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ORIGINAL ARTICLE

# Effects of perceived intrapersonal problem-solving and social competence on emotional regulation in adolescents

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Author`s Contribution

*[1] Conceptualization of study, analysis, and interpretation of data*

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A B S T R A C T

**Introduction:** There is a need to assess the effects of interpersonal problem-solving and social competence on emotional regulation in adolescents. The research was investigating the effect of interpersonal problem-solving and social competence on emotional regulation in adolescents. Moreover, the impact of the study based on demographical variables was also explored.

**Objective:** This study aimed to assess perceived interpersonal problem-solving and social competence in the emotional regulation of adolescents in Sialkot.

**Methodology:** A sample of 345 adolescents with the age range of (11 to 20 years) was collected from various educational institutes in Sialkot through a random sampling technique. For collecting data, interpersonal problem solving, social competence, and emotional regulation, the Inventory of Interpersonal problems IIP-32, Social Competence Inventory, and Cognitive Emotional Regulation Questionnaire were used as assessment tools. Statistical analysis of correlational analysis, regression analysis, t-test, and descriptive analysis was applied to the collected data.

**Results:** Results indicated that interpersonal problem-solving, and social competence significantly correlate with emotional regulation ($r$ = 0.25$^{**}$, $^{**}p$<0.01, $r$ = 0.31$^{**}$, $^{**}p$<0.01, $r$=0.42$^{**}$, $^{**}p$<0.01 respectively). Further applied analysis indicated that interpersonal problem-solving, and social competence also significantly predict emotional regulation among adolescents (β = 0.31 and β = 0.42, respectively).

**Conclusion:** Results of current research concluded that emotional regulation positively correlates with interpersonal problem-solving and social competence. Further, interpersonal problem-solving, and social competence also positively correlates with each other.

**Keywords:** *Intrapersonal, Social competence, Emotional regulation, Adolescents*

## Introduction

Currently, adolescents are facing various problems consisting of majorly components i.e., psychological, social, and moral levels. Adolescence is an ambiguous period of one's life. To have matured approach toward a better future one must be an emotionally stable and effective interactional pattern. Trends suggested that emotions are important in formulating an individual's perception. According to the researchers, societal stressors produce a major influence on adolescents' emotions.[1] It is mainly observed that these emotional imbalances are created due to the criticism from society which is produced due to societal interaction. Therefore, it is important to observe interpersonal problem-solving capacity and social competence.

Our study aimed to analyze the consequences of interpersonal problem-solving and social competence on emotional regulation among the adolescents of the Pakistani population. Reviewing various articles and

journals a map study was formulated to explore the effect of interpersonal problem-solving and social competence on the emotional regulation of adolescents. Interpersonal problem-solving skills are an ability to generate a solution to deal with the obstacle concerned with the formulation of solutions that became persistent over time based on the outcome of the results. Adolescents' being socially interactive creatures dealt with the problem they face in their daily life on interpersonal and intrapersonal, resolving issues such as social, emotional, cognitive, and behavioral levels. These interactions formulate the multi-dimensional functionality of an adolescent known as social competence. This social interactional adaptation leads to the formulation of the perspective with which an adolescent formulates their future experiences. According to a study, social competence is goal-directed behavior, which is vitally important for an adolescent to have a secure further or to be completely deviant.[2] Moreover, interpersonal problem-solving and social competence of an adolescent is directly linked to their future perspective and emotionally matured. According to a research study, emotional regulation is an adolescent's process by which they express these emotions such as their positive and negative experiences of their life.[3]

## Methodology

A cross-sectional survey was used to carry out the current study. Data was collected from different age groups ranging from 11 to 20 years, with different characteristics, such as socioeconomic status, educational background, family system, ethnic background, etc., for the assessment of their interpersonal problem-solving and, social competence effect on emotional regulation. The sample of 345 adolescents was collected from different schools, colleges, and universities in Sialkot, Pakistan. Convenient sampling was used for collecting data. For this purpose list of different schools, colleges, and universities was attained from Education District Office (EDO) Sialkot. Every fifth institute was selected from the list for data collection.

