Bullying and Social Emotional Learning Among Junior High Students: A Theoretical Model Approach

Esin Özer

1Assistant Professor, Adnan Menderes University, Aydın, Turkey. eozer@adu.edu.tr
Abstract

The present study aimed to construct a theoretical model based on the correlation between social emotional learning and coping with peer bullying in junior high school students and to test this theoretical model with respect to the gender variable. The study group included 295 students attending a junior high school in Düzce province (Turkey) during the 2016-2017 academic year. 140 participants were female and 155 were male. 40 students were seventh grade and 255 were eighth grade students. Social Emotional Learning Skills Scale and Bullying scales were used as data collection instruments. It was found that the impact of self-worth development skills on victim dimension for female students was $\beta = -220$ ($p < .05$), and the impact of self-worth development skills on victim dimension for male students was $\beta = -385$ ($p < .05$). The findings that the problem-solving skill was effective on bullying among the females ($\beta = -.216$, $p < .05$) and the effects of the problem solving skill ($\beta=-.144$, $p<.05$) and coping with stress skills ($\beta=-.235$, $p >.05$) on bullying among the males.

Keywords: Bullying, Social Emotional Learning, Junior high school students.

Introduction

Bullying is considered a very serious problem with adverse effects on physical and mental health of individuals in several parts of the world and continues to attract the attention of many researchers. Bullying is a form of continuous intentional behavior by one or more individuals towards a weaker individual or individuals where there is no balance of power (Olweus, 1999).

Baldry and Farrington (2000) distinguished bullying from other quarrels and arguments, teasing and school quarrels by the presence of factors such as sustenance and the physical and power imbalances between the bully and the victim.

According to Olweus (2003), three criteria are used to distinguish bullying from aggressive behavior.

1) The behavior is intentional, deliberate and conscious in aiming to hurt and harm the other individual in bullying (Bullying is similar to aggression in leading to physical or emotional harm, however it includes purposeful actions to have fun, enjoy and gain grounds, while aggression behavior is honest).

2) It contains repetitive and sustained behavior (continuity of bullying; random coercive behavior are not considered as bullying).

3) Presence of power imbalance.

Bullying has different forms such as physical bullying, verbal bullying (nicknaming and threats), relational bullying (social isolation, ostracism and gossiping), and cyberbullying that emerged in the current electronic age (posting annoying messages and photos) (Williams & Guerra, 2007).

There are several adverse effects of bullying both on bully children and adolescents and the victims who are exposed to such behavior, leading to several individual problems. Bully students scare other students by their behavior and statements, leading to the emotion of insecurity in the environment (Olweus, 2002; Olweus, 2003). Furthermore, it
was determined that bullying increases absenteeism among bullied students and reduce their achievements and self-esteem (Pişkin, 2002). Those who were exposed to bullying develop psychological problems in the long run, and experience loneliness, diminished self-esteem, psychosomatic symptoms and depression (Hawker & Boulton, 2000; Kaltiala, Rimpela, Rantanen, & Rimpela, 2000; Parker & Asher, 1987; Salmon, James, & Smith, 1998). They also have higher risk of suicide and can commit suicide (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999; Rigby & Slee, 1999).

According to Olweus (2003), as a consequence of bullying experienced during school years, victims can develop depression and low self-esteem during adulthood.

In every race, social class, culture and international environment and at every age, males exhibit a higher rate of bullying behavior when compared to females (Graham, 2016).

Males are more likely to be the victims of bullying when compared to females (Pepler, Jiang, Craig & Connolly, 2008). Males are more exposed to bullying compared to females, especially to direct physical bullying. Females mostly face bullying in the form of gossip and manipulation of others’ relationships. Previous studies demonstrated that 10% and 30% of children face bullying, and the rate increases in junior high school (Hazler, 1996; Rios-Ellis, Bellamy & Shoji, 2000).

When compared to their peers, bullies tend to misinterpret social interactions as hostile and provocative (Dodge, 1993). Problem solving requires the assessment of probable consequences as well.

They immediately exhibit aggressive behavior without considering the consequences (Pelligrini, 2002) and do not think much about the impact of their behavior on others or on their relationship with others (Arsenio & Lemerise, 2001).

