

Research Paper

Rejection Sensitivity, Perceived Loneliness and Optimum Health: Examining Gender Differences

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ABSTRACT

The current study looked at rejection sensitivity as a predictor of perceived loneliness and optimum health among adolescents. Responses were collected from 460 adolescents (230 urban and 230 rural students) studying in 11th and 12th grades. The sample comprised of 230 girls and 230 boys enrolled in Government Senior Secondary Schools in the three districts namely Ludhiana, Patiala, and Sangrur in the Malwa region of Punjab. The Fear of Rejection Scale by Nafees and Jahan (2018), Loneliness Scale by Hamid and Parvez (2020), Optimum Health Scale by Kumar and Bala (2016) and a self-structured personal information sheet were used to collect the data. According to the results, boys showed higher levels of loneliness, whereas girls reported higher levels of rejection sensitivity. In terms of optimum health, boys exhibited higher levels of physical health as compared to their female counterparts. Loneliness and rejection sensitivity were found to be significantly positively correlated, indicating that adolescents who were more sensitive to rejection also felt more alone. Additionally, rejection sensitivity was found to have a strong negative correlation with optimum health, suggesting that rejection sensitivity not only made social isolation worse but also decreased overall well-being. The findings highlighted the need for early intervention and resilience-building strategies to reduce rejection sensitivity, loneliness and promote the best possible health for adolescents.

Keywords: *Rejection Sensitivity, Perceived Loneliness, Optimum Health, Adolescents*

Increased emotional sensitivity during adolescence makes acceptance a psychological imperative. Even small signs of rejection during this sensitive time may have long-term consequences for mental health and overall wellbeing. Being rejected means being cut off from relationships or social interactions (DeWall and Bushman 2011). Rejection Sensitivity (RS) is the term used for those individuals who become too sensitive to rejection and as a result, develop a fear of rejection in general (Pietrzak *et al* 2005). Cassidy and Shaver (2016) asserted that early relationships have a significant influence on the development of rejection sensitivity. A youngster who has an unstable relationship with their primary caregivers is likely to be more sensitive to social rejection. Additionally, it was mentioned that children with insecure attachment, which is typified by a lack of emotional support from caregivers, may interpret social cues more negatively and react more violently

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to perceived rejection. This can increase their fear of neglect or abandonment. According to Mellin (2008), rejection sensitivity is a recurrent, individual trait that may contribute to the development of internalizing disorders like depression and loneliness. It is best characterized as a personal vulnerability factor that raises the likelihood that a person would feel lonely in the presence of particular stressors. London *et al* (2007) interpreted that rejection sensitivity is linked to loneliness. Adolescents who display defensive affect (anxiety or rage) when rejection is a possibility are more likely to experience social anxiety, withdrawal and violence toward others. They may also react to these signs in a number of ways, such as internalizing issues like depressive symptoms or displaying anxiety, anger, dependence or jealousy. Man being a social animal requires other people around him. Lack of social interaction and peer victimisation are responsible for loneliness among adolescents (Goswick and Jones, 1982). Relationships between people are essential to their health. The most important aspect of modern living is health. Good health is the key to human happiness and well-being. Optimum health is a balance among all the health aspects. Furthermore, it is the condition of a person in which, all facets of their health—both physiological and psychological—operate normally. Vasseghi (2011) says that the best state of health is one that is unconstrained by all kinds of constraints, limitations and connections in all facets of one's physical, mental, emotional and spiritual well-being. Mental and physical health are linked. When someone has a serious mental illness, they may experience a variety of physical symptoms. A person may also be more susceptible to physical health issues as a result of their experience with mental illness. For example, a person with poor mental health may be afraid of being left out, which can lead to loneliness, hormone imbalances, sleep disturbances and other physical injustices. Adopting healthy habits can be adversely affected by mental illness since it can affect social and cognitive abilities as well as energy levels. The physiological functioning of an individual's body may be influenced by their emotional or psychological condition. Long-lasting physical discomfort may cause stress, which weakens the body's defenses against illness (Lintang 2021). The relationship between rejection sensitivity, perceived loneliness and optimum health is complex, with each factor influencing the others in a vicious circle of negative reinforcement. This cycle can have a significant detrimental impact on an adolescent's overall health because chronic loneliness and emotional distress have been linked to several detrimental health outcomes, including compromised immune systems, increased inflammation and elevated levels of stress hormones like cortisol (Jordan and Miller 2024). Williams *et al* 2023 indicated that these physiological stress reactions might hinder emotional resilience, increase the likelihood of mental health problems, and impair cognitive functioning. The aim of this study is to examine the association between rejection sensitivity and teenagers' feelings of loneliness, with a focus on gender variations, building on the relationship between rejection sensitivity, perceived loneliness, and optimum health. Knowing these patterns may make it easier to spot those who are more at risk and support their mental well-being.

Objectives of the study

- To study the gender differences in rejection sensitivity, perceived loneliness and optimum health among adolescents.
- To find out the relationship of rejection sensitivity with perceived loneliness and optimum health.

METHOD

Participants

A sample of 460 adolescents (16–18 years old) enrolled in the eleventh and twelfth grades at the Government Senior Secondary Schools in three districts—Ludhiana, Patiala, and

Sangrur—in the Malwa area of Punjab were selected for the study. The District Education Officer's official website provided a comprehensive list of all Government Senior Secondary Schools. The sample was split evenly between the two genders (ng = 230 girls and nb = 230 boys).

Measures

Self-structured personal information sheet: A self-structured socio-personal characteristic information sheet was used to collect data on the adolescents' socio-personal traits. The adolescents' grade, gender, location, parents' occupation and level of education, family size, family type, number of siblings, and birth order were all given on this sheet.

Fear of Rejection Scale: Rejection sensitivity among selected adolescents was assessed by using the Fear of Rejection Scale developed by Nafees and Jahan (2018). The three dimensions of this scale are people-pleasing, rejection sensitivity, and exclusion. The questionnaire contained fifteen statements in all, fourteen of which were positive and one of which was negative. A 5-point Likert scale, from Never to Always, was used by the participants to record their answers. Strong reliability and good internal consistency were demonstrated by the scale's Cronbach's Alpha scores, which ranged from 0.68 to 0.89 for the subscales and 0.79 for the entire scale. The scale showed strong construct validity, indicating that it accurately assesses adolescents' fear of rejection.

Score range for Fear of Rejection Scale:

S.No.	Levels of Fear of Rejection	Range of Raw Scores
1.	Low	<36
2.	Moderate	36-54
3.	High	>54

Loneliness Scale: Loneliness Scale developed by Hamid and Parvez (2020) was used to assess the level of loneliness as perceived by adolescents. The scale consists of five dimensions; social relationship, interpersonal relationship, distressed reaction, social isolation and emptiness. There are 34 statements total—14 good and 20 negative. Responses were recorded using a five-point Likert-type scale that ranged from Never to Always. With a split-half dependability of 0.83 and a Cronbach's Alpha of 0.87, the scale showed excellent reliability. Significant correlations between dimensions at the 0.01 level showed the scale's strong construct validity.

Score range for Loneliness Scale:

S.No.	Levels of Loneliness	Range of Raw Scores
1.	Low	<99
2.	Moderate	99-130
3.	High	>130

Optimum Health Scale: Optimum Health Scale developed by Kumar and Bala (2016) was used to assess the optimum health status of adolescents. The scale consists of five dimensions: physical health, mental health, social health, emotional health and spiritual health. It has 45 statements, 12 of which are negative and 33 of which are positive. Responses were recorded using a five-point Likert-type scale with the following options: Strongly Disagree, Disagree, Undecided, Agree, and Strongly Agree. Different scoring

methods were applied to positive and negative items in order to guarantee accurate evaluation.