**Demographic Variables:**

It comprising of an individual's information such as name, age, sex, education, family structure, family income, earning members, marital status, socioeconomic status, grades, number of siblings, and birth order. This scale is designated to gain information according to the research requirement. Demographic form and other three scales devised in Urdu were used.

**Inventory of interpersonal problems (IIP-32)**:

The IIP-32 is a 32-item measure of under and overdeveloped interpersonal strategies with eight subscales reflecting different interpersonal problems. Twenty questions assess aspects that are hard for the person to do. A five-point response format was utilized starting at; (0) 'not at all', (1) a little bit, (2) 'moderately', (3) 'quite a bit', to (4) 'extremely. For the targeted population, Urdu translation was done following the standard procedure of translation so that tool could be easily comprehensible.[4]

**Social competence inventory:**

The 25-item social competence inventory measured the behavioral feature of social competence, developed with parents and teachers of children ages 7-10 years. Objects rated on a 5-point scale from 1 = does not apply at all 5 = applies very well. Higher scores indicate higher competence. This questionnaire contains statements describing children's behavior. [5]

**Cognitive emotion regulation questionnaire:**

Research suggested that it is a multi-exile questionnaire constructed to identify the emotion regulation strategy that someone uses after having experienced a negative trial or site to develop cognitive emotion regulation. It has good factorial validity and high reliability, with Cronbach's as ranging between 0.75 and 0.87. [6]

**Pilot Testing:**

Pilot testing was conducted on 10% of the sample size which is 45 students. The average time to complete the questionnaire was 25 minutes. Since the tool was in Urdu (the national language) there was no linguistic or other problem identified in the pilot study. The Cronbach's alpha for tools was measured at 0.79, 0.81, and 0.84 which is favorable. [7]

**Data collection:**

The current research was divided into four major phases. Phase I (Research Design Selection), Phase II (Pilot Study), Phase III (Data Collection), and Phase IV (Analysis). After consulting the literature variable for the research were decided i.e., interpersonal problem-solving,

social competence, and, emotional regulation. To measure the interpersonal problem-solving assessment tool developed by IIP-32, and for assessing social competence tool developed by.[4, 5] Social Competence Inventory was used. Both tools were in English version so, they were translated into Urdu following the standard procedure consisting of the steps i.e., forward translation, panel meeting, back translation, pre-testing and cognitive interviewing, final version and, documentation of the Urdu version. To assess the emotional regulation tool developed by Garnefski (2003) i.e., the Cognitive emotion regulation questionnaire (CERQ) translated version was used. Moreover, ethical rights were also given to the participants. Statistical Package for Social Sciences (SPSS) was used to generate results by applying person correlation analysis, and linear regression analysis.

## Results

The current study aimed at the effect of interpersonal problem-solving and social competence on the emotional regulation of adolescents. The data were investigated and showed the following results.

**Table 1: Mean, standard deviation, and correlation matrix for all variables (345)**

| Variables | IPS | SC | ER | M | SD |
|---|---|---|---|---|---|
| Ips | --- | .25** | .31** | 58.15 | 15.99 |
| SC | --- | --- | .42** | 85.77 | 13.29 |
| CER | --- | --- | --- | 110.24 | 18.84 |

**Note:** IPS= Inventory of interpersonal problems, SC= social competence inventory, CERQ= cognitive emotional regulation questionnaire. **p<0.01. *p<0.05

Table 1 indicates that Interpersonal Problems solving (IPs), Social Competence (SC), and Cognitive Emotional Regulation (CER) significantly correlate with each other at a significance level of 0.01. This table shows that interpersonal problem-solving (IPS) significantly correlated with social competence (0.25**) and Cognitive emotional regulation (0.31**) respectively. Whereas Social competence (SC) also significantly correlates with (CER) Cognitive emotional regulation at (0.42**).