Social emotional learning, the second variable in the study, is defined as the systematic development of basic social and emotional skills that would help students cope effectively with problems in learning and social environments (Ragozzino & Utne, 2009). Social emotional learning is not limited to improving academic performance, but entails adaptation to the changes in the globalizing world and achievement of long-term living skills (Lindsay, 2013).

Social emotional learning is very important for an individual in identification and regulation of own emotions, development of problem-solving skills, and establishing good relationships with other individuals in the community (Zins & Elias, 2007). Social emotional learning helps students develop healthy relationships and active collaboration with peers and teachers, empathy, respect, emotional regulation, self-control, setting goals, critical thinking, affection for others, establishing positive relationships, using coping and problem-solving skills (Varela, Kelcey, Reyes, Gould, & Sklar, 2013). Social emotional learning includes self-recognition and awareness of others, self-management and management of others and taking responsibility for own actions (Brackett & Rivers, 2014).

CASEL (2003) concluded that there are 5 dimensions of social emotional learning:

1) Self-awareness: The individual’s awareness about own emotions, values, interests and strengths, assessment of self-competency realistically and improvement of self-confidence.
2) Social-awareness: Understanding emotions of others, being open to different ideas and interacting with others positively.

3) Self-management: self-regulation under stress, impulse control and setting personal and academic goals to overcome obstacles and strive to achieve these goals, explaining and managing emotions in a constructive manner, persistence when facing challenges without losing enthusiasm.

4) Relational skills: Establishing healthy, regarding and quality relationships, resistance to inadequate social pressures, prevention of interpersonal conflicts, management and problem solving, requesting assistance when needed, active use of emotions in communication, healthy communication in collaboration, resistance to negative social pressures, attempting to resolve conflicts and providing assistance when needed.

5) Decision-making: Considering the possible consequences of different situations, application of decision-making skills in academic and social situations, increasing well-being at school and in the society, considering all the possible factors when making decisions, reaching the accurate result by considering different perspectives, and taking responsibility for decisions.

These skills enable children to calm down in case they feel anger, resolve conflicts, and make ethical and safe choices in a respectful manner.

The present study aimed to construct a theoretical model based on the correlation between social emotional learning and coping with peer bullying in junior high school students and to test this theoretical model with respect to the gender variable.

The theoretical model constructed within the theoretical framework is presented in Figure 1.

![Theoretical Model](image)

**Figure 1. Theoretical Model**

With respect to the study objective, the theoretical model that scrutinized the correlations between the social emotional learning level sub-dimensions of "Communication Skills (CS)"; "Problem Solving Skills (PSS)"; "Coping with Stress..."
Skills” (CSS) and “Self-Worth Development Skills (SWS) and bullying sub-dimensions of “Bully (B), “Victim (V)” and “Filling (F)” was tested.

The model that emerged with testing was analyzed with multiple group analysis to determine whether there was a difference between the gender groups and 7th and 8th grade students. For this purpose, the following research questions were constructed:

1) Are communication skills, problem solving skills, coping with stress skills, and self-worth development skills significant predictors of bullying behavior?

2) Are communication skills, problem solving skills, coping with stress skills, and self-worth development skills significant predictors of victim behavior?

3) Are communication skills, problem solving skills, coping with stress skills, and self-worth development skills significant predictors of filling?

4) Is there a significant difference between the female and male groups based on the theoretical model?

5) Is there a significant difference between the 7th and 8th grade student groups based on the theoretical model?

Methods

Model

Since the present study investigated the correlation between related variables, it was conducted with the correlational technique, a quantitative research method (Karasar, 2005). Correlational studies examine relationships between two or more variables (Fraenkel, Wallen and Hyun, 2012; Karasar, 2005). In this study, the correlation between levels of social emotional learning and coping with peer bullying was investigated. The study also tested whether there was a difference between the correlations based on gender.

Study Group

The study group included 295 students attending a junior high school in Düzce province (Turkey) during the 2016-2017 academic year. One hundred forty participants were female and 155 were male. Forty students were seventh grade and 255 were eighth grade students.

Data Collection Tools

Social Emotional Learning Skills Scale, developed by Kabakçı (2006) and Bullying Scale, developed by Kutlu (2005) were used in the present study.