Score range for Optimum Health Scale:

S.No.	Levels of Optimum Health	Range of Raw Scores
1.	Low	<130
2.	Moderate	130-174
3.	High	>174

Pre-testing: To help the respondents understand each other better, the tools were translated into Punjabi vernacular. Twenty non-sampled students participated in a pretest of the questionnaires. The Punjabi versions of the surveys were distributed to ten randomly chosen 11th grade students (5 females and 5 boys) and 12th grade students (5 girls and 5 boys). These pupils were not included in the final sample. The pre-test results showed consistency, indicating that the pupils provided reliable responses.

Statistical Analysis

Various statistical tools were employed, including frequency, percentage, mean, standard deviation, t-test, Z-test, and Karl Pearson's correlation coefficient.

Data Collection

A total of 460 adolescents were chosen, assuring that boys and girls were equally represented. The goal and importance of the study were explained to the participants prior to the distribution of the instruments. They were guaranteed that their identities would be kept private and that the data gathered would only be utilized for study. They were also asked to keep their answers confidential in order to guarantee the accuracy of the data. With the use of SPSS23 software, the gathered data was entered into an MS Excel sheet for analysis.

RESULTS

Socio-personal characteristics of the respondents

The details of socio-personal characteristics of the adolescents as per their gender are shown below:

Table 1: Socio-personal characteristics of the adolescents as per their gender (n=460)

Socio-personal characteristics		Girls (n _g =230)		Boys (n _b =230)	
		<i>f</i>	%	<i>f</i>	%
Grade	11 th	117	50.87	115	50.00
	12 th	113	49.13	115	50.00
Father's Education	Illiterate	26	11.30	34	14.78
	Primary	33	14.35	24	10.43
	Middle	47	20.43	37	16.09
	High School	71	30.87	87	37.83
	(+2) Intermediate	36	15.65	35	15.22
	Graduation	16	6.96	13	5.65
	Post-Graduation	1	.43	0	0.00
Mother's Education	Illiterate	47	20.43	48	20.87
	Primary	41	17.83	38	16.52
	Middle	43	18.70	43	18.70

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	High School	53	23.04	54	23.48
	(+2) Intermediate	25	10.87	32	13.91
	Graduation	14	6.09	14	6.09
	Post-Graduation	7	3.04	1	.43
Father's Occupation	Service (Govt./ Private)	47	20.43	42	18.26
	Business	32	13.91	42	18.26
	Farming	24	10.43	23	10.00
	Labourer	96	41.74	102	44.35
	Any other (Vendor, Driver, Gardener, etc.)	31	13.48	21	9.13
Mother's Occupation	Service (Govt./ Private)	33	14.35	26	11.30
	Business	8	3.48	5	2.17
	Farming	2	.87	0	0.00
	Labourer	36	15.65	15	6.52
	Homemaker	136	59.13	166	72.17
	Any other (House-help, Laundry worker etc.)	15	6.52	18	7.83
Family Size	Small (upto 4 members)	84	36.52	108	46.95
	Medium (5-8 members)	134	58.26	108	46.96
	Large (9 and more members)	12	5.22	14	6.08
Family Type	Nuclear	70	30.43	56	24.35
	Joint	160	69.57	174	75.65
No. of Siblings	None	9	3.91	9	3.91
	One	102	44.35	105	45.65
	Two	81	35.22	81	35.22
	Three	31	13.48	24	10.43
	Four or more	7	3.03	11	4.77
Birth Order	First	101	43.91	92	40.00
	Second	93	40.43	88	38.26
	Third	29	12.61	38	16.52
	Fourth or above	7	3.04	12	5.22



