



RESEARCH ARTICLE

The relationship of psychopathology with personality traits, social skills and peer relation among Indian adolescent girls

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ABSTRACT

Background: Psychopathology in adolescents, seen as adaptation failure which involves deviations from age-appropriate behaviour, disrupting normal development and social functioning, especially in girls and require special attention. The aim of this study was to explore the correlation of psychopathology with personality traits, social skill and peer relation among adolescent girls.

Methods: A cross-sectional study was done among 150 adolescent girls aged 16-19 years using purposive sampling technique from 17 colleges of Kamrup Metro, Assam, India. Personality traits, social skill, peer relation, and psychopathology were measured using the big five inventory, social skill scale, adolescent peer relation instrument, and adolescent psychopathology scale, respectively. Pearson correlation coefficients $r \geq 0.40$ (moderate to strong) were reported irrespective of P value.

Results: The results showed significant correlation between the neuroticism of personality traits ($r=0.58$). Neuroticism was found moderately correlated with six subdomains of the psychopathology distress scale, including academic problems ($r=0.55$), generalised anxiety disorder ($r=0.57$), post-traumatic stress ($r=0.61$), depression ($r=0.55$), eating disturbance ($r=0.43$), and interpersonal problems ($r=0.57$). A moderate positive correlation was found between the total score of the adolescent psychopathology distress scale and the peer relation scale ($r=0.43$). An inverse but weak correlation was found with psychopathology distress scale and social skills.

Conclusion: Psychopathology distress of adolescent girls are correlated with neuroticism of personality traits, overall adolescent peer relation. However, an inverse but weak correlation was found with social skills.

Keywords: *personality, social skills, peer relation, psychopathology*

INTRODUCTION

Adolescence marks the transitional phase between childhood and adulthood, representing a critical stage in human development characterised by rapid growth.¹ Adolescent girls have unique developmental needs that require special attention, especially in the developing world where their challenges are particularly urgent.² Personality development is often considered a progression towards higher stages marked by more complicated thought processes and emotional responses. Many other studies on adolescent

personality focus on the common challenges during this period. However, these difficulties of adolescence might be due to biological or sociological factors, but these also partly reflect the personality traits.³

Social skills in general, are described as the ability to effectively perform a specific task, action, or function. Having an adequate level of social skills enables adolescents to form strong, healthy, and lasting relationships.⁴ Social skills play an important role in the identity development of adolescent girls, often focusing on issues of relating to others and social behaviour.⁵ On the other hand, peer relation is considered to be the

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HIGHLIGHTS

1. Psychopathological distress of adolescent girls are correlated with neuroticism of personality traits.
2. Psychopathological distress of adolescent girls are correlated with overall adolescent peer relation.
3. An inverse but weak correlation was found between psychopathological distress of adolescent girls with social skills.

phase of adolescence where rapid social growth is characterised by increasing independence and the formation of social identity through interactions with peers, joining groups, and developing a sense of belonging. As, a result, teenagers tend to be more affected by peer acceptance and rejection.⁶

Adolescent girls are viewed as more peer-oriented, often showcasing higher quality relationships, better communication, and more prosocial behaviours compared to adolescent boys.⁷ Psychopathology in adolescents, seen as adaptation failure which involves deviations from age-appropriate behaviour, disrupting normal development and social functioning.⁸ Adolescent girls are less likely than boys to engage in violent crimes, commit suicide, fall victim to homicide, or use substances like drugs, alcohol, and tobacco. They are more susceptible to psychological distress. Notably, the risk for mental health problems for girls is on the rise.⁹ As, considered with the topic and its variables, some of the earlier research done on this field are reflected below.

Studies have indicated that, there is significant evidence indicating that personality traits like self-criticism and dependency are predictive of developing depression and anxiety symptoms, as well as experiencing depressive episodes in adolescent girls.^{10, 11} Other studies have explored the relationships between psychopathological symptoms, social skills, and personality traits.^{12, 13, 14, 15} Hockenberry¹⁶ investigated, social skills played a significant role in mitigating internalising and externalising symptoms of psychopathological disorders. Adedeji *et al.*¹⁷ found that better peer relationships are strongly associated with the mitigation of depressive symptoms for both boys and girls.

The objective of this study was to explore the correlation of psychopathology with personality traits, social skill and peer relation among adolescent girls.

METHODS

Sample

This cross-sectional study used a purposive sampling technique with a sample of 150 adolescent girls, aged 16 to 19 years, from provincialised colleges in Kamrup Metro, Assam, India. As per the records of higher education, Government of Assam, there are 21 provincialised colleges in Kamrup metro out of which 17 colleges provide higher secondary courses (11-12th grade) along with graduation courses and were selected for data collection.

