PSYCHOLOGICAL INVESTIGATION. TRAILS WHICH FORK

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CONTENIDO

INTRODUCTION

Psychology, I reached its science status by the hand of learning psychology (behavioral approach) in the first half of the 20th century Later, new currents were integrated into the scientific study of psychology incorporating new research objects. Cognitive processes were integrated into the classic themes of behavioral psychology.

In parallel, and as a consequence of the emergence of new research objects, psychology diversified into multiple sub-disciplines: social psychology, occupational psychology, clinical psychology, evolutionary psychology, learning psychology, etc. In fact, this diversification also occurred within the same field of study, for example, in the educational field one could speak of educational psychology, school psychology, learning psychology, instructional psychology, etc.

Now in the 21st century, the diversity of objects of study, and of sub-disciplines, demonstrates the strength of this science and its heuristic potential to continue advancing. In this sense, to speak of Psychological Research is to refer to various empirical domains, to multiple and varied participants, to a heterogeneous body of theories and to a multifaceted table of research objects.

In other words, Psychological Research is shown as a path that branches off into multiple paths. An example is the research that is compiled in this book; its authors approach various research objects with the methodological rigor that the academic community demands. Each of these investigations was evaluated by a scientific committee formed expressly. In total, the book presents seven research reports.

In chapter one Enrique Ibarra Aguirre presents his work, located in the field of self-referentiality, entitled "Self-concept of rural primary school teachers and the academic performance of their students".

In chapter two Arturo Barraza Macías offers us an instrumental study, typical of the field of psychometry, called “Single item for the study of academic stress. Acceptability and evidence of convergent validity”.

In chapter three Erik Omar Carrasco Favela leads we to the field of educational psychology with his work entitled "The evaluation of reading comprehension in primary school".

In chapter four Oscar Luis Ochoa Martínez and Gloria Rocío Nery León, inserted in the field of evaluation, present their work entitled "Analysis of the results of the reading ability test of the exam planned in high school."

In chapter five Rosa Isela Cerda Uc, María Rosado y Rosado and Ana Karina Palau Aguilar trying to contribute to the field of evolutionary psychology, they present their work called “Advances and limitations in the areas of development in a preschool population in Yucatan”.

In chapter six Patricia Lorena Martínez Martínez, Jaime Fernández Escárzaga, Marco Antonio Vázquez Soto and Alejandro Ríos Valles, from clinical psychology, present their work entitled “The society that inoculates emotional problems: a human need satisfied by psychotherapy.”.

In chapter seven, based on organizational psychology, María Leticia Moreno Elizalde offers us her work called “Implementation of the questionnaire based on seven basic guidelines of ISO 26000 on social responsibility”,

Each one of these works from their field of study and / or psychological sub-discipline show the diversity and multiplicity of research objects within Psychological Research.

It only remains to invite potential readers to approach their reading with the critical and methodological rigor to which psychological research aspires and which, without a doubt, each of its authors expects.

SELF-CONCEPT OF RURAL TEACHERS OF ELEMENTARY EDUCATION AND THE ACADEMIC PERFORMANCE OF THEIR STUDENTS

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Abstract

The study is quantitative in nature, the purpose of which is to describe the self-concept of rural teachers and explore their links with the academic performance of the students in their charge. Including in the analysis the sex, marginalization and number of grades that teachers attend. The sample was made up of 15 educators; eight women and seven men from rural multigrado and unigrado schools in the municipality of Badiraguato, Sinaloa, characterized by having the highest marginalization in the state. The 5 Self-concept Questionnaire Form was used to measure self-concept and the ENLACE test for academic performance of the students. The results reveal that, with the exception of academic self-concept, in the other four dimensions (social, emotional, family, and physical) women present lower scores than men, the emotional dimension is mostly perceived. Likewise, the unitary teachers achieve the best scores in the self-concept and the unigrado the lowest. On the other hand, in the contexts of highest marginalization, students obtain the poorest results in academic performance, where most of the women in this sample work. The educational authorities must provide pedagogical and psychological support for rural teachers, especially those who work in contexts with high and very high degrees of marginalization; and on the other hand, develop educational strategies that allow better educational achievements for students, to counter their condition of marginalization.

Keywords: rural education, marginalization, multigrado

Introduction

As is known, the work of primary school educators, is a very complex task, which inherently entails a high cognitive demand, a great social commitment, a professional and vocational commitment. But particularly more so, if it is carried out in schools located in rural contexts; educational scenarios that in some regions of Mexico are considered vulnerable and adverse for the performance of teaching work (Ibarra-Aguirre, et al., 2014; Ibarra-Aguirre, et al., 2018, National Institute of Educational Evaluation, INEE, 2019a). According to data from INEE (2015), school centers located in rural areas are more than a few. In our country these represent more than half of the existing basic education schools. 55.8 percent of them are preschoolers, 58.4 percent are primary schools and 57.1 percent are secondary schools, the aforementioned school levels concentrate respectively 26.3%, 25.4% and 21.6%.

The schools that can be found in the rural areas of Mexico are of two types: (1) those with a full organization or unigrado, in which each of the school groups is attended by a teacher -which are the least-, and (2) those of multigrado composition, where a single teacher is in charge of teaching students of different grades in the same group (Carr, 2003; Gordon, 2001; Juárez, 2017). The latter type of school, according to data from the National Institute for Educational Evaluation (INEE, 2019b), constitute 42.7 percent of the total rural schools.

It must be emphasized that multigrado organization schools have stood out for constituting educational landscapes that are not very favorable for teaching performance. For example, they are characterized by being located in contexts with high degrees of marginalization (National Population Council, CONAPO, 2010), poverty, insecurity, low levels of human development (National Council for the Evaluation of Social Development Policy, CONEVAL, 2014), few educational policies to attend to pedagogical functioning, school management, infrastructure, and the continuous training of teachers, with scarce staffing, educational materials, pedagogical support and supervision (Cano, et al., 2018; Espeleta & Weiss, 1996; INEE, 2019b, Santos, 2010).

Those schools are also characterized by poor student learning (Hernández, 2018), it is where the academic performance of students, according to the results of the National Plan for the Evaluation of Learning (PLANEA) and before those of the National Evaluation of Academic Achievement in School Centers (ENLACE), is lower compared to those who study in urban schools. This is confirmed, for example by Ibarra-Aguirre and Jacobo (2014a), in a comparative study carried out with sixth-grade students from primary education in rural and urban contexts.

In the case of multigrado schools, the most vulnerable traits for professional teaching performance are most noticeable in those that are of unitary organization. The teachers in these schools are multi-tasking, because not only are they responsible for the educational care of students of all possible grades, with diverse ages, experiences and development, but they also take on school management tasks that turn their work into a fabric of factors that sometimes saturate and limit their time for educational activities, which can be a negative factor for student learning (Ibarra-Aguirre, 2020; Ibarra-Aguirre et al., 2018, INEE, 2015; 2016; 2019a).

One cannot forget other ingredients that make teaching work more uncertain, we must say that when working in rural areas, teachers are distanced from their affective ties with family and friends, far from their usual ways of life they were used to. They also show the existence of a relative sociocultural closure given that they have little access to culture and cannot have assiduous relationships with people of the communities, moreover some live alone. All the aforementioned factors are associated with the physical, psychological and professional risk for teachers. (Ibarra-Aguirre, et al, 2014).

In this work we are going to focus on the psychological dimension of teachers, specifically on self-concept; this is defined as a complex system of multidimensional composition that refers to the integrated totality of knowledge, descriptions, perceptions, representations that a person refers to about themselves (García & Musitu, 2009; Ibarra-Aguirre & Jacobo, 2014b; 2018; Shavelson, et al., 1976). It is a theory that the individual builds on himself (Epstein, 1973), which has the ability to influence the performance of individuals; guides the ways of thinking, feeling and acting of people in the different spheres of their behavior, including their academic performance (Alcaide, 2009; Ibarra-Aguirre & Jacobo, 2014a; Shavelson et al., 1976; Villarroel, 2001).

The self-concept has a flexible and changing character. The theories that we formulate about ourselves do not remain static, but make changes according to the experiences lived in certain scenarios and according to our capacity to live and signify the experience. We are not indifferent to the context, rather, subject and context are complementary, mutually determined (Ibarra-Aguirre et al., 2014; Munné, 2000; 2004).

There are situations or scenarios that are more demanding than others and test the theories of the self, developed by the subjects. In this regard, theoretically, it has been said that a more complex structure of the self, allows to mitigate the discomfort caused by stressful contexts, acts as a buffer for the onslaught of the environment. The greater the complexity of the self, the energy has a better distribution across the different conductive psychic threads. The less complexity of the self, the energy overflows the system and violates stability of the structure of the system itself (Ibarra-Aguirre et al., 2014; Izquierdo, 2002; Linville, 1987).

Research Background

Some reports have evidenced that the self-concept in teachers who work in rural contexts that are adverse is depressed, this is mostly so in the emotional dimension (Hernández, 2017), given that the work scenarios described above generate fear and confinement, which, as other works have found (Ibarra-Aguirre, 2020; Ibarra-Aguirre et al., 2014), paradoxically seems to contribute to improve in the academic dimension because to alleviate the psychological discomfort they focus on the study, they are dedicated to plan school sessions and compensate the closure to the environment with relationships with fellow teachers, they also seek refuge in the family -although virtual- so their sense of family is strengthened. It is not superfluous to note, as observed in these investigations, that scores in the multidimensional self-concept, except in the academic dimension, are considerably lower in women; mainly in the emotional dimension, and that teachers in the most adverse contexts are those who obtain lower scores in the social self-concept. It must be stated, that in this line of research little empirical evidence is presented.

