

Peer Relationships and Interpersonal Reactivity as Predictors of The Social Competence of Learners With Autism

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Abstract — Poor social competence among learners with Autism remains a significant concern in inclusive education. This study determined a predictive model of social competence using peer relationships and interpersonal reactivity as predictors. Employing a predictive research design, the study involved 150 respondents selected through universal sampling. Data were analyzed using multiple linear regression analysis. Findings revealed that peer relationships and interpersonal reactivity significantly and moderately predict the social competence of learners with Autism, collectively explaining 46% of the variance. The results support Social Learning Theory, which emphasizes the role of observation and social interaction in behavior acquisition. It is recommended that future research explore additional variables to account for the remaining variance in social competence. Moreover, schools may optimize resources and implement targeted interventions to strengthen peer relationships and interpersonal reactivity among learners with Autism.

Keywords: Intepersonal reactivity, learners with Autism, peer relationships, predictors social competence

I. INTRODUCTION

Poor social competence among learners with Autism is widely recognized as a persistent global concern in education. Learners with autism spectrum disorder (ASD) often experience significant difficulties in developing appropriate social skills and engaging effectively in social interactions across various contexts (Luqman et al., 2025; Clarke et al., 2023). These challenges persist, indicating that social competence remains a critical area of concern in contemporary educational settings.

Across countries, poor social competence among learners with Autism continues to be documented in diverse educational contexts. In the United States, studies report persistent limitations in social functioning and interaction among learners with ASD (Clarke et al., 2023). Similarly, research in China shows that learners with autism encounter difficulties in applying social skills in real-life situations despite interventions (Cheng et al., 2025). In Pakistan, findings reveal notable challenges in peer engagement and social participation among children with Autism (Luqman et al., 2025). These international findings underscore the pervasive nature of social competence issues among learners with Autism.

In the Philippine context, poor social competence among learners with Autism remains a significant concern, particularly in inclusive classroom settings. These learners continue to exhibit difficulties in social interaction, communication, and participation in school-based activities, reflecting ongoing challenges in addressing their social development needs within the local education system (Khalid et al., 2023). Despite the implementation of inclusive education programs, social competence remains an area requiring sustained attention and improvement.

Poor social competence leads to difficulties adapting, social isolation, and fewer meaningful interactions, underscoring its importance in education (Kourtesis et al., 2023).

This study aligns with Sustainable Development Goals (SDGs) 4 (Quality Education) and 10 (Reduced Inequalities) because it promotes inclusive practices that enhance the social competence of learners with Autism and ensure equitable participation. It supports Philippine education goals, especially the Department of Education's commitment to inclusive education, by offering evidence-based insights for implementing Special Needs Education (SNED).

This study examines how peer relationships and interpersonal reactivity contribute to social competence through behavioural modelling. Its findings support the mission of Holy Cross of Davao College for inclusive, learner-centred education. Furthermore, the results can help schools, families, and communities address social challenges and reduce social isolation among learners with Autism.

The purpose of this study is to determine the influence of peer relationships and interpersonal reactivity on the social competence of learners with autism. Specifically, it aims to determine the levels of peer relationships in terms of intimacy, popularity, trust, and insightfulness; interpersonal reactivity in terms of perspective taking, fantasy, empathic concern, and personal distress; and social competence in terms of social skills, self-esteem, and social-emotional regulation. Furthermore, the study seeks to determine the significance of the relationships among peer relationships, interpersonal reactivity, and social competence, and to examine the predictive model of social competence with peer relationships and interpersonal reactivity as predictors. This study was based on Albert Bandura's Social Learning Theory (1977).

II. METHODOLOGY

This study employed a predictive research design. This design aims to forecast or estimate outcomes based on one or more predictor variables. It focuses on identifying relationships that enable researchers to anticipate outcomes rather than merely describe or explain phenomena. Predictive research design extends traditional explanatory research by emphasising the prediction of outcomes using both theoretical and empirical data (van Witteloostuijn et al., 2022).