To determine sample size followed, Roger Sapsford's recommendation of having at least 40 cases per independent variable, and considering the study includes three independent variables: personality traits, social skills, and peer relations, a minimum sample size was $40 \times 3 = 120$ (40 cases per variable).¹⁸ Considering the 80% response rate, the final sample size was 150.

The inclusion criteria were participant's aged from 16 to 19 years. The tools that were used to collect data for the present study are as follows:

- *The big five inventory*: A 44-items self-report inventory that assesses the personality traits. Respondents rate the items on a 5-point Likert scale. This inventory has been translated and validated, demonstrating good psychometric properties.^{19, 20}
- *Social skill scale*: 24 items designed to evaluate three dimensions of social skills in adolescents which are getting along skills, social attributes and friendship skills. This scale has strong psychometric properties, making it suitable for use in diverse contexts.²¹
- *Adolescent peer relation instrument (APRI)*: The APRI assesses three forms of bullying behaviours (physical, verbal and social) and three types of victimisation (physical, verbal and social). It includes 18 items for measuring bullying and 18 items for measuring experiences of being bullied. Responses range from 1 (infrequent bullying or victimisation) to 6 (frequent occurrences).²²

- *Adolescent psychopathology scale (APS)*: The APS comprises 12 clinical scales and 2 validity scales intended for use with children aged 12 to 19 years.²³ Six of the clinical scales focus on specific symptoms outlined in the DSM-IV, covering disorders such as generalised anxiety disorder, conduct disorder, major depression, post-traumatic stress disorder, oppositional defiant disorder and substance abuse disorder. It contains 115 items across its 12 clinical scales and 2 validity scales.

Data collection

Prior to the study commencing the researcher obtained study approval from the authority of the colleges. The participants were given manual copies of the English questionnaire, prior that they had been fully informed about the research study. They were told to be as truthful as possible when filling out the questionnaire. The participants completed the questionnaires anonymously. The data were then manually inputted in the Microsoft Excel and analysed in SPSS, version 26.

Ethical considerations

The participants were thoroughly informed about the purpose of the study as well as there is no physical or mental risk of participating in the study. Written informed consent was then obtained. Also informed that their participation were entirely voluntary, and they can withdraw at any time without facing any negative repercussions. All collected data were kept strictly confidential and used exclusively for this study.

Statistical analysis

Score of the all four scales were described using mean and standard deviation. To identify the relation of psychopathology with personality traits, social skill and peer relation among adolescent girls, Pearson correlation was used and correlation coefficients $r \geq 0.40$ (moderate to strong) were reported irrespective of P value.

RESULTS

The highest mean scores among the five domains of personality traits scale were observed for openness (mean=35.9) and neuroticism (mean=34.2). In the social skills scale, the highest mean score was reported for the getting along skills domain (mean=25.0). For the adolescent peer relation scale, the total bullied domain had the highest mean score (27.9). In the adolescent psychopathology scale, the mean scores for generalised anxiety disorder, post-traumatic stress disorder, depression, self-concept, and interpersonal problems were all 7 and above (TABLE 1).

TABLE 1 Description of the scores of personality traits, social skill, peer relation, and psychopathology scales of the adolescent girls studying in higher secondary and first year bachelor programme, Assam, India (n=150)

Variables	Mean (standard deviation)
Dimensions of big five inventory	
Extraversion	24.5 (5.0)
Neuroticism	34.2 (4.3)
Agreeableness	26.5 (5.5)
Conscientiousness	29.4 (5.2)
Openness	35.9 (4.2)
Dimensions of social skills scale	
Getting along skills	25.0 (4.8)
Self-attribution	13.4 (3.2)
Friendship skills	10.9 (5.5)
Dimensions of adolescent peer relation instrument	
Total bullying	23.1 (6.3)
Total bullied	27.9 (10.2)
Dimensions of adolescent psychopathology scale	
Conduct disorder	1.8 (1.8)
Oppositional defiant disorder	6.0 (2.4)
Substance abuse	0.1 (0.5)
Anger/Violence	6.6 (3.4)
Academic problems	6.6 (3.2)
Generalized anxiety disorder	9.3 (4.2)
Post traumatic stress disorder	8.6 (4.2)
Depression	11.0 (5.6)
Eating disturbances	4.4 (2.4)
suicide	2.3 (2.0)
Self-concept	7.9 (3.8)
Interpersonal problem	9.3 (3.9)