On the other hand, there is evidence to say that the psychological well-being of teachers is a factor that can mediate the academic achievement of their students. Teacher-student relationships influence, for example, the self-concept of their students (Leflot, et al., 2010; McFarland, et al., 2016) and the prediction of school commitment (Riley, 2013), just as the Pygmalion effect decrees both academic self-concept and academic results (Szumski & Karwoski, 2019).

It has also been recognized that the personality of the teacher is one of the elements that most influences student learning (Albert, 1986; Covarrubias & Piña, 2004) and that the beliefs of self-efficacy of teachers determine the academic achievement of students (Caprara, et al., 2006). This is understandable, because as it has been theoretically argued, the teacher, as a significant other - in the sense of Mead (1934) - influences his students and therefore their academic performance (Basto, 2017).

Before continuing, it must be said that academic performance, without going into the discussion about the conceptual dispersion that underlies it when used as a synonym for other nearby concepts and, the multifactorial character to which it responds, is referred to the school grades achieved by students, which is generally given a numerical representation (Edel, 2003; Erazo, 2012). For the purposes of this study, as other works has done (Ibarra-Aguirre et al., 2014), academic performance refers to the qualification scores achieved in the ENLACE test of the Mexican Educational System.

Returning to the recognition of the relationship between the psychological well-being of the teacher and the academic achievements of the students, it should be noted that there is evidence, although little, on the relationships between the psychological variable self-concept of the teacher and the academic performance of the students. Of this sort, in the study carried out by Villarroel (2001), she found that in urban schools with high academic performance, the self-concept of their teachers is high, particularly in the dimensions of self-criticism and self-evaluation and, in low-performance schools, their teachers got low scores in the aforementioned dimensions.

Other study conducted on teachers from rural and adverse contexts found that when they present high scores in the dimension of Academic and Family self-concept accompanied by coping oriented to problem solving, the academic performance of students is higher, compared to those where teachers achieved lower scores in these dimensions and coping strategy (Ibarra-Aguirre et al., 2014).

These studies, although isolated, suggest the relationship between the variables in question, but they are not conclusive given the limited evidence that exists on this line of work. On the other hand, they do not take into account some factors such as the sex of the teachers, nor do they analyze the multigrado organization schools or the degree of marginalization of the schools where the teachers work; factors that could mediate the relationship described above.

Purposes

The purpose of this study is to describe the self-concept of rural teachers and to explore the links between their self-concept and the academic performance of their students obtained on the ENLACE test. Their relationship with the number of grades attended by teachers, their sex and the degree of marginalization in the schools where they work is also explored.

The limited empirical evidence and theoretical contributions on the self-concept of rural teachers and its relationship with the academic performance of students in rural schools located in marginalized contexts, we assume that: (1) the self-concept of women is considerably lower than that of men, mainly in the emotional dimension, (2) the social self-concept is lower in teachers who work in the most marginalized contexts, (3) when the academic and family self-concept of the teachers are high, so is the academic performance of the students and (4) the academic performance of the students is lower in rural contexts with higher marginalization. Additionally, we hope to find other relationships undiscovered yet.

Method

It is a quantitative study that is descriptive and exploratory. The latter is because the tradition of research in this field has little evidence on the relationship between self-concept of teachers and academic performance of students, or in relation to sex, the degree of marginalization nor school organization -multigrado and unigrado- of the Mexican Educational System.

Participants and scenarios

The sample is made up of seven female teachers and six male teachers who work in eight primary schools in the Badiraguato Sierra, Sinaloa, supervised by the same school zone. The schools are scattered in the municipality and in some cases, accesing to them is difficult. It should be said that this municipality is the most marginalized in the Entity with an index of 0.676, according to data from CONAPO (2015). It is also considered a context of extreme risk, with high insecurity and low human development.

Out of the 13 participants nine of them work in schools with high or very high levels of marginalization, all are teachers who work in multi-grade organization schools. Five of them teach all the grades at the same time (unitaries); two more are in charge of three grades in two and two work with two grades simultaneously, in three teacher schools. The other four teachers in the sample attend a single grade -nigrade- in schools that have a medium degree of marginalization (see Table 1).

Table 1.

Participants by Modality, Sex and Marginalization of their school

Modality	Sex	Marginalization
Unigrade	Male	Middle
	Female	Middle
	Female	Middle
	Male	Middle
Bidocent	Female	High
	Female	High
Tridocent	Female	Very high
	Female	Very high
Unitary	Male	High
	Male	High
	Female	Very high
	Male	Very high
	Male	High

Note: Own elaboration

The participants have been selected from among a universe of teachers from the Badiraguato Sierra who attended a training workshop done by the supervision of the School Zone. The sample was selected according to the following inclusion criteria:

- That at the time of the research, the teachers were carrying out their teaching activity in third, fourth, fifth or sixth grade in rural schools, regardless of the type of school organization.
- That in the groups under their charge, the Ministry of Public Education had administered the national test ENLACE, which was applied from third to sixth grade, therefore the first and second grade teachers were not considered.

Instruments

To measure self-concept, the 5 Self-Concept Questionnaire Form (AF-5) was used (García & Musitu, 2009), which psychometric properties in its five factors and the total (see Table 2), according to a study in the Sinaloa context (Ibarra-Aguirre & Jacobo, 2014), are considered statistically acceptable, except in the physical factor that obtains scores lower than .70, but although it is lower, it is valid for basic studies (Morales, 2006).

Table 2.
Psychometric properties

Dimensions	Cronbach's Alpha
Academic	.859
Social	.714
Emotional	.791
Family	.708
Physical	.672
Total	.784

Note: According to a study by Ibarra-Aguirre & Jacobo (2014)

The AF-5 consists of 30 items; six in each factor. Each item is answered with an option in the range of 1 to 99, where 1 means *in complete disagreement* and 99 means *In complete agreement*. The academic factor refers to the perception that the individual has of himself about his academic performance (e.g., I do my school work well). Social refers to the individual's perception of performance in social relationships (e.g., I easily get friends). The emotional refers to the perception of the individual's emotional state and their responses to specific situations (e.g., I am afraid of some things). The family factor refers to the individual's perception of their involvement, participation and integration in the family environment (e.g., I feel happy at home). The physical refers to the perception of physical appearance and physical condition (e.g., I take care of myself physically).

To measure the academic performance of the students in charge of the participating teachers, the group arithmetic means reached by the mentioned students in the ENLACE test were used. This is a standardized census test that was created and applied by the Secretariat of Basic Education of Mexico. It is used to measure cognitive achievement in Spanish and Mathematics. It is made up of multiple choice items, a minimum of 50 and a maximum of 70 for each subject. Each reagent has only one correct answer. Responses are converted into scores. The minimum is equal to 200 points -as the lowest performance- and the maximum is up to 800 points –as the highest performance-.

Process

The authorization to carry out this study was requested to the school supervision, on which the schools that were part of our work depend, which granted the permission and told us to do it at the time when the teachers would be meeting taking a teaching updating workshop in one of the schools in the rural area. Given that travelling to the meeting place is considered a high risk trip, we were asked to do the tour together with supervisory personnel who would do the workshop.

In the meeting place assigned by the school supervision, the total of the teachers were spoken to and asked for their consent to apply the AF-5. Subsequently, only those instruments answered by the teachers that met the aforementioned inclusion criteria were selected. These teachers were asked for the necessary data to access the ENLACE platform where the test results of the group or groups in their charge are recorded. It is worth adding that in addition to providing the instructions for completing the AF-5, they were asked to proceed honestly to respond to the items on the instrument, at the same time that they were guaranteed the protection of their identity and of their students' as well.

The data derived from the application of the AF-5 and the results of the ENLACE test were organized in a matrix prepared in the statistical software SPSS in version 21, where the pertinent quantitative analyzes were carried out. The averages of the global results were organized as follows: for the unitary teacher, the average of the global results of his school was taken; and for the bidocents and tridocents, the results of the scores averaged by the groups they served were taken, and finally, in the case of the unigrado teacher, the data from the group they served were used.

Results

The results are condensed in descriptive tables showing the means and standard deviation (SD) of the scores achieved by the teachers in the AF-5, grouped by school organization, degree of marginalization and sex, as well as the academic performance of the students in Spanish and Mathematics in the ENLACE test.

As Table 3 shows, it is noticeable that the unitary teachers (four men and one woman) are the ones who perceive a higher and more stable multidimensional self-concept, followed by the bidocents who surpass them in the social and family aspects by about 10 points in the mean, but they have a depressed emotional self-concept with wide differences (unitary: 61.60 ± 30.94; the bidocent 26.67 ± .00), although it must be said that in academic self-concept both present very similar scores. In Mathematics, the students of the unigrado teachers achieve the highest scores (527.75 ± 38.44), followed by students of the bidocents (507.00 ± 48.36) who barely exceed the students of the unitarians (504.60 ± 71.04), and with the lowest scores the students of the tridocents (450.75 ± 21.01). In Spanish the students of the bidocents reach the highest scores (513.25 ± 34.03) followed by the unitary ones (490.45 ± 49.52), unigrado (484.25 ± 14.63) and with the lowest scores the students of the tridocents (439.75 ± 58.02).

