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Mexican school students' perceptions of inclusion: A brief report on students' social inclusion, emotional well-being, and academic self-concept at school

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With the increasing student diversity, inclusive education has only become more relevant. Given that inclusive education is considered as the most effective approach to improve quality of education and promote equity and social cohesion, research has focused on examining the facilitators and barriers of meaningful inclusive education as well as the effectiveness of inclusive education on students' academic outcomes. In contrast, far less attention has been paid to explore students' non-achievement outcomes, such as their socio-emotional development. Therefore, this brief report presents the results of a small-scale exploratory study which examines Mexican students' perceptions regarding their social inclusion, emotional well-being, and academic self-concept. A total of 101 Mexican students were included in the sample. Nonparametric tests such as Chi-square goodness of fit, Mann-Whitney U and Dunn's tests were conducted to analyze the data. Overall, results show that students in general perceive themselves included at school, however, students attending private schools experience less emotional well-being. Implications of the results as well as further lines of research are discussed.

KEYWORDS

inclusive education, students' perceptions, emotional well-being, social inclusion, academic self-concept, perceptions of inclusion questionnaire, Mexico

1. Introduction

With the increasingly diverse student population in schools, the establishment of inclusive classrooms has become a top policy priority worldwide (UNESCO, 2020). With this background, the concept of inclusive education has shifted from the inclusion of students with disabilities, to the provision of equal opportunities in education celebrating the diversity of all learners (Watkins, 2017). To achieve this aim, schools must become "more responsive to children with a diverse range of abilities, cultures, gender, religions, and other situations and issues that present in the classroom" (Loreman, 2017, p. 2). Given that inclusive education is considered as the most

effective policy approach to improve quality of education as well as to promote equity and social cohesion (Council of the European Union, 2009; Watkins, 2017; UNESCO, 2020), extensive research has focused on examining the facilitators and barriers of meaningful inclusive education. Additionally, studies have also investigated the effectiveness of inclusive education on students' outcomes (Goddard et al., 2015; Valiandes, 2015; Bal, 2016; Eysink et al., 2017). However, important to highlight is that within the context of such studies, the focus has been mainly placed on students' academic achievement rather than non-academic outcomes (Schwab and Alnahdi, 2020). Considering the fact that the key objectives of inclusive education are not only to support students' academic learning but also to promote their socio-emotional development (Pozas and Schneider, 2019), it is imperative that research also takes students' non-achievement outcomes into account. In addition, studies have mainly focused on examining teachers' perspectives when it comes to inclusive education. In contrast, far less attention has been paid to explore learners' perspectives about their perceptions of education in inclusive classrooms. As a result, researchers have stressed the necessity of considering all stakeholders' perspectives, and in particular, student experiences in inclusive education research (De Leeuw et al., 2018; Lavin et al., 2020).

Given that inclusive education is a worldwide priority, the number of research studies at an international level has increased immensely (Alnahdi and Schwab, 2020). However, empirical research on inclusive education in Mexico is still sparse (García-Cedillo and Romero-Contreras, 2012), and mainly focuses on documenting the experiences and perceptions of teachers, preservice teachers, and parents (Flores Barrera et al., 2017; Lavin et al., 2020). In order to explore students' experiences of inclusion, the student version of the Perceptions of Inclusion Questionnaire (PIQ) by Venetz et al. (2015) will be used. The PIQ assess students' perceptions of inclusion with focus on students' social inclusion, emotional well-being, and academic self-concept. Although the PIQ is currently available in different languages, up to now, the Spanish PIQ version in a Mexican sample has not been explored. Thus, with this background, the present brief report focuses on presenting the results from a small-scale exploratory study that aims to examine for the first time the PIQ within a sample of Mexican school students. The following sections will briefly introduce the Mexican educational system. Afterwards, it will shortly elaborate on the topic of inclusive education and students' socio-emotional variables.