The study took place at the SPED Center in Bangoy District, Division of Davao City, a recognized educational hub in Mindanao that promotes inclusive and quality education through programs aligned with the Department of Education, including Special Needs Education (SNED). The site demonstrates active implementation of inclusive programs, such as SNED Fun Day, and supports learners with Autism and other exceptionalities. These characteristics make the setting appropriate for examining the development of social competence within the school environment.

The participants in this study were 150 typically developing peers of learners with Autism. They were from two Grade 5 sections (n = 72) and two Grade 6 sections (n = 78) where learners with Autism were enrolled. These respondents were selected because they have enough awareness and social exposure. This data enables them to provide reliable assessments of peer interactions, which is essential for examining the social competence of learners with Autism.

This study used a survey to collect quantitative data from respondents. A survey is a systematic approach to gathering information from participants using structured instruments, such as questionnaires, to collect standardised data efficiently (Creswell, 2018).

Three adapted questionnaires with a 4-point Likert scale measured the variables. These instruments included the Peer Relationship Scale for Adolescents by Aydođdu (2021), which consists of 15 items (Cronbach’s alpha = 0.749); the Interpersonal Reactivity Index (IRI) by Davis (1980, 1983), which contains 18 items (Cronbach’s alpha = 0.808); and the Children’s Social Competence Scale (CSCS) by Nuñez (2011), which includes 14 items (Cronbach’s alpha = 0.866). These instruments provide reliable and suitable measures of peer relationships, interpersonal reactivity, and social competence.

This study employed three data analysis techniques: descriptive statistics, correlation analysis, and multiple linear regression analysis. Descriptive statistics, specifically the mean and standard deviation, summarized and presented the data. These techniques described the variables, identified patterns, and provided a basis for further analysis (Kim & Mallory, 2023).

The following scale interprets the level of the variables:

<i>Scale</i>	<i>Level</i>	<i>Peer Relationships</i>	<i>Interpersonal Reactivity</i>	<i>Social Competence</i>
3.26-4.00	Very High	Demonstrate excellent peer relationships.	Demonstrate excellent interpersonal reactivity.	Demonstrate excellent social competence.
2.50-3.25	High	Demonstrate good peer relationships.	Demonstrate good interpersonal reactivity.	Demonstrate good social competence.
1.75-2.49	Low	Demonstrate poor peer relationships.	Demonstrate poor interpersonal reactivity.	Demonstrate poor social competence.
1.00-1.74	Very Low	Demonstrate very poor peer relationships.	Demonstrate very poor interpersonal reactivity.	Demonstrate very poor social competence.

Standard Deviation Value of Ranges and Interpretation

SD Value	Range of Interpretation
0.00 – 0.50	Very low variability/responses are very consistent
0.51 – 1.00	Low variability / responses are relatively consistent
1.01 – 1.50	Moderate variability/responses vary significantly
1.51 – 2.00	High variability/responses vary significantly
Above 2.00	Very high variability/responses are highly dispersed

Correlation analysis determined the strength and direction of relationships between variables. This analysis does not imply causation. Pearson’s r served as the statistical measure, as recommended by Schober et al. (2023).

The following interpretation scale for the r-value follows the classification proposed by Guilford (1956):

Computed r	Descriptive Interpretation
+/- 1.00	Perfect Correlation
Between +/- 0.75 - +/- 0.99	High Correlation
Between +/- 0.51 - +/- 0.74	Moderately high correlation
Between +/- 0.31 - +/- 0.50	Moderately low correlation
Between +/- 0.01 - +/- 0.30	Low correlation
0.0	No correlation

Multiple linear regression examined the relationship between a single dependent variable and several independent variables. It predicted outcomes and assessed the influence of predictors. Beta (β) coefficients indicated the strength and direction of each predictor (Hair et al., 2023).

β Value Range	Predictive Strength
$\pm 0.00 - \pm 0.09$	Very Weak
$\pm 0.10 - \pm 0.29$	Weak
$\pm 0.30 - \pm 0.49$	Moderate
$\pm 0.50 - \pm 0.69$	Strong
± 0.70 and above	Very Strong

The study followed established ethical standards throughout the research process. To ensure voluntary participation, signed agreements secured informed consent from all respondents prior to data collection. Moreover, the study strictly maintained confidentiality by excluding any

identifying information, such as names. In addition, the study secured permission from the Department of Education (DepEd) to conduct the research. Furthermore, the study obtained ethical clearance from the Society of Moral Integrity and Legal Ethics (SMILE) to ensure compliance with relevant guidelines.