Social Emotional Learning Skills Scale (SELSS): It is a four-point Likert-type scale including 40 items (Kabakçı, 2006) and developed to measure SEL skills of primary education second-tier students. (1- Completely inapplicable, 2- Inapplicable, 3- Applicable, 4- Completely applicable).

In the study, it was determined that the scale KMO (Kaiser-Meyer-Olkin) score was 0.897, the Bartlett test result was 7027.971, the Cronbach alpha (α) reliability coefficient was 0.88, and the test-retest reliability was 0.85. The scale included four factors and 40 items and it was determined that factor loads varied between 0.33 and 0.60 and the factors explained a high portion of the variance. The scale included four sub-dimensions. These are communication skills (9 items), problem solving skills (11 items), coping with stress skills (10 items), and self-worth development skills (10 items).
The lowest possible score in the scale is 40 and the highest possible score is 160. Low scale scores reflect inadequate SEL skills, while high scores indicate adequate SEL skills. Descriptive factor analysis conducted within the scope of validity tests demonstrated that the scale included four factors. The four-factor construct was tested with confirmatory factor analysis and it was found that the tested model had good fitness indices \( \chi^2 = 1282.02, \text{ sd } = 727, \chi^2/\text{ sd } = 1.76, \text{ GFI} = .90, \text{ AGFI} = .89, \text{ CFI} = .96, \text{ NFI} = .92, \text{ NNFI} = .96, \text{ SRMR} = .049, \text{ RMSEA} = .036 \). Similar scales validity test showed that there were positive and significant correlations between four different scales that measure similar constructs and the SELSS. Furthermore, it was noted that the distinctiveness of all items between the lower and upper 27 percentiles was significant. The SELSS Cronbach's alpha coefficient was .88 for the total score and varied between .61 and .83 for the subscales and the test-retest reliability coefficient was .85 for the total score and varied between .69 and .82 for the subscales (Kabakçı, 2006). Additional evidence was provided for the adequacy of psychometric properties of the scale with the DFA results conducted for a second time in order to determine the factor structure of the scale with an item analysis conducted with a different dataset and at a different time (Kabakçı and Korkut Owen, 2010) (Chi-square: \( \chi^2 = 2264.09, N = 431, \chi^2/\text{ df } = 3.13, p = .00 \), Fitness Indices: \( \text{ RMSEA} = .049, \text{ GFI} = .94, \text{ CFI} = .95, \text{ AGFI} = .93, \text{ NFI} = .91, \text{ NNFI} = .95, \text{ SRMR} = .053 \)).

**Bullying Scale** (BS): The scale, developed by Kutlu (2005), includes the dimensions of bullying, victim and enjoying life (filling items). The response options of the 19-item scale developed as a self-evaluation form are arranged as a 5-point Likert type scale ranging between "1-I completely disagree" and "5-I completely agree". Internal consistency coefficients of the sub-dimensions (bullying = 0.83, victim = 0.86, filling = 0.70) were found to be at predictive level in the analyzes. Three factors were tested with Confirmatory Factor Analysis. Findings indicated that the three-factor model demonstrated the best fitness statistics (Kutlu, 2005). The Cronbach alpha internal consistency coefficients of the Bullying Scale were examined for the study sample. The determined internal consistency coefficients were .82 for the victim subscale, .86 for the bully subscale, and .66 for the enjoying life subscale (filling items).

**Data Analysis**

The IBM SPSS 22 and AMOS 24 software was used to test the study hypotheses in order to determine whether the structural model was verified. It was determined as a result of the DFA conducted to verify whether the measurement instruments used in the study were valid for the study dataset that there was excellent model-data fitness in both scale subscales. Then, the "Sample Size", "Missing Data" and "Outliers" required for Structural Equation Modeling (SEM) were examined and "Multivariate normality", "Multi-linearity" and "Multicollinearity" assumptions were tested.

There are different recommendations for sample size, which is a requirement for SEM such as a minimum size of 200 (Kline, 2005), \( N > 50 + m \) (\( m \) = number of independent variables) (Tabachnick and Fidell, 2007), at least 10 times the number of the observed variables (VanVoorhis and Morgan, 2007), a significant probability level for the chi-square value in large samples (usually 200 and over) (Schumacker and Lomax, 2004) and the minimum sample size for the most likelihood method should be 100-150 (Hair, Black, Babin, Anderson and Tatham, 2006). In the present study, it was observed that the sample size hypothesis for structural equation modeling could be accepted since the sample size was 295.
Since the structural equation modeling is susceptible to missing data and outliers, whether there were missing data in the dataset was tested before the data analysis. Missing data and outlier analyses demonstrated that there was no missing data in the study group. Z scores were analyzed to determine the outliers and whether there were outliers beyond +3 and -3 was controlled. "Mahalanobis Distances" were calculated to determine the multivariate outliers. It was determined that there were no multivariate outliers and missing data in the study dataset.