1.1. Mexico's educational system

Mexico's education system is coordinated by the Public Education Secretariat (*Secretaría de Educación Pública*, SEP) and organized into three educational levels (OECD, 2019): (a) basic education (pre-school education, primary education and lower secondary education); (b) upper-secondary education (with options between general or vocational programs), and (c) higher education. Children start school at the age of 6, and are first formally streamed into different educational pathways at the age of 15 as they enter upper-secondary schools (Santiago et al., 2012; OECD, 2018). More than 90% of students attend public school, which are publicly subsidized (OECD, 2019). The rest of students attend private schools which obtain their resources from student fees (Santiago et al., 2012). Even though private schools are

not linked to governmental resources, they still require the authorization of the state educational authorities and must implement the national curriculum established by the SEP.

1.2. Inclusive education in Mexico

The Mexican education system caters to the educational needs of a large and highly diverse population (Forlin et al., 2010), e.g. according to languages and dialects (OECD, 2019). Students with special education needs attend mainstream basic schools or specialized institutions (García Cedillo et al., 2015). Nevertheless, despite that certain policies and practices such as delayed tracking and limited ability grouping are implemented, reports from OECD (2018) indicate that Mexico ranks amongst the countries with the lowest level of inclusion. Moreover, when it comes to reading performance, Mexico has been able to reduce the gap between different groups of students, such as students from different socio-economic status, immigrant status and gender (OECD, 2023). However, such differences are non-significant.

In 2012, a constitutional reform established quality education as a right for all Mexicans (OECD, 2018). In addition, Mexican law states that private schools cannot deny admission to students with SEN (Official Gazette of the Federation [DOF], 2011). Mexico's policies ensure full participation access to quality learning and are committed to ensure educational institutions and all educational stakeholders value diversity (OECD, 2023). Nevertheless, although Mexico has established educational support such as curricular adaptations and accommodations to students with disabilities in inclusive settings (SEP, 2012), Romero-Contreras et al. (2013) argue that inclusive education in Mexico is still unsatisfactory. In fact, out of the 15% of students who have a disability, only 2.85% receive inclusive education (DOF, 2017). Moreover, approximately 90% of students attend public schools (OECD, 2019), having access to free education. In contrast, private schools are not publicly subsidized and thus, are tuition-based operating without any government funding (Santiago et al., 2012). Most private schools are attended by middle and high socioeconomic status students (García Cedillo et al., 2015). Even though private schools cannot deny admittance based on disability (DOF, 2011; Lavin et al., 2020), many students with SEN are left without appropriate support for their specific learning needs as they would need to pay private school tuition as well as the additional support required within these school settings (García Cedillo et al., 2015). Considering the fact that the key objectives of inclusive education is fostering students' emotional, social and academic development and the impact these might have on their quality of life, it is necessary to empirically explore students' perceptions of inclusion.

1.3. Inclusive education and students' socio-emotional variables

Three important student socio-emotional variables related to the effectiveness of inclusive schooling are social inclusion, emotional well-being, and academic self-concept (Knickenberg et al., 2020). According to empirical evidence, students' social inclusion, emotional well-being, and academic self-concept can be perceived differently between boys and girls. For instance, research has reported that girls

have shown higher levels of emotional well-being as well as social inclusion (Schneekloth and Andersen, 2013; Ato et al., 2014; Krull et al., 2018; Guillemot and Hessels, 2022; Knickenberg et al., 2022). In contrast, Venetz et al. (2019) found that males have higher levels of academic self-concept than girls.

Even though researchers and authors have long argued on differences on students' socio-emotional development when attending public or private schools, empirical research on the topic is still sparse (Plata Zanatta et al., 2014). From the few limited studies exploring such topic, have already indicated certain differences across variables such as self-esteem and self-concept (Salum-Fares et al., 2011; Plata Zanatta et al., 2014). Given the results of the previous limited research, it seems meaningful to explore the potential differences between public and private school students when it comes to their perceptions of inclusion.

1.4. Research questions

In light of the aforementioned theoretical background, the aim of the present brief report is to present the results of a small-scale exploratory study which investigates students' perceptions of inclusion with focus on social inclusion, emotional well-being, and academic self-concept. The research questions guiding this study were:

- What are Mexican school students' perceptions of inclusion?
- Are there significant differences in students' perceptions of inclusion between male and female learners?
- Are there significant differences in students' perceptions of inclusion between students in public and private schools?