Table 2 describes inter-correlations among scales and subscales. Results suggested that IPS and its all subscales have a significant positive correlation with the Cognitive Emotion Regulation Questionnaire (CERQ). The table also indicates that IPS significantly correlates with the CER's sub-components.

Table 3 indicates that total SC significantly correlates with the CER's sub-components. Total social competence shows a non-significant result with the other-blame (0.01), catastrophizing (0.09), other-blame (0.03), catastrophizing( 0.09), other-blame (-0.01), catastrophizing (0.09), other-blame (-0.02).

Table 4 shows that sub-components of IPs i.e., controlling, self-centered, distant, socially inhibited, nonassertive, overly accommodating, self-sacrificing, Intrusive., significantly correlate with sub-component of emotional regulation i.e., self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, other-blame. It also showed non-significant results with the self-blame.

Table 5 shows that sub-components of Social competence (SC) i.e., Prosocial Orientation, Social Initiative, significantly correlate with cognitive emotional regulation (CER) the sub-components, such as Prosocial orientation significantly correlate with Self-blame, Acceptance, rumination, and positive refocusing, refocus on planning, positive reappraisal and putting into perspective. Results also showed that social initiative significantly correlates with Self-blame, rumination, putting into perspective, catastrophizing, and other blame. Whereas, Prosocial orientation indicated non-significant results with Acceptance, Catastrophizing, and, other blame. The social initiative shows significant results with the Accepta Positive refocusing, Refocus on planning, and positive reappraisal.

Table 6 indicates that the sub-component of social competence i.e., pro-social orientations and social initiative significantly correlate with the sub-component of interpersonal problem solving i.e., domineering with the Prosocial orientation (-0.23**) and, social initiative (0.17**). Results also showed that Self-centered correlates with the Prosocial orientation (0.22**), and cold/distant positively correlate with the Prosocial orientation (0.17**). It shows nonassertive significantly correlates with Prosocial orientation (0.19**), table indicated that overly accommodating correlate with social initiative (0.14**), at

the end it is show that self-sacrificing correlate with Prosocial orientation (0.29**), social initiative (0.14*).

Table 7 indicates that 9% of the variance in emotional regulation can be attributed to a model comprising Interpersonal Problem Solving as a predictor ($R^2$ = 0.09, $p$<0.001). Overall, the model was significant {$F$ $(1,343)$ = 37.01, $p$<0.001}, and IPS was the significant positive predictor of cognitive-emotional regulation ($\beta$ =0.31, $t$ =6.08, $p$<0.001). Whereas interpersonal problems were excluded as a predictor.

The model presents an interaction of Domineering/Controlling, Vindictive/Self-Centered and Cold/Distant, socially inhibited, Nonassertive, Overly Accommodating, self-sacrificing, and Intrusive/ Needy as a predictor of Emotional Regulation (Table 8). The overall model was found to be significant with $\Delta R^2$= 0.14, $\Delta F$ = 7.72, and $p$< 0.05. Domineering/Controlling is non-significant in predicting the Emotional Regulation with $\beta$ =-0.03, $t$=-0.92, and $p$<0.05. Vindictive/Self-Centered was found to be non-significantly predicting Emotional Regulation with $\beta$ = 0.00, $t$ =-0.60, Cold/ distant was found to be non-significantly predicting Emotional Regulation with $\beta$ = 0.13, $t$ =1.73, socially inhibited was found to be significantly predicting Emotional Regulation with $\beta$ =-0.01, $t$ =0.19. Nonassertive was found to be non-significantly predicting Emotional Regulation with $\beta$ = 0.04, $t$ =0.59. Overly Accommodating was found to be non-significantly predicting Emotional Regulation with $\beta$ = 0.11, $t$ =1.89, $p$<0.01, self-sacrificing was found to be significantly predicting Emotional Regulation with $\beta$ = 0.19, $t$ = 3.46, $p$<0.01. Whereas, Intrusive/ Needy was found to be significantly predicting Emotional Regulation with $\beta$ = 0.18, $t$ = 0.3.12, and $p$<0.01. The product of these variables contributes to a .16% variance in the dependent variable ($R^2$ = 0.16).

