DIFFERENCES BETWEEN SUBGROUPS OF STUDENTS INVOLVED IN BULLYING: VICTIMS, AGGRESSORS AND AGGRESSORS-VICTIMS

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ABSTRACT

The aim of this study was to determine if the social self-concept, psychosocial adaptation issues and family climate variables differentiate aggressors-victims, victims and aggressors. In addition, to establish a discriminating function which allow a classification of students. To do this, we identified 245 students involved in bullying: 50 victims and 63 aggressors-victims and 132 aggressors. With a discriminating analysis it was found that the mentioned variables differentiate subgroups and properly classified up to 70% of the cases. The aggressors-victims were the most vulnerable, since they have a lower social self-concept, greater psychosocial adaptation problems and the most unfavorable family climate. The aggressors have higher social self-concept and greater difficulty in psychosocial adaptation and the family atmosphere, compared with the victims. It is concluded that the findings demonstrate that subgroups have characteristics which distinguish them, which suggests the need of different intervention strategies.

Keywords: Bullying, victims, aggressors/victims, self-concept, family climate

Introduction

Of the different ways that school violence may occur, that which happens between peers is the one that more attention has received for their high frequency and its consequences in the school environment, which affects the function exercised by the school concerning the education of citizens, able to live in democratic societies and, in addition, exerts a negative influence on the psychosocial development of the actors involved (Elliot, 2008; Olweus, 1993).

Bullying constitutes the most extreme form that can take violence between colleagues within the school context. This behavior is characterized by the following:

a) Existence of a clear difference of power between the aggressor and the victim.

b) Expressed intention to inflict physical and/or emotional pain

c) Repetitive character.

d) Relational character, showing the need of different actors for the maintenance of the aggressor behavior.

e) Dynamic nature, since the positions of the actors are not stable over time (Coloroso, 2004; Olweus, 1993).

The research about bullying has identified several subgroups of students involved in the same: aggressors, aggressor/victims, victims and spectators (Ortega, 2010; Swearer, Espegale & Napolitano, 2009). This dynamic of the positions of the actors of bullying shows the complexity of the phenomenon, especially when it has been found that there are differences in the psychological characteristics of each of the sub-groups (Coloroso, 2004).

The aggressors are characterized by carrying out violent behavior in a repeated manner towards their companions. His aggressiveness is generally proactive, i.e. does not respond to the perception of aggression on the part of others and tends to have an instrumental character (Perren & Alsaker, 2006; Salmivalli & Nieminen, 2002). They are less pro-social and empathetic (Perren & Alsaker, 2006), have a social self-concept greater than other subgroups (Torre, Cruz, Villa Casanova, 2008) and a pattern of aggressive behavior and adaptation difficulties in school (Ellickson & McGuigan, 2000).
Their families are indicators of little assertive and coercive parenting, parental hostility, experiences of little support and family cohesion, exposure to parental conflict, permissiveness with the aggressive behaviors and generally unfavorable family climate (Haynie et al., 2001).

The subset of victims is made up of students who suffer, in a systematic way, violence by peers, and that demonstrate little or no aggressive behavior towards the attackers. They frequently have a lower sense of belonging to the school (Brockenbrough, Cornell & Loper, 2002; Kochenderfer-Ladd, 2003) and a low social self-concept (Lucas, Pulido & Solbes, 2011; Torre et al., 2008). In their family context dominates the overprotective parenting, communication problems and perception of rejection (Perry, Hodges & Egan, 2001).

The aggressors/victims both refer to attacks as being victims of assaults by their partners. Their aggression is reactive, since it originated as a response to the perception of hostility and presented a higher frequency of aggressive behavior, in particular of physical type (Brockenbrough et al., 2002; Salmivalli & Nieminen, 2002). They have emotional instability, lack of pro-social ability, high rejection by peers and low social self-concept (Hanish & Guerra, 2004; Perren & Alsaken, 2006). With regard to domestic violence, it is noted that they come from homes where there are no positive links with parents and where there is a high probability of violence (Olweus, 1993). They have the greatest problems of social and school adjustment among the subgroups involved in bullying (Unnever, 2005).

The relevance of this study lies in four closely related aspects: first, it is a phenomenon that occurs frequently in Mexican schools (Castillo & Pacheco, 2008; Instituto Nacional de Evaluacion Educativa [INEE], 2006; Valdes et al., 2012); Second, it is an event with obvious negative effects on academic and socio-emotional performance of all involved (Elliot, 2008); third, the accurate knowledge of the actors involved in bullying is essential, it is important for prevention programs and interventions regarding it (Salmivalli & Nieminen, 2002), and fourth, despite the need for studies of this type to properly guide the interventions aimed at the prevention of bullying, after reviewing the publications of the five years in education and psychology journals indexed in the databases in the Red de Revistas Científicas de América Latina y el Caribe (REDALYC) y Scientific Electronic Library Online (SCIELO), it did not identify any report of research carried out in Mexico which addressed as such the differentiation of subgroups of students involved in bullying.