Table 3.
Means of teaching Self-Concept and average academic performance of students by Modality

Modality		Spanish	Math	Academic	Social	Emotional	Family	Physical
Unitary	*Mean*	490,45	504,60	72,00	53,60	61,20	77,80	81,20
	N	5	5	5	5	5	5	5
	SD	49,52	71,04	10,05	32,95	30,94	20,45	16,49
Tridocent	*Mean*	439,75	450,75	65,00	42,50	20,50	82,50	60,00
	N	2	2	2	2	2	2	2
	SD	58,02	21,01	10,00	32,50	19,50	7,50	10,00
Bidocent	*Mean*	513,25	507,00	70,00	62,67	26,67	88,00	65,00
	N	2	2	2	2	2	2	2
	SD	34,03	48,36	2,88	20,20	,00	2,88	23,09
Unigrado	*Mean*	484,25	527,75	57,50	46,25	36,25	65,00	70,75
	N	4	4	4	4	4	4	4
	SD	14,63	38,44	15,00	24,95	26,57	35,35	25,66

Note: Own elaboration

The same Table 3 shows that the teachers who attend only one grade are those who have a lower academic self-concept than the others, but the scores in Mathematics are the highest and those in Spanish appear below the bidocents and unitary respectively. The tridocents, who work in a context of very high marginalization (see Table 1), are the ones that achieve the lowest averages in emotional self-concept and their students in Spanish and Mathematics.

Table 4.
Teaching Self-Concept and average academic performance of students by school Marginalization

Marginalization		Spanish	Math	Academic	Social	Emotional	Family	Physical
Very high	*Mean*	478,44	480,81	70,00	41,00	38,40	73,00	79,20
	N	5	5	5	5	5	5	5
	SD	54,35	59,30	12,91	33,08	33,61	17,65	18,76
High	*Mean*	497,17	519,17	69,17	65,17	60,00	90,50	61,67
	N	4	4	4	4	4	4	4
	SD	48,03	68,41	4,68	23,32	25,93	7,20	15,57
Middle	*Mean*	484,25	527,75	57,50	46,25	36,25	65,00	70,75
	N	4	4	4	4	4	4	4
	SD	14,63	38,44	15,00	24,95	26,57	35,35	25,66

Note: Own elaboration

On the other hand, Table 3 itself shows that teachers who work in schools with a high degree of marginalization, present three dimensions of self-concept with scores above those of schools with medium marginalization and those of very high marginalization. In the academic dimension (69.17 ± 4.68) they are similar to those with a very high marginalization (70.00 ± 12.91), and as previously expressed, they have the highest scores in Spanish than the other two contexts compared and in Mathematics (519.17 ± 68.41) it presents notable differences with respect to those of schools with an average degree of marginalization (527.75 ± 15.00).

From the results shown in Table 4, it is possible to say that students from schools with very high marginalization have lower scores on the ENLACE test, both in Mathematics (480.81 ± 59.30) and in Spanish (478.44 ± 54.35), while their Teachers achieve higher scores in the academic and physical self-concept than those with medium marginalization and the same as those with high marginalization, but lower than the others in the social dimension. Those with medium marginalization, have the highest results in Mathematics (527.75 ± 38.44) of the three groups compared and lower in Spanish (484.25 ± 14.63) than those with high marginalization (497.17 ± 48.03). It can be seen that these teachers who work in contexts of medium marginalization are those who achieve the poorest scores in self-concept, since they only exceed those with high marginalization in the social dimension and those with high marginalization in the physical dimension.

Table 4.
Teaching Self-Concept by Sex and average student academic performance

Sex		Spanish	Math	Academic	Social	Emotional	Family	Physical
Female	*Mean*	483,21	492,79	70,71	41,79	18,93	66,43	68,29
	N	7	7	7	7	7	7	7
	SD	45,073	42,692	15,173	24,464	15,539	22,991	25,530
Male	*Mean*	488,50	507,50	66,11	60,94	73,61	85,06	77,28
	N	6	6	6	6	6	6	6
	SD	52,092	75,393	6,764	31,310	11,089	13,304	15,130

Note: Own elaboration

As shown in Table 4, women (70.71 ± 15.17) present moderately higher scores in academic self-concept than men (66.1 ± 16.76). In the other dimensions, men considerably outnumber women, but more noticeably in emotional self-concept (men = 73.61 ± 11.08; women = 18.93 ± 15.53). Male students are those who achieve higher scores in Spanish (488.50 ± 52.09) and Mathematics (507.50 ± 75.39) than those who are attended by women, who in Spanish reach 483.21 ± 45.07 and in Mathematics 492.79 ± 42.69. A relevant fact for these results is that three women work in contexts of very high marginalization, while only one of the men works in these settings (see Table 1).

Discussion and Conclusions

The purposes of this study focused on exploring the links between the teacher's self-concept and the academic performance of their students, taking into account the relationship of the number of groups attended by the teacher, the marginalization of their schools and their sex.

The results confirm that the teachers' multidimensional self-concept suffers the onslaught of the environment where they work. This is more noticeable in women, because they are who achieved the lowest scores in self-concept; more noticeable in the emotional dimension, as it has been found in other studies (Hernández, 2017; Ibarra-Aguirre et al., 2014). Which means that the adverse rural context represents a greater physical and psychological risk for women. It is more stressful for them, it generates fear, uncertainty, threatens the structure of their self and depresses them. It must be said that academically they perceive themselves relatively better than men.

On the other hand, teachers who work in settings with high degrees of marginalization, are those who present lower scores in social self-concept, which is to be expected if we consider that they do not have colleagues to interact with regularly and neither the adverse context where they work in, inadequate to establish friendly social relations. Similar findings were found in previous works (Ibarra-Aguirre, 2020; Ibarra-Aguirre et al., 2014).

We must add that, there is no evidence in favor of maintaining that when teachers present a higher academic and family self-concept, their students achieve the best scores in academic performance, as previously found (Ibarra-Aguirre et al., 2014), rather, the links are blurred and do not allow a conclusive relationship to be drawn.

Unfortunately, due to the findings, it is possible to confirm that the school environments with the highest degrees of marginalization are where students present the lowest academic performance (Hernández, 2018). This is evidenced in the ENLACE and PLANEA tests in Mexico, and verified by a study by Ibarra-Aguirre and Jacobo (2014a), which should be reversed to provide greater development to rural communities

In addition the relationships between teacher self-concept and student academic achievement by the number of grades the teacher attended are not very clear, but they are suggestive. Unitary teachers, as observed in the results, are in the most adverse working conditions because their schools are located in the contexts with the highest degree of marginalization, they have a greater demand for academic and administrative work (Juárez, 2017; Ibarra-Aguirre et al., 2018; INEE, 2015; 2016; 2019a), distant from their habitual forms of family and social life (Ibarra-Aguirre, et al., 2014). Despite this, with the exception of the social dimension of self-concept, in all other dimensions they outperform other teachers who have better working conditions. In terms of the academic performance of their students, both in Spanish and Mathematics, they are above those of the tridocent teachers and in Spanish of those of unigrado and with scores similar in Mathematics to those of the bidocente teachers.

It seems that the unitarians, as has been said by Ibarra-Aguirre (2020) and Ibarra-Aguirre et al. (2014), have managed to negotiate with the environment to counteract the psychological discomfort that adverse work contexts represent. The high professional demand that multitasking requires, seems to strengthen them, building resilience. This seems to confirm that when teachers' multidimensional self-concept is more complex, they can better cope with stressful situations and it is possible that in a correlative way it contributes to decent academic achievements in their students, compared to teachers whose self-concept is poorer and less complex (Izquierdo, 2002; Linville, 1987).

On the other hand, the working demands of the unigrade teachers in a rural context, their schools are considered of medium marginalization, with only one group, without worries about the administrative and management tasks, and with the opportunity to interact with their colleagues. It is incomprehensible why they have the lowest scores in all dimensions of the self-concept compared to the unitary ones and in four dimensions (Academic, Family, Emotional and Physical) compared to the high marginalization, although their students obtain the highest scores in Mathematics, but in Spanish they are below than the unitary.

From the results, a more consistent relationship can be seen when the sex variable is incorporated. Men are the ones who achieve the best scores in four of the five dimensions of self-concept (Social, Family, Emotional and Physical), and just below the teachers in Academic, and it is the students in their charge who present better results in Spanish and Mathematics, compared to those who are in charge of women. But these data must be taken with reserve, because the men in this sample, although they are mostly unitary, only one of them works in contexts of very high marginalization, on the other hand, three women work in contexts of very high marginalization, and it is where students achieve the lowest scores in academic performance.

Apparently, the context of high and very high marginalization where most of the women in the sample work, generates a psychological discomfort so that it depresses the structure of their self, which as part of their personality, impacts their professional teaching performance to the degree that their students score lower in their cognitive achievements (Covarrubias & Piña, 2004), as expressed in the results of the ENLACE test. So, it seems that being a woman and working in contexts of high and very high marginalization is related to a depressed self-concept and low academic results in their students.