Table 9 indicates that 0.17% of the variance in emotional regulation can be attributed to a model comprising Interpersonal Problem Solving as a predictor ($R^2$ = 0.17, $p$<0.001). Overall the model was significant {$F$ $(1,343)$ = 73.62, $p$<0.001}, and IPS was the significant positive predictor of cognitive emotional regulation ($\beta$ = 0.42, $t$ = 8.58, $p$<0.001).

Table 10 showed that model 1 presented an interaction of Prosocial Orientation as the predictor of Cognitive Emotional Regulation was found to be non-significant with $\Delta R^2$= 0.14, $\Delta F$ = 58.06, $\beta$ = 0.38, $t$ = 7.62). The product of these variables contributes to a 0.15% variance in the dependent variable ($R^2$ = 0.15). Model 2 presented an interaction of Pro-social Orientation and Social Initiative as a predictor of Emotional Regulation. The overall model was found to be significant with $\Delta R^2$= 0.17, $\Delta F$ =37.24, and $p$<0.001. Pro-social Orientation was non-significant in predicting Emotional Regulation with $\beta$ =0.36, $t$ =7.39, and $p$<0.05. Whereas Social Initiative was found to be significantly predicting Emotional Regulation with $\beta$=0.19, $t$ = 3.77, $p$< 0.001. The product of these variables contributes to .18% variance in the dependent variable ($R^2$ = 0.18).

**Table 2: Correlation Matrix for total IPS with ER's sub components Variables Used in the Study (N = 345)**

| V | T.IP | SB | A | R | PR | RP | PRE | PP | C | OB | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T.IP | --- | .16** | .17** | .19** | .18** | .19** | .17** | .15** | .27** | .16** | 11.33 | 3.41 |
| SB | --- | --- | .45** | .48** | .14** | .22** | .14** | .44** | .39** | .17** | 11.64 | 3.30 |
| A | --- | --- | --- | .49** | .31** | .33** | .31** | .34** | .38** | .17** | 12.17 | 3.50 |
| R | --- | --- | --- | --- | .27** | .27** | .27** | .41** | .39** | .21** | 14.39 | 3.59 |
| PR | --- | --- | --- | --- | --- | .63** | 1.0** | .38** | .09 | .03 | 14.46 | 3.43 |
| RP | --- | --- | --- | --- | --- | --- | .63** | .41** | .09 | .01 | 14.39 | 3.59 |
| PRE | --- | --- | --- | --- | --- | --- | --- | .38** | .09 | .03 | 12.32 | 3.51 |
| PP | --- | --- | --- | --- | --- | --- | --- | --- | .33 | .24 | 10.63 | 3.43 |
| C | --- | --- | --- | --- | --- | --- | --- | --- | --- | .40 | 10.44 | 3.52 |
| OB | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

**Note:** T.IP= Total interpersonal problem, SB= Self-blame, A= Acceptance, R= rumination, PR= positive refocusing, RP= refocus on planning, PRE= positive reappraisal, PP= putting into perspective, C= catastrophizing, OB= other blame, **p<0.01.