Figure 1: Grade of the adolescents as per their gender

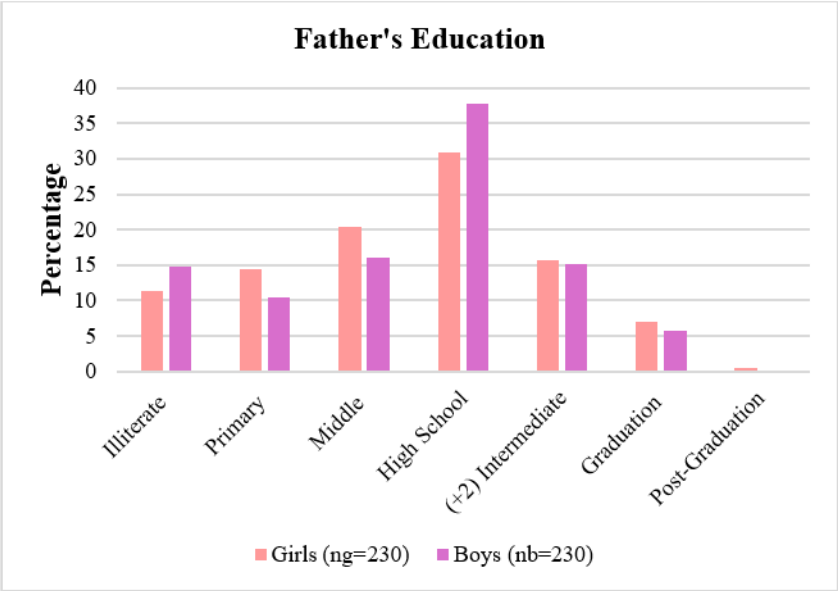


Figure 2: Father's education of the adolescents as per their gender

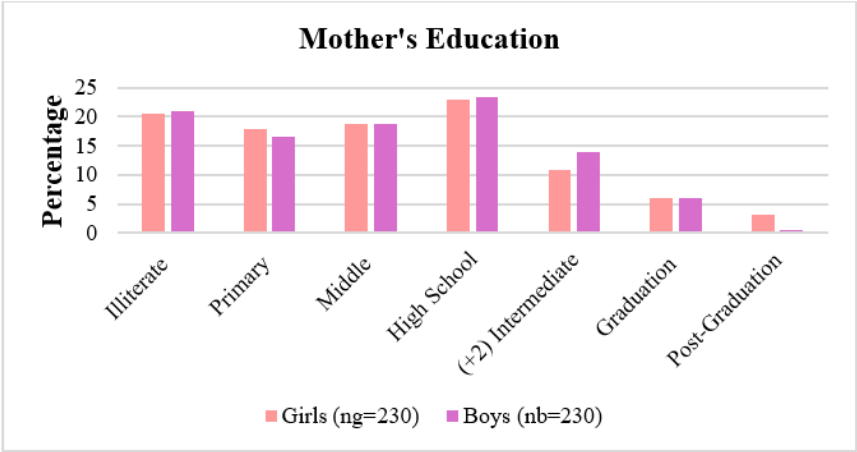


Figure 3: Mother's education of the adolescents as per their gender

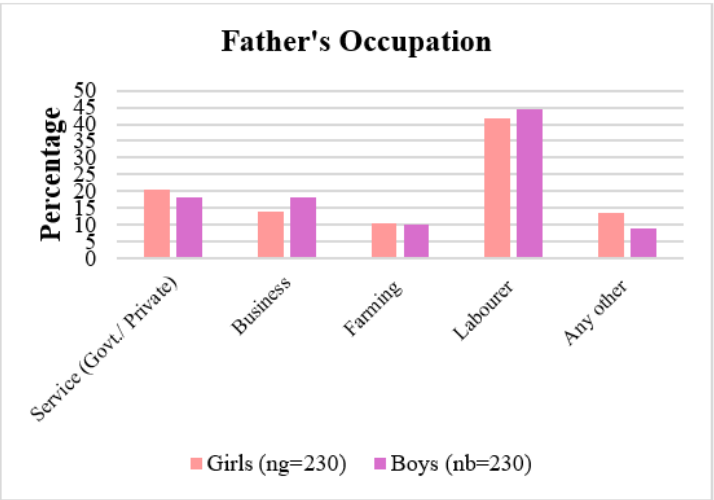


Figure 4: Father's occupation of the adolescents as per their gender

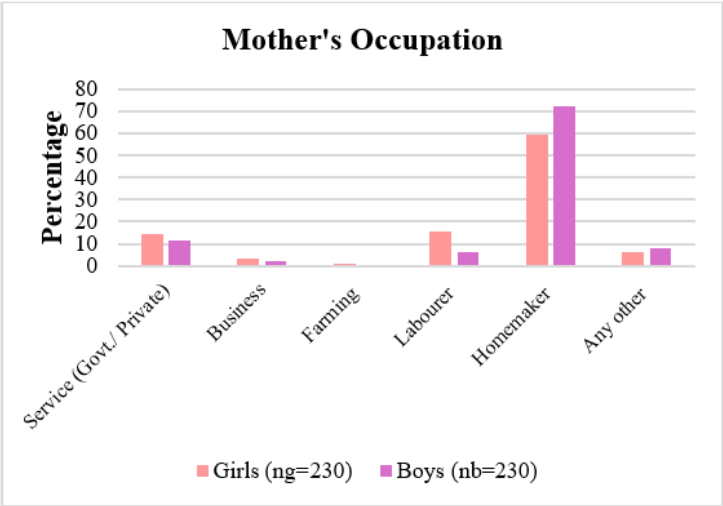


Figure 5: Mother's occupation of the adolescents as per their gender

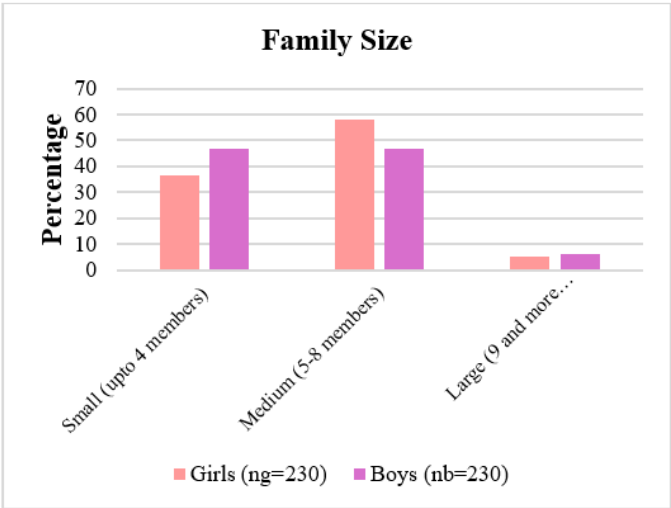


Figure 6: Family size of the adolescents as per their gender

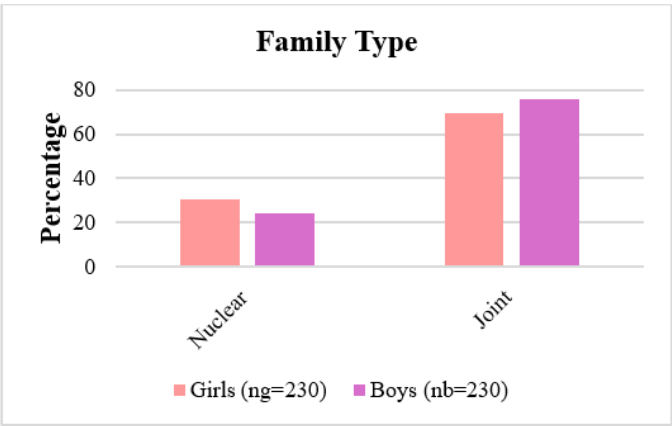


Figure 7: Family type of the adolescents as per their gender

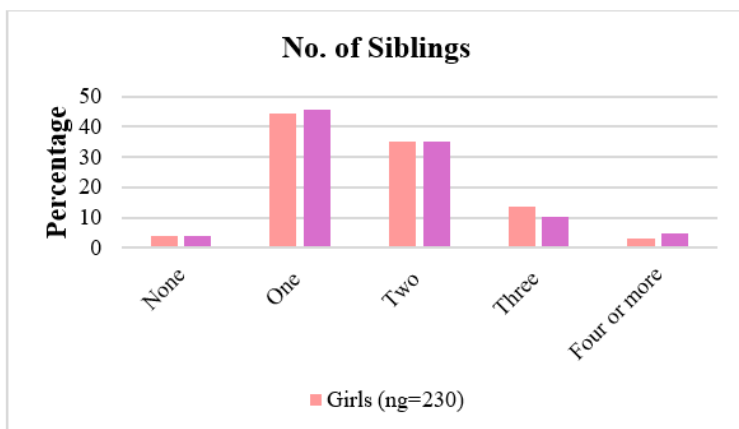


Figure 8: No. of siblings of the adolescents as per their gender

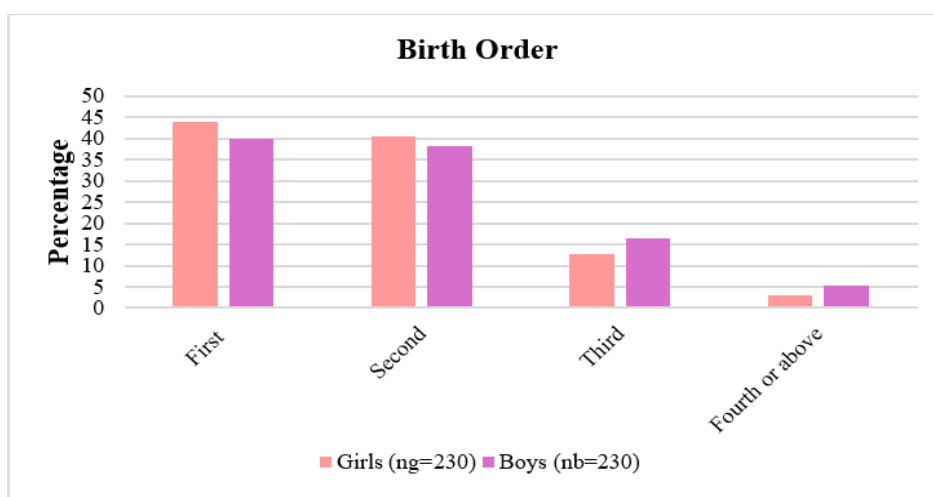


Figure 9: Birth order of the adolescents as per their gender

Grade: Among girls, 50.87 percent were in the 11th grade and 49.13 percent were 12th graders. 50 percent of the students in grades eleven and twelve were boys. This proved that the sample was fairly represented and that there was an equal distribution of students among both genders.

Father's Education: When the educational attainment of fathers was broken down by gender, it was discovered that most fathers of both boys and girls had completed high school, with a higher proportion of fathers of boys (37.83%) than fathers of girls (30.87%). Middle school education came next, and it was more prevalent among fathers of girls (20.43%) than among fathers of boys (16.09%). Fathers of girls were more likely to have completed elementary school (14.35%) than fathers of boys (10.43%). Boys were more likely than girls (11.30%) to have illiterate fathers (14.78%). The proportion of fathers of girls (15.65%) and boys (15.22%) with intermediate education was approximately similar, but the percentage of fathers of both genders in the graduate and post-graduation categories of education was quite low.