These presented findings are not conclusive, they require the study of a larger sample of rural teachers, the use of suitable statistical tests to find relations among variables, for example, resilience, as a factor that could explain why unitary teachers working in highly marginalized contexts present a more stable self-concept and their students achieve better academic performance than those in more favorable contexts.

Educational authorities must provide assiduous pedagogical and psychological support for teachers, men and women, who work in rural contexts, particularly those with high and very high degrees of marginalization, to mitigate their feeling of fear and psychological discomfort. On the other part, to elaborate educational strategies that allow a better educational achievement of the students, without affecting their condition of marginalization.

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SINGLE ITEM FOR ACADEMIC STRESS STUDY. ACCEPTABILITY AND EVIDENCE OF CONVERGENT VALIDITY

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Abstract

This paper aims to: a) determine the acceptability of the data generated by three different versions of single item to measure academic stress and, b) establish the evidence of convergent validity that would support the use of three different versions of single item to measure academic stress. To achieve these objectives, an instrumental study was carried out through the application of a questionnaire with five sections and 19 items, including the three items of interest (Intensity 10, Frequency 5 and Intensity 5) and the three variables for the convergent analysis (depression, vital satisfaction and family support link). The questionnaire was applied to 300 high school and higher education students from the city of Durango, in Mexico. The main results are inclined by the items that offer a zero / high intensity scaling for their response and, particularly, by the item with five response options for presenting a higher level in the correlation coefficient in relation to the variables vital satisfaction and family support link.

Key words: stress, SISCO inventory, single item, validation.

Introduction

Instruments for measuring academic stress have had a slow evolution due to the difficulties inherent in their conceptualization; in 2007, from a database made up of 59 investigations carried out from 1996 to 2006, however, Barraza (2007) was able to show the existence of a great diversity of measurement instruments. By the time being, he reported, having found in the analyzed investigations, a great diversity of questionnaires, and there were only two cases having used the instrument a second time: In fact, from the analysis carried out on the 59 investigations, 57 different questionnaires could be found.

This situation led him to conclude that "the diversity of instruments, in general, and of questionnaires, in particular, is merely a reflection of the problems detected in relation to the multiplicity of ways of conceptualizing academic stress" (Barraza, 2007, para. 32).

Futhermore, in 2011, Román and Hernández sustained that there was a theoretical-methodological inconsistency in research on academic stress which was reflected in a relationship within three areas: approaches, concepts and used instruments in research; for the specific case of instruments, they stated that the study of academic stress lacks homogeneity in terms of methods and used instruments in research, coinciding with Barraza (2007) when stating that “the high diversity of used instruments is a reflection of conceptual diversity to approach stress” (Román & Hernández, 2011, p. 7).

Currently, Barraza (2016), based on Spanish, English and Portuguese scientific literature, concludes that “the field of stress study is still far from being consolidated and continues to have strong conceptualization problems” (p. 96). As a result, although the author does not state it, it is inferred as a necessary consequence, that problems related to measuring instruments also continue.

In 2018, Barraza carried out a selective review (2016, 2017 and 2018) on what was investigated on academic stress, reaching, among others, the following conclusion:

> Two research instruments are mainly used: the Academic Stress Inventory (Polo, Hernández & Pozo, 1996) and the SISCO Inventory for academic stress study (Barraza, 2007). The first one is used in two investigations (Castillo et al. 2016; Soto-Vásquez & Arkin, 2018) and the second one in seven investigations (Toribio-Ferrer & Franco-Bárcenas, 2016; Salinas et al. 2016; Quito et al. 2017; Navia et al. 2018; Peña et al. 2018; Vida-Contil et al. 2018; y Macbani et al. 2018) (p. 5).

So, this contribution by Barraza (2018) begins to visualize a tendency to use a specific research instrument, resulting in the use of a single concept of academic stress as a necessary consequence. However, to confirm this trend is really present and remains over time, this research performs a second selective review of what has been published in the field of academic stress study. To carry out this selective review, the years 2019 and 2020 were used as the basis for conducting an academic google search. The first 15 records reported by this search engine were taken into account in the analysis. This consultation was held on March 15, 2020.

The results obtained, in this second selective review, show the same trend reported by Barraza in 2018, unlike the SISCO Inventory for the study of academic stress is consolidated to the detriment of the Inventory of Academic Stress of Polo, Hernández and Pozo (1996).

It is important to highlight that of those 15 investigations found, 11 of them use the SISCO Inventory to study academic stress (Alcántara, 2019; Aliaga, 2019; Barraza, 2019; Barraza, González, Garza & Cázares, 2019; Chávez & Peralta, 2019; León, González, González & Barcelata, 2019; Márquez, Tavarez, Flores, Carreón, Macías-Galaviz & Rodríguez, 2019; Oblitas, Soto, Anicama & Arana, 2019; Quiliano & Quiliano, 2020; Tenelanda, Damián, Célleri, Castillo & Inca, 2019; Trujillo & González, 2019), and only 1 investigation uses the Academic Stress Inventory (Mendieta, Cairo & Cairo, 2020).

And the lasting 3 investigations reveal serious methodological problems in relation to the used instrument to collect the information, such as: a) one of them mentions an instrument without saying its name, or providing further information (Aldana, Isea & Colina, 2020), b) another reports using a questionnaire, but without showing any relationship with stress (an instrument to evaluate clinical learning environments in medical specialties), and shows a rather confusing methodological section, although it does report results of stressors (Monserrat, Anzaldo & Anzaldo, 2019), and c) the last one does not offer any information about the used instrument (Arias, Nuñez-Guale, Señalin & Salcedo-Muñoz, 2019).

It can be seen in this analysis that the trend indicated by Barraza in 2018 is consolidated, which is undoubtedly good for the field of academic stress study, however, when reviewing these investigations there was one (Barraza & Muñoz, 2019), which attracts attention, because to measure academic stress they use a single item that investigates the level of self-perceived stress on a scale of 1 to 10, so they identify the stress variable as a single item.

This idea of single item variable or single item scale is used by the authors in relation to different variables, such is the case of happiness (Muratori, Zubieta, Ubillos, González & Bobowik, 2015) or life satisfaction (Abello -Llanos, et al. 2009). In addition, studies can be found that address the analysis of psychometric properties, such as convergent validity, such is the case of an item to measure self-efficacy (Dominguez-Lara, Navarro-Loli & Prada-Chapoñan, 2019), the validity of content, such is the case of an item to measure burnout syndrome (Merino-Soto & Fernández-Arata, 2017) or family life satisfaction (Caycho-Rodríguez, et al. 2018), or reliability and structural validity , such is the case of the measurement of Academic Emotional Exhaustion (Domínguez-Lara & Merino-Soto, 2017).

This tendency to use a single item to measure a variable is reinforced by Ang and Eisend, who carried out 8 meta-analyzes in 2017, and concluded that the measurements of a single item are equivalent to those of multiple items. Under this context of use, and the result of these meta-analyzes, it is pertinent to think that academic stress can be measured with a single item, however, the question remains about how to write that item.

The SISCO Inventory for the study of academic stress, in its original version as in the second version of 21 items (Barraza, 2018), he proposes an item with Likert-type scaling of five values to measure the intensity of stress, unlike Barraza and Muñoz (2019), in their research, formulate it with 10 values, and Barraza and Hernández (2015) formulate it with a frequency scaling of 10 values.

These antecedents make it necessary to analyze whether an intensity escalation (nothing-much) or a frequency escalation (never-always) should be prioritized for the response; Also, it is necessary to discuss whether an escalation of five values or ten is more appropriate.

Due to these questions, this research proposes the simultaneous analysis of the psychometric properties of three items: a) one of intensity of 10 values, b) one of frequency of five values, and c) one of intensity of five values; It is worth mentioning that the responses focused on intensity were prioritized because it is the type of escalation, which as a single item variable is present in the SISCO Inventory, which until now is the most used instrument to measure academic stress.

There are three basic assumptions related to the measurement of academic stress that are fully assumed and without restriction in this research:

a) Stress is, essentially, a phenomenon of a subjective nature (vid Lazarus, 2000), so its assessment should depend on who experiences it or perceives it, thus, it is considered that most people have a general idea of what it is to be stressed and therefore are able to report it.

b) For this reason, it is necessary and recommended to use a measurement that is fundamentally based on people's self-reports.

c) Self-reports using a single item format can provide a molar measure of how the person feels about stress.

From this background, and the decisions that were made, the objectives of this research are: a) determine the acceptability of the data generated by three different versions of a single item to measure academic stress and, b) establish the evidence of convergent validity that would support the use of three different versions of a single item to measure academic stress.

Method

Type of study

This study can be characterized as an instrumental study that seeks to investigate the psychometric properties (acceptability of data and evidence of convergent validity) of three different versions of a single item to measure academic stress.

Participants

This research was carried out with a sample of 300 high school and higher education students from the city of Durango, in Durango, Mexico. The sample was non-probabilistic. The inclusion criteria were being a high school or higher education student, being at least 18 years old, and having attended classes the day the questionnaires were applied. The elimination criterion was not answering 80% of the items in the questionnaire.

The distribution of the students, according to the sociodemographic variables investigated, is presented in table 1. As shown, there is a great number of women, who are studying at high school and university. In the case of age, the least was 18 years old and the maximum was 53 years old, the average age resulting 25 years.