**Table 3**: **Correlation Matrix for SCI to sub component of CERQ's all the Variables Used in the Study (N = 345)**

**Note:**

| V | T.SC | SB | A | R | PR | RP | PRE | PP | C | OB | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T.SC | --- | .17** | .26** | .21** | .44** | .40** | .44** | .29** | .15** | .01** | 11.33 | 3.41 |
| SB | --- | --- | .45** | .48** | .14** | .22** | .14** | .44** | .39** | .17** | 11.64 | 3.30 |
| A | --- | --- | --- | .49** | .31** | .33** | .31** | .34** | .38** | .17** | 12.17 | 3.50 |
| R | --- | --- | --- | --- | .27** | .27** | .27** | .41** | .39** | .21** | 14.39 | 3.59 |
| PR | --- | --- | --- | --- | --- | .63** | 1.0** | .38** | .09 | .03 | 14.46 | 3.43 |
| RP | --- | --- | --- | --- | --- | --- | .63** | .41** | .09 | .01 | 14.39 | 3.59 |
| PRE | --- | --- | --- | --- | --- | --- | --- | .38** | .09 | .02 | 12.32 | 3.51 |
| PP | --- | --- | --- | --- | --- | --- | --- | --- | .33** | .24** | 10.63 | 3.43 |
| C | --- | --- | --- | --- | --- | --- | --- | --- | --- | .40** | 10.44 | 3.52 |
| OB | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

T.SC= Total social competence, SB = Self-blame, A= Acceptance, R= rumination, PR= positive refocusing, RP= refocus on planning, PRE= positive reappraisal, PP= putting into perspective, C= catastrophizing, OB= other blame, **p<0.01.

**Table 4: Correlation Matrix for sub component of Interpersonal problems and subcomponent of emotional regulation Variables Used in the Study (N = 345)**

| V | C | SC | C/D | SI | N | OC | SS | I/N | SB | A | R | PR | RP | PR | PP | C | OB | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | --- | .07 | .07 | .16** | .05 | .17** | .06 | .24** | .06 | -.02 | .03 | .17** | -.10 | -.17** | .01 | .12** | .23** | 3.71 | 3.08 |
| V/SC | --- | --- | .01** | .37** | .51** | .23** | .26** | .17** | .05 | .05 | .06 | .18** | .17** | .17** | .05 | .11* | .03 | 8.77 | 4.60 |
| C/D | --- | --- | --- | .40** | .50** | .25** | .24** | .16** | .09 | .09 | .06 | .17** | .18** | .17** | .09 | .15** | .06 | 8.61 | 4.19 |
| SI | --- | --- | --- | --- | .47** | .02 | .18** | .27** | .00 | .09 | .09 | .05 | .09 | .05 | .04 | .14** | .08 | 7.17 | 3.41 |
| N | --- | --- | --- | --- | --- | -.05 | .16** | .19** | .03 | .03 | .08 | .12* | .13* | .12* | .08 | .16** | .07 | 8.19 | 3.54 |
| OC | --- | --- | --- | --- | --- | --- | .20** | .16** | .15** | .05 | .21** | -.02 | -.07 | -.21 | .09 | .11* | .13* | 5.72 | 3.25 |
| SS | --- | --- | --- | --- | --- | --- | --- | .38** | .17** | .24** | .19** | .25** | .23** | .25** | .14** | .21** | .08 | 9.19 | 3.49 |
| I/N | --- | --- | --- | --- | --- | --- | --- | --- | .21** | .21** | .22** | .13* | .16** | .13* | .18** | .22** | .11* | 6.79 | 2.86 |
| SB | --- | --- | --- | --- | --- | --- | --- | --- | --- | .45** | .48** | .14** | .22** | .14** | .44** | .39** | .17** | 11.33 | 3.41 |
| A | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .49** | .30** | .33** | .30** | .34** | .38** | .17** | 11.64 | 3.30 |
| R | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .27** | .27** | .27** | .41** | .39** | .21** | 12.17 | 3.50 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PR** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .63** | 1.00** | .38** | .09 | -.03 | 14.39 | 3.59 |
| **RP** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .63** | .41** | .09 | -.01 | 14.46 | 3.43 |
| **PR** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .38** | .09 | -.03 | 14.39 | 3.59 |
| **PP** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .33** | .24** | 12.32 | 3.51 |
| **C** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .40** | 10.63 | 3.43 |
| **OB** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.44 | 3.52 |

**Note:** Sub component of interpersonal problems, C= controlling, SC=self-centered, D=distant, SI=socially inhibited, N=nonassertive, OA=overly accommodating, SS= self-sacrificing, I=Intrusive. Sub component of emotional regulation i.e., SB=self-blame, A=acceptance, R= rumination, PR=positive refocusing, RP=refocus on planning, PR=positive reappraisal, PP=putting into perspective, C=catastrophizing, OB=other-blame. ***p< 0 .01, *p< 0.05.*