Mother's Education: High school was the most level of education attained by mothers of both genders, with 23.48 percent of mothers of boys and 24.04 percent of mothers of girls having done so. Mothers of girls (20.43%) and mothers of boys (20.87%) were about equally uneducated. The 18.70% middle education rate for both categories did not vary

according to gender. 17.83 percent of mothers of girls and 16.52 percent of mothers of boys had completed primary school. At the intermediate level, boys' mothers were more represented (13.91%) than mothers of girls (10.87%). In terms of graduation, mothers of both boys and girls had the same proportion (6.09%).

Father's Occupation: According to the data, fathers of boys were more likely to be laborers (44.35%) than fathers of girls (41.74%). Compared to fathers of boys (18.26%), fathers of girls were more involved in business (13.91%) and services (20.43%). Compared to boys (9.13%), a greater proportion of fathers of girls (13.48%) worked as vendors, drivers, gardeners, and other vocations. Fathers of both genders were employed in agriculture in nearly similar numbers.

Family Size: Compared to boys (46.96%), a higher proportion of girls (58.26%) come from medium-sized families. Compared to girls (36.52%), boys were more likely to have small families (46.96%). The likelihood of having big families was slightly higher for boys (6.08%) than for girls (5.22%).

Family Type: Boys were more likely to have joint families (75.65%) than girls (69.57%), but girls were more likely to have nuclear households (30.43%) than boys (24.35%).

Number of Siblings: 45.65 per cent of boys and 44.35 percent of girls had one sibling. 10 per cent of the boys and thirteen per cent of the girls had three siblings. For each gender, the percentages of the two (35.22%) and no siblings (3.91%) groups were similar.

Birth Order: Results showed that girls (43.91%) were more likely than boys (40.00%) to be the firstborn. The proportion of second-born children was 38.26 percent for boys and 40.43 percent for girls. Birth orders third (16.52%) and fourth or higher (5.22%) were more common in boys (12.61%) than in girls (3.04%).

Table 2: Gender-wise distribution of adolescents across different dimensions and levels of fear of rejection (n=460)

Dimensions of Fear of Rejection	Levels	Gender				Z-Value
		Girls(n _g =230)		Boys (n _b =230)		
		<i>f</i>	%	<i>f</i>	%	
Exclusion	Low	80	34.78	101	43.91	2.00*
	Average	145	63.04	125	54.35	1.89
	High	5	2.17	4	1.74	0.33
Rejection Sensitivity	Low	53	23.04	92	40.00	3.91**
	Average	132	57.39	124	53.91	0.75
	High	45	19.57	14	6.09	4.32**
People Pleasing	Low	75	32.61	108	46.96	3.14**
	Average	113	49.13	100	43.48	1.21
	High	42	18.26	22	9.57	2.69**
Overall Fear of Rejection	Low	45	19.57	84	36.52	4.04**
	Average	143	62.17	120	52.17	2.16*
	High	42	18.26	26	11.30	2.10*

**Significant at 1% level of significance

*Significant at 5% level of significance

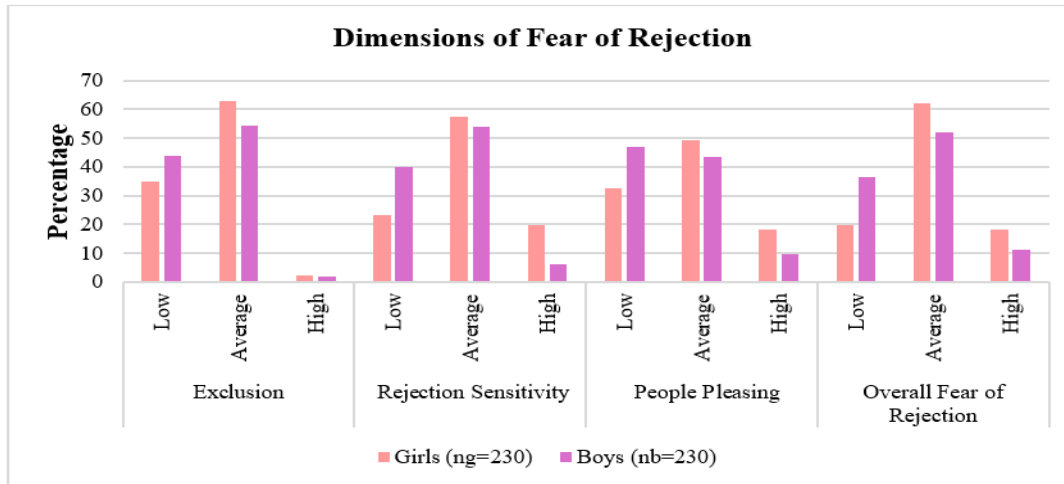


Figure 10: Gender-wise distribution of adolescents across different dimensions and levels of fear of rejection

Exclusion: There was a significant difference ($Z=2.00$, $p<0.05$) in the percentage distribution of boys (43.91%) being higher as compared to girls (34.78%) at the low level of exclusion. The percentage of girls (63.04%) and boys (54.35%) did not significantly differ at the average level. At the high level, a similar pattern was observed.

Rejection Sensitivity: In terms of rejection sensitivity, the percentage distribution of boys (40%) was significantly ($Z=3.91$, $p<0.01$) larger than that of girls (23.04%) at the low level. On average, the proportion of girls (57.39%) was larger than that of boys (53.91%) with no significant difference. Girls' percentage distribution (19.57%) was significantly ($Z=4.32$, $p<0.01$) higher than boys' (6.09%) at the high level.

People-pleasing: Compared to girls (32.61%), boys were significantly ($Z=3.14$, $p<0.01$) more likely to be at a low level of people-pleasing (46.96%). At the average level, there was no discernible difference in the percentage of girls (49.13%) and boys (43.48%). At the high level, the proportion of girls (18.26%) was significantly ($Z=2.69$, $p<0.01$) greater than that of boys (9.57%).

Overall Fear of Rejection: At a low level, boys' percentage distribution (36.52%) was significantly ($Z=4.04$, $p<0.01$) larger than girls' (19.57%). At the average level, a considerably higher percentage of girls (62.17%) than boys (52.17%) expressed an overall fear of rejection ($Z=2.16$, $p<0.05$). Furthermore, at the high level, the percentage of girls (18.26%) was significantly ($Z=2.10$, $p<0.05$) higher than that of boys (11.30%).