According to Alnahdi (2020), item level analyses are mostly never conducted. Nonetheless, "much information can be observed at the item level that can be overlooked when comparing only the overall means" (Alnahdi and Schwab, 2020, p. 777). Therefore, the present study will examine Mexican school students' perceptions of inclusion by exploring at an item level how they rate their school experiences.

2. Method

2.1. Participants

Following convenient sampling (Creswell, 2012), 101 Mexican students (40% boys and 60% girls) from third to ninth grade with a mean age of 12.93 years ($SD = 2.43$) participated in the study. The sample included students attending public (59%) and private (41%) schools. A total of 5 participants were diagnosed as having SEN (visually impaired $N = 1$; emotional and behavioral disorder $N = 4$). The participants completed a voluntary online survey during January and February of 2021 and which took approximately 15–20 min. Given that students were underaged, parental consent and ethical approval by the appropriate educational institutions were obtained. Based on G*Power 3.1 calculations, the required sample size for comparing two independent mean samples (non-parametric tests such as Mann–Whitney U tests) with an estimated effect size of $d = 0.50$ and a power of 0.95 is a total of 184 participants (Buchner et al., 2021). Unfortunately, the current

sample size is not in line with the established threshold (Faul et al., 2007). However, some relevant articles have argued that depending on the purpose of the study, a smaller sample could be appropriate. For example, Isaac and Michael (1995) suggested that in case of an exploratory study, such as the case of the present brief report, samples with 10 to 30 participants can have many practical advantages (i.e., simplicity, easy calculation and the ability to test hypotheses). Moreover, Hertzog recommended samples of 30–40 participants per group for studies comparing groups. Therefore, based on the recommendations from Isaac and Michael (1995) as well as Hertzog (2008) and considering that this is an exploratory study, it was decided to use the current sample in order to examine the present study's research questions.

2.2. Instrument: Students' perception of inclusion

Students' perceptions regarding their social inclusion, emotional inclusion, and academic self-concept at school were assessed using the Spanish Perceptions of Inclusion Questionnaire–Student version by Venetz et al. (2015). The PIQ is a short-form version of a questionnaire to assess students' integration (originally in German as the "Fragenbogen zur Erfassung von Dimensionen der Integration von Schülern [FDI]") by Haeberlin et al. (1989), which includes three subscales with four items each: social inclusion (i.e., "I have a lot of friends in my class"), emotional well-being (i.e., "I like going to school"), and academic self-concept (i.e., "I am a fast learner"). Important to highlight is that the PIQ has been designed to assess three different perspectives, this means that it can be self-administered or responded by a child's teacher or parent. In order to fulfil the purpose of this study, the student perspective questionnaire was administered. The items were responded by students using a 4-point Likert scale (1 = not at all true to 4 = certainly true). Given that in the present study the results were based on item level comparisons, no subscale scores were used.

The students' PIQ perspective questionnaire's psychometric properties have been previously documented (see DeVries et al., 2018; Zurbriggen et al., 2019). Additionally, German, English, Spanish as well as other language versions of the PIQ are available online (see Venetz et al., 2015) making it possible to be implemented in different countries [i.e., Germany and Saudi Arabia (see Alnahdi and Schwab, 2020)].

2.3. Data analyses

Statistical analyses were conducted in IBM SPSS Statistics 27. Before analyses were conducted, data normality tests for each of the 12 items of the PIQ were carried out. As seen from Table 1, the Shapiro–Wilk test indicated that the scores were not normally distributed.

Given that the current sample is not in line with the parameters' threshold and the scores are not normally distributed, non-parametric tests will be conducted (Vickers, 2005; Field, 2013). Thus, in order to answer the first research question, Chi-Square goodness of fit tests were computed for each of the 12 items of the PIQ. Concerning the second and third research questions,

TABLE 1 Shapiro–Wilk test for each of the 12 items of the PIQ (N=101).