**Table 5: Correlation Matrix for sub component of Social competence and subcomponent of Cognitive emotional regulation Variables Used in the Study (N = 345)**

| V | PO | SI | SB | A | R | PR | RP | PRE | PP | C | OB | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PO** | --- | .09 | .13* | .26** | .19** | .47** | .42** | .47** | .23** | .08 | .06 | 62.52 | 11.61 |
| **SI** | --- | --- | .18** | .06 | .12* | .00 | .05 | .00 | .23** | .22** | .23** | 20.21 | 4.03 |
| **SB** | --- | --- | --- | .45** | .48** | .14** | .22** | .14** | .44** | .39** | .17** | 11.33 | 3.41 |
| **A** | --- | --- | --- | --- | .49** | .31** | .33** | .31** | .34** | .38** | .17** | 11.64 | 3.30 |
| **R** | --- | --- | --- | --- | --- | .27** | .27** | .27** | .41** | .39** | .21** | 12.17 | 3.50 |
| **PR** | --- | --- | --- | --- | --- | --- | .63** | 1.00** | .38** | .09 | .03 | 14.39 | 3.59 |
| **RP** | --- | --- | --- | --- | --- | --- | --- | .63** | .41** | .09 | .01 | 14.46 | 3.43 |
| **PRE** | --- | --- | --- | --- | --- | --- | --- | --- | .38** | .09 | .03 | 14.39 | 3.59 |
| **PP** | --- | --- | --- | --- | --- | --- | --- | --- | --- | .03** | .24** | 12.32 | 3.51 |
| **C** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .40** | 10.63 | 3.43 |
| **OB** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.44 | 3.52 |

**Note:** V= Variables, PO=Prosocial Orientation, SI=Social Initiative, SB = Self-blame, A= Acceptance, R= rumination, PR= positive refocusing, RP= refocus on planning, PRE= positive reappraisal, PP= putting into perspective, C= catastrophizing, OB= other blame, **p< 0.01. *p< 0.05.

**Table 6: Correlation Matrix for sub component of Interpersonal problems and Social competence Variables Used in the Study (N = 345)**

| V | D/C | V/SC | C/D | SIN | N | OA | SS | I/N | PO | SI | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **D/C** | --- | .07 | .07 | .16** | .05 | .17** | .06 | .24** | -.23** | .17** | 3.71 | 3.08 |
| **V/SC** | --- | --- | .71** | .37** | .51** | -.23** | .26** | .17** | .22** | .04 | 8.77 | 4.60 |
| **C/D** | --- | --- | --- | .40** | .52** | -.25** | .24** | .16** | .17** | .10 | 8.61 | 4.19 |
| **SIN** | --- | --- | --- | --- | .47** | .02 | .18** | .27** | .09 | .04 | 7.17 | 3.41 |
| **N** | --- | --- | --- | --- | --- | .05 | .16** | .19** | .19** | .10 | 8.19 | 3.54 |
| **OA** | --- | --- | --- | --- | --- | --- | .20** | .16** | -.01 | .14** | 5.72 | 3.25 |
| **SS** | --- | --- | --- | --- | --- | --- | --- | .38** | .29** | .14* | 9.19 | 3.49 |
| **I/N** | --- | --- | --- | --- | --- | --- | --- | --- | .11* | .09 | 6.79 | 2.86 |
| **PO** | --- | --- | --- | --- | --- | --- | --- | --- | --- | .09 | 62.50 | 11.61 |
| **SI** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.21 | 4.03 |

**Note:** D/C= Domineering/Controlling, V/SC= Vindictive/Self-Centered, C/D= Cold/Distant, SIN= Socially Inhibited, N= Nonassertive, OA= Overly Accommodating, SS= Self-Sacrificing, I/N= Intrusive/Needy, PO= Prosocial Orientation, SI= Social Initiative, ***p< 0.01. *p< 0.05.*