Table 1.
Sample characterization

Variable	N	%
Sex		
Man	78	26
Woman	222	74
Institution		
Universidad Pedagógica de Durango	185	61.7
Escuela Normal del Estado de Durango	51	17
Centro de Estudios Tecnológicos Industrial y de Servicios Núm. 148.	64	21.3
Level of studies		
High school	116	38.7
Bachelor's degree	120	40
Postgraduate	64	21.3

Source: self made

Instrument

To collect the information, a questionnaire composed of five sections was used:

a) In the first section, the personal data of the respondents (sex, age, name of school and level of studies) were investigated.

b) In the second section, two single item variables were investigated: stress and depression; both to be answered by using a Likert-type scaling of ten values where one is nothing and ten is much.

c) The third section is made up of the items of Vital Satisfaction Questionnaire; In this research, the translation offered by Seligman (2003) was used, the original version is maintained with five items written in the affirmative and positive way, which are answered by an escalation of seven response possibilities, ranging from (1) Strongly disagree to (7) Strongly agree. In this application, a reliability coefficient of .79 was obtained in Cronbach's alpha.

d) The fourth section was made up of six items distributed in three blocks: a) two items investigated the frequency of how they lived with or related to their nuclear family (parents and siblings) and their close relatives (grandparents, uncles / aunts and cousins). To answer these items, they were offered a frequency scaling of four values: never, sometimes, almost always, and always, b) the following two items inquired about how many people they were regularly related to, both the nuclear family and close relatives; there were four options to answer: from one to three, from four to six, from seven to nine and from 10 onwards, and c) the last two questions investigated trust, intimacy or closeness that existed with people with whom they related from their nuclear family and close relatives; To answer these items, an escalation of four values was offered where one was little and four was much.

e) In the fifth section the intensity and frequency of academic stress were investigated, using two questions by a Likert type scale of five values where one was nothing / never and five was much / always.

The items of interest were written as follows:

1.- On a scale of one to ten, where one is **nothing** and ten is **much**, indicate with an X how much **stress** have you had in the last four weeks?

1	2	3	4	5	6	7	8	9	10

2. - On a scale of 1 to 5, where one is **never** and 5 **always,** indicate **how often** have you had stress during this semester?

1	2	3	4	5

3.- On a scale of 1 to 5, where one is **nothing** and five is **much**, it indicates **how much** stress have you had in this semester?

1	2	3	4	5

To reach evidence of convergent validity in relation to the three selected variables, the literature review clearly reports its relationship with stress: a) depression (De Francisco, Arce, Vílchez & Vales, 2016; Restrepo, et al. 2018; Tijerina , et al. 2018), b) vital satisfaction (Cantú, et al. 2010; Collantes, 2018; Haley, LaMonde, Han, Burtony & Schonwetter, 2004), and c) family support linkage (Melguizo-Garín, Martos-Méndez & Hombrados-Mendieta, 2019; Rezende, Calais & Cardoso, 2019; Ruiz, 2019), therefore they are considered adequate variables to obtain evidence of convergent validity.

Process

The application of the questionnaire was developed in the form of pencil and paper in the aforementioned institutions, with the permission of the respective authorities after clarifying that there was no risk for the respondents and explaining the objective of the investigation.

During the application, there were internal collaborators from each institution who informed the students of the voluntary nature of completing the questionnaire and explained the confidentiality with which the results would be managed. With these actions, the consent of the informants was achieved, and allowed the investigation to be conducted considering the protection of the rights and guarantees of the participants in the investigation (according to section 8.01 of the ethical principles of the American Psychological Association, 2017).

Once the questionnaire was applied, the database was constructed in the SPSS version 23 program. Later, the data were imputed using the methods of the series mean and the median of nearby points, as appropriate to the level of measurement of the items. Then the general variables Vital Satisfaction (items in the third section) and family support linkage (items in the fourth section) were calculated.

Then, once the final version of the database was established, the analysis of the information was carried out in the SPSS program, version 23: a) the reliability of Vital Satisfaction Questionnaire was obtained through the Cronbach alpha procedure; b) the descriptive data of each of the three items subject to analysis were obtained (the one in the second section to be identified hereafter as intensity 10; and the two items in the fifth section to be identified hereafter as Frequency 5 and Intensity 5); c) the descriptive data of the three variables used in the convergent analysis (vital satisfaction, social support linkage and depression) were obtained; d) acceptability was studied, understood as the quality, completeness and distribution of the data (Hilari et al, 2003), based on six procedures: the distance between the mean and median, the percentage of missing values, the ground and roof effects, asymmetry and kurtosis; e) normality test was performed on the four single-item variables (Depression, Intensity 10, Frequency 5 and Intensity 5), and the two general variables (vital satisfaction and family support linkage); in all cases the result was KS = .000, so there was a need to use a non-parametric procedure in the correlational analysis; and f) the correlational analysis was carried out, within the three single item variables of stress and the other three variables, through Spearman's Rho procedure ($p < .05$).

Results

Descriptive data of the six variables (four single items and two multi-items) are presented in table two. In particular, the results of the three items that are addressing academic stress are of interest, but in order to make a comparison in relation to these means, these are transformed into a percentage giving the following results: Intensity 10 (67.4%), Frequency 5 (72.8%) and Intensity 5 (74%); as it can be seen, the escalations with five values give higher results, being the Intensity the one that offers the highest value.

Table 2.
Descriptive data of the analyzed variables

Variables	Mean	Standard Deviation
Intensity10	6.74	2.20
Frequency 5	3.64	.980
Intensity 5	3.70	1.03
Depression	4.63	2.86
Vital satisfaction	5.18	1.14
Family support linkage	2.76	.684

Source: self made

In the case of the procedures used, the following decision rules were taken into account to determine the acceptability of the data: a) for the distance between the mean and median, the decision rule was an arbitrary standard ≤ 10% of the maximum score; b) in the case of the percentage of missing values, the decision rule was <5%; c) in the case of ground and roof effects the decision rule was <15%, and d) for the asymmetry and kurtosis the acceptable limits ranged from −1.5 to +1.5. Results of this analysis are presented in Table 3; as shown in Table 3, only the items Frequency 5 and Intensity 5 had problems with the roof effect, all the other values are within the established limits.

Table 3

Results of the procedures followed in acceptability

Ítems	Median / Median	Missing values	Ground effect	Roof effect	Kurtosis	Asymmetry
Intensity 10	2.6 %	0 %	12.3 %	9.3 %	-.851	-.375
Frequency 5	7.2 %	0 %	11.3 %	**21 %**	-.549	-.291
Intensity 5	6 %	0 %	12 %	**24.7 %**	-.495	-.463

Note: Values that do not respect the decision rule established for each case are highlighted in bold.
Source: self-made

Table 4 presents the results of the correlational analysis. As shown, the three items that address academic stress are correlated with the three variables investigated, only the coefficient correlation, and the level of significance varies. In the case of the depression variable, its positive correlation is greater with Intensity 10, while in the case of the variables vital satisfaction and family support linkage, its negative correlation is greater with Intensity 5.

Table 4.

Correlational analysis within the three single-item variables that address academic stress and the three variables investigated

	Depression	Life satisfaction	Family support network
Intensity 10	.326**	-.208**	-.144*
Frequency 5	.240**	-.179**	-.156**
Intensity 5	.250**	-.217**	-.168**

** p <.001, *p<.05. Source: self made

Discussion of results

One of the central tasks in an investigation process is the collection of information; in the development of this task, there is a tendency to use scales or multi-item instruments, however, some authors have opted to use scales with a single item. Given this, the question arises: how is this use justified?

One of the situations that justify the use of single item scales is that when carrying out massive studies, in relation to the population, or extensive, with reference to the number of variables investigated, it is necessary to take care of the number of items that in total are presented to the respondents so as not to discourage them from answering or promoting on their part a reluctant or random response that damages the quality of the information collected (Domínguez-Lara, et al. 2019). In this context, being able to measure some variables with single item scales, with the required quality, helps to reduce the total number of items without sacrificing the number of variables to be investigated.

In addition to this situation, there are two other cases that justify the use of scales with single items in investigations that are not necessarily massive or extensive: a) there are some instruments that address variables with several questions but very similar (Domínguez-Lara, et al. 2019), the empirical fields and the objective dimensions are equivalent, only the way of writing them changes; In these cases, using a single item helps to reduce the time and effort for the respondent without essentially sacrificing the quality of the information that is collected, and b) there are investigations where the instruments to be used address the same empirical areas, so when writing the different items there is a sense of redundancy (Barraza & Hernández, 2014) that affects the response and can influence the quality of the data collected.

These justifications, and other similar ones, are located in what Postmes, Haslam & Jans (2013) call pragmatic reasons, however, in terms of the quality of the data generated, the literature in this regard has shown that these types of measures are so valid and reliable as those generated by multi-item instruments (Ang & Eisend, 2017; Burisch, 1984; Loo & Kelts, 1998), in addition to its easy and fast incorporation in investigations with multiple variables, and its inclusion does not represent greater effort on the part of the respondent, minimizing the fatigue and the perception of redundant content that appear in some long-term scales (Van Hooff, Geurts, Kompier, & Taris, 2007).