Item	W	df	p
I like going to school.	0.77	101	<0.001
I have a lot of friends.	0.78	101	<0.001
I am a fast learner.	0.84	101	<0.001
I have no desire to go to school. (N)	0.64	101	<0.001
I get along very well with my classmates.	0.76	101	<0.001
I am able to solve very difficult exercises.	0.84	101	<0.001
I like it in school.	0.78	101	<0.001
I feel alone in my class. (N)	0.68	101	<0.001
I do well in my schoolwork.	0.78	101	<0.001
School is fun.	0.78	101	<0.001
I have very good relationships with my classmates.	0.75	101	<0.001
Many things in school are too difficult for me. (N)	0.67	101	<0.001

*N = negatively worded item.

Mann–Whitney U Tests with Dunn’s *post hoc* tests between gender (male and female) and school type (public and private school) for each item were calculated.

3. Results

3.1. Students’ ratings of their perceptions of inclusion

First, Chi-Square Tests for each item (based on a scale of 1 to 4 where the theoretical mean is 2.5) were calculated. From Table 2 it can be seen that all item level scores are statistically significant, indicating that a high rating (above 2.5).

3.2. Differences between demographic variables

To answer the second and third research question, Mann–Whitney nonparametric tests between students’ gender and school type on all 12 items of the PIQ were calculated. As seen from Table 3, there significant differences with small effects between male and female participants in items 3 (*I am a fast learner*) and item 7 (*I like it in school*) PIQ items. In detail, item 3 was rated higher by males, whereas item was rated higher by female participants (Table 3).

With regards to mean comparisons between school type, Mann–Whitney nonparametric test that four items were significantly different between students attending public and private schools. Overall, these four items (item 1 *I am a fast learner*, item 2 *I have a lot of friends*, item 7 *I like it in school*, and item 10 *School is fun*) were rated higher by students attending public schools than their

TABLE 2 Means, standard deviations, t-statistics and effect size (N=101).

Item	M	SD	χ ²	df	p
I like going to school.	3.25	0.71	69.73	3	0.000
I have a lot of friends.	3.29	0.73	60.15	3	0.000
I am a fast learner.	3.00	0.78	44.70	3	0.000
I have no desire to go to school. (R)	1.48	0.70	48.50	2	0.000
I get along very well with my classmates.	3.24	0.70	76.31	3	0.000
I am able to solve very difficult exercises.	2.76	0.75	54.29	3	0.000
I like it in school.	3.26	0.69	70.13	3	0.000
I feel alone in my class. (R)	1.57	0.65	41.90	2	0.000
I do well in my schoolwork.	3.15	0.67	79.00	3	0.000
School is fun.	3.05	0.68	83.20	3	0.000
I have very good relationships with my classmates.	3.10	0.63	101.01	3	0.000
Many things in school are too difficult for me. (R)	1.54	0.66	42.85	2	0.000

*R = recoded item.

counterparts attending private schools. As observed in Table 4, the items’ effect sizes are small to medium.

4. Discussion

The aim of this brief report was to explore Mexican students’ perceptions of social inclusion, emotional well-being, and academic self-concept. Additionally, students’ perceptions of inclusion attending private and public schools as well as potential gender differences were investigated. Chi-square goodness of fit results revealed that overall the mean scores of the sample across all items were rather higher than the theoretical mean. These results are in line with previous literature on the PIQ and comparable to recent studies focusing on students’ social inclusion, emotional well-being, and academic self-concept (Venetz et al., 2019; Schwab and Alnahdi, 2020). However, as discussed by Schwab and Alnahdi (2020, p. 9), “behind high mean scores, there may still be some students struggling with their inclusion, and these students would need to be addressed in more detail in practice.” When taking a closer look at the present study’s results, some students can be considered to be at risk as they perceived their social inclusion, emotional well-being, and academic self-concept as rather low. Consequently, students’ socio-emotional variables should also be an important focus point for measures of prevention and intervention.