**Table 7: Linear Regression Analysis for Interpersonal Problems Solving as Predictor of Emotional Regulation (N = 345)**

| Variable | $R^2$ | $\Delta R^2$ | B | SE | B | t | F (Model) |
|---|---|---|---|---|---|---|---|
| Constant | 0.09 | 0.09 | 88.86 | 3.65 | | 24.38*** | 37.01*** |
| IPS | | | 0.37 | 0.06 | .31 | 6.08*** | |

**Note:** IPS= Interpersonal problem solving, ***p< 0.001.

**Table 8: Linear Regression Analysis for Interpersonal Problems (N = 345)**

| Predictor Variable | $R^2$ | $\Delta R^2$ | B | SE | β | t | F (Model) |
|---|---|---|---|---|---|---|---|
| (Constant) | .16 | .14 | 83.90 | 3.81 | | 22.03** | 7.72*** |
| D/C | | | -.29 | .32 | .05 | -.92** | |
| V/SC | | | -.02 | .31 | -.00 | -.06** | |
| C/D | | | .59 | .34 | .13 | 1.78** | |
| SI | | | -.07 | .33 | -.01 | -.19** | |
| N | | | .20 | .34 | .04 | .59** | |
| OA | | | .61 | .33 | .11 | 1.89** | |
| SS | | | 1.07 | .31 | .19 | 3.46** | |
| I/N | | | 1.17 | .38 | .18 | 3.12** | |

**Note:** D/C= Domineering/Controlling, V/SC= Vindictive/Self-Centered, C/D= Cold/Distant, SI= Socially Inhibited, N= Nonassertive, OA= Overly Accommodating, SS= Self-Sacrificing, I/N= Intrusive/Needy ***p<0.01*.

**Table 9: Linear Regression Analysis for Social Competence as Predictor of Emotional Regulation (N = 345)**

| Variables | $R^2$ | $\Delta R^2$ | B | SE | β | t | F (Model) |
|---|---|---|---|---|---|---|---|
| Constant | .17 | .17 | 59.11 | 6.03 | | 9.80*** | 73.62*** |
| CERQ | | | .59 | .07 | .42 | 8.58*** | |

**Note:** CERQ= Cognitive emotional regulation questionnaire, ***p<0.001

**Table 10: Linear Regression Analysis for Social Competence (N = 345)**

| Model | Predictor Variable | B | SE | β | $R^2$ | $\Delta R^2$ | F (Model) |
|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 71.65 | 5.15 | | .15 | .14 | 58.06*** |
| | PO | .62 | .081 | .38 | | | |
| 2 | (Constant) | 55.84 | 6.57 | | .18 | .17 | 37.24*** |
| 3 | PO | .59 | .08 | .36 | | | |
| 4 | SI | .87 | .230 | .19 | | | |

**Note:** PO= Prosocial Orientation, SI= Social Initiative, ****p<0.001*.

## Discussion

Interpersonal problem-solving is the capacity to resolve the problems in the life of an adolescent, which can be part of their personal, family, and social settings. According to research, interpersonal relationships play the most important role while solving these problems, as their results can either be positive i.e., the solution generated to resolve is effective to have better relationships or they can be negative i.e., worsening of the situation which in turn affect an adolescent's mental status as well as their social interaction.[8, 9] these interpersonal problem-solving skills are complemented by an adolescent's capacity to apply their learned personal knowledge and skills already developed to effectively deal with life situations.[10] Social competence is viewed as goal-specified social skills, sociometric status, relationships, and functional outcomes.[11] These skills induce socially responsible behavior among adolescents', which leads them to self-regulate their emotions.[12]