Table 3: Gender-wise differences in the mean scores ($\pm$ S.D) of the adolescents across different dimensions of fear of rejection ($n=460$)

Different dimensions of fear of rejection (n = 460)					
Dimensions of Fear of Rejection	Gender				t-value
	Girls (n _g =230)		Boys (n _b =230)		
	Mean	SD (±)	Mean	SD (±)	
Exclusion	17.12	3.57	16.58	3.94	1.52
Rejection Sensitivity	14.67	4.05	12.84	3.83	4.97**
People Pleasing	12.70	4.23	11.10	4.28	4.02**
Overall Fear of Rejection	44.40	9.37	40.47	9.58	4.44**

**Significant at 1% level of significance

*Significant at 5% level of significance

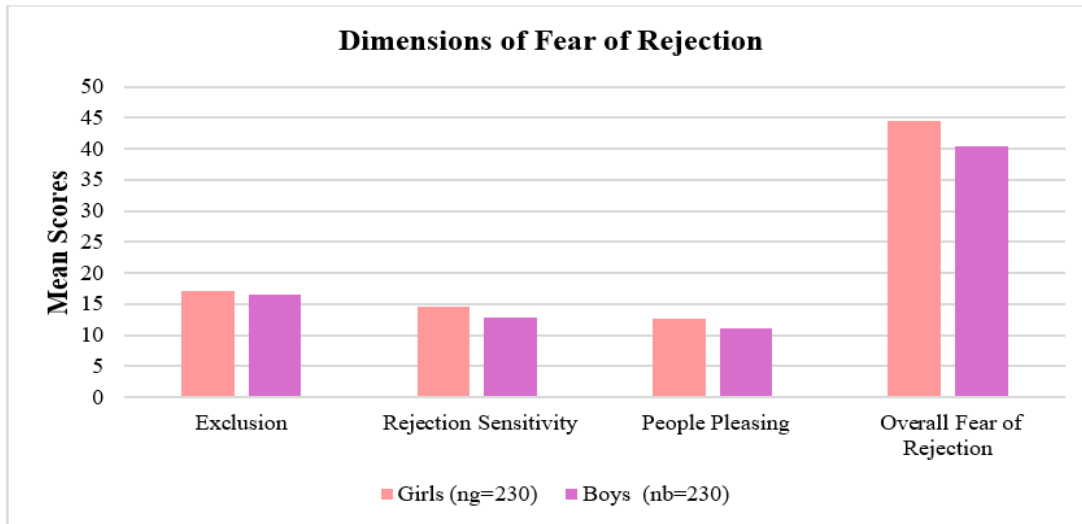


Figure 11: Gender-wise differences in the mean scores ($\pm$ S.D.) of the adolescents across different dimensions of fear of rejection

According to the findings presented in Table 3 and Figure 3, there were non-significant gender differences in mean scores for exclusion, a dimension of fear of rejection. Compared to boys (16.58 ± 3.94), girls felt more excluded (17.12 ± 3.57). Similar patterns were observed in rejection sensitivity, with significant differences ($t=4.97$, $p<0.01$) between girls (14.67 ± 4.05) and boys (12.84 ± 3.83). There was a significant difference in mean scores for the people-pleasing dimension of fear of rejection ($t=4.02$, $p<0.01$). A later study found that girls were perceived as more people-pleasers (12.70 ± 4.23) than boys (11.10 ± 4.28). Similarly, overall fear of rejection was shown to differ significantly ($t=4.44$, $p<0.01$) between boys (40.47 ± 9.58) and girls (44.40 ± 9.37). It was shown that girls were more afraid of rejection than boys.

Table 4: Gender-wise distribution of adolescents across different dimensions and levels of loneliness (n=460)

Dimensions of Loneliness	Levels	Gender				Z-Value
		Girls (n _g =230)		Boys (n _b =230)		
		<i>f</i>	%	<i>f</i>	%	
Social Relationship	Low	25	10.87	19	8.26	0.95
	Average	123	53.48	110	47.83	1.21
	High	82	35.65	101	43.91	1.81
Interpersonal relationship	Low	24	10.43	21	9.13	0.47
	Average	123	53.48	104	45.22	1.77
	High	83	36.09	105	45.65	2.08*
Distressed Reaction	Low	43	18.70	38	16.52	0.61
	Average	169	73.48	164	71.30	0.52
	High	18	7.83	28	12.17	1.55
Social Isolation	Low	36	15.65	33	14.35	0.39
	Average	188	81.74	168	73.04	2.22*
	High	6	2.61	29	12.61	4.04**
Emptiness	Low	27	11.74	17	7.39	1.58
	Average	123	53.48	102	44.35	1.95
	High	80	34.78	111	48.26	2.93**

Dimensions of Loneliness	Levels	Gender				Z-Value
		Girls (n _g =230)		Boys (n _b =230)		
		<i>f</i>	%	<i>f</i>	%	
Overall Loneliness	Low	24	10.43	15	6.52	1.50
	Average	133	57.83	105	45.65	2.61**
	High	73	31.74	110	47.83	3.52**

**Significant at 1% level of significance

*Significant at 5% level of significance

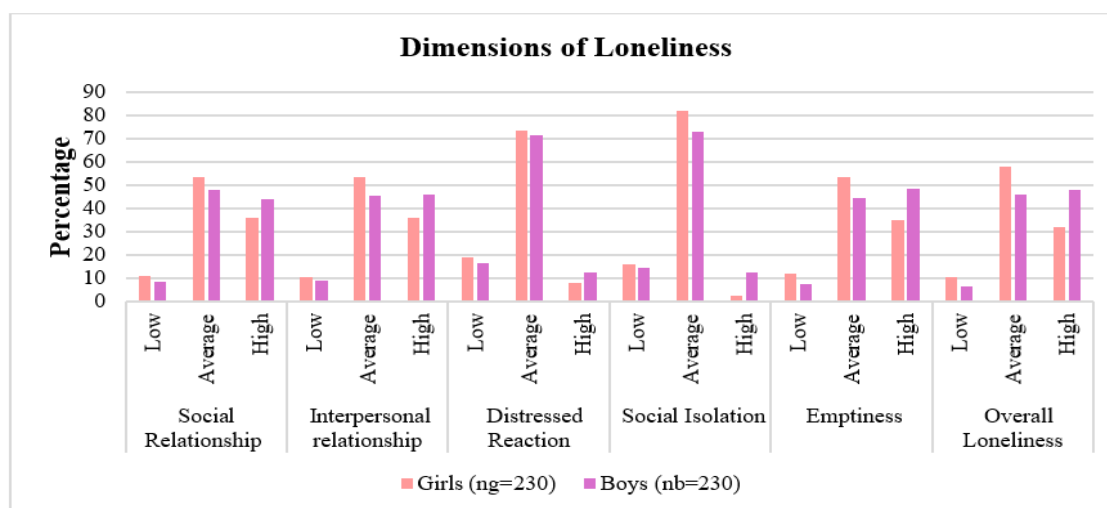


Figure 12: Gender-wise distribution of adolescents across different dimensions and levels of loneliness

Social Relationship (SR): The results showed that girls' percentage distribution (10.87%) was larger than boys' (8.26%) at low level of social relationship. Similarly, at the average level, girls' percentage distribution (53.48%) was larger than boys' (47.83%). There were more boys (43.91%) than girls (35.65%) at the high level. There was no significant difference across any level of social relationship.

Interpersonal Relationship (IR): The data on interpersonal relationship indicated that there was a high percentage of girls (10.43%) as compared to boys (9.13%) at low level with no significant difference. At the average level, there was no significant difference between the percentage distribution of boys (45.22%) and girls (53.48%), but at the high level, there was a significant difference ($Z=2.08$, $p<0.05$), indicating that a higher percentage distribution of boys (45.65%) had better interpersonal relationships than girls (36.09%).

Distressed Reaction (DR): It was shown that a higher percentage of girls (18.70%) than boys (16.52%) were at a low level. A similar pattern was seen at the average level, with girls' percentage distribution (73.48%) slightly greater than boys' (71.30%). Boys had a higher percentage (12.17%) than girls (7.83%) at the high level. There was no significant difference in the percentage distribution of distressed reaction at any level.

Emptiness (EMP): The results revealed that, at a low level, there was no significant difference between the percentage distribution of girls (11.74%) and boys (7.39%) in the emptiness dimension of loneliness. A similar pattern with no significant difference was seen at the average level, with girls having a higher percentage (53.48%) than boys (44.35%). At

the high level, the percentage of boys (48.26%) was significantly ($Z=2.93$, $p<0.01$) higher than that of girls (34.78%), suggesting that boys experienced greater feelings of emptiness.