According to the aspects mentioned above, this study sought to determine if there were differences between subgroups of high school students involved in bullying (victims, aggressors and aggressor-victims) and establish a discriminant function to classify them.

For the realization of the discriminant analysis was considered as the dependent variable the belonging to one of the above mentioned sub-groups (victims, aggressors and aggressor-victims), and the following variables were included as independent:

a) Problems of psychosocial adaptation, which were integrated by the average with which students indicated the consumption of alcohol, drugs and reports by discipline problems in school during the last month.

b) Social self-concept, comprising the self-perception of the individual with respect to their skills in different contexts in which maintains social relationships (Goñi & Fernandez, 2007).

c) Social family climate, consisting of the perception about interpersonal relationships in the family (Moos, Moos, & Trickett, 1984).

**Method**

**Participants**

Intentionally 10 public high schools in the South area of a State in the Northwest of Mexico were selected with the largest number of students in this level of education (Secretaria de Educación y Cultura, 2012). Using random sampling, stratified by school grade, were selected to participate in the study 937 students from these schools, on the basis of a 50% success probability (p = .5; q = .5) and a confidence level of 95%.
From this initial sample and intentionally way, students involved in bullying situations were selected, playing roles of aggressors, victims or aggressor-victims. As a cut-off point for the identification of offenders and victims was proposed by Solberg and Olweus (2003), who considered that three or more reports of acts of violence committed or received by partners during the last month indicate participation in the phenomenon of bullying. In the case of the aggressor-victims it was taken into account to report the giving as well as the receiving of aggression by their peers with the above-mentioned frequency.

According to the above criteria 245 were identified of which 26.1% were students involved in the phenomenon of bullying. From this number 50 (20.4%) were considered victims, 63 (25.7%) aggressor-victims and 132 (53.9%) offenders. The subgroup of the victims had an average age of 12.6 years, mostly male (58%) and had higher percentage of students studying the first year (48%). On the subgroup of offenders it presented an average age of 13.8 years, a similar number of students were men and women that were distributed proportionally in three years. Finally, the subgroup of aggressor/victims had an average age of 13.7 years, prevalent among them male (57.1%), and most frequently were in the first year (58.7%) (see Table 1).

### Tabla 1

<table>
<thead>
<tr>
<th>Year students are going through</th>
<th>Victims</th>
<th>Aggressors</th>
<th>Aggressor-Victims</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f %</td>
</tr>
<tr>
<td>First</td>
<td>24</td>
<td>48</td>
<td>41 31.1</td>
</tr>
<tr>
<td>Second</td>
<td>13</td>
<td>26</td>
<td>46 34.8</td>
</tr>
<tr>
<td>Third</td>
<td>13</td>
<td>26</td>
<td>45 34.1</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
<td>132 100</td>
</tr>
</tbody>
</table>

**Instruments**

- **Questionnaire of «Characterization of the violence» of Valdes et al. (2012).** This is an instrument of Self-report by the students, from which this information was considered:
  
  a) **Frequency of violent behavior directed towards other students during the last month.** It consisted of 15 reagents and answered with a Likert type scale with four answer options: Never, Rarely (one or two times a month), Regularly (three or four times a month) and Often (more than four times in a month). This instrument features items to assess the different types of attacks; physical, psychological and social, among which the following were found: «I hit my colleagues», «say offensive nicknames», and «Do not allow them participate in school activities». It presented a reliability of .90 measured with Cronbach’s alpha.

  b) **Frequency of violent behavior received by other students.** Composed of 17 reagents that are answered with a Likert type scale with four answer options: Never, Rarely (one or two times a month), Regularly (three or four times a month) and Often (more than four times in a month); It obtained a .89 measure reliability with Cronbach’s alpha. Items evaluated have suffered various forms of violence (physical, psychological and social) by their peers, for example: «Destroyed my things», «I get punched» and «Leave me alone in team activities».

  c) **Psycho-social adjustment problems.** This variable consisted of the average with which the students reported use of alcohol, drugs and reports of discipline problems in the school during the last month. This section was answered using a Likert type scale with seven response options ranging from: Never (1) to Always (7).
• Scale of Social self-concept of Yañez, Valdes and Vera (2012). This subscale evaluated the perception of aspects of the individual that relate to their social behavior. Comprised of 11 reagents, it was answered with a Likert-type scale with seven response options, which went from totally in disagreement (1) up to Complete agreement (7). The authors reported a validity of construct determined through an exploratory factorial analysis with the Varimax method and the extraction of main components, from which it obtained two factors that explained the 45.8% of the variance of the scores: Pro-social Self-concept, which evaluated characteristics that tend to be valued in a favorable way by, precisely, promoting social relations and antisocial self-concept, which measured aspects deemed unfavorable to social relations. In measuring pro-social self-concept six items are used, some of them were «I am friendly», «I am sympathetic». In the case of the antisocial self-concept, were five items, inside which were found «I’m aggressive» «I am envious» among others. The responses of the instrument recoded in a way that a higher global score indicate the presence of a positive social self-concept.