As expected, results indicated several gender differences across the items. First, female participants scored higher in the item *I like it in school* which derives from the construct of emotional well-being. Similar results were found within the studies by Knickenberg et al. (2022) Germany and Guillemot and Hessels (2022) in France. Important to highlight is that the small effect size also was document by Guillemot and Hessels (2022). Second, male participants rated

TABLE 3 Medians, Mann–Whitney U and Dunn’s tests by sample and effect size (N=101).

Item	Male	Female	U	z	p	r	Dunn’s test
	Mdn	Mdn					
I like going to school.	46.06	52.67	1022.50	−1.25	n.s	–	n.s
I have a lot of friends.	53.69	47.50	1032.50	−1.16	n.s	–	n.s
I am a fast learner.	57.85	44.68	866.00	−2.43	0.02	−0.24	0.02
I have no desire to go to school. (R)	51.88	48.73	1105.00	−0.62	n.s	–	n.s
I get along very well with my classmates.	51.85	48.75	1106.00	−0.59	n.s	–	n.s
I am able to solve very difficult exercises.	53.86	47.38	1025.50	−1.21	n.s	–	n.s
I like it in school.	42.20	55.29	868.00	−2.48	0.02	−0.24	0.01
I feel alone in my class. (R)	52.74	48.14	1070.50	−0.89	n.s	–	n.s
I do well in my schoolwork.	44.86	53.48	974.00	−1.67	n.s	–	n.s
School is fun.	46.78	52.19	1051.00	−1.06	n.s	–	n.s
I have very good relationships with my classmates.	53.89	47.36	1024.50	−1.33	n.s	–	n.s
Many things in school are too difficult for me. (R)	49.30	50.47	1152.00	−0.23	n.s	–	n.s

*R= recoded item.

TABLE 4 Medians, Mann–Whitney U and Dunn’s tests by sample and effect size (N=101).

Item	Public	Private	U	z	p	r	Dunn’s test
	Mdn	Mdn					
I like going to school.	58.80	38.56	720.00	−3.83	0.000	−0.38	0.00
I have a lot of friends.	55.44	43.39	918.00	−2.25	0.02	−0.22	0.02
I am a fast learner.	49.95	51.29	1177.00	−0.25	n.s	-	n.s
I have no desire to go to school. (R)	49.08	52.55	1125.50	−0.68	n.s	-	n.s
I get along very well with my classmates.	52.23	48.01	1107.50	−0.81	n.s	-	n.s
I am able to solve very difficult exercises.	52.03	48.30	1119.50	−0.69	n.s	-	n.s
I like it in school.	57.26	40.77	810.50	−3.12	0.002	−0.31	0.002
I feel alone in my class. (R)	52.89	47.06	1068.50	−1.13	n.s	-	n.s
I do well in my schoolwork.	50.10	51.07	1186.00	−0.19	n.s	-	n.s
School is fun.	58.93	38.37	712.00	−4.03	0.00	−0.40	0.00
I have very good relationships with my classmates.	52.64	47.41	1083.00	−1.07	n.s	-	n.s
Many things in school are too difficult for me. (R)	52.46	47.68	1094.00	−0.93	n.s	-	n.s

R= recoded item.

higher the item ‘*I am a fast learner*’ than their female counterparts. This item is comprised within the academic self-concept construct. Results from a study Venetz et al. (2019) indicated that male learners have higher levels of academic self-concept than girls. However, Guillemot and Hessels (2022) who also assessed sixth grade students’ experiences of inclusion using the PIQ, did find any differences. Similar results were found by Knickenberg et al. (2022) with fourth grade students. Nonetheless, when exploring gender differences for academic self-concept with seventh grade students, they authors did find that male students show higher academic self-concept. Research has suggested that academic self-concept develops during adolescence

(Scherrer and Preckel, 2019). Consequently, this study calls for further longitudinal empirical research that could explore into more detail and provide deeper understanding of gender differences.