In terms of correlation between big five personality traits and adolescent psychopathology scale, the study identified a significant moderate positive correlation between the neuroticism domain of personality traits and the total score of the adolescent psychopathology scale ($r=0.58$). Furthermore, the neuroticism was found moderately correlated with six subdomains of the

TABLE 2 The correlation between big five personality traits and adolescent psychopathology scale of adolescent girls studying in higher secondary and first year bachelor programme, Assam, India (n=150)

Dimensions	CND	ODD	SUB	AVP	ADP	GAD	PTS	DEP	EAT	SUI	SCP	IPP	Total APS
Extraversion	0.03	-0.24	-0.01	-0.17	-0.28	-0.24	-0.26	-0.25	-0.12	-0.21	-0.03	-0.35	-0.28
Neuroticism	-0.01	0.35	0.10	0.34	0.55**	0.57**	0.61**	0.55**	0.43**	0.25	0.24	0.57**	0.58**
Agreeableness	-0.25	-0.12	0.07	-0.25	0.00	-0.07	-0.01	-0.03	-0.10	-0.23	0.07	-0.11	-0.11
Conscientiousness	-0.14	-0.24	0.05	-0.25	-0.30	-0.30	-0.29	-0.32	-0.22	-0.29	-0.08	-0.28	-0.33
Openness	-0.08	-0.04	0.05	-0.15	-0.04	-0.02	0.07	0.00	0.06	-0.18	0.07	-0.01	-0.03
Total BFI	-0.18	-0.10	0.06	-0.16	-0.00	-0.00	-0.06	0.00	0.03	-0.23	0.11	-0.04	-0.04

* $r \geq 0.4$ indicates moderate to strong correlation.

CND indicates conduct disorder; ODD, oppositional defiant disorder; SUB, substance abuse; AVP anger/ violence proneness; ADP, academic problem; GAD, generalised anxiety disorder; PTS, post traumatic stress; DEP, depression; EAT, eating disturbances; SUI, suicide; SCP, self-concept; IPP, interpersonal problem; APS, adolescent psychopathology scale; BFI, big five inventory.

psychopathology scale, including academic problems ($r=0.55$), generalised anxiety disorder ($r=0.57$), post-traumatic stress ($r=0.61$), depression ($r=0.55$), eating disturbance ($r=0.43$), and interpersonal problems ($r=0.57$) (TABLE 2).

An inverse but weak correlation was found between social skills scale and adolescent psychopathology scale (TABLE 3). For the correlation between adolescent peer relation instrument and adolescent psychopathology scale, a moderate positive correlation was identified between the total score of the adolescent psychopathology scale and the peer relation instrument ($r=0.43$). Furthermore, moderate correlations were found between total peer relations score with the four subdomains of the psychopathology scale, including conduct disorder ($r=0.50$), oppositional defiant disorder ($r=0.47$), anger/violence proneness ($r=0.54$), and eating disturbance ($r=0.43$) (TABLE 4).

neuroticism and conscientiousness as significant personality traits influencing psychopathology and overall individual functioning. Furthermore, Brandes and Tackett,²⁵ reported that personality traits, particularly neuroticism and dependency, play a significant role in exacerbating depressive episodes, a common psychopathological issue among adolescent girls.

We observed no moderate or strong correlations between social skills scale score and adolescent psychopathology distress scale score. However, Hohendorff *et al.*,²⁶ reported that adolescent girls who showed psychopathological symptoms had low levels of social skills. Another study stated that peer group becomes an important aspect in forming some of the psychopathological disturbances during adolescents, such as conduct disorder, oppositional disposition disorders, depression, anxiety and other relatable symptoms.²⁷

TABLE 3 The correlation between social skills scale and adolescent psychopathology scale of adolescent girls studying in higher secondary and first year bachelor programme, Assam, India (n=150)

Dimensions	CND	ODD	SUB	AVP	ADP	GAD	PTS	DEP	EAT	SUI	SCP	IPP	Total APS
Getting along skills	-0.17	-0.11	0.06	-0.20	-0.15	-0.16	-0.11	-0.11	-0.12	-0.15	0.15	-0.18	-0.15
Self-attribution	-0.09	-0.14	0.09	-0.15	-0.11	-0.09	-0.10	-0.16	-0.19	-0.21	0.10	-0.16	0.16
Friendship skills	-0.17	-0.00	-0.03	-0.18	-0.04	-0.11	-0.03	-0.04	-0.02	-0.04	-0.09	-0.07	-0.09
Total SSS	-0.22	-0.11	0.04	-0.26	-0.14	-0.18	-0.11	-0.13	-0.14	-0.18	0.05	-0.19	-0.19

* $r \geq 0.4$ indicates moderate to strong correlation.