III. RESULTS AND DISCUSSION

Table 1 presents the descriptive statistics of the study variables, namely: peer relationships (in terms of intimacy, popularity, trust, and insightfulness), interpersonal reactivity (in terms of perspective taking, fantasy, empathic concern, and personal distress), and social competence (in terms of social skills, self-esteem, and social-emotional regulation). It includes the sample size, mean, standard deviation, and corresponding descriptive levels.

TABLE 1
DESCRIPTIVE STATISTICS (N = 150)

Variables	Standard Deviation	Mean	Descriptive Level
Peer Relationships	0.42	3.04	High
<i>Intimacy</i>	0.46	3.20	High
<i>Popularity</i>	0.62	3.11	High
<i>Trust</i>	0.52	3.06	High
<i>Insightfulness</i>	0.70	2.80	High
Interpersonal Reactivity	0.34	2.82	High
<i>Perspective Taking</i>	0.55	2.81	High
<i>Fantasy</i>	0.61	2.76	High
<i>Empathic Concern</i>	0.54	2.92	High
<i>Personal Distress</i>	0.47	2.80	High
Social Competence	0.44	2.96	High
<i>Social Skills</i>	0.51	2.98	High
<i>Self-esteem</i>	0.56	3.03	High
<i>Social-Emotional Regulation</i>	0.58	2.86	High

Specifically, peer relationships had a mean of 3.04, indicating good peer relationships among respondents. All its indicators were likewise rated high. The standard deviation of 0.42 indicates very low variability, suggesting highly consistent responses.

Similarly, interpersonal reactivity had a mean of 2.82, also considered high, indicating that respondents demonstrate good interpersonal reactivity. All indicators under this variable were likewise rated high. The standard deviation of 0.34 indicates very low variability, reflecting consistent responses.

Finally, social competence had a mean of 2.96, indicating good social competence among respondents. All indicators were rated high. The standard deviation of 0.44 indicates very low variability, further suggesting highly consistent responses.

Table 2 presents the correlation between the independent variables (peer relationships and interpersonal reactivity) and the dependent variable (social competence). It includes the r-values, p-values, decisions on the null hypothesis, and corresponding interpretations.

TABLE 2
CORRELATION BETWEEN THE INDEPENDENT VARIABLES AND SOCIAL
COMPETENCE (N = 150)

Variables	r-value	p-value	Decision on H0	Interpretation
Peer Relationships	0.652	< .001	Reject H0	Moderately high, significant
Interpersonal Reactivity	0.530	< .001	Reject H0	Moderately high, significant

Level of Significance: 0.05
Decision Rule: Reject H₀ if p < 0.05

Specifically, peer relationships were significantly associated with social competence ($r = 0.652, p < .001$). Since the p-value is less than the 0.05 level of significance, the null hypothesis was rejected. The result indicates a moderately strong positive correlation, suggesting that stronger peer relationships are associated with greater social competence.

Similarly, interpersonal reactivity was significantly related to social competence ($r = 0.530$, $p < .001$). The null hypothesis was likewise rejected. This indicates a moderately high positive correlation, suggesting that increases in interpersonal reactivity are associated with increases in social competence.

Overall, both peer relationships and interpersonal reactivity are significantly associated with social competence. However, peer relationships show a stronger correlation, suggesting a stronger association with social competence

Table 3 presents the results of the multiple linear regression analysis, including the unstandardised coefficients (B), standard errors, standardised coefficients (β), t-values, p-values, and corresponding decisions.