Interestingly, when comparing Mexican students attending private and public schools, out of the 12 items, 3 were rated differently based on the means. Analyses indicated that item 1 “*I like going to school,*” item 7 “*I like it in school,*” and item 10 “*School is fun,*” were rated significantly lower by students in the private school sample. All three items were within the emotional well-being construct. A possible explanation to these results can be due to the fact that when compared to students in public schools, learners in private schools are facing

more complex academic demands and higher standards which could have a negative impact on their emotional well-being (Plata Zanatta et al., 2014). On the other hand, no significant differences between both school types were found in the items within the social inclusion and academic self-concept construct. This is noteworthy, in particular for the case of items under the academic self-concept construct. A previous study by Salum-Fares et al. (2011) reported a significant relationship between academic self-concept and school type. Therefore, the findings from this paper also call for further research to continue examining potential differences according to school type (public or private; Plata Zanatta et al., 2014).

4.1. Limitations and considerations for further research

The present study exhibits several limitations. The first limitation from this study stems from the relatively small sample, and thus, was only able to explore large effects (Faul et al., 2007). With such a sample, the overall findings as well as gender and school type differences have to be interpreted very carefully. Consequently, it is necessary for future research to continue to investigate student perceptions, however, raising and balancing the participants accordingly. Second, although convenient sampling (as used in this study) is a common research sampling approach that possesses great advantages (e.g., least time-intensive and simple to conduct), it also carries important disadvantages. One of these is that the results obtained from such samples have generalizability only to the sample under study (Bornstein et al., 2013). Hence, the findings from this study must be considered with caution. Therefore, future studies with other types of samples such as simple random, stratified or clustered samples are necessary. Additionally, the present small-scale study makes use of students' self-reports. Although surveys addressing students' perspectives are economical, recommended in research, and possess validity (Butler, 2012), self-reports might be biased (Venetz et al., 2019). Thus, it is strongly suggested that future studies integrate all stakeholders' perspectives, that is students, parents and teachers, make use of multi-trait-multi-method (Venetz et al., 2019), as well as the use of mixed-methods research designs that could provide rich and more in-depth information. With such a design, it could be possible to give more insights into the quantitative data. In addition, although this sample included students with SEN, unfortunately the SEN sample was too small to be included as another research question. Given the extensive scientific literature exploring differences between students with and without SEN perceptions of inclusion in mainstream classes (McCoy and Banks, 2012; Bossaert et al., 2013; Schwab et al., 2015; Hascher, 2017; Knickenberg et al., 2020; Schwab and Alnahdi, 2020), it would be important to deeply investigate Mexican students' (with and without SEN) perceptions of inclusion.

Lastly, the current study presents and discusses its findings on the basis of item level mean scores instead of the mean scores of the three sub-scales of social inclusion, emotional well-being and academic self-concept. Hence, the results from this study must be interpreted with caution. Notwithstanding such limitation it is important to highlight that to the authors' knowledge, this is the first study that uses and examines the Spanish version of the PIQ instrument in Mexico. Carpenter et al. (2016) as well as Wieland et al. (2017) argue that a rigorous evaluation at the item level are appropriate in order to

understand how a scales function, particularly when it comes to new surveys. Based on this, it was decided to conduct the analyses at an item level. Nonetheless, given that the Spanish version of the PIQ has not been used, appropriate explorative and validations studies are currently being conducted in Mexico.

Taking into consideration the limitations of this small-scale study, future research directions are suggested. A recent study by DeVries et al. (2018) reported that students' perceptions of inclusion changed from Grade 6 to 7 indicating potential longitudinal effects of inclusive schooling. Thus, more longitudinal research is needed in order to explore changes across school types, transitions, and inclusive education. Additionally, future work should consider that differences between private and public schools when it comes to inclusive education (Pozas et al., 2021). Thus, future investigations should aim to follow research designs and samples that explore nested structures. Using such an approach could be a meaningful addition not only to the current international research, but also research in Mexico. Lastly, cross-country comparative research is strongly encouraged as "these types of studies provide new contextual understandings of the differences and similarities between education systems in distinct cultures" (Alnahdi and Schwab, 2020, p. 11).

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

MP and VL-A contributed to the study conception and design. MP performed the material preparation and analysis. CT conducted the data collection. MP prepared the manuscript with contributions from CT and VL-A. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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