Overall Loneliness: The percentage distribution of girls (10.43%) and boys (6.52%) did not significantly differ at the low level, according to the data in Table 4 and Figure 4. At the average level, the percentage of girls (57.83%) was significantly greater than that of boys (45.65%) ($Z=2.61$, $p<0.01$). Although at a high level, the percentage distribution of boys (47.83%) was higher than that of girls (31.74%), with a significant difference of ($Z=3.52$, $p<0.01$).

Table 5: Gender-wise differences in the mean scores ($\pm$ S.D) of the adolescents across different dimensions of loneliness (n=460)

Dimensions of Loneliness	Gender				t-value
	Girls (n _g =230)		Boys (n _b =230)		
	Mean	SD (±)	Mean	SD (±)	
Social Relationship	26.28	5.31	27.33	4.94	2.18*
Interpersonal Relationship	28.61	6.40	29.57	6.60	1.57
Distressed Reaction	17.58	3.93	18.90	4.01	3.54**
Social Isolation	21.42	3.83	22.20	4.64	1.97*
Emptiness	24.49	4.67	25.75	4.68	2.90**
Overall Loneliness	118.51	18.53	123.64	20.33	2.82**

**Significant at 1% level of significance

*Significant at 5% level of significance

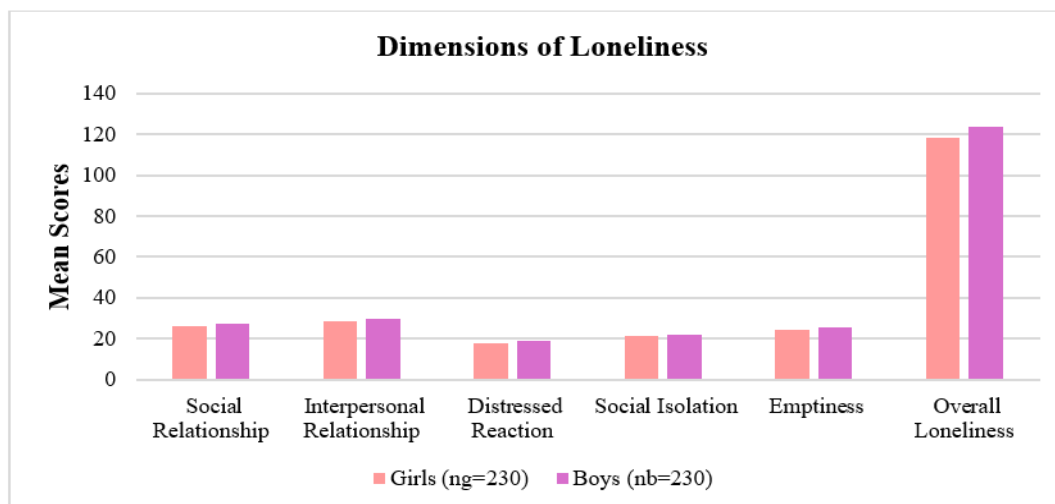


Figure 13: Gender-wise differences in the mean scores ($\pm$ S.D) of the adolescents across different dimensions of loneliness

The analysis in Table 5 and Figure 5 depicted the gender-wise differences in mean scores of adolescents across different dimensions of loneliness. Compared to girls (26.28 ± 5.31), boys (27.33 ± 4.94) had significantly ($t=2.18$, $p<0.05$) better social relationships. Furthermore, there was no significant difference between the interpersonal relationships of boys (29.57 ± 6.60) and girls (28.61 ± 6.40). Gender differences in mean scores were significant ($t=3.54$, $p<0.01$), with boys (18.90 ± 4.01) showing a more distressed reaction than girls (17.58 ± 3.93). Furthermore, it was demonstrated that boys (22.20 ± 4.64) felt more socially isolated than girls (21.42 ± 3.83), with a significant difference in mean scores ($t=1.97$, $p<0.05$).

Rejection Sensitivity, Perceived Loneliness and Optimum Health: Examining Gender Differences

Boys had significantly ($t=2.90$, $p<0.01$) higher mean scores (25.75 ± 4.68) than girls (24.49 ± 4.67) on the emptiness dimension of loneliness. In terms of overall loneliness, boys' mean scores (123.64 ± 20.33) were significantly ($t=2.82$, $p<0.01$) higher than girls' (118.51 ± 18.53). Boys were shown to be more lonely than girls.

Table 6: Gender-wise distribution of adolescents across different dimensions and levels of optimum health (n=460)

Dimensions of Optimum Health	Levels	Gender				Z-Value
		Girls (n _g =230)		Boys (n _b =230)		
		<i>f</i>	%	<i>f</i>	%	
Physical Health	Low	7	3.04	11	4.78	0.96
	Average	147	63.91	112	48.70	3.29**
	High	76	33.04	107	46.52	2.95**
Mental Health	Low	8	3.48	6	2.61	0.54
	Average	164	71.30	155	67.39	0.91
	High	58	25.22	69	30.00	1.14
Social Health	Low	15	6.52	13	5.65	0.39
	Average	180	78.26	193	83.91	1.54
	High	35	15.22	24	10.43	1.53
Emotional Health	Low	2	.87	5	2.17	1.14
	Average	130	56.52	123	53.48	0.65
	High	98	42.61	102	44.35	0.37
Spiritual Health	Low	5	2.17	5	2.17	0.00
	Average	78	33.91	83	36.09	0.48
	High	147	63.91	142	61.74	0.48
Overall Optimum Health	Low	3	1.30	6	2.61	1.01
	Average	124	53.91	100	43.48	2.23*
	High	103	44.78	124	53.91	1.95

**Significant at 1% level of significance

*Significant at 5% level of significance

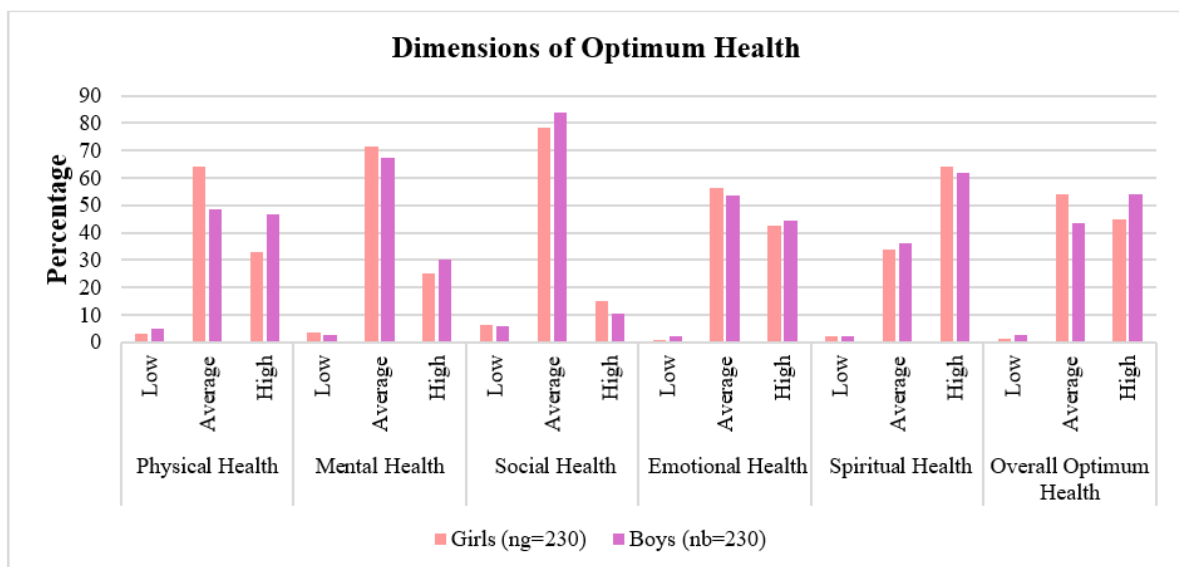


Figure 14: Gender-wise distribution of adolescents across different dimensions and levels of optimum health

Physical Health: Table 4.3.11's results showed that a very small proportion of boys (4.78%) were at a higher level than girls (3.04%). No significant difference was found at this level. Girls' percentage distribution (63.91%) was significantly ($Z=3.29$, $p<0.01$) higher than boys' (48.70%) at the average level. Boys (46.52%) outnumbered girls (33.04%) in terms of high physical health, with a significant difference of ($Z=2.95$, $p<0.01$).