TABLE 3
REGRESSION ANALYSIS PREDICTING SOCIAL COMPETENCE (N = 150)

Independent Variables	Social Competence						Decision on H_0	Interpretation
	Unstandardised Coefficients		Standardised Coefficients					
	B	Std. Error	Beta	t	Sig.			
(Constant)	.43	.23	-	1.84	.068	-	-	
Peer Relationships	.55	.08	.52	7.07	.000	Reject	Significant	
Interpersonal Reactivity	.31	.09	.24	3.22	.002	Reject	Significant	

Model Summary:

$R = 0.68$ | $R^2 = 0.46$ | $F = 63.52$ | $p = 0.000$

Level of Significance: 0.05

Decision Rule: Reject H_0 if $p < 0.05$

Predictive Model: $SC = .55 PR + .31 IR$

The results indicate that both peer relationships ($\beta = 0.52$, $p < .001$) and interpersonal reactivity ($\beta = 0.24$, $p = .002$) significantly predict social competence. Thus, the study rejected the null hypothesis.

The model summary shows that the regression model is statistically significant ($F = 63.52$, $p < .001$), with an R value of 0.68 and an R^2 value of 0.46. This indicates that 46% of the variance in social competence is explained by the combined influence of peer relationships and interpersonal reactivity, reflecting a moderate level of predictive strength.

The predictive model is expressed as: $SC = 0.55(PR) + 0.31(IR)$

This suggests that peer relationships contribute more strongly to social competence than interpersonal reactivity, as indicated by the larger standardised beta coefficient.

IV. SUMMARY OF FINDINGS

The statistical analysis found the following.

1. Both peer relationships and interpersonal reactivity significantly correlate with the social competence of learners with Autism.
2. Peer relationships and interpersonal reactivity predict social competence, accounting for 46% of the variance among learners with Autism.

V. DISCUSSION

Correlation of Peer Relationships, Interpersonal Reactivity, and Social Competence

This study finds that peer relationships significantly correlate with social competence. This study supports de Swart et al. (2022), who found that high-quality peer relationships are associated with socially competent behaviour. The study also aligns with Wentzel and Muenks (2023), who asserted that peer relationships significantly aid the development of social competence by providing practice and fostering prosocial behaviour.

However, this finding contrasts with that of Dionne et al. (2025), who suggested that peer relationships are not always directly linked to social competence. Other variables may have stronger effects. The difference may be due to sample size and context: Dionne et al. had 63 respondents; this study had 150 participants.

The results show that interpersonal reactivity correlates significantly with social competence. This study aligns with Lucas-Molina et al. (2024), whose findings emphasise that perspective-taking and emotional responsiveness directly contribute to social competence. This study also supports Chen et al. (2022), who highlight that interpersonal reactivity shapes social competence outcomes.

In contrast, Lin et al. (2024) argued that interpersonal reactivity does not always directly predict social competence. Mediating variables may affect their impact. Contextual differences may explain the variation: Lin et al. studied China; this study focused on the Philippine

Social Competence as Predicted by Peer Relationships and Interpersonal Reactivity

This study shows that peer relationships and interpersonal reactivity predict social competence. This study supports Silveira-Zaldivar et al. (2021), who emphasised these traits as key predictors.

The findings align with Feldman (2023), who found that higher social competence is associated with greater peer inclusion and better interpersonal reactivity, reflecting learners' ability to respond to social and emotional cues.

These findings contradict those of Magro et al. (2023), who found no significant effects of peer relationship quality on social competence. This study shows that both peer relationships and interpersonal reactivity together predict social competence, underscoring their combined role in the social development of Autism learners.

VI. CONCLUSION

The findings show that peer relationships and interpersonal reactivity predict social competence in Autism learners, accounting for 46% of the variance. This result shows a moderate predictive strength.

This study supports Social Learning Theory, which holds that people learn new behaviours through direct experience and observation of others. The findings show both social interaction (peer relationships) and empathic processes (interpersonal reactivity) are key to social competence.

VII. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed:

1. Future research may explore additional variables not included in this study to account for the remaining 54% of the variance in social competence.
2. Exploratory studies may be conducted to generate themes that can serve as potential variables and indicators for future research.
3. School leaders and educators may optimize available resources by implementing programs, training, and policy enhancements that strengthen peer relationships and interpersonal reactivity, thereby improving the social competence of learners with Autism.

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