Corruption is One of the Variables that Explains the Community Problem of Crime Near Schools in Mexico

By Luis Felipe Miguel Llanos Reynoso

Universidad Anáhuac, Mexico

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Abstract- In Mexico, as well as worldwide level, school performance is one of the main concerns of the countries. This performance has been affected by the wave of violence the country lives. There are multiple researches that seek to explain the phenomenon of violence in and around the schools, but until now, corruption had not been considered as one of the quantitative variables that can explain this problematic. With data from the Survey of Victimization and Perception of the Public Safety of the National Institute of Statistics and Geography, the records of the students and the coverage rates by the official educational level, through a procedure of multiple linear regression, it was found with a minor significance to 5% that the low coverage of the population with an educational degree at bachelors level, violent gangs, the resulting frequent thefts and assaults, the lack of public lighting and the problem of corruption explain the problems of the community crime near schools. The recommendation is for the authorities of the communities to keep ssurveilling and monitoring the problem of corruption to attain a good school performance.

Keywords: school performance, school violence, school crime, corruption.

I. Introduction

A social concern is knowing to what extent school performance has been affected from the problem of security. The Organization for Economic Cooperation and Development (OECD) found that in Mexico, 12.8 % of the people reported that they were victims of an assault in the past 12 months, while the OECD average is 3.9 %; the homicide rate in Mexico per 100,000 inhabitants, is 23.4, still the highest rate in the OECD (OECD, 2015; Llanos, Tovar, 2014).

Universities are not exempt from that, their students are affected by violence. In a study made in the northern Mexican state of Sonora, Durazo and Ojeda (2013) revealed that 38% of the students accepted having been victims of some kind of violence, either within their circle near or outside the same, and some 8.3% said they had stopped attending school because of this, causing a huge delay in the ability of learning and in their academic performance.

To identify the main variables in the area of security that have an impact on the educational processes, and as part of the projects driven by the Information Subsystem of National Government, public safety and the delivery of justice of the Mexican Government, the National Institute of Statistics and Geography (INEGI) took place between March and April, 2013, the National Survey of Victimization and Perception of Public Safety 2013, people over 18 years old, with the estimated that 18.6 million people identified the existence of crime problems near schools. This population represents 24.6 % of inhabitants of this range of age. The survey found that 5.2 % of people, also 18 years old, has abandoned school for fear of being victim of a crime. Also in the same survey, in order to understand the causes of victimization and perception of public safety, it was identified some of the criminal or antisocial behaviors that the population reported with greater frequency in the vicinity of the neighborhood: *a)* alcohol is consumed in the streets, 64 %; *b)* there are frequent robberies or muggings, 37 %; *c)* Drugs consumption, 38 %: *d)* Gangs or violent gangs, 30 %; *e)* pirate products are sold, 18%; *f)* quarrels among neighbors, 19%; *g)* there is illegal sale of alcohol, 19% of the population (INEGI, 2013).

In Mexico, the educational coverage, compared with the OECD member countries, does not have a satisfactory performance, only 19 % of its population of 25 to 64 years old account with a higher education, when[1] the average of the OECD countries is 32%; in the USA 43% and 53% in Canada (OECD, 2014).

The problem of violence in schools is not unique to Mexico; between July 2010 and June 2011, according to government figures of USA, there were 25 killings of students inside or around schools, that is in addition to the approximately 649.000 thefts and 598.000 violent crimes (Robers, Kemp, Truman, 2013).

Violence is a factor affecting the global education and causes that students do not apply their full potential and result causing, in extreme cases, the abandonment of the enrolment in schools. Many researchers have shown that both, students who have

Author: Phd for Instituto Politécnico Nacional Campus ESCA Santo Tomás. Professor in Organizational Behavior and Leadership for Universidad Anahuac in Mexico. e-mail: luis.llanos@anahuac.mx

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[1]Data reported by the OECD based on the "International Standard Classification Education ISCED 2011" the degree "Higher Education" (In English: "Tertiary education") includes the degrees of Bachelor, Master and specialities.

suffered some type of violence, such as those with high levels of anxiety, are those who on average have a lower academic performance. Aggression and violence affect the student productivity, but the simple fact of seeking this eradication brings multiple benefits, being the main benefit increasing levels of learning. (Cantrell, Parks - Savage, Rehfuss, 2007; Grases, Rigo, 2010).