Univariate and bivariate normality tests are used to test multivariate normality. In this study, the Kolmogrov Smirnov Test was applied for univariate normality. A significance level above .05 demonstrates that the normality is not achieved. When the KS test results do not demonstrate normality, the skewness and kurtosis coefficients are examined. A skewness between +1 and -1 indicates univariate normality. In the present study, the skewness was examined although the KS test result was insignificant (IB = -.53 PCB = -.93, SB = -.026, KDB = -1.113 ZR = 1.71, KR = -1.112 and DL = -1.189) and it was found that the skewness coefficient was within the +1 - -1 range, demonstrating univariate normality. Although the KDB, KR, ZR and DL variables were outside the +1 - -1 range, Q-Q diagrams demonstrated that the values were close to normality. The Q-Q diagrams are presented in the Appendix. For bivariate normality, the scatter diagram matrix was examined.

Multi-linearity is the linearity of the correlation between variable pairs and examination of the scatter diagram matrix constructed for bivariate normality demonstrated that there was linearity between the variable pairs.

Variance Inflation Factor (VIF) and tolerance values were examined to control the multicollinearity hypothesis (Cohen, Cohen, West and Aiken, 2003). In the study, it was found that (IB = -1.76 / .57 PCB = 1.83 / .54, SB = 1.44 / .70, KDB = 1.13 / .88 ZR = 1.24 / .80 KR = 1.15 / .87, DL = 1.18 / .85) VIF value was equal to or greater than 10 and the tolerance value was equal to or less than.10, demonstrating that there was no problem of multicollinearity.

Findings

Correlations between the theoretical model variables and descriptive statistics on these variables are presented in Table 1.

Table 1. Correlations between the theoretical model variables

<table>
<thead>
<tr>
<th></th>
<th>IB</th>
<th>PCB</th>
<th>SB</th>
<th>KDB</th>
<th>KR</th>
<th>ZR</th>
<th>DL</th>
<th>X</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB</td>
<td>1</td>
<td>.589**</td>
<td>.414**</td>
<td>.290**</td>
<td>-.231*</td>
<td>.259**</td>
<td>.343**</td>
<td>3.09</td>
<td>.49</td>
</tr>
<tr>
<td>PCB</td>
<td>.589**</td>
<td>1</td>
<td>.471**</td>
<td>.288**</td>
<td>-.224*</td>
<td>.379**</td>
<td>.240**</td>
<td>3.15</td>
<td>.51</td>
</tr>
<tr>
<td>SB</td>
<td>.414**</td>
<td>.471**</td>
<td>1</td>
<td>.124*</td>
<td>-.183*</td>
<td>.365**</td>
<td>.026</td>
<td>2.46</td>
<td>.47</td>
</tr>
<tr>
<td>KDB</td>
<td>.290**</td>
<td>.288**</td>
<td>.124*</td>
<td>1</td>
<td>-.308*</td>
<td>.163**</td>
<td>.176**</td>
<td>3.42</td>
<td>.50</td>
</tr>
<tr>
<td>KR</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>.462**</td>
<td>-095</td>
</tr>
</tbody>
</table>
The correlation between the filling scores and coping with stress, bully and victim variables in the bullying scale was not significant as observed in Table 1 (p > .05). The correlation between other variables was weak and moderately significant.

Once the relevant hypotheses are accepted, the constructed model was analyzed. Based on the analysis results, t values related to the significance of the constructed pathways in the model are presented in Table 2.