For this reason, the need to search for an item that allows measuring academic stress becomes relevant; the results obtained in this study are inclined to items that include a Likert-type intensity scale (nothing-much) in their response. Acceptability is better in the item with a response scaling with 10 values, while the relationship with other variables is better in the item with a response scaling with 5 values.

In the case of the relationship with other variables, the results should be taken with caution since the fact that the item called Intensity 10 had a higher correlation with depression (which is a negative variable and was investigated in the same way with an escalation of 10 values) while the item called Intensity 5 has correlated higher with vital satisfaction and social support linkage (which are positive variables and are investigated with escalations of less than 10 values) leaves doubts as to whether the level of coefficient correlation can be affected by the type of variable with which it is related or the escalation in which these are answered.

These concerns force, without a doubt, to continue their study and think of these results as provisional; under these considerations, the most appropriate decision is proposed, for the moment, to use the item called Intensity 5 for the study of academic stress. This item is presented below:

On a scale of 1 to 5, where one is **nothing** and five is **much**, indicates how much stress have you had in this semester?

1	2	3	4	5

As a closing, it is necessary to recognize that the main limitation of this work is that the three items of interest were investigated simultaneously, and although the order in which they were presented was carefully considered, it is feasible to think that the halo effect or the perception of redundancy could have influenced any of the results. For this limitation, and the concerns arising from the results obtained in relation to the type of variables investigated for the convergent validity procedure and the response scaling in which they were investigated, it is suggested to continue this work to determine the best form, which can assume a single item to measure stress.

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THE EVALUATION OF READING COMPREHENSION IN ELEMENTARY SCHOOL

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Abstract
In this chapter, a theoretical approach is displayed what concerns the evaluation of reading comprehension in elementary school, addressing the main definitions and models that conceptualize what it is to evaluate Reading Comprehension. This with the intention of offering a panorama that motivates teachers to develop this activity in classroom work. In the same way, a methodology is disclosed that allows the teachers to design their own assessment instruments.

Key words: Reading Comprehension, evaluation.

Then a composition of a subject that has not had much enhancement in education is presented, however, it is of vital importance since it allows actions to be taken to improve one of the most important reading skills, that is, the Reading Comprehension. Assess the relevance of Reading Comprehension makes manifest the need to know in what state are students and what areas need to be served for better in such competition.

Introduction

What is Reading Comprehension and why evaluate it? Reading Comprehension is a polysemic concept, which can cause controversy, before the resulting discussion to determine what the definition should be used. In this sense, Goodman (2002) mentions that “learning to read begins with the development of the sense of the functions of written language. Reading is searching for meaning and the reader must have a purpose to search for meaning in the text” (p. 27).

However, the concern is not having a universal concept or standardized; but the misinterpretation that can give it to the only associate it with the understanding of the reading of a text. Cassany, Luna, & Sanz (2003) propose the thesis to read is to understand a text since, let us read as we read, whether quickly or slowly, pauses, always with the same rhythm, in silence, or out loud, what matters is interpreting what the printed letters try to lead us to, building a new meaning in our minds from these signs. This is basically what reading means.

But really, what can be understood by Reading Comprehension? It could be simply constructing a new meaning, and in this way, the cognitive vehicle to reach an interpretation close to the author's intention in his work. For Smith (1989) the basis for understanding is prediction; which he calls the prior elimination of improbable alternatives, and it mentions that those predictions are questions we put to the world, so it is as understanding is the action of receiving answers.

As an intellectual process, Reading Comprehension involves capturing the meanings that others have transmitted through a speech, within its conceptualization you can find a large number of authors who define Reading Comprehension in a different way, therefore, it is crucial to see what ideas they share in common and that similarities dictate in analogy.

Gomez Palacio (1995) affirms that the Reading Comprehension is the effort that the reader makes to search for the meaning, and this consists of connecting a given information with something new or different from what is already known, he also points out that the Reading Comprehension depends on the complexity and the extension of the intellectual structure available to the subject to obtain increasingly objective knowledge. From the perspective of Gonzalez (as cited in Santiesteban & Velazquez, 2012);

> A reader understands a text when he can give it meaning and puts it in relation to his previous knowledge and interests, since he mentions text comprehension is relative to each reader, because each person has different life experiences and gives what is read different meanings (p. 6).

For this reason, Guevara & Guerra (2013) point out that, due to its educational and professional importance, Reading Comprehension has gained worldwide recognition as a generic competence par excellence, therefore, systematic research has been carried out to evaluate it and to find out his, her nature.

But what should be attended to? Within the above, Reading Comprehension is mentioned as a performance level; Anderson & Pearson (as cited in Cooper, 1990) define comprehension, as it has been conceived since the 90s as: the process through which the reader elaborates a meaning in his interaction with the text.

To evaluate this competence, it is important that mechanisms are necessary to carry out its assessment and above all what processes, that is, starting from the need to prepare students for the type of national and international tests, you must know the mechanisms and elements needed to perform it.

While you can also say that there are a variety of instruments that measure some aspects of reading, it is important to remember that sometimes the term Reading Comprehension confused with the same activity to read and simply provide an interpretation of what I read as an explanation that, in some cases, accompanied by a simple questionnaire is used to show that the student comprises or not a read text, however, Ferres et. Al (2009) mention that:

> The problem of reading comprehension difficulties requires much more research and the contribution of multiple disciplines and approaches, both to study the effect of different causal factors and to propose forms of intervention. A necessary step in this direction is the development of specific assessment instruments (p. 42).

Evaluate a competition as it is Reading Comprehension is not an easy work, involves the thoughtful effort and the need to decipher what skills and basic cognitive processes to be used by individuals to understand the text. Even so, there is a high range of strategies originating from various studies.

The evaluation can be oriented to the valuation of various educational processes, as is the case of reading, even more specific, to its understanding. Unlike the great amount of existing strategies for the improvement and treatment of this competence, but not to evaluate it; among the investigations carried out (and when carefully reviewed), one can perceive the marked tendency to use the Integration Construction Model.

This is where the interrogation arises, what to evaluate? Starting from the analysis of the previous models, four areas are distinguished that must be considered to be evaluated in these three models or in the integration of the first ones. For this, there are certain guidelines that must be taken into account for the evaluation of Reading Comprehension according to Alonso (1985) should be considered;

- Assessment of the knowledge necessary to understand a text and of the beliefs held by the reader.
- Evaluation of the representation that the reader builds after reading a text.
- Evaluation of the training process and review of relations established between elements of the text while reading.
- Evaluation of the types of strategies that the reader uses to correct comprehension errors during reading.

For this reason, it is essential to carry out an evaluation of Reading Comprehension, which allows obtaining an overview of the processes that are used and the relationship they have with the elements of the text, as well as discerning the state of the reading student, seeking to turn those mistakes into areas of opportunity.

International evaluations of reading comprehension and competences reading have been carried out in recent years (PISA or PIRLS) have confirmed suspicions about the comprehension difficulties experienced by our students in 4th ESO and the need to evaluate, diagnose and intervene from ages earliest (Leon, Escudero, & Olmos, 2012, p. 17).

Reading Comprehension is evaluated through tests that include questions about the content of the text, whether it is a phrase or a fragment and most of their answers can be found explicitly in the text. It is suggested to develop an instrument that adapts to the context in which the students operate, taking as a reference a model in combination with questioning techniques that are effective where the questions require the student to make inferences and anticipations. It is worth mentioning that one of the most used models in the evaluation of Reading Comprehension is the Construction Integration Model.

Construction of the research object

How to evaluate reading comprehension? It should be noted that knowing in what levels of Reading Comprehension students are found gives a notion of the difficulties that students present, however, it is necessary to build an evaluation instrument to know what cognitive skills are related to each level, and thus taking the same deficiencies as a starting point for relevant and appropriate intervention relevant to the needs of the students present at the time of evaluation.

It is established as a general objective to build a battery of tests to assess reading comprehension that is valid and reliable for use with primary school pupils. Consequently, they also established as specific objectives; examine the degree of external validity of the battery of tests to assess reading comprehension as a tool for assessment and discernment about the state of elementary school students.

In the Integration Construction Model of Kintsch and Van Dijk (as cited in Garate, 1996) and their alternatives for the evaluation of Reading Comprehension. Although it is known that the Reading Comprehension consists in the construction of a meaning from the information presented, and that objective tests are used for their viability and effectiveness they give, but it is important to know how the questions asked should be they will pose.

This model comes out the importance of the use of instruments such as objective tests to develop an assessment of Reading Comprehension, since they are more viable and have higher efficiency; also, they raise the relevance of designing the indicated questions to be used seeking the greatest objectivity. In it, the following hypotheses are proposed on the construction of the base text for the construction of the global meaning of the text according to Kintsch and Van Dijk (as cited in Garate, 1996):

- The referential coherence of the base text is checked first.
- Checking the referential coherence of the basic text and the possible addition of inferences cannot be made in all of the basic text due to the limited capacity of working memory.
- To connect different cycles, some propositions are kept from one cycle to another, in a working memory buffer.

The evaluation of Reading Comprehension, under the approaches of the Integration Construction Model, is oriented to a hypothesis about the construction of a base text in which the reader can, in turn, put his cognitive skills into play, where the questions must be used in the instrument to evaluate must be the most objective to which it is intended to evaluate.