The importance of the involvement of schools and principals thereof, the families and heads thereof, the community as well as the public security authorities, in the prevention and abatement of young people delinquency, has been studied from the theoretical, practical and political points of view. Recent investigations have identified factors that foster the violence in the schools:

- In the interior of the same schools: *a)* scholar harassment or "bullying"; 75% of the murders committed by children who are students were due to that they felt intimidated, threatened, attacked or injured by their peers or mates over a long period of time; *b)* consumption of drugs and alcohol; *c)* association with delinquent peers; *d)* low grades or drop out of school (Duplechain, Morris, 2014; Windle, Mason, 2004; Ritakallio et al. 2005; Boles et al. 2006; Center for Disease Control and Prevention, 2015). On the other hand, decreases the violence in the schools if increasing the satisfaction of the school life and if there is a close monitoring of students by teachers (Ellonen, 2008; Önder, Yilmaz, 2012).

- On behalf of school Directors, there are some qualitative research that have confirmed that the corruption is one of the variables that can explain the level of crime around the organizations (Schmidt, 2007; Hutchinson, Vickers, Wilkes, Jackson, 2009), so that there is a need to discuss this phenomenon now from a quantitative methodology

- Looking inside the families of the students: *a)* family dysfunction; *b)* a history of violence; *c)* drugs, alcohol or tobacco consumption; d) television and video games for more than 3 hours a day (Demissie, Lowry, Eaton, Hertz, Lee, 2014; Center for Disease Control and Prevention, 2015). On the other hand, violence diminishes in schools if there is a decrease in "stringency / supervision" of family life (Önder, Yilmaz, 2012).

- In the community itself, through its inherent characteristics: *a)* lack of economic opportunities; *b)* concentrations of poor residents; *c)* migration or mobility; *d)* poor participation of the community; *e)* socially disorganized neighborhoods; *f)* drug culture; *g)* rates of violence in the society as a whole

(Duplechain, Morris, 2014; Center for Disease Control and Prevention, 2015).

- It is shown that school teachers and principals play an important role with respect to the degree of violence to the interior thereof, depending on the degree of supervision they have on the students, stop bickering, keep order in the classroom, monitor coffee breaks or recess and check that in the nearby school smoking is forbidden (Ellonen, 2008). However, all together parents, teachers, students and political leaders continue to seek understanding of the origin of the school violence, to take effective action and attack the root causes, and make schools a safe environment for teaching and learning (Donnelly, 2015).

II. Research Methodology

Hypothesis: corruption is one of the variables that explains the problem of crime community near schools in Mexico.

Source of information on the variables to analyze is the following:

- The dependent variables in the percentage of the population older than 18 years that believes that "Y. There is a problem of crime community near the school", was estimated for each of the 32 federal states of Mexico (States), for the year 2013, by the INEGI, through the National Survey of Victimization and Perception of Public Safety 2013 (INEGI, 2013).

- The independent variables in the official data of the student population in Mexico: "X1. Terminal Efficiency of first High School"[2]; "X2. Terminal efficiency of higher middle level", were provided by the Ministry of Public Education for the Government of Mexico for each of the 32 States, based on 100% of the records of students in the Country (Ministry of Public Education, 2013).

- The independent variables in the official data of the student population in Mexico: "X3. Net Rate non coverage of the first High School Level", "X4. Net rate of non coverage of higher middle level"; were provided by the National Institute of Educational Evaluation of the Government of Mexico, for each of the 32 States, based on 100% of the records of the students in the country (National Institute for the Evaluation of Education, 2014).

- The independent variables of the percentage of the population older than 18 years who believe that: "X5. Criminal prevalence per federal entity"; "X6. Around their homes there is gangs or gang violence"; "X7. Around their homes there are frequent robberies or muggings"; "X8. Around their homes there is illegal sale of alcohol"; "X9. Around their homes there are quarrels between neighbors";