**Table 2. Findings on the Significance of the Constructed Model Pathways**

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t-value</th>
<th>p</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR &lt;--- IB</td>
<td>-.084</td>
<td>-1.246</td>
<td>.213</td>
<td>Reject</td>
</tr>
<tr>
<td>ZR &lt;--- IB</td>
<td>.006</td>
<td>.107</td>
<td>.915</td>
<td>Reject</td>
</tr>
<tr>
<td>DL &lt;--- IB</td>
<td>.277</td>
<td>4.806</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>KR &lt;--- PCB</td>
<td>-.056</td>
<td>-.804</td>
<td>.422</td>
<td>Reject</td>
</tr>
<tr>
<td>ZR &lt;--- PCB</td>
<td>-.198</td>
<td>-3.628</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>DL &lt;--- PCB</td>
<td>.087</td>
<td>1.471</td>
<td>.141</td>
<td>Reject</td>
</tr>
<tr>
<td>KR &lt;--- SB</td>
<td>-.093</td>
<td>-1.397</td>
<td>.163</td>
<td>Reject</td>
</tr>
<tr>
<td>ZR &lt;--- SB</td>
<td>-.210</td>
<td>-3.986</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>DL &lt;--- SB</td>
<td>-.154</td>
<td>-2.709</td>
<td>.007</td>
<td>Accept</td>
</tr>
<tr>
<td>KR &lt;--- KDB</td>
<td>-.269</td>
<td>-4.435</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>ZR &lt;--- KDB</td>
<td>-.054</td>
<td>-1.140</td>
<td>.254</td>
<td>Reject</td>
</tr>
<tr>
<td>DL &lt;--- KDB</td>
<td>.065</td>
<td>1.253</td>
<td>.210</td>
<td>Reject</td>
</tr>
</tbody>
</table>

As seen in Table 2, the correlation between communication skills and victim and bully variables was not significant (p < .05). In other words, communication skills are not a significant predictor of students' bullying and victim behavior.

However, it was observed that the communication skills significantly predict the filling dimension (p < .05). On the other hand, it was determined that the problem-solving
skill predicts the bullying dimension significantly (p <.05), while it failed to predict the victim and filling sub-dimensions significantly (p > .05). ***

Coping with stress skill did not significantly predict the victim dimension, while it was a significant predictor of the filling and bully dimensions (p < .05).

It was observed that self-worth development skills significantly predicted only the victim sub-dimension (p < .05).

After non-significant paths in the constructed model were excluded from the analysis and the model was reanalyzed. The path coefficients, t-values and significance levels obtained in the second analysis are presented in Table 3.

Table 3. 

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t-value</th>
<th>p</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL &lt;--- IB</td>
<td>.401</td>
<td>6.724</td>
<td>.000</td>
<td>.134</td>
</tr>
<tr>
<td>DL &lt;--- SB</td>
<td>-.140</td>
<td>-2.344</td>
<td>.019</td>
<td></td>
</tr>
<tr>
<td>ZR &lt;--- PCB</td>
<td>-.234</td>
<td>-4.172</td>
<td>.000</td>
<td>.188</td>
</tr>
<tr>
<td>ZR &lt;--- SB</td>
<td>-.204</td>
<td>-3.655</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>KR &lt;--- KDB</td>
<td>-.279</td>
<td>-5.429</td>
<td>.000</td>
<td>.095</td>
</tr>
</tbody>
</table>

When the direct correlation between the independent variables and the dependent variables were examined, it was observed that all were significant (t > 1.96). When the path coefficients were examined, it was observed that a unit change in communication skills led to a .40 unit increase in filling dimension. A unit change in problem-solving skills resulted in a .23 reduction in bullying behavior. A unit change in the coping with stress skills led to a .20 reduction in bullying behavior and a .14 reduction in filling dimension. A unit change in self-worth development skills led to a .28 decrease in victim behavior.

Analysis of R² values demonstrated that communication skills, together with coping with stress skills explained 19% of the bullying behavior. Communication skills and coping with stress skills explained 13% of the filling behavior. Self-worth development skill alone explained 10% of victim behavior.

It was reported that standardized path coefficients have a weak impact if lower than │.10│, a moderate impact if close to │.30│, and a strong impact if higher than │.50│ (Cohen, 1992). Accordingly, the highest impact on the consistency of interest variable was caused by self-control. The effects of other variables on related dependent variables were moderate.

Goodness of fit values for the theoretical model are presented in Table 4.