After an analysis of this model, Escobar-Pérez, Robayo & Villegas (2007) indicate that: these inference questions should be about the relationships that are implied in the text, but not explicitly stated. The use of this model allows to overcome criticisms to previous tests of Reading Comprehension that asked about the central idea of the text.

If the reader only answers information extraction questions, without first having used his previous knowledge or using key words from the text, he will not have really understood what has been read, because even those questions can be answered without the need to have read the text completely.

> There may be inferences that are available to the student, even without reading the text. Therefore, the creation of inference questions is a rather difficult task that requires a delicate balance between what is and is not stated in the text, and what can be assumed as common knowledge and what is unlikely to be known. as a reader (Wiley, Griffin and Thiede, as cited in Escobar-Pérez, Robayo & Villegas, 2007, p. 128).

In the Construction Integration model, Van Dijk & Kintsch (1983) point out that; an evaluation, which in turn is an additional structure assignment that allows better information retrieval. Literature is a prototypical case of this respect and literary passages are generally reading specifically for evaluation and, therefore, are perhaps easier to remember or recognize. A complete test would require a demonstration of the activation or inactivation of various knowledge structures during comprehension.

There is talk of a test in which students not only answer questions specific to the information contained in the text, it is necessary to assess all the cognitive processes required for reading comprehension, each of the cognitive skills that make up this reading competition.

> It is not sufficient for a test of knowledge to determine that a word or sentence is an appropriate argument for the relationship it has with the rest of the content,

> and therefore that the statement may be semantically acceptable, but it must provide the necessary precision. Totally different from what occurs in understanding the metaphor (Van Dijk, as quoted in Van Dijk and Kintsch, 1983, p. 314).

In a comprehension test should also evaluate rhetorical figures appearing in them, as processes other processing required information in the connotative and denotative language, but the same precision when constructing the meaning of the text.

Before designing a test or exam that allows measuring the level of student performance, it is important not only to follow a model with the one described above, but also a methodology that allows developing an evaluation process of this reading competence in an ideal way.

It is necessary to emphasize that the use of methods and methodologies is not for the exclusive use of the exact sciences or natural sciences, likewise, in the educational field it is very recurrent to see research and / or various teaching procedures, as is the case of the evaluative work in education.

For this, it is important to know what a methodology is, Aguilera & Rina (2013) point the purpose of the methodology as “the task of the methodology, consequently, is aimed at examining, evaluating, refuting or corroborating the effectiveness of the methods in the various fields of knowledge” (p. 91).

In this way, it can be affirmed that the methodology is in charge of the study of the methods, that is to say, of those strategies that are used to evaluate the Reading Comprehension; where an examination of the procedures that will be used to carry it out is required.

> The evaluation of Reading Comprehension should be characterized by being a stimulating task for children. It has been verified that, if the children know the task to be carried out in an evaluation situation, their understanding improves, since they are able to guide their activity based on such objectives. Children can check their own understanding (metacomprehension) and advance themselves in their reading development (Gomez Palacio, 1993, p. 22).

The evaluation of Reading Comprehension allows the teacher to carry out a construction on the explanation of the performance that the student has in front of the treatment and understanding that he will give to the different types of texts that are proposed to him to work, and thus know if they have the necessary elements to be a good reader.

An evaluation situation that is designed with the purpose of knowing the initial state of knowledge in which a student or a group is found - diagnostic or initial evaluation - allows, with respect to reading development, to know: what are the characteristics of reading they make of certain texts, what kind of inferences they make to construct their meanings and what are the difficulties they face to understand them and to account for this by answering certain questions (Gomez Palacio, 1993, p. 21).

Exposed by the author's words, the fundamental purpose of the initial evaluation is to know the characteristics or, in a few words, the reader's profile when interacting with the text, and to identify the difficulties and limitations that it has to understand reading, by posing questions, in order to investigate the information provided by the answers given by the reading student.

Knowing which are the types of texts that are ideal to use when working on the different aspects of Reading Comprehension; as is the evaluation, it allows to guide in a pertinent way which aspects and under which criteria the appropriate typology of texts should be chosen when working with this competence.

For Ulloa & Carvajal (2008) the types are objectively verbatim in any language, since in every society and in every culture, it is narrated, explained, argued and poetized in different ways, according to the measures and parameters that each society establishes to carry out these actions through both oral and written language.

The narrative text is mainly characterized by the tendency it has to describe commonly facts of a story, which is a core part of its structure; Its feasibility of use allows students in the lower grades of primary education to carry out a more comprehensive reading, thanks to the ease of understanding it has for the reader when the text is read.

For Ruffinelli (1982) narrating is precisely to account for one or several events that unfold over time. It doesn't matter that that time is apparently distorted, or even that nothing happens in the story or in the novel; there will always be facts, no matter how small, and these facts will always be located in a context of place and time.

During several years of research on the process of teaching and developing literacy in children in basic education, which were carried out mainly in Spanish-speaking countries, specifically on the difficulties in understanding the alphabetical nature of the literacy system in words of Rodriguez (1993) indicates that in the case of narrative texts;

> The interest lies in the action and, through it, the characters who perform it and the framework in which this action is carried out acquire importance. The temporal arrangement of the facts and the cause-consequence relationship make the time and the aspect of verbs take on a fundamental role in the organization of narrative texts (p. 26).

In order to acquire the literacy system, children proceed to assimilate the content of the information presented in the text, however, the information may be difficult to assimilate, if the information presented is new to the individual, for what very often they are forced to reject it; although it is easy to assimilate content such as that presented in narrative texts.

> Narrative texts are organized in a sequential pattern that includes a beginning, middle, and end. Within this general pattern, sometimes narrative it consists of several distinct episodes, each of which includes characters, a setting, a problem, action and a resolution of the problem (Cooper, 1990, p. 328).

For the learner is easier to digest a text narrative type, as the vocabulary used becomes associated, and share similar words to which the student uses to communicate in their daily lives, on the other hand, the structure presented by this type of text enables a simpler way of understanding, including the reader can predict what will happen in the outcome of the plot view.

Commonly difficulties come to prevail at the time of being read, because sometimes the reader does not know the meaning of some words, since they are not incorporated into his daily lexicon; By not understanding the meaning of the words, the reader presents conflicts to find the meaning of the sentences, which in most cases leads to the loss of interest in reading them. This leads us to the use of expository text.

Ulloa and Carvajal (2008) frame that, in the case of expository discourse, textual modalities such as essays, reviews, articles or newspaper editorials also have common characteristics; steps or procedures for the preparation of the text such as: the definition, description, classification, generalization, citations and references.

This type of text, it is not usual that there is a tendency to be read, since its preference is much less compared to narrative texts, sometimes it is difficult for the reader to understand the information presented in it; by the use of words scientific order or by the use of technicalities. The description in the expository writing is related to concepts such as: structure, morphology, procedure, process, mechanism, system, comparison, functions, phases, cycles, etc. (Alvarez & Ramirez, 2010, p. 75).

These texts can be divided into five categories that despite sharing similar structures, there are differences in wording, how the information presented is accommodated in Cooper (1990);

- Descriptive: Provides information about a particular topic or the characteristics of the topic or context.
- Grouper: the author exposes in group a certain number of ideas or descriptions, relating them to each other. This structure is usually called enunciation.
- Causal or cause-effect: presents the contents grouped in a sequence such that a causal relationship, explicit or implicit, results.
- Explanatory: the author presents us with a problem, an unknown question or a dilemma situation, followed by a solution, answer or reply.
- Comparative: requires the reader to notice the similarities and differences between two or more elements or ideas.

When analyzing the five categories previously exposed, it can be determined that there is a great diversity of variants of this type of text because over time many writings have been incorporated into this type of text, it is for them that, given their wide range of variations for some readers find it complex to understand its content.

Another type of text that is used in the reading comprehension evaluation process is the poetic text. In poetry they are no longer facts, but themes expressed in words, images and sounds. The first information of a poem brings together, at the same time, what the poem refers to and verbal structure. A first reading of the poetry could remain in the basic information. It will be seen, for example, that a poem expresses attitudes, ideas and feelings about an aspect of life, and it will be captured, with a minimum of prior technical knowledge, that it has a certain number of verses, whether or not they rhyme with each other, etc.

> Poetry is, therefore, a particularly revealing field of literary creation since it fulfills a very specific function within human existence, and this when man adopts it as one of the ways of "reacting" this existence to reality that surrounds it (Alvarez, 2013, p. 227).

A first reading, then, will be able to inform both aspects without relating them to each other, since the work on his own body has not been done, the connection between form and content has not been sought or reflected on. Ruffinelli (1982) mentions that in the second stage of poetry reading it involves an analytical work to know the operation of its entirety. The advantages here, compared to a similar narrative analysis, consists in the brief extension of the poems, in general, which allows studying their expressive totality and focusing each one of its elements with greater precision.

It is recommended to use this type of reading with the students of the first cycle of primary education only if they are some fragments of the text, since it is more digestible to read because of its limited length, and at least tedious to read a text with a connotative language, whose interpretation in some cases can be difficult, due to the subjective and ambiguous possibilities of the language itself.

As a fundamental element for the construction of an evaluation (by means of a test) on Reading Comprehension, the use and selection of a text is indispensable, in which the reader will be good to interact with it, putting into play his cognitive skills in the search the construction of the meaning of the processed information.