Mental Health: It was found that negligible proportion of girls were (3.48%) and boys were (2.61%) at low level of mental health. At the average level, a similar pattern was seen, with a higher percentage of girls (71.30%) than boys (67.39%). At a high level, the percentage distribution of boys (30%) was greater than that of girls (25.22%). At every level of mental health, no significant difference was seen.

Social Health: A minor number of girls (6.52%) was found to be slightly higher than boys (5.65%) at low level, according to the data. On the other hand, the majority of boys (83.91%) were more socially active than girls (78.26%). At the high level, girls had a higher percentage (15.22%) than boys (10.43%). It showed no significant variation in social health at any level.

Emotional Health: A negligible proportion of boys 2.17 per cent and girls 0.87 per cent were observed at the low level of emotional health. In terms of emotional health, girls had a higher percentage distribution (56.52%) than boys (53.48%). Boys had a little higher percentage at the high level (44.35%) than girls (42.61%). At every level of emotional well-being, there was no discernible difference.

Spiritual Health: The findings showed a similar minimal percentage distribution of 2.17% among boys and girls with poor spiritual health. On average, boys had a larger percentage (36.09%) than girls (33.91%). There was no discernible difference in spiritual health at any level, with girls having a little higher percentage distribution (63.91%) than boys (61.74%).

Overall Optimum Health: In overall optimum health, results indicated negligible proportions of boys (2.61%) and girls (1.30%) at low level. At average level, percentage distribution of girls (53.91%) was significantly ($Z=2.23$, $p<0.05$) higher than boys (43.48%). At high level, percentage distribution of boys 53.91 per cent was higher than girls 44.78 per cent with no significant difference.

Table 7: Gender-wise differences in the mean scores ($\pm$ S.D) of the adolescents across different dimensions of optimum health (n=460)

Different dimensions of optimum health (N= 460)					
Dimensions of Optimum Health	Gender				t-value
	Girls (n _g =230)		Boys (n _b =230)		
	Mean	SD (±)	Mean	SD(±)	
Physical Health	36.47	4.94	37.59	5.68	2.26*
Mental Health	36.05	5.32	36.49	5.41	0.87
Social Health	29.11	4.77	28.81	4.20	0.71
Emotional Health	27.86	3.85	27.47	4.28	1.02
Spiritual Health	35.10	4.89	35.09	5.21	0.028
Overall Optimum Health	164.59	17.12	165.29	17.86	0.42

**Significant at 1% level of significance

*Significant at 5% level of significance

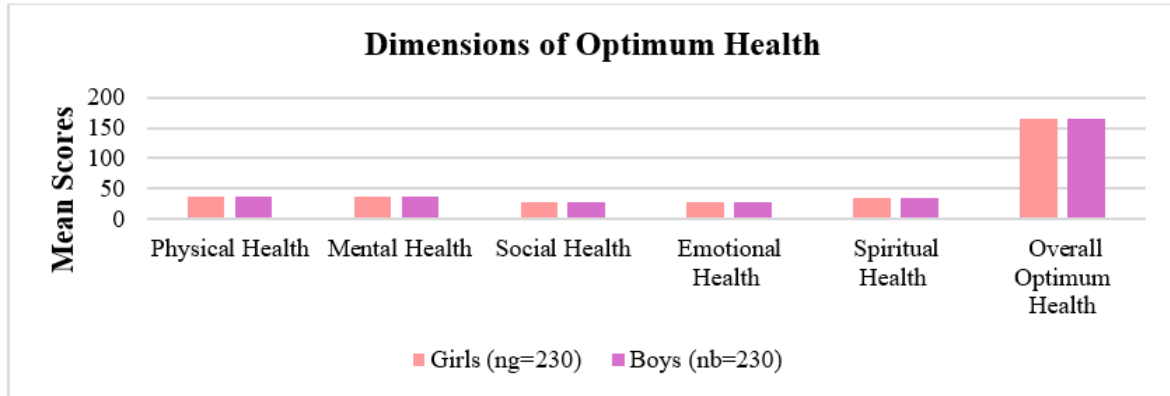


Figure 15: Gender-wise differences in the mean scores ($\pm$ S.D.) of the adolescents across different dimensions of optimum health

The mean score for social health was higher for girls (29.11 ± 4.77) than for boys (28.81 ± 4.20). A similar pattern was seen in emotional health, where girls' mean scores (27.86 ± 3.85) were somewhat higher than boys' (27.47 ± 4.28). According to the data on the spiritual health dimension of optimum health, the mean score for girls (35.10 ± 4.89) and boys (35.09 ± 5.21) was nearly identical. The aforementioned dimensions showed no significant differences. The mean score for overall optimum health was found to be slightly higher for boys (165.29 ± 17.86) than for girls (164.59 ± 17.12), with no statistically significant difference.

Relationship of Rejection Sensitivity with Perceived Loneliness and Optimum Health Among Adolescents.

Table 8 Relationship between different dimensions of loneliness and overall fear of rejection among adolescents as per their gender (n=460)

Dimensions of Loneliness	Overall Fear of Rejection	
	Gender (n=460)	
	Girls (ng=230)	Boys (nb=230)
Social Relationship	-.12	-.23**
Interpersonal Relationship	-.10	-.34**
Distressed Reaction	.13*	.17**
Social Isolation	.02	.32**
Emptiness	.17**	.26**
Overall Loneliness	.15*	.33**

**Significant at 1% level of significance

*Significant at 5% level of significance

Overall loneliness ($r=0.15$, $p<0.05$), emptiness ($r=0.17$, $p<0.01$), and distressed reaction ($r=0.13$, $p<0.05$) were all significantly positively connected with girls' fear of rejection. Similarly, among boys, overall fear of rejection was strongly positively connected with distressed reaction ($r=0.17$, $p<0.01$), social isolation ($r=0.32$, $p<0.01$), emptiness ($r=0.26$, $p<0.01$), and overall loneliness ($r=0.33$, $p<0.01$), indicating that high fear of rejection enhanced loneliness. Overall fear of rejection was found to be significantly negatively correlated with social relationships ($r=-0.23$, $p<0.01$) and interpersonal relationships ($r=-0.34$, $p<0.01$).