Table 4. Theoretical Model Goodness of Fit Values

<table>
<thead>
<tr>
<th>Model Fitness Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>x²</td>
</tr>
</tbody>
</table>

The chi-square value ($x^2(9) = 20.02; p<0.01$) of the constructed theoretical model was low and significant at the 0.01 level as shown in Table 3. The ratio of the chi-square value to the degree of freedom ($x^2/sd = 2.22$) indicated that the model had a good fitness value ($x^2/sd < 5$). When the other model fitness indices were examined, it was observed that RMSEA (.07)) was less than .05; GFI (.98), AGFI (.94), NFI (.95) and CFI (.97) values were greater than .90. Based on these values, the constructed theoretical model demonstrated perfect fitness (Schermelleh-Engel, Moosbrugger, and Müller, 2003; Thompson, 2000).

Standard loads for the structural model confirmed by the analysis results are presented in Figure 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>Model Fitness Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$x^2$</td>
</tr>
<tr>
<td>Theoretical Model</td>
<td>6.68</td>
</tr>
</tbody>
</table>
The model goodness of fit indices ($\chi^2 = 6.68, p < 0.05; \chi^2 /df = .74; GFI = 0.99; AGFI= 0.96; RMSEA=0.000$; $NFI=0.96; RFI=0.91$) were acceptable according to Hu and Bentler (1999), Kline (2005), McDonald and Ho (2002), and Gefen, Karahanna and Straub (2003). Thus, in the next phase, the findings obtained in the structural model could be interpreted.

**Structural Model Hypothesis Tests (Female)**

The model verified for the whole group was tested for female student group. Path coefficients, t values and significance levels obtained for the model analysis are presented in Table 6.

Table 6. *Findings on the significance of the paths for the female student group*

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t</th>
<th>P</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL ---&gt; IB</td>
<td>.432</td>
<td>6.087</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>DL ---&gt; SB</td>
<td>-.121</td>
<td>-1.782</td>
<td>.075</td>
<td>Reject</td>
</tr>
<tr>
<td>ZR ---&gt; PCB</td>
<td>-.216</td>
<td>-3.746</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>ZR ---&gt; SB</td>
<td>-.077</td>
<td>-1.293</td>
<td>.196</td>
<td>Reject</td>
</tr>
<tr>
<td>KR ---&gt; KDB</td>
<td>-.220</td>
<td>-3.408</td>
<td>.000</td>
<td>Accept</td>
</tr>
</tbody>
</table>

When the model variables were tested for the female student group, the hypothesis constructed to test the impact of communication skills on the filling dimension was accepted ($\beta = .432, p <.05$), while the hypothesis related to the impact of coping with stress skills was rejected ($\beta = .121, p > .05$). *** The hypothesis constructed to test the impact of the problem-solving skills on bullying was accepted ($\beta = .216, p <.05$), while the hypothesis related to the impact of coping with stress skills was rejected ($\beta = -.077, p > .05$). Finally, the effect of self-worth development skill on victim dimension was accepted ($\beta = -.220, p <.05$).

Model path coefficients on the tested path model are presented in Figure 3. The significance of these findings is discussed with the model findings tested for males in the conclusion section.
Figure 3. Structural model for female student group

Structural Model Test (Male)

Initially, the model goodness of fit values was investigated and presented in Table 7.

Table 7. Structural Model Goodness of Fit Values for the Male Student Group

<table>
<thead>
<tr>
<th>Model</th>
<th>Model Fitness Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$x^2$</td>
</tr>
<tr>
<td>Theoretical</td>
<td>27.156</td>
</tr>
</tbody>
</table>

The model goodness of fit indices ($\chi^2 = 27.156, p < 0.05; \chi^2 /df = 1.509; GFI = 0.98; AGFI = 0.92; RMSEA = 0.042; NFI = 0.94; IFI = 0.98$) were acceptable according to Hu and Bentler (1999), Klem (2000), Kline (2005), McDonald and Ho (2002), and Gefen, Karahanna and Straub (2003). Thus, in the next phase, the findings obtained in the structural model could be interpreted.

Structural Model Hypothesis Tests (Male)

The model verified for the whole group was tested for male student group. Path coefficients, t values and significance levels obtained for the model analysis are presented in Table 8.