• Scale of Family Climate of Moos et al. (1984) adapted by Valdes et al. (2012). This instrument assessed the perception of students about family relationships through 20 items, which are answered using a Likert type scale with seven response options ranging from Never (1) to Always (7). The authors reported to obtain, through a factor analysis with the method of maximum likelihood and Oblimin rotation, three factors that explained the 49.2% of the variance of the scores and had a reliability of .92. these factors were: a) support and coexistence, family functioning characterized by the presence of relationships, rules and values that favor the development of the individual; b) conflict, presence of tensions and violence in family relationships, and c) stimulation of development, activities that promote families to encourage the personal development of its members. The responses of the instrument are recoded so that higher scores indicate the presence of a positive family atmosphere.

Procedure

To obtain the information it was requested first to the directors of the schools their informed consent for the study. Later a letter was sent to parents, so they give in a written way their informed consent for the participation of children in the project. The sample was constituted by students whose parents signed the letter of consent.

The objectives of the project were explained to the students included in the study and were asked their voluntary participation in the same, guaranteeing the confidentiality of the information they provided. Later they were met in classrooms, provided by schools, so that they respond to the instruments, whose administration was carried out by researchers previously trained for this purpose.

In the data analysis uni-variate statistics (a Post Hoc test and one-way Anova) were used to establish whether there were differences between sub-groups in relation to variables: social self-concept, family climate and adjustment problems. For the multi-variate analysis a dependence test was used, particularly a discriminant analysis with a step by step inclusion method.

Results

One-way Anovas test results allow affirming that there are significant differences between sub-groups with respect to the variables: social self-concept, psychosocial and family climate adaptation problems (see Table 2).

Through Post Hoc tests, in particular using the Bonferroni method, it was compared the means of the scores of variables to determine the meaning of the differences previously found between them. It was established that average scores in social self-concept are significantly higher in the subgroup of offenders and lower in the aggressor-victims. This implies that within the three subgroups, the aggressors are the ones with greater social self-concept and the aggressor-victims possess lower social self-concept.
Table 2
Results of comparisons by variables between subgroups of victims (n = 50), aggressor-victims (n = 63) and Aggressors (n = 132)

<table>
<thead>
<tr>
<th>Variables/values</th>
<th>Subgroups</th>
<th>Median</th>
<th>d.s</th>
<th>F</th>
<th>gl</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social self-concept</td>
<td>Victims</td>
<td>4.90</td>
<td>.41</td>
<td>17.12</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Minimum = 1</td>
<td>Aggressor-Victims</td>
<td>4.30</td>
<td>.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum = 7</td>
<td>Aggressors</td>
<td>5.20</td>
<td>.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problemas de adaptación psicosocial</td>
<td>Victims</td>
<td>3.31</td>
<td>.28</td>
<td>9.90</td>
<td>2</td>
<td>.001</td>
</tr>
<tr>
<td>Minimum = 1</td>
<td>Aggressor-Victims</td>
<td>4.14</td>
<td>.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum = 7</td>
<td>Aggressors</td>
<td>3.40</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clima familiar</td>
<td>Victims</td>
<td>4.33</td>
<td>.43</td>
<td>8.97</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Minimum = 1</td>
<td>Aggressor-Victims</td>
<td>4.10</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum = 7</td>
<td>Aggressors</td>
<td>4.10</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p < .05

With respect to the variable psychosocial adjustment problems, it was found that scores are significantly higher in the subgroup of aggressor-victims and children of victims.

With regard to the family atmosphere, the victims obtained scores significantly higher than the other subgroups, and the aggressor-victims children. This allows to say that victims have the most favorable family climate and the aggressor-victims the most unfavorable.

Results of discriminant analysis

It was found as a first step the fulfillment of the statistical assumptions of the model in order to strengthen the validity of its results: a) size of the sample, exceeded the 20 cases established as minimum required by each discriminant variable; b) normalcy, was established through the analysis of graphs of waste; c) homoscedasticity, determined through Box test M (4.826; p = .577) and d) collinearity, the step-by-step method used protects the inclusion of collinear variables.