Table 9 Relationship between different dimensions of optimum health and overall fear of rejection among adolescents as per their gender (n=460)

Dimensions of Optimum Health	Overall Fear of Rejection	
	Gender (n=460)	
	Girls (n _g =230)	Boys (n _b =230)
Physical Health	-.09	-.06
Mental Health	-.16*	-.20**
Social Health	.07	.04
Emotional Health	-.05	.03
Spiritual Health	-.09	-.01
Overall Optimum Health	-.09	-.07

**Significant at 1% level of significance

*Significant at 5% level of significance

Overall fear of rejection and mental health were shown to be significantly correlated negatively among urban adolescents ($r=-0.18$, $p<0.01$). Similarly, in rural areas, there was no significant link identified across any other dimensions, although there was a strong negative correlation ($r=-0.18$, $p<0.01$) between overall fear of rejection and mental health. Gender-wise analysis revealed that overall fear of rejection and mental health were significantly correlated negatively for girls ($r=-0.16$, $p<0.05$) and negatively correlated for boys ($r=-0.20$, $p<0.01$). For both boys and girls, there was no significant correlation in any other aspect of optimum health. Analysis of data concerning total adolescents reported that, there was a strong negative correlation ($r=-0.20$, $p<0.01$) between overall fear of rejection and mental health. The remaining aspects and total optimal health did not significantly correlate.

DISCUSSION

Gender differentials in rejection sensitivity among adolescents

Across both genders, it was determined that girls had more average and high levels of overall fear of rejection than boys, while a higher percentage of boys were at low levels across all dimensions and overall fear of rejection. Additionally, Zulfikar *et al* (2024) revealed that whereas boys had stronger psychological well-being and less rejection sensitivity, girls showed a more pronounced decline in psychological well-being as rejection sensitivity increased. This discrepancy may be explained by the patriarchal society and male-dominated culture. Girls were more sensitive to these unfavorable social interactions of rejection or social exclusion and had a larger degree of fear of rejection, which may have had a greater impact on their mental health.

Regardless of gender, exclusion was almost the same. However, there was a noticeable difference in other aspects like rejection sensitivity, people-pleasing, and general fear of rejection. Along with the other two factors, it was shown that girls were far more afraid of being rejected than boys. According to a study by Giovazolias and Paschalidi (2022), girls were more likely than boys to have interpersonal anxiety and rejection sensitivity. Generally speaking, girls seemed to have higher anxiety levels than boys and were more prone to develop anxiety disorders. It was found that both the experience of rejection cues and the expectation of rejection may hinder the development of strong interpersonal bonds.

Gender differentials in loneliness among adolescents

Different levels of loneliness were shown by both genders, with a higher proportion of boys experiencing high levels of loneliness overall and a higher percentage of girls

experiencing average levels of loneliness across all categories. Boys were shown to have a high level of general loneliness. A study by Cacioppo *et al* (2009) found that while boys were more prone to stigmatize loneliness, girls were more likely to exhibit negative emotions and show concern for others' feelings. The study also discovered that girls reported loneliness more often than boys, despite possible measurement biases, because they were able to recognize such feelings without facing as many social repercussions. In addition, boys were more likely than girls to respond to several questions with feelings of loneliness.

All characteristics showed significant variations, with the exception of interpersonal relationships. Additionally, there was a significant distinction in overall loneliness between boys and girls, indicating that boys were more likely to experience loneliness. A study that revealed boys were more likely than girls to suffer loneliness starting in adolescence supported these conclusions. Boys showed a greater fall in family time than girls, despite the fact that both genders spent less time with their families. It was demonstrated that girls were more adept at communicating their feelings, whereas boys preferred to withdraw themselves more. During adolescence, a period of self-discovery and identity construction in connection to peers, it was discovered that boys who spent more time alone were more likely to experience loneliness and felt more alienated from others (Maes *et al* 2019).

Gender differentials in optimum health among adolescents

The results showed that over half of the girls had average levels of overall optimum health across all dimensions, including physical, mental, and emotional health, with the exception of social and spiritual health, when a higher percentage of boys had average levels. On the other hand, compared to girls, more than half of the boys had high levels of overall optimal health across a few measures. Liu *et al* (2023) provided additional support for this study by speculating that the influence of the intervention on optimum health may vary by gender because boys and girls engage in different activities. For instance, this study found that boys were more likely to participate in high-intensity activities such as running or weightlifting, as well as more social interactions that are proven to improve mental and social health. On the other hand, studies revealed that girls reported lower levels of physical activity during leisure time than boys, and that time and job limitations severely limited girls' physical activity and self-improvement, which had a detrimental impact on their general health.

Only the physical health dimension showed a significant difference, indicating that males were more physically active than girls. In contrast, there was no significant difference between girls and boys in the other aspects or total optimum health. The health attitudes and practices of adolescent boys and girls were similarly described and compared by Graham and Uphold (2010). According to the results, most boys and girls thought of themselves as healthy and managed their own care in the areas of physical, mental, social, and emotional health. Concerns about nutrition surfaced, as fewer kids skipped breakfast and more than half ate empty-calorie snacks. It was commonly found that adolescents knew how to handle minor injuries and what to do in an emergency. Except for physical health, all aspects of health beliefs and behaviors were similar for boys and girls. In this sense, it was found that whereas girls did not regularly participate in physical activities, boys did.

Assessing the relationship of rejection sensitivity with perceived loneliness and optimum health

Results showed that feelings of social isolation, loneliness, distressed reaction, and emptiness were significantly correlated with a higher fear of rejection in both boys and girls. Among girls, fear of rejection was strongly positively connected with distressed emotion,

emptiness, and general loneliness. Boys too showed a similar pattern. These results led to the conclusion that, regardless of gender, fear of rejection increased higher levels of social difficulties and loneliness. These findings were corroborated by a study by Lin and Fan (2023) which found a significant positive correlation between rejection sensitivity and loneliness. This suggested that emotional and social isolation were more common among adolescents who showed high levels of rejection dread.

This correlation suggested that adolescents who had a persistent fear of rejection were less likely to form or sustain social relationships because they often anticipated rejection or exclusion. By eroding mutual understanding and trust, the propensity to misinterpret ambiguous or neutral social cues as indications of discontent further strained already-existing relationships. As a result, their social networks grew smaller and less encouraging, which increased their sense of isolation and continued a vicious cycle of diminished social activity and failing relationships. Results suggested that adolescents exhibiting higher levels of rejection sensitivity were more prone to poorer health outcomes in general. A significant negative correlation was observed between mental health and overall fear of rejection. The current study was connected to a study by Brendgen and Vitaro (2008), who found that peer rejection was a strong predictor of increasing physical and mental health problems in adolescents, with gender and emotional reactivity influencing this effect. Girls in particular were more likely to report an increase in physical health concerns, such as headaches or stomach troubles. These results indicated that rejection sensitivity, especially in girls, exacerbated the physiological impacts of social stress, which may have implications for immune system performance and disease susceptibility affecting their psychological health as well. It was determined that some people with underlying vulnerabilities had poor health outcomes when they were exposed to external stressors like peer rejection. The study highlighted the need for health education and intervention initiatives, particularly for emotionally reactive adolescents. These interventions could assist these teenagers in developing coping and problem-solving skills that would reduce the long-term psychological and physical impacts of peer-related stress.

CONCLUSION

The study revealed that, adolescents' emotional and social wellbeing is significantly influenced by their rejection sensitivity. The results showed distinct gender disparities, with boys reporting higher levels of loneliness and girls exhibiting a larger fear of rejection. The findings also demonstrated that among adolescents, greater rejection sensitivity is linked to higher levels of loneliness and worse mental health. In order to help adolescents manage rejection-related emotions and improve their optimum health, it is crucial to foster emotional awareness, coping mechanisms and supportive surroundings.

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Conflict of Interest

The author(s) declared no conflict of interest.

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