Table 8. Findings on the significance of the paths for the male student group

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t</th>
<th>P</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL &lt;--- IB</td>
<td>.268</td>
<td>3.707</td>
<td>.000</td>
<td>Accept</td>
</tr>
<tr>
<td>DL &lt;--- SB</td>
<td>-.129</td>
<td>-1.525</td>
<td>.127</td>
<td>Reject</td>
</tr>
<tr>
<td>ZR &lt;--- PCB</td>
<td>-.144</td>
<td>-2.323</td>
<td>.020</td>
<td>Accept</td>
</tr>
<tr>
<td>ZR &lt;--- SB</td>
<td>-.235</td>
<td>-3.251</td>
<td>.001</td>
<td>Accept</td>
</tr>
<tr>
<td>KR &lt;--- KDB</td>
<td>-.385</td>
<td>-4.491</td>
<td>.000</td>
<td>Accept</td>
</tr>
</tbody>
</table>

When the model variables were tested for the male student group, the hypothesis constructed to test the impact of communication skills on the filling dimension was accepted ($\beta = 0.268, p<0.05$), while the hypothesis related to the impact of coping with stress skills was rejected ($\beta = -.129, p>0.05$). *** The hypothesis constructed to test the impact of the problem-solving skills ($\beta = -.144, p<0.05$) and coping with stress ($\beta = -.235, p>0.05$) on bullying were accepted. Finally, the effect of self-worth development skill on victim dimension was accepted ($\beta = -.385, p < 0.05$). ***
Model path coefficients on the tested path model are presented in Figure 4.

![Figure 4: Structural model for male student group](image-url)

**Discussion and Conclusion**

Effective social problem solving requires a definitive assessment of the situation. Social emotional skills are the main skills in coping with the bullying problem. Bullies are individuals who possess ideas that support violent behavior and do not prefer non-violent strategies in problem-solving (Bosworth et al., 1999). Decision-making skills enable children to calm down when they feel anger, solve conflicts in relationships, and make ethical and safe choices in a respectful manner.

The finding that problem solving skills are effective on bullying obtained in a study by Wilton, Craig and Pepler (2000) is consistent with the results of the present study which determined that problem solving skill was a significant predictor of bully dimension and one unit increase in problem solving skill would reduce bullying behavior by .23.

Victims have lost their active social problem-solving skills. The vast majority prefer to utilize passive strategies and evade instead of using problem solving strategies (Wilton et al., 2000). In the present study, it was determined that the self-worth that aims the individual to recognize her or his emotions, interests and strengths, to assess self-competence in a realistic manner and to improve self-esteem is a significant predictor of victim sub-dimension. One unit change in self-worth development skills led to a .28 decrease in victim behavior. It was found that the impact of self-worth development skills on victim dimension for female students was $\beta = -220$ ($p < .05$), and the impact of self-worth development skills on victim dimension for male students was $\beta = -.385$ ($p < .05$).
In the present study, the findings that the problem-solving skill was effective on bullying among the females (β = -.216, p <.05) and the effects of the problem solving skill (β=-.144, p<.05) and coping with stress skills (β=.235, p>.05) on bullying among the males were consistent with the findings of the study conducted by Wilton, Craig and Pepler (2000).

In every race, social class, culture and international environment and at every age, males exhibit a higher rate of bullying behavior when compared to females (Graham, 2016). Males are more likely to be the victims of bullying when compared to females (Pepler, Jiang, Craig & Connolly, 2008).

Previous studies demonstrated that 10% and 30% of children face bullying, and this rate increases during the junior high school (Hazler, 1996; Rios-Ellis, Bellamy & Shoji, 2000).

Bullying increases and reaches the peak levels during early adolescence and begins to decrease during late adolescence. It is considered that this is due to the fact that learning avoidance, advanced mental skills, improved equality in peer structures and developed identity perception, improved experiences contribute to the reduction of bullying (Gordon, 2017).

Suggestions

It would be highly productive for field specialists to design curricula that would improve social emotional competency, support healthy development of children, significant in prevention of bullying, and focus on empathy, emotion management, and social problem solving. It is also very important to emphasize assertiveness training programs, which are important in providing assistance for bullying victims and their adaption to school programs. Instruction of these skills does not only lead to the creation of a safe and positive climate at schools, but also generate an environment suitable for students with high readiness for learning.

References


Graham, S. (2016). Victims of Bullying in Schools, Theory Into Practice, 55:2, 136-144,