For UPN (2002) the task of selecting texts is part of the pedagogical work of the teacher, where should assess the reading materials used, notes that "in this determination are put into play the different conceptions that each teacher about learning, processes of reading, reading comprehension" (p. 114).

As indicated the UPN (for its acronym in is Spanish is National Pedagogical University) given the importance of analyzing a text before use in any process of teaching and learning, could become a factor that can affect negatively or positively on the success you have in the application of this process, that is to say, it is necessary to carry out an analysis prior to the text that will be used to treat a didactic activity with the students, such as the evaluation of Reading Comprehension, considering the relevance of its use.

Now, it is necessary to consider the elements and the pickpockets that make up the text that will be used for the design and construction of that or those instruments to be applied in the process of evaluating reading comprehension, Gomez Palacio (1995) points out that it is Five categories must be considered to be proposed as a resource for the evaluation:

1. Subject: to keep a relationship with the elements within the text: depth: that forces the reader to read the text completely to obtain information, plus other data to locate it within some possible sequence in the text type structure.
2. Length and complexity: extension, syntactic complexity and types of sentences.
3. Semantic relations: its complexity is marked by the type and number of inferences that are present in the text: inferences, type of inferences, number of inferences and relations between propositions:
4. Textual signals: key words (endophores, anaphores and cataphors), spelling and punctuation.
5. Textual structure or superstructure. Constituted elements of the text: it must contain all the parts that characterize the superstructure (introduction, development and closure).

Within these categories the levels of complexity of some of them and some of their subcategories are mentioned, to use the type of text with which one will work, this is for the teacher's consideration: since not all children have the same ability and the degree of complexity must also be considered, which will increase as the student progresses from school grade and according to the age of the student. That is why it is for the teacher's consideration to analyze what type of text will be used based on the criteria presented in each of the categories.

In the construction of any evaluative instrument, it is important to consider what type and what items make it up, that is, what will be the types of indicators that will be subject to an evaluative judgment to be used in the evaluation process, which in this case are aimed at assessment of reading comprehension.

For Attorresi, Lozzia, Abal, Galibert, & Aguerri (2009) the item should be considered as the unit of analysis and modeled directly with the latent trait for measurements using a score that estimates changes in the psychometric properties of the reagents they will conform to the designed instrument.

Table 1

Types of items to evaluate Reading Comprehension.

Item type	**Description**
Preguntas abiertas	The question requires the reader to consider what happened to the character throughout the narrative, to realize the cause of the change in mood or locate the cause in the information. Required inferences: Informative, spatial, temporal and lexical relationships, in the two parts of the reagent (two inferences).
Open in two parts	The first part of this reagent should focus on knowing the meaning that the reader gives to the expression. In the second part, it is intended to know the reader's inference about elements that do not appear in the text. Inference erected: Informative, spatial, temporal and lexical relationships, in the two parts of the reagent (two inferences).
"Cloze" technique	The item presents part of a short textual passage that the reader must complete using the memory and the semantic relationship between the information given in the item and its answers.
Multiple choice questions	These items specifically require the memory of the text read and select one of the answers offered; relating lexical information. Required inferences: Connecting spatial and temporal informational relationships (two inferences). It is recommended that the teacher incorporate questions of this type into daily work, without referring to the contents of the texts, or using the evaluation questions.
Questions that require paraphrase (open-ended question that questions the reader about the opinion on the text)	This question will let you know if the child integrates the meaning despite the strategy followed. Required inferences: Connective and complementary to lexical informative relationships of logical relationships of psychological cause (an inference).

Note: adapted from Gomez Palacio, Indicators of Reading Comprehension (1993).

It should be noted that the use of the above items plays a relevant role in the relevance and feasibility required to design a test aimed at the evaluation of Reading Comprehension, since they allow for a more in-depth evaluation that allows collecting accurate and objective about the skills or areas that are intended to be evaluated in this competition.

It is everyone's knowledge that, when working with reading skills; As it is in this case, Reading Comprehension has a profile defined by its characteristics, knowing that comprehension is a process, this leads us to think that it goes by stages or levels. In works and proposals that touch on the same subject, performance indicators are mentioned as levels of Reading Comprehension, and there has even been a mistaken idea of what these levels are, sometimes proposing three or more, and even more regrettable than that. Consider the types of reading or reading levels as compression levels, since reading and understanding are not the same.

There may be different levels for reading comprehension; Ruffinellis (1982) proposes three levels of Reading Comprehension in words he argues that "the text reports, has a linguistic structure and expresses ideas and concepts of the author" (p. 52).

The three levels that are proposed respond to the approaches that the reader himself makes when reading a text in order to understand and interpret the content that the author implements, in a certain way the reader makes an assessment of the understanding that can be have about the information presented after reading it.

Information level. As Ruffinelli (1982) states, he answers the question; What? it is the existing relation of the facts (narrative), of the words and images (poetry), of the themes and subjects (essay). When making a first reading, the information on the topic should be given as a result. In this sense, the basic recommendation for the reader is to attend the title. From his approach as an item Van Dijk (1990) mentions that;

> Its structural function is to express the main issues of the event. That is, they function as an initial summary. Hence, as in normal stories, also to introduce the category of the summary governing those of headline and heading (p. 83).

Stylistic level. For Ruffinelli (1982) the stylistic level answers the question How? The way the facts are expressed (narrative); how words and images are arranged (poetry), or subjects or themes are exposed (essay). After understanding the topic and what the author says about it (the thesis), it is important to note how his arguments are presented, what he does with his style to be more convincing.

> Given the context model of the receivers, they may be able to link such style variations with the context structure. A global feature of the style is not only pointing out properties of the context (relationships between participants, etc.), but also underlining appropriate meanings (Van Dijk, 1999, p. 32).

Ideological level. This last level of Reading Comprehension intends that the reader can compare the ideas that he rescued from the author of the written speech with reality, where he also questions the knowledge that he himself had on the subject when knowing a different opinion, in the You can analyze and reflect on the content read and thus make an evaluation based on the reading done.

At the ideological level Ruffinelli (1982) alludes to the fact that the core of this is answering the questions; Why? And, What for? it is the expression of concepts and ideas about reality (narrative, poetry, essay). The information flow must be recovered again (read again).

Van Dijk (1996) points out that the purpose of ideological discourse analysis is not simply to "discover" deep ideologies, but to systematically articulate the structures of discourse with the structures of ideologies; it is a more explicit and analytical study of discourse that requires a clearer formulation of such entities, and tries to specify which expressions or meanings of discourse give rise to what kind of inferences or other mental processes.

It should be noted that the levels presented and under the author's position, it is understandable for each of them they keep a certain degree of difficulty, it is observable that the difficulty of the abstraction changes in them, this is a factor for the student not to get involved with those cognitive skills that are immersed in them.

The processes involved in Reading Comprehension require the use of cognitive skills, since they allow; initiate, modulate, and select processes to achieve learning or develop thinking. They are those capacities that are involved in the process of understanding the texts.

Sanz (2003) mentions that it can be considered that mental capacities (intellectual skills, cognitive strategies, etc.) can be developed through practice. Normally, preadolescence and adolescence are expected to systematically work on comprehension skills, it would not be unreasonable to think that working on these skills and strategies at an early age could reduce the high rate of school failure that occurs, especially in certain groups of students who come from low sociocultural backgrounds and who, therefore, are not intellectually stimulated correctly.

The previous experiences and the cognitive structure of the student are manifested not only in the notion, conception, meaning that it has and in the way of representing a common fraction, but also in the ability to observe, remember, relate, order, compare and establish equivalence of common fractions, specific cognitive skills that determine meaningful learning (Capilla, 2016, p. 52).

Although there are multiple works that propose strategies to promote the development of Reading Comprehension, each of them involves some of the cognitive skills that the reader must resort to in order to understand reading, according to Sanz (2003) next:

- Relate: introduces a new terminology: knot and relationship, that is, relate the terms that appear in this reading.
- Deeply process information: look for analogies between two given situations. In making the analogies, the reader must have a deep understanding of the meaning of the reading. This activity, on the other hand, accustoms students to think divergently; that is to say, to think in different ways from the usual ones, consists in expressing through paraphrase the content of a part of the reading.
- Synthesize: is to get the main idea out of the paragraph or paragraphs. In discovering which propositions would be included in a proposition enunciated with a higher degree of abstraction.
- Organize information hierarchically: represent graphically and verbally the relationships that exist between the terms of the reading that must be organized and related.
- Discovering the global coherence of the text: consists in "looking for a solution" and "causes" between the affirmations of the text and discovering terms that are present.
- Compare-Evaluate: the student must compare the main ideas culled from the paragraphs and the summary of the text prepared by him, with the same tasks prepared by an expert.
- Classification: consists of grouping, given a criterion, propositions, expressions or words, it is important that they discover that many and diverse criteria can be used to group the content of a text.

Each of these skills are part of Reading Comprehension, since this competence by its nature requires abilities and skills to make, inferences, interpretations and the construction of meanings of reading; It is important to mention that these skills will determine if the reader will adequately assimilate the text, sometimes the student does not have these and it is necessary with the use of strategies and the practice that is acquired.

Leaving aside the difficulties presented by the students