The discriminant function was statistically significant to differentiate subgroups, managing to correctly classify 70% of the cases. The subgroup with the highest percentage of properly classified cases was the aggressors (77%), followed by that of the aggressor-victims (71%) and finally, the victims (64%). Stepwise discriminant analysis indicated that the varying psychosocial adjustment problems (λ of Wilks = -.593; * p = .000), social self-concept (λ of Wilks = .541; * p = .000) and family atmosphere (λ of Wilks = .476; * p = .000) differed significantly at the student subgroups (see Table 3).
The table above shows that the variables that most differentiate the subgroups are in this order: social self-concept, family climate and finally psycho-social adaptation problems. The subgroups victims and aggressor-victims are located in the positive scores of discriminant function, while the aggressors subgroup, is on the downside of the function; If you don’t know the Sub-group to which a student belongs, this can be located from the information obtained in the distinctive variables of the subgroup, which according to its discriminant score it’s approaching more to any of the three centroids.

**Discussion**

The discussion of the results was carried out according to the purpose of the study, which was to determine whether psycho-social, social self-concept and family climate adaptation problems differed to the various subgroups of students involved in bullying (victims and aggressors, aggressor-victims) and made it possible to make a successful classification of students within these groups.

It is necessary to point out that the above-mentioned variables were effective in the differentiation of the subgroups. Finding relevant variables in different levels of functioning of the individual (personal and family) to

| Variables in discriminant analysis which differ victims-aggressors, victims and aggressors |
|-----------------------------------------------|------------------|------------------|
|                                               | F                | Standardized coefficients | Standardized coefficients |
| Social self-concept                           | 11.08            | .541*              | .682*              |
| Psycho-social adjustment problems             | 7.87             | -.593*             | -.574*             |
| Family climate                                | 8.97             | .476*              | .611*              |
| λ de Wilks                                    | .813*            |                   |                   |
| χ²                                            |                  | .4276*             |                   |
| Canonical correlation                          |                  | .450*              |                   |
| Function of the centroid                       |                  |                   |                   |
| Victims                                       | .360             |                   |                   |
| Aggressor-Victims                             | .560             |                   |                   |
| Aggressors                                    | -.768            |                   |                   |

*p < .05
diferencian los actores mostrando no solo la fertilidad de los constructos utilizados en el estudio, sino también la ecologización del acto de bullying (Swearer et al., 2009) y contradicen las posiciones que tienen para explicar el bullying de manera distintiva, es decir, que estos constructos son más relacionados con el comportamiento agresivo que con el victimario. A través de la presentación de los constructos utilizados en el estudio se identificaron específicamente los grupos con diferentes características en el mismo. Esto permite concluir que estos constructos son más relacionados con el comportamiento agresivo que con el victimario. Es decir, se excluye el constructo de la autoconceptualización sociocultural, ya que se identificó en este aspecto un problema específico para el subgrupo de víctimas, lo cual tiene una autoconceptualización sociocultural más desfavorable que el resto de los grupos.

El estudio contribuye a clarificar la discusión sobre los hallazgos contradictorios sobre la autoconceptualización sociocultural de los agresores, ya que basado en los resultados de lo mismo, se puede decir que estas contradicciones se relacionan con el hecho de que en la mayoría de los estudios de autoconceptualización sociocultural los agresores fueron tratados como un grupo homogéneo, independientemente del existencia de subgrupos con diferentes características en el mismo. En este caso, los resultados confirmaron los hallazgos que indican que la autoconceptualización sociocultural es positiva en los agresores, lo cual sugiere que existe un positivo desarrollo cultural de los comportamientos violentos que se producen en este momento, ya que estos estudiantes son aceptados por sus iguales y más competentes. Asimismo, se reconoce que los comportamientos violentos en este grupo tienen un carácter instrumental, lo cual se asocia con el desarrollo de la autoconceptualización sociocultural (Salmivalli & Nieminen, 2002).

Los hallazgos también indican que los comportamientos agresivos están asociados con la presencia de problemas de externalización de los comportamientos, lo cual indica que los agresores y víctimas de agresores son estudiantes con alto riesgo psicosocial que tienen estos comportamientos para sobrevivir a largo plazo (Kokko & Pulkkinen, 2000). En este caso, los autores de teorías de la evolución de los comportamientos agresivos plantean la posibilidad de manejo de la rabia y el desarrollo de comportamientos prosociales que favorecen la adaptación escolar y social. Es necesario promover la mejora del ambiente para sus familias, ya que son fuentes de apoyo y modelos positivos socialmente.

Finalmente, el estudio presenta dos limitaciones que son necesarias para lograr el análisis de los comportamientos de victimización. En primer lugar, no consideran variables relacionadas con el ambiente escolar y el docente en la diferenciación de los subgrupos y segundo limitación, se utilizan variables subgrupos que comúnmente utilizadas en el estudio de los agresores, lo que sin duda afecta la comprensión del problema de victimización.
References


Secretaría de Educación y Cultura (2012). *Secundarias del Estado de Sonora. Sonora: SEC.*