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"X10. Around their homes alcohol is consumed in the street"; "X11. Around their home drugs are consumed"; "X12. Around their homes pirate products are sold"; "X13. Because of the insecurity there is poor quality- education"; "X14. Because of the insecurity there are no values at all"; "X15. Because of the insecurity there is alcohol"; "X16. Because of the insecurity there is corruption"; "X17. Because of the insecurity there are little severe punishments to the offenders"; "X18. Because of the insecurity there is unemployment"; "X19. Because of the insecurity there is family disintegration"; "X20. Because of the insecurity there are drugs"; "X21. Because of the insecurity there are members of the police ill"; "X22. Because of the insecurity there is poverty"; "X23. Community problem is the lack of lighting"; "X24. Community problem is violent gangs"; "X25. Community problem there are thefts"; "X26. Dueto violence I stopped going to school"; "X27. Due to violence I never left my children going out"; "X28. Due to violence I stopped walking out"; "X29. Due to violence I stopped using public transport"; "X30. Perception of insecurity at school" ; "X31. Perception of insecurity in the park or recreation center"; "X32. Perception of insecurity in the public transport"; "X33: perception of insecurity in the street", were estimated for each of the 32 federal states of Mexico, for the year 2013, by the INEGI, through the National Survey of Victimization and Perception of Public Safety 2013.

Validity of the information: the databases of the Ministry of Public Education, and the National Institute for the Evaluation of Education, which are used in the present research, for being the governmental institutions responsible there for, it is took for granted that they are valid and reliable, and that it is assumed that a quantification has been made there of. The information provided by the survey from INEGI , is considered as valid and reliable, due to the fact that the design of the survey is probabilistic, stratified, of one stage only for a population of 18 years old people, with a sample size at domestic level of 95.810 houses, Considering is results a confidence of more than 90%

Statistical processing: 1. Existent correlations between the dependent variable are calculated: "Y. There is a problem of community crime near the school" against each of the 33 independent variables selected; 2. Independent variables that have a correlation coefficient (ρ) with countersigns with regard to the dependent variable are discarded, when not having a "theoretical consistency"; 3. With the independent variables not discarded, through the STEPWISE procedure, there is a hypothesis test with the following features: a) There is a multiple linear regression with a statistical significance in the whole of the 5 % of reliability, b) all parameters of the multiple linear regression in the individual are not independent, with a statistical significance of the 5% and c) All the coefficients of the multiple linear regression parameters in the individual are positive, so that there is a positive theoretical consistency (Guajarati, 1993).

III. Results

With data analyzed to Mexico, national averages and correlation coefficients against the dependent variable were obtained, for each of the independent variables analyzed in the following table presents the data per variable analyzed.

Table 1 : List of variables in the education area in Mexico 2013

Code	Description	Average	Coefficient Correlation
Dependent variable: the percentage of the population older than 18 years that believes that:			
Y	There is a problem of crime community near the school	22.1 %	1.0
Independent Variables: official data of the student population in Mexico			
X1	Terminal efficiency of the First High School	84.6 %	0.13
X2	Terminal Efficiency Higher Middle Level	64.0 %	-0.08 ln)
X3	Net Rate of non coverage of the First High School	17.4 %	- 0.26
X4	Net rate of non coverage Higher Middle Level	46.0 %	0.10
Independent Variables: Percentage of the population older than 18 years who believes that:			
X5	Delinquent Prevalence Rate by Federal entity	25.0 %	0.50
X6	Around their home there is violent gangs	29.5 %	0.74
X7	Around their home there are frequent assaults or robberies	36.8 %	0.76
X8	Around their home there is illegal sale of alcohol	19.3 %	0.27
X9	Around their home there are quarrels between neighbors	18.5 %	0.65
X10	Around their home alcohol is consumed in the street	64.1 %	0.33
X11	Around their home drugs are consumed	38.3 %	0.29
X12	Around their home pirate products are sold	18.4 %	0.52
X13	Because of the insecurity, education is of poor quality	16.4 %	0.08
X14	Because of the insecurity, there is the lack of values	19.5 %	0.09