Mainly focused on the effect of interpersonal problem-solving and social competence on the emotional regulation of adolescents. It is important to understand the main variable of this research i.e., interpersonal problem-solving skills, social competence, and emotional regulation. Based on the finding it is elicited that there is a significant correlation between interpersonal problem-solving and social competence with emotional regulation.[13] Results also suggested via regression analysis that interpersonal problem-solving and social competence predict emotional regulation in adolescents. Table 1 indicates that interpersonal problem-solving positively correlates with the emotional regulation of adolescents at 0.31 ($p$= 0.01). The study suggested that a balanced emotion enhances the ability of individuals to deal with everyday problems more effectively. [14] Therefore, it is vitally important that an adolescent develop a better ability to deal with daily life problems effectively using their interpersonal problem-solving skills and social competence capacity to become betters emotionally regulated. Table 4 shows that the sub-component of interpersonal problems (IPs) i.e., domineering, self-centered, cold/distant, socially inhibited, nonassertive, overly accommodating, self-sacrificing, intrusive., significantly correlate with the sub-component of emotional regulation i.e., self-blame, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, other-blame. A research work elicited that interpersonal sensitivity i.e., perspective to see others, personal evaluation, and view towards personal interaction directly affect the individual's emotional regulation along with the fluid intelligence of an adolescent.[15] Results indicated in Table 1 shows that interpersonal problem solving significantly positively correlate with emotional regulation of adolescent at 0.42 ($p$= 0.01).

Research on emotional understanding as a mediator of correlation between interpersonal competencies, aloneness, perceived social support, and a class of social networks. Table 1 indicates that IPS, significantly correlates with the CER's sub-component i.e., Self-blame, acceptance, rumination, positively refocusing, refocus on planning, putting into perspective, catastrophizing, and other-blame at with significance level of 0.01. Literature suggests that children's behavior strongly influences their social taking.[16] Results obtained indicate that Table 5 shows that, Prosocial Orientation positive relationship with self-blame, acceptance, ruminations, positive refocusing, refocus on planning, positive reappraisal, and Putting into Perspective at a level of $p$<0.05. Whereas there is no relationship between Prosocial Orientation and Catastrophizing and other blame. Similarly, a report discussed social competence as the ability and compatibility of an adolescent to achieve different goals and the generation of adaptive responses.[17] Which is the requirement of the social society, similarity could be observed in the results obtained as it is vitally important as prosocial behaviors and social initiation leads towards goal-directed behaviors, which benefits others and increases the chances of an adolescent's social appraisal and acceptance.[18] Therefore, this positive health acceptance and societal relationships further create emotional stability which further creates well regulates human emotions in such situations for the future. Hence, adolescents have a better ability to deal with daily life problems i.e., interpersonal problem-solving also has better social competence indicating that there is a positive correlation between the two variables. Results obtained indicate that controlling, self-centered, distinct, nonassertive, self-sacrificing, and needs significantly correlate with pro-social behavior. Research presented that pro-social orientation helps adolescents have a

positive association with positive peer interaction, a good family social environment, and a positive personality. [18] According to the researcher, individuals who take responsibility for their own life are mentally strong and interns lead towards better adaptability, confidence, and self-awareness.[19] The results showed that Table 2 indicates that interpersonal problem-solving is a significant predictor of cognitive-emotional regulation. The study indicated that high-quality relationships with peers significantly predict this stability in emotional regulation and a high capacity to resolve interpersonal problems solving with friends. Adolescents having a better ability to deal with daily life problems i.e., interpersonal problem solving, and social competence have predicted emotional regulation.[20]

## Limitation

The sample collected from Sialkot city was limited, so for the further general implementation of the research, the sample size should be increased and data should be gathered from various cities of Pakistan so that results could be implemented generally for all the adolescents of the Pakistani culture. Reviewing the results of the current research workshops should be organized with adolescents and their parents so that, they have commanded on how to deal with emotionally vulnerable situations, and enhance their interpersonal interaction to become psychologically healthy and effective participants in the development and progress of Pakistan.

## Conclusion

It was concluded from the current research that emotional regulation positively correlates with interpersonal problem-solving and social competence. Results further also indicated that interpersonal problem-solving, and social competence also positively correlate with each other.

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