CND indicates conduct disorder; ODD, oppositional defiant disorder; SUB, substance abuse; AVP anger/ violence proneness; ADP, academic problem; GAD, generalised anxiety disorder; PTS, post traumatic stress; DEP, depression; EAT, eating disturbances; SUI, suicide; SCP, self-concept; IPP, interpersonal problem; APS, adolescent psychopathology scale; SSS, social skills scale.

DISCUSSION

Our study revealed a moderate correlation between neuroticism, a subdomain of the Big Five personality traits, and psychological distress scores. This aligns with findings from Hengartner *et al.*,²⁴ who highlighted

Another finding of the current study determines that neuroticism and peer relation are two significant predictors of psychopathology. Supporting research have stated that among all the personality traits,

TABLE 4 The correlation between adolescent peer relation instrument and adolescent psychopathology scale of adolescent girls studying in higher secondary and first year bachelor programme, Assam, India (n=150)

Dimensions	CND	ODD	SUB	AVP	ADP	GAD	PTS	DEP	EAT	SUI	SCP	IPP	Total APS
Bullying	0.38	0.26	-0.03	0.33	0.19	0.07	0.13	0.11	0.21	0.26	0.08	0.20	0.23
Bullied	0.44**	0.48**	-0.00	0.53**	0.30	0.27	0.30	0.23	0.45**	0.27	0.20	0.38	0.43**
Total API	0.50**	0.47**	-0.01	0.54**	0.31	0.23	0.28	0.22	0.43**	0.31	0.19	0.37	0.43**

* $r \geq 0.4$ indicates moderate to strong correlation.

CND indicates conduct disorder; ODD, oppositional defiant disorder; SUB, substance abuse; AVP anger/ violence proneness; ADP, academic problem; GAD, generalised anxiety disorder; PTS, post traumatic stress; DEP, depression; EAT, eating disturbances; SUI, suicide; SCP, self-concept; IPP, interpersonal problem; APS, adolescent psychopathology scale; API, adolescent psychopathology scale.

neuroticism is one of the facets that is required to anticipate and identify the risks of developing specific forms of psychopathological issues.^{28, 5} Similarly, peer relationships have been considered an important factor to be associated with mental health disorders during adolescence.^{29, 30} Peers significantly influence mental health during adolescence, with higher risks of mental disorders among those exposed to peers with such diagnoses³¹ further validating the findings of the study.

Thus, it can be witnessed that the findings of this study illuminates on the intricate interplay between personality traits, social skill, peer relation and psychopathology in adolescent girls. Neuroticism emerged as a critical factor, outstandingly predicting the emotional and psychological distress, focusing its vital role in mental health challenges. Interestingly, the study also revealed that dimensions of social skill showed weak and negative correlations as stronger social skill may act as a buffer against distress. A very remarkable discovery was to be observed between the dimensions of peer relation and psychopathology, particularly in adolescent girls, underlying the impact of negative peer interactions on psychological well-being. Together, these findings, highlight the significant predictive roles of neuroticism and peer relation, marking them as key points for addressing adolescent psychopathology.

This leads us to the strengths of this current study which gives a holistic understanding of factors that may contribute to the awareness of the psychopathological issues in adolescent girls. However, the limitations of this study were lack of probability proportional to size sampling which cause sampling bias and self administered interview methods.

Conclusion

This study can be further concluded by psychopathological distress of adolescent girls are correlated with neuroticism of personality traits, overall adolescent peer relation. However, an inverse but weak correlation was found with social skills.

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Author contributions

Conception and design: S, TY. *Acquisition, analysis, and interpretation of data:* S. *Manuscript drafting and revising it critically:* S, TY. *Approval of the final version of the manuscript:* S. *Guarantor of accuracy and integrity of the work:* S.

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Conflict of interest

We do not have any conflict of interest.

Ethical approval

Since the research is part of PhD work of Tajbina Yasin, the topic was approved from the Rajiv Gandhi University Memo No. Regn-4075/2023/Vol. I/188, Dated 15-12-2023. As per the RGU guidelines the current research was conducted. Apart from this, informed written consent was obtained from the participants and permission was taken from the respective institutions from where data has been collected for this current study.

Data availability statement

We confirm that the data supporting the findings of the study will be shared upon reasonable request.

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