X15	Because of the insecurity, there is alcohol	20.7 %	-0.13
X16	Because of the insecurity, there is corruption	31.2 %	0.11
X17	Because of the insecurity, there are little severe punishments to the offenders	21.9 %	0.43
X18	Because of the insecurity, there is unemployment	41.0 %	-0.02
X19	Because of the insecurity, there is the disintegration of the family	21.1 %	0.17
X20	Because of the insecurity, there are drugs	34.3 %	-0.21
X21	Because of the insecurity, there are ill policemen	21.0 %	0.34
X22	Because of the insecurity, there is poverty	34.7 %	-0.49
X23	Community problem is the lack of lighting	43.9 %	0.19
X24	Community problem is the violent gang	23.0 %	0.75
X25	Communityproblem are thefts	49.9 %	0.76
X26	Due to violence, I stopped going to school	4.7 %	-0.36
X27	Due to violence I stopped letting my children going out	60.8 %	0.07
X28	Due to violence, I stopped going out for a walk	30.4 %	0.08
X29	Due to violence, I stopped using public transport	16.3 %	-0.03
X30	Perception of insecurity in the school	27.2 %	-0.14
X31	Perception of insecurity in the park or recreation center	45.6 %	0.12
X32	Perception of insecurity in public transport	58.1 %	0.39
X33	Perception of insecurity in the street	62.3 %	0.37

Source: ownpreparation.

When analyzing the information related to education and to the prevailing insecurity in Mexico, the following are highlighted: *a)* the percentage of the population who do not study a bachelor degree, 46%; together with the efficiency of this terminal degree school, already that the relationship that exists between the beginning and the ending is 64%; *b)* the percentage of the population who declare that there is consumption of alcohol in the street, 64 %; or *c)* the percentage of people who declare that the problem in their community are thefts, 50%; *d)* the percentage of people who declare that due to violence, they won't let their children out, 61 %; *e)* the percentage of people who felt unsafe both public transport, as being out in the street, 58% and 62 %.

The independent variables that are eliminated having a correlation coefficient contrary to the dependent variables are: *a)* terminal efficiency higher middle level; *b)* net rate of no coverage of the First High School; *c)* cause of insecurity is the alcohol; *d)* cause of insecurity is the unemployment; *e)* cause of insecurity are drugs; *f)* because of the insecurity there is poverty; *g)* by violence students abandon school.

Once the correlations between the dependent variable are calculated: "Y. There is a problem of crime community near the school" against each of the 33 independent variables. The variables were ruled out when not having a "theoretical consistency". The SWATCH procedure was run, a multiple linear regression was obtained with the parameters of significance wanted. The results of the multiple linear regression are: Number of independent variables 5, a multiple correlation coefficient (R) of 89 %, with a statistical F = 20.29, and a significance as a whole less than 1%. The coefficients of the variables in the multiple linear regression in as an individual are all of them positive significance and with a less than 5% each of them. The straight line of multiple linear regression is:

$$Y = 0.22 X4 + 0.44 X6 + 0.29 X7 + 0.37 X16 + 0.18 X23 - 27.94$$

Where the independent variables and its individual significance for the coefficients are:
- X4. Net rate of non coverage of higher middle level (alpha = 3 %).
- X6. Around their homes, there is gang or gang violence (alpha = 0 %).
- X7. Around their homes, there are frequent robberies or muggings (alpha = 1 %).
- X16. Because of the insecurity, there is corruption (alpha = 2 %).
- X23. Community problem is the lack of lighting (alpha = 2 %).

IV. DISCUSSION

Crime problems in the community near schools is something that will continue existing. But this does not mean that their communities, managers, teachers and administrative staff could not do anything to halt. In Mexico, based on data and results of this research, it was determined significantly that the variables that affect crime near schools are the low coverage of the population with a high or superior education degree, truancy or violent gangs, the consequential frequent robberies and assaults, the lack of public lighting and the problem of corruption.

Therefore, checking that the hypothesis that corruption is one of the variables that explains the community problem of crime near schools in Mexico.

The significant contribution of the present research is reached when the variable corruption was determined that is part of the problem of crime near schools.

Knowing the variables that affect crime near schools, the interested parties may work in four lines of action to accomplish good results: *a)*There is a need to work at the national and local level to raise the rate of population coverage with an education to a high degree level; *b)* There is a need to work with the help of local security authorities, in order to reduce truancy and gang violence, as well as in breaking down robbery and assaults; *c)*There is a need to work on behalf of the municipal services to improve lighting near schools, and *d)* There is a need to work at the national and local levels to reduce corruption, both from schools managers and community authorities, because corruption provokes violence both, by acts of omission as volunteers.

The demand of the community to reduce corruption, to control the violence and crime near schools, is of the utmost importance so that students may thrive to reach their potential and raise their educational level in Mexico.

In forthcoming the researches may encompass the type of corruption that occurs within the schools and that allows students to create a climate of violence near them.

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