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It's not just about poverty

Capital, inequality, and antisocial behaviour in schools

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It's not just about poverty:

Capital, inequality, and antisocial behaviour in schools.

Many studies about antisocial behaviour (ASB) in the school environment are based on a single conceptual and theoretical framework, producing partial results that limit our understanding about the problem. Using a more inclusive approach, this paper uses survey data from the educational system in Mexico to explore the relationship between the forms of capital introduced by Bourdieu (1986), their associated inequalities, and the perception of ASB of students of secondary schools. The results show that social capital was the only form of capital with a consistent effect across all types of schools and localities. Economic and cultural capital and their associated inequalities were linked to the perception of ASB but only amongst students of some types of schools and localities. It is concluded that further analyses must take into account various aspects at individual and school level, but particularly understand the unique characteristics of different environments.

Key words:

Capital; Poverty; Inequality; Bourdieu; Antisocial Behaviour; Schools.

1. Introduction

Many academics around the world have repeatedly pointed out that poverty and deprivation are amongst the best predictors of crime and antisocial behaviour (ASB) (Sampson, Morenoff, and Gannon-Rowley 2002; Obberwittler 2005, 2007; Sampson 2009; Weatherburn and Lind 2001; Wikstrom and Loeber 2000). However, many of the studies that have explored this relationship have focused on particular elements in very specific contexts, leaving little room for the acceptance of external ideas (Wheeldon 2015). A major problem is that most research has been carried out in a few countries of the so-called '*Global north*', whose reality differs from that seen in other parts of the world, including Latin America. Additionally, many studies have focused mainly on those who fall into a specific category, usually "*the poor*" (Almaguer, Lozano, and Peña 2014; Corona, Urdal, and Chaitanya 2013; Furlan 2012; Jimenez 2005), overlooking other social groups and the role of non-economic factors. The aim of this paper is to contribute to the existing literature by exploring the link between economic and non-economic forms capital, their associated inequalities and the way Mexican students perceive ASB their schools.

The conceptual framework of the paper is based on four elements. First, this study uses the term *capital* instead of poverty, allowing the study of all students and not only of those who are in one category. Second, the division of capital introduced by Bourdieu (1986) is used to explore the effects of economic and non-economic resources, including social capital (i.e. social connections) and cultural capital (i.e. culture and education). The third element is the inclusion of measures of both capital and inequality, with the purpose of exploring the effects of inequalities over and above deprivation (see Pridemore 2011). Lastly, the analysis is based on both individual and school level elements following the idea that adolescents are affected by their own characteristics, their social relationships, and the world around them (Bronfenbrenner 1979).

This study focuses on the school context due to its role in the development of children and adolescents. For instance, it is in schools where most of them learn to interact with people outside their family and where many are exposed for the first time to ASB (Fernandez 1994). The analysis of Mexico results interesting due to the immense social divisions that exist in this country, which have resulted in segregation and stigmatisation of some social groups who live in poor and deprived areas (Cisneros 2007). Additionally, schooling is no longer attractive for many young Mexicans from the most vulnerable backgrounds (Saravi 2015), causing that other activities, including crime and ASB, have become more appealing to make a living and gaining social recognition (Conde 2014; Furlan 2012; Jimenez 2005).

2. ASB in Mexican schools

In Mexico, schools are probably one of the places where social and economic disparities are most reflected. Saravi (2015) noted that these institutions no longer build a common subject and space, but reproduce what is present in each social segment, distancing classes even more. While attendance to some private schools is marked by the social exclusivity that they offer, students from poor and deprived areas often do not attend school for very pragmatic reasons such as finding a job and improving their living conditions. Instead, their willingness to learn is often replaced by apathy and boredom associated to the meaningless sense of schooling and distant long-term benefits of education (Saravi 2015). It is in this sense that poverty and deprivation have been associated with many problems in the school environment, particularly crime and ASB (Almaguer, Lozano, and Peña 2014; Corona, Urdal, and Chaitanya 2013; Furlan 2012; Jimenez 2005).

However, this association requires a more in depth examination due to the lack of both, a strong empirical evidence and the inclusion of ideas from other contexts. The very meaning of ASB and how it is perceived is also an important limitation of previous studies, as these elements vary not only between individuals and social groups but also across time and space (Gray et al. 2019; Kruger, Reischl, and Gee 2007; Tulloch 2000). Moreover, while the term ASB is commonly used in English to describe external behaviours and actions that are against social rights and norms (Frazier 2011) ranging from individual incidents to larger social events (Gray et al. 2019), this concept is not very popular amongst Spanish speaking researchers..

Thus, the term ASB is used in this paper to refer to the “*violation of socially prescribed patterns of behaviour*” (Mayer 2001) in the school context; including verbal and physical interpersonal aggression, and nonaggressive behaviour such as stealing and destroying property (Hinshaw and Lee 2003). This study also incorporates two factors that seem to be essential to explain variations in the perception of these problems in Mexican schools: social connections (Blasco 2003; Del Tronco Panganelli and Madrigal Ramirez 2013; Furlan 2012; Prieto Garcia 2005), including negative relationships (Conde 2011; Gomez Nashiki 2005), and different aspects associated with schooling such as school dropout (Salazar Estrada et al. 2011), level of education (Cisneros 2007; Corona, Urdal, and Chaitanya 2013), and educational achievement (Vicente and Leyva Moreno 2018).

3. Capital and inequality in schools

Analysing the effects of poverty and inequality can be theoretically and methodologically challenging. On the one hand, research on poverty seems to have focused mainly on those who fall

into a specific category (Contreras et al. 2015; Odgers 2015; Sen 1995), overlooking how many problems affect other social groups. On the other, attempts to measure inequality based on the use of income distributions have been widely criticised as they cannot describe all aspects of wellbeing (Atkinson and Bourguignon 1982; Binelli, Loveless, and Whitefield 2015; Kolm 1977; Maasoumi 1999; Sen 1995; Tsui 1995).

In Criminology, Pridemore (2011) pointed out that some differences in the outcomes of studies that have analysed the effects of poverty and inequality can be attributed to models that have not analysed the correct relationship nor used the right variables. Furthermore, although economic poverty and inequality are a major problem in many places, their impact on crime cannot be understood without looking at other types of inequalities and their possible intersection (Heimer 2019). Those studies that have focused on exploring economic and non-economic inequalities and multiple disadvantage have found that these are key factors in early life, explaining several problems across a range of domains, including criminal and problematic behaviour (McAra and McVie 2010; McVie 2020).

Therefore, this study takes a more inclusive and multidimensional approach to address some of these challenges. First, the term '*capital*' is used instead of '*poverty*', allowing the analysis of all individuals and institutions, and not only those who fall into a specific category. This decision was taken due to the lack of a consistent framework to define poverty (Walker 2015), and because poverty measures pay '*no attention to the fact that people could be a little below the line, or a lot, and also the distribution of income among the poor may or may not be itself very unequal*' (Sen 1995:102). Moreover, because the word capital '*has now acquired the broad meaning of a stock or reserve of anything of social or economic significance*' (Hodgson 2014:1075), other non-economic resources identified in previous studies of ASB in schools can be incorporated in the analysis. Similarly, the term '*inequality*' in this paper is used to describe disparities in economic and non-economic capital across all social groups (Maasoumi 1999; Sen 1995), and not only to refer to differences in income distributions (Pigou 1932).

The study uses the division of capital introduced by Pierre Bourdieu (1986), who believed that capital was a concept that should not be restricted to the materialisation of economic assets because other valued objective and subjective resources, in the form of social and cultural capital, also serve to maintain or improve social position. Bourdieu's work results relevant in the context of this research not only because this division allows the incorporation of elements that have been linked in the past to ASB in the school context, but also due to his extensive work about the effects of structural inequalities in the school context. He believed that the students' future was not only

determined by their own background (Bourdieu and Passeron 1964) but also by other factors at the school level (Bourdieu and Passeron 1970) and therefore, the distribution of capital defined the social space, and thus, explained some of the differences observed in any given particular universe (Bourdieu 1987). He referred to *economic capital* as those resources that can be *'immediately and directly convertible into money and institutionalised in the form of property rights'* (Bourdieu 1986, 47). This conceptualisation is appropriate for this research as for Bourdieu (1986), economic capital went beyond income distribution and wealth accumulation. Hence, although parental income is considered by many as a key element for the future of children (Bartee and Brown 2007; Parcel, Dufur, and Cornell Zito 2010), other resources that also reflect the economic situation of students and their schools can be incorporated into the analysis.

Social capital represents all those resources connected to social networks or membership to a group, *'which provides each of its members with the backing of the collectivity-owned capital'* (Bourdieu 1986, 51). Although there are many definitions for this concept (Claridge 2004), Coleman (1990:302) pointed out that social capital should not be defined by its meaning but by its function, as *"it is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure"*. Indeed, various studies have identified that different elements that can be associated with social capital are amongst the most important determinants of ASB. Common predictors of ASB in the school context linked to social capital (or a lack of) include: fair discipline and moral authority, lack or low curricular tracking, expulsions, class size, and school type (Donlan 2003); attachment and commitment to school and delinquent peers (Gottfredson 2000); and coercive and punitive environments (Thapa et al. 2013; Unnever, Colvin, and Cullen 2004). In contrast, some studies have found that positive school outcomes seem to be linked to good relationships not only with other students but also with teachers (Eccles and Roeser 2011; Meehan, Hughes, and Cavell 2003; Schwartz et al. 2009).

Lastly, according to Bourdieu (1986), *cultural capital* is linked to education and qualifications; it can exist in an embodied state (often called culture), objectified state (cultural goods that can presuppose both an economic and cultural value), and institutionalised state (educational qualifications). Bourdieu's concept of cultural capital is perhaps the most criticised from all the forms of capital, as his explanations are often considered vague and even contradictory (Kingston 2001), and because there is a lack of consensus about its conceptualisation, measurement, and the interpretation of empirical correlations (Jæger and Breen 2016). An important aspect about Bourdieu's concept of cultural capital (1986, 48) is that although some other scholars have

contemplated this idea, it has often being connected to the economic profit as a result of educational investment, '*ignoring the contribution which the educational system makes to the reproduction of the social structure*'. Therefore, various elements previously linked to both positive and negative behaviours in schools such as disparities in academic performance (Sabates, Feinstein, and Shingal 2011), positive family traits (Donlan 2003), and expectations about education (Birnbbaum et al. 2003; Harris, Duncan, and Boisjoly 2002) can be included under the concept of cultural capital.

4. Research design

4.1 Data

This study uses information from the National Plan for the Evaluation of Learning or PLANEA (INEE 2016), a nationwide assessment of the educational system in Mexico which contained a contextual survey with all the necessary elements to operationalise the theoretical concepts. PLANEA was administered in June 2015 to 144,517 grade 9 students (ages 14 to 15) and 3,228 principals in 3,529 secondary schools throughout Mexico. The survey represents approximately 7.4 percent of the total number of grade 9 students and 9.6 percent of the secondary schools in Mexico¹.

Dependent variables

The questions used for the construction of the dependent variable are linked to the frequency with which certain ASB are perceived, which means that it is not possible to explore any individual behaviour. Thus, this is not an objective measure of ASB, and the results cannot be used to establish a direct link between this problem and the different levels of capital and inequality. However, there is a strong body of literature that suggests that public perception of crime and ASB is a good indicator of 'the health of local neighbourhood order' (Farrall, Jackson, and Gray 2009), as it is associated not only to direct and indirect experiences of victimisation (Farrall, Jackson, and Gray 2009) and actual levels of crime at the neighbourhood level (Budd and Sims 2001; Flatley 2017; Laufer and Harel 2003; Upson 2006; Wood 2004) but also to other underlying problems associated to personal experiences, circumstances, and even attitudes to which people are exposed (Gray et al.

¹ More information about the questions used in the creation of measures for the perceived frequency of ASB and for each one of the forms of capital can be provided on request by email.

2019). The measure of perceived frequency of ASB was based on the following perceived behaviours: a) insulting; b) stealing; c) fighting; and d) damaging furniture.

Independent variables

Economic capital: Twelve variables that assess the availability of different household assets were used to create a measure of the students' economic capital. In turn, 18 variables linked to the presence of a series of goods and services in their schools were used for the construction of a measure of the schools' economic capital.

Social capital: Nineteen variables were associated with the social capital of the students, which were associated to the frequency with which certain behaviours happened in their school context. The measure school social capital was based on five variables linked to the perception of principals about behaviours of both students and teachers.

Cultural capital: Eight items used for the creation of measures of the students' cultural capital. These variables are associated with the level of education of their parents, their expectations about education, the number of books at home, classes taken outside schools, and their support at home. The measure of school cultural capital was constructed using 7 variables, which can be divided into three different categories: parental participation and support, the presence of a fully qualified teacher in charge of the group, and infrastructure linked to cultural capital.

4.2 Methods

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was used to construct unobserved or latent variables for the concepts of perceived frequency of ASB and economic, social and cultural capital. CFA was used instead of other exploratory methods because it does not reduce the dimensionality arbitrarily, but it is driven by predefined concepts (Walker, Tomlinson, and Williams 2012), that is, it tests theoretically supported concepts instead of '*fishing in data*' (Walker 2015, 4). Weighted Least Squared (WLS) was used in the analysis as it is considered more effective than other methods when the data is large and the nature of the observed variables is ordinal or binomial (Ningaye, Alexi, and Virginie 2013). WLS is an extension of Ordinary Least Squared (OLS) in which weights are applied to the observations, and thus, slopes are calculated minimising the difference between the observed

weighted value and the predicted value (Lewis-Beck, Bryman, and Futing Liao 2004). Because all the variables used in the creation of the measures of perceived frequency of ASB and social capital are ordinal, a variation of WLS called diagonally weighted least squares was used (Li 2016; Muthen and Muthen 2011).

Factor scores (i.e. the values of the latent variables for individual observations (Bollen 1989)) were calculated for each individual and school, showing the 'level' of capital and perceived frequency of ASB of each student and school. Because these factors are not easily interpretable and their range can take positive and negative numbers, they were normalised, that is, the scores from the latent variables were transformed into new scores ranging from 0 to 1, in which 0 denotes the minimum value (when students and schools did not have any capital or did not perceived any ASB) and 1 the maximum value possible (the highest absolute level of capital or when they always perceived ASB).

Multilevel Modelling

This study departed from the assumption that not only the individual characteristics of the students play a role in shaping their behaviour, but also other social and environmental characteristics (Bronfenbrenner 1979), including the different forms of capital that exist in the school context. Moreover, although large data surveys are usually based on random samples of the population, not all observations follow this assumption (Kaplan 2009). Some linear models violate the assumption of uncorrelated error when they handle data that is clustered by one or more grouping variables; thus, their error term is not independent (Garson 2013). This means that the conclusions of those studies that do not take into account this hierarchical structure can often be misleading, as they do not truly capture the group level effect.

Multilevel models are an extension of linear models that incorporate different levels into the model statement, classifying cases into groups, and thus, establishing a hierarchy in which some variables explain differences at the individual level while others at the group level (Gill and Womack 2013). As the aim of this research is the analysis of unobserved variables such as capital and perceived frequency of ASB, the analysis was carried out using Mplus version 6.1, a comprehensive statistical package specialised on models based on latent constructs (Muthen and Muthen 2011).

Measuring inequalities

Many scholars have pointed out the necessity of establishing inequality measures that take into consideration the multidimensional nature of wellbeing (Atkinson and Bourguignon 1982; Kolm 1977; Maasoumi 1986; Sen 1995; Tsui 1995), and which are sensitivity to transfers at different levels, as inequality measures that are dependent of the mean (e.g. GINI) are also invariant to proportional shifts (Atkinson 1970). Therefore, Maasoumi's (1999) suggested a two-step approach for the creation of multidimensional measures of inequality, in which a function of utility was constructed first, followed by a measure of their dispersion using a unidimensional approach. In this study, the resulting variables satisfy all the inequality measures axioms, as the 'function of utility' of each form of capital is based on factor scores that follow a positive continuous distribution (similar to income). Maasoumi (1999) proposed to measure the dispersion or inequality of this function of utility using generalised entropy (GE), an approach first introduced to the field of economics by Theil (1967) to measure the divergence between the structure of the income distribution across groups and the structure of the distribution of the people that integrates those groups (Conceicao and Ferreira 2000).

The concept of entropy relates to the level of disorder in a system, where maximum entropy is linked to complete disorder (or minimum inequality), and minimum entropy to complete order (or maximum inequality) (Bailey 1985). A key element of GE measures is the inclusion of a parameter that measures the sensitivity of transfers at different parts of the distribution. In this study, when the parameter $\alpha = 0$ (also called Theil's L, Theil's first index, or mean log deviance measure) it shows more sensitivity to transfers at the lower end of the distribution, that is, due to the presence of students with lower levels of capital. With $\alpha = 1$ (also called Theil's T or Theil's second index), the measure is equally sensitive to changes across the whole distribution, and, all the other higher values, including $\alpha = 2$, give more importance to the upper tail, thus, showing inequalities as result of extremely wealthy students.

5. Results

The results of the CFA can be observed in the appendix section, including the factor loadings or correlation coefficients between the observed variables and latent constructs (i.e. the measures of perceived frequency of ASB and each of the forms of capital). As mentioned before, the factor scores or values of the capital measures that correspond to each student were used to construct three inequality measures for each form of capital, each of them coinciding with a different parameters of sensitivity to transfers. The mean or average level of the students' capital was also incorporated into

the analysis in addition to the measures of school capital in order to control for disparities between schools and to explore the effects of inequality over and above deprivation (see Pridemore (2011)).

Table 1 shows the results of the relationship between capital, inequality and the students' perceived frequency of ASB. At the student level, social capital was the only form of capital with an important association with the dependent variable, as throughout the different models, it had a strong and consistent effect on the perceived frequency of ASB. The economic and cultural capital of the students, although significant, had a relatively small effect on the dependent variable. At the school level, the effect of the average level of students' capital seems to be considerably stronger than the school capital, suggesting that school characteristics are not as important as those of students in predicting changes in their perceived frequency of ASB. Moreover, most measures of inequality in the students' capital lost statistical significance after controlling for other elements in the model. Nonetheless, in the final model (model VI) GE(1) in the students' cultural capital was significant even after controlling for type of school and size of locality, and indeed had the strongest relationship with the perceived frequency of ASB.

Lastly, although the results of model VI show differences between students of different types of schools and localities, these effects seem to be relatively small. Despite model VI not having the best fit statistics, all the variables were included in the final analysis in order to analyse the effect of inequality over and above deprivation. The Intra Class Correlation (ICC) of this model showed that the overall effect of the schools on dependent variable was 0.116; that is, 11.6 percent of the variation in the perceived frequency of ASB of the students is explained by differences between schools. Hence, most of the variation in the perceived frequency of ASB is explained differences that exists between the students of each school.

Table 1: Multilevel Models of students' perceived frequency of ASB.

Model:	0	I	II	III	IV	V	VI
Constant	0.379**	0.561**	0.305**	0.515**	0.820**	0.765**	0.747**
S.E	(0.001)	(0.003)	(0.005)	(0.006)	(0.031)	(0.029)	(0.029)
STUDENT LEVEL							
Student Eco. Capital		0.035**		0.026**	0.018**	0.017**	0.017**
S.E		(0.003)		(0.003)	(0.004)	(0.003)	(0.003)
Student Soc. Capital		-0.417**		-0.412**	-0.404**	-0.404**	-0.404**
S.E		(0.003)		(0.003)	(0.005)	(0.003)	(0.003)
Student Cul. Capital		0.080**		0.076**	0.072**	0.071**	0.071**
S.E		(0.004)		(0.004)	(0.005)	(0.004)	(0.004)

SCHOOL LEVEL					
<i>Economic capital</i>					
GE(0) <i>At the bottom</i>	0.082**	0.033**	-0.037**	-0.006	-0.006
S.E	(0.010)	(0.009)	(0.013)	(0.011)	(0.011)
GE(1) <i>Across the distrib.</i>	-1.829**	-0.979**	0.269	-0.156	-0.109
S.E	(0.206)	(0.187)	(0.270)	(0.237)	(0.237)
GE(2) <i>At the top</i>	0.964**	0.502**	-0.145	0.063	0.035
S.E.	(0.161)	(0.146)	(0.189)	(0.177)	(0.176)
Mean Stu. Eco. Capital			0.186**	0.121**	0.145**
S.E			(0.026)	(0.023)	(0.024)
School Eco. Capital			-0.071**	-0.026*	-0.022*
S.E			(0.012)	(0.011)	(0.011)
<i>Social Capital</i>					
GE(0) <i>At the bottom</i>	0.094	0.028	-0.051	-0.063	-0.066
S.E	(0.161)	(0.060)	(0.060)	(0.057)	(0.056)
GE(1) <i>Across the distrib.</i>	-8.270**	-5.432**	-1.758	-0.422	-0.344
S.E	(1.445)	(1.292)	(1.333)	(1.201)	(1.192)
GE(2) <i>At the top</i>	12.680**	8.083**	2.355	0.907	0.871
GE(0) <i>At the bottom</i>	(1.482)	(1.326)	(1.408)	(1.250)	(1.241)
Mean Stu. Soc. Capital			-0.438**	-0.345**	-0.352**
S.E			(0.035)	(0.029)	(0.029)
School Social Capital			-0.078**	-0.059**	-0.059**
S.E			(0.010)	(0.009)	(0.009)
<i>Cultural Capital</i>					
GE(0) <i>At the bottom</i>	-0.685	-0.824**	-0.740	0.100	0.135
S.E	(0.373)	(0.331)	(0.633)	(0.139)	(0.138)
GE(1) <i>Across the distrib.</i>	2.693*	3.041**	2.774	0.934	1.044*
S.E	(1.273)	(1.135)	(2.018)	(0.537)	(0.533)
GE(2) <i>At the top</i>	-2.076*	-1.986*	-1.677	-0.671	-0.817
GE(0) <i>At the bottom</i>	(0.953)	(0.851)	(1.374)	(0.564)	(0.560)
Mean Stu. Cul. Capital			-0.102**	-0.027	-0.017
S.E			(0.029)	(0.030)	(0.030)
School Cul. Capital			0.042**	0.024**	0.024**
S.E			(0.008)	(0.007)	(0.007)
<i>Type of School</i>					
<i>(ref. Public School)</i>					
Public Technical				0.005	0.004
S.E				(0.004)	(0.004)
TV School				-0.042**	-0.042**
S.E				(0.004)	(0.004)

Private						-0.066**	-0.066**
S.E						(0.006)	(0.006)
Size of locality							
(ref. 1 to 2,499)							
2,500 to 99,999							0.010**
S.E							(0.004)
More than 100,000							-0.018**
S.E							(0.005)
Between sch. variance	0.010**	0.007**	0.008**	0.006**	0.005**	0.004**	0.004**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Within sch. variance	0.037**	0.034**	0.037**	0.034**	0.034**	0.034**	0.034**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ICC	0.224	0.171	0.181	0.156	0.131	0.118	0.116
	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)
Log likelihood	25899.6	31797.9	26299.2	31991.54	31333.18	31478.4	31485.48
-2*log-likelihood	-51799	-63596	-52598	-63983.1	-62666.36	-62957	-62971

N= 144,057. ** *p*<0.01, * *p*<0.05.

Interestingly, a higher economic capital (particularly higher mean in the students capital in each school) seems to be linked to higher perceived frequency of ASB, contradicting some previous research that suggest that poverty and deprivation are associated with higher levels of crime and ASB. However, the results also show that students from different backgrounds are likely to be affected differently by these factors, and therefore, models for each type of school and locality were run in order to explore these effects in different contexts (table 2). This analysis was carried out using Multiple Group Analysis on MPlus, which allowed the exploration of ‘*measurement invariance and population heterogeneity*’ (Muthen and Muthen 2011:421) that is, it allows to simultaneously test for the effects of the forms of capital and inequality across different.

The key finding from the results displayed in table 2 is that the effects of capital and inequality change considerably between different groups. The ICC varied between 0.077 and 0.158, which means that while differences between schools explained only 7.7 of the variation in the perceived frequency of ASB of the students of public and technical schools, they explained 15.8 percent of the variance of students of small localities. The constant or intercept in many of the models is close to 1 (with the exception of TV schools and small localities); suggesting that the expected perceived

frequency of ASB is at around the highest possible level when all the other variables are 0. Thus, most of the elements that were statistically significant decreased the perceived frequency of ASB.

Social capital had again the most consistent relationship with the dependent variables, decreasing the perceived frequency of ASB of students of all school types and localities. Even though economic and cultural capital were statistically significant in some of the models, their effect on the dependent variable was considerably smaller to that of social capital. The analysis also shows that a higher mean in the students' economic capital was associated with an increased in the perceived frequency of ASB but only amongst students of TV schools and small localities. While cultural capital did not seem to be a good predictor of the perception of ASB in the models shown in table 1, a higher mean in the students' cultural capital predicted an increase in the perceived frequency of ASB among students of Public schools and small localities.

While inequality in the students' economic capital does not seem to be a good predictor of the students' perceived frequency of ASB, the results suggest that some measures of inequality linked to the students' social and cultural capital are. For instance, all inequality measures in the students' cultural capital were associated with increases in the dependent variable of students of private schools. Furthermore, the effects of the other inequality measures changed in strength and direction according to the part of the distribution to which they were sensitive. The effect of inequalities in the students' cultural capital in TV schools and small localities was particularly interesting. While an increase in GE(1) was linked to a higher perception of ASB, higher levels of GE(0) and GE(2) were associated with lower levels of the dependent variable. Although more studies are needed in order to understand these effects, the results could suggest that despite the negative connotation that the world inequality has, some differences between students could have a positive effect, and students with more cultural capital could help compensate some of the deprivations or deficiencies in cultural capital of other students from less privileged backgrounds.

Table 2: Multilevel Model of students' perceived ASB by type of school and size of locality.

Model:	Type of school				Size of locality		
	Public	Technic	TV	Priv.	Small	Med.	Large
Constant	0.985**	0.919**	0.565**	1.160**	0.550**	1.045**	0.992**
S.E	(0.057)	(0.024)	(0.042)	(0.106)	(0.042)	(0.067)	(0.086)
STUDENT LEVEL							
Student Eco. Capital	0.018**	0.021**	0.020**	-0.021	0.028**	0.023**	0.005
S.E	(0.006)	(0.007)	(0.007)	(0.015)	(0.006)	(0.007)	(0.006)
Student Soc. Capital	-0.421**	-0.392**	-0.368**	-0.453**	-0.354**	-0.419**	-0.428**

	S.E	(0.008)	(0.009)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)
Student Cul. Capital		0.071**	0.075**	0.094**	0.033**	0.083**	0.070**	0.065**
	S.E	(0.008)	(0.009)	(0.010)	(0.012)	(0.008)	(0.009)	(0.007)
SCHOOL LEVEL								
<i>Economic Capital</i>								
	GE(0)	0.062	-0.045	-0.022	0.058	-0.023	-0.122	-0.103
	S.E	(0.056)	(0.049)	(0.013)	(0.066)	(0.013)	(0.078)	(0.112)
	GE(1)	-0.618	0.458	0.380	0.009	0.341	2.723	3.227
	S.E	(1.883)	(1.613)	(0.266)	(0.111)	(0.263)	(1.727)	(3.340)
	GE(2)	-0.422	-0.994	-0.229	-0.001	-0.196	-3.414	-3.455
	S.E.	(1.947)	(1.624)	(0.181)	(0.069)	(0.178)	(1.815)	(3.766)
Mean Stu. Eco. Capital		-0.144**	-0.115	0.240**	-0.285*	0.216**	-0.088	-0.087
	S.E	(0.053)	(0.066)	(0.033)	(0.127)	(0.032)	(0.063)	(0.099)
School Eco. Capital		-0.058**	-0.020	-0.008	-0.031	-0.029	-0.091**	-0.054**
	S.E	(0.021)	(0.023)	(0.016)	(0.046)	(0.016)	(0.023)	(0.020)
<i>Social Capital</i>								
	GE(0)	-0.044	-0.100**	-0.022	-0.115	0.333**	-0.021	-0.073
	S.E	(0.074)	(0.035)	(0.083)	(0.092)	(0.076)	(0.048)	(0.046)
	GE(1)	-0.154	-0.088	-1.445	0.083	-2.584	0.003	-0.346
	S.E	(0.105)	(0.131)	(2.129)	(2.567)	(1.884)	(0.201)	(0.346)
	GE(2)	-0.143*	-0.038	2.135	-0.119	2.986	0.024	-0.049
	S.E.	(0.083)	(0.113)	(2.239)	(2.805)	(1.989)	(0.124)	(0.125)
Mean Stu. Soc. Capital		-0.422**	-0.375**	-0.341**	-0.429**	-0.376**	-0.534**	-0.482**
	S.E	(0.059)	(0.074)	(0.046)	(0.081)	(0.044)	(0.076)	(0.057)
School Soc. Capital		-0.007	0.059**	-0.103**	-0.058*	-0.088**	-0.011	-0.024
	S.E	(0.017)	(0.021)	(0.014)	(0.028)	(0.014)	(0.018)	(0.017)
<i>Cultural Capital</i>								
	GE(0)	-2.909*	-0.250	-1.276**	0.753*	-1.423**	-0.150	-1.790**
	S.E	(1.241)	(0.136)	(0.418)	(0.376)	(0.440)	(0.161)	(0.751)
	GE(1)	6.828	2.839	4.769**	0.533*	5.514**	1.086	3.576**
	S.E	(4.114)	(2.053)	(1.570)	(0.266)	(1.607)	(1.915)	(1.065)
	GE(2)	-2.598	-2.786	-3.055**	0.234*	-3.291**	-0.501	-0.061
	S.E.	(2.893)	(2.112)	(1.158)	(0.118)	(1.169)	(1.980)	(0.104)
Mean Stu. Cul. Capital		0.151**	-0.060	-0.091	-0.067	0.192**	0.006	0.011
	S.E	(0.058)	(0.075)	(0.050)	(0.094)	(0.048)	(0.060)	(0.057)
School Cul. Capital		0.015	0.015	0.048**	0.013	0.055**	0.038**	0.015
	S.E	(0.012)	(0.014)	(0.013)	(0.019)	(0.012)	(0.013)	(0.011)
Between sch. var.		0.003	0.003	0.005	0.005	0.006	0.004	0.004
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Within sch. var.		0.036	0.036	0.033	0.032	0.032	0.037	0.035
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ICC		0.077	0.077	0.132	0.135	0.158	0.098	0.103

Log likelihood	31787.9	31787.9	31787.85	31787.85	31644.9	31644.9	31644.9
-2*log-likelihood	-63575.7	-63575.7	-63575.7	-63575.7	-63290	-63290	-63290

*N= 144,057. ** p<0.01, * p<0.05*

6. Limitations

This research presents some limitations that need to be acknowledge. First, the survey used throughout this study was not developed for the specific purpose of this research but to assess the education system in Mexico (INEE 2016). This means that some important elements were not incorporated into the analysis, including household income and other monetary variables at the school level. Additionally, the variables used for the creation of the dependent variable only show the perceived frequency of ASB and not individual behaviours or actions, and therefore, the results of this paper only show the link between different levels of capital and inequality and how students perceive this problem. While this perception could be linked to the actual levels of ASB (Budd and Sims 2001; Flatley 2017; Laufer and Harel 2003; Upson 2006; Wood 2004) and other problems in their communities (Farrall, Jackson, and Gray 2009; Gray et al. 2019), the results of this paper should be interpreted carefully, and a direct link between capital, inequality and ASB should be avoided. Lastly, it must be considered that the use of alternative sampling methods, including the selection of students on other age groups or of young people who do not attend school can yield a different result, and therefore, the results presented here are relevant only for the populations considered in the sampling design of the PLANEA survey.

7. Discussion and conclusions

This paper has shown the importance of using a more inclusive or holistic approach in the study of complex social problems such as the relationship between deprivation, inequality and ASB, as single conceptual or theoretical frameworks can result in partial or inconclusive findings. In this research, the use of the forms of capital introduced by Bourdieu (1986) allowed the analysis of economic and non-economic forms of capital; an ecological approach (Bronfenbrenner 1979) justified the exploration of various individual and environmental elements; and the use of measures of both capital and inequality together (Pridemore 2011) helped to identify the effects of deprivation over and above inequalities.

It is not my intention to claim that this study has controlled for all those factors that might affect the behaviour of students, but trying to show that more insightful results may arise by using such approach. Therefore, the findings of this research must be interpreted carefully and any direct causal relationship should be avoided. What is more, this paper has shown that it is not possible to establish general conclusions about the effects of capital and inequalities that apply to all contexts, as even within Mexico, their relationship with the perception of ASB in schools depends on the unique characteristics of individuals and the places where they live. Hence, more empirical evidence that acknowledges these differences is necessary, especially in regions where the social reality is very different to where the leading theories and research have been developed.

This does not mean that the substantive findings of this paper are not useful for further research and the development of policies to tackle the problem of ASB in schools. The link between social capital and the perceived frequency of ASB is perhaps one of the most relevant results of this research. This relationship is particularly interesting because it was the only form of capital with a consistent effect, decreasing the perceived frequency of ASB of students from all the types of schools and localities. This finding could be of a great importance in a country with large economic inequalities like Mexico, as fostering better social connections in the school environment can benefit people from all backgrounds. Although previous studies have indicated a relationship between economic deprivation and crime/ASB, especially in urban areas (Sampson, Morenoff, and Gannon-Rowley 2002; Obberwittler 2005, 2007; Sampson 2009; Thapa et al. 2013; Weatherburn and Lind 2001; Wikstrom and Loeber 2000), individual levels of economic capital did not seem to be an important predictor of the perception of ASB. Yet, some elements associated with the school environment seem to explain this problem, including the average level of the students' economic and cultural capital in each school.

This research also contributes to the existing literature about the effects of capital and inequality by suggesting the use of two important methodological elements: the use of measures of both capital and inequality together, and the analysis of inequality measures in different form of capital and with parameters sensible to transfers at different parts of the distribution. The first element was based on the work of Pridemore (2011), who suggested that in order to understand the effects of poverty and inequality on crime (he studied homicide), it is necessary to include in the analysis appropriate measures of poverty and inequality together. The results of the models shown in the first part of the analysis demonstrated that the effect and direction of capital and inequality changed when controlling for both variables, and most inequality measures lost statistical significance with the inclusion of the mean of the students' capital. Therefore, this study confirmed not only the

importance of using measures of poverty and inequality together, but also the need to include measures for these elements at the appropriate level of analysis in order to avoid partial or misleading results.

This paper also noted that many academics and policy makers have used the word inequality to refer to differences in economic capital between people, yet, inequality can have very different meanings and sources. Although the measurement of inequality can be challenging due to the lack of appropriate data, both economic and non-economic inequalities are important to explain many problems including crime and violent behaviour (McVie 2020). In this sense, while the concepts of inequality in social and cultural capital have not been explored in the past, they seem to be better than inequality in economic capital in explaining differences in the perceived frequency of ASB of students in Mexico. Lastly, one of the most interesting results of this study was observed when using Generalised Entropy measures, as it demonstrated not only the importance of analysing the effects of inequalities in different forms of capital but also of exploring inequalities resulting from the presence of students with very high or low levels of capital. This paper showed that despite the negative connotation that comes with the word inequality, in some contexts differences between students might have a positive effect. This situation was observed particularly among students of TV schools and small localities, where disparities in cultural capital due to the presence of very deprived or wealthy students, were linked to a decrease in the perceived frequency of ASB.

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APPENDIX: Confirmatory Factor Analyses

CFA Student's perceived frequency of ASB

VARIABLE NAME	STANDARDISED COEFFICIENT	R-SQUARE
Fighting	0.744**	0.554
Stealing	0.692**	0.479
Damaging furniture	0.688**	0.473
Insulting	0.655**	0.429
Student Perceived frequency of ASB	1	

N= 144,057. Chi-square= 232.897 with 2 df, p=0.000, RMSEA= 0.029, CFI=0.999, TLI=0.997. ** p<0.01, * p<0.05.

CFA Student economic capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R-SQUARE
Internet	0.907**	0.823
Computer	0.843**	0.71
Refrigerator	0.799**	0.639
Gas	0.791**	0.626
Washer	0.773**	0.597
Microwave	0.752**	0.566
Home Phone	0.712**	0.507
Television	0.685**	0.469
Car or van	0.67**	0.449
Pay TV	0.626**	0.391
Electric Light	0.593**	0.352
DVD or Blu-ray	0.548**	0.300
Economic Capital Student	1	

N= 144,057. Chi-square= 25,950.960 with 54 df, p=0.000, RMSEA= 0.059, CFI=0.965, TLI=0.957. ** p<0.01, * p<0.05.

CFA School economic capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R- SQUARE
Computers	0.943**	0.889
Water for toilets	0.688**	0.474
Books	0.682**	0.466
Video devices	0.661**	0.437
Toilet for girls	0.657**	0.431
Toilet for boys	0.647**	0.419
Desks	0.619**	0.383
Drainage	0.594**	0.353
Toilet for adults	0.59**	0.348
Patio	0.558**	0.311
Electricity everyday	0.556**	0.309
Sufficient water	0.538**	0.289
Fence	0.528**	0.279
Classroom	0.468**	0.219
Water from public network	0.455**	0.207
Blackboard or white board	0.423**	0.179
TVs	0.368**	0.136
Electricity from public network	0.346**	0.120
<i>Economic Capital School</i>	<i>1</i>	

N= 3,529. Chi-square= 4,115.556 with 135 df, p=0.000, RMSEA= 0.096, CFI=0.708, TLI=0.669. ** p<0.01, * p<0.05.

CFA Student social capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R-SQUARE
Teacher gives confidence	0.702**	0.493
Students give opinion on rules	0.697**	0.485
Teacher considers opinion	0.683**	0.467
Teacher organises activities	0.668**	0.446
Teacher ask to listen others	0.662**	0.438
Teacher encourages	0.632**	0.400
Students work in teams	0.501**	0.251
Teacher encourages to talk when upset	0.481**	0.232
Positive classroom Capital	0.948**	0.898
Principal and teachers listen complaints	0.748**	0.559
Students trust teachers	0.713**	0.509
Principal helps to solve problems	0.709**	0.503
Students taken into account in school	0.655**	0.429
Students review school activities	0.632**	0.399
Students suggest activities	0.599**	0.359
Changes based on students proposals	0.582**	0.339
Positive school Capital	0.789**	0.622
Teacher ignores	0.791**	0.626
Teacher shouts	0.64**	0.41
Teacher interrupts	0.59**	0.348
Teacher scolds	0.393**	0.154
Negative social Capital	-0.604**	0.365
Social Capital Students	1	

N= 144,057. Chi-square= 99,383.569 with 149 df, p=0.000, RMSEA= 0.070, CFI=0.928, TLI=0.917. ** p<0.01, * p<0.05.

CFA Student cultural capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R-SQUARE
Father's level of education	0.837**	0.701
Mother's level of education	0.805**	0.648
Parents' expectations of education	0.522**	0.272
Books at home	0.46**	0.212
Language classes	0.389**	0.151
People at home helps studying	0.254**	0.065
People at home aware of studies	0.153**	0.023
Computer classes	0.073**	0.005
Cultural Capital Students	1	

N= 144,057. Chi-square= 29,067.687 with 20 df, p=0.000, RMSEA= 0.103, CFI=0.905, TLI=0.867. ** p<0.01, * p<0.05.

CFA School economic capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R- SQUARE
Computers	0.943**	0.889
Water for toilets	0.688**	0.474
Books	0.682**	0.466
Video devices	0.661**	0.437
Toilet for girls	0.657**	0.431
Toilet for boys	0.647**	0.419
Desks	0.619**	0.383
Drainage	0.594**	0.353
Toilet for adults	0.59**	0.348
Patio	0.558**	0.311
Electricity everyday	0.556**	0.309
Sufficient water	0.538**	0.289
Fence	0.528**	0.279
Classroom	0.468**	0.219
Water from public network	0.455**	0.207
Blackboard or white board	0.423**	0.179
TVs	0.368**	0.136
Electricity from public network	0.346**	0.120
<i>Economic Capital School</i>	<i>1</i>	

N= 3,529. Chi-square= 4,115.556 with 135 df, p=0.000, RMSEA= 0.096, CFI=0.708, TLI=0.669. ** p<0.01, * p<0.05.

CFA School social capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R- SQUARE
Students meet rules	0.702**	0.493
Principal helps to solve problems	0.498**	0.434
Students solve conflicts peacefully	0.653**	0.426
Principal involves students in school activities	0.304**	0.093
Principal involves parents to solve problems	0.273**	0.075
<i>Social Capital School</i>	<i>1</i>	

N= 3,529. Chi-square= 364.130 with 5 df, p=0.000, RMSEA= 0.149, CFI=0.828, TLI=0.656. ** p<0.01, * p<0.05.

CFA School cultural capital

VARIABLE NAME	STANDARDISED COEFFICIENT	R- SQUARE
Parents asked about the progress	0.816**	0.665
Parents gave suggestions	0.763**	0.582
Parents gave some notice	0.733**	0.537
TVs for teaching	0.487**	0.237
Books for students use	0.458**	0.21
Computers for students use	0.391**	0.153
Full teacher in all groups	0.136**	0.019
<i>Cultural Capital School</i>	<i>1</i>	

N= 3,529. Chi-square= 4,010.424 with 59 df, p=0.000, RMSEA= 0.144, CFI=0.642, TLI=0.599. ** p<0.01, * p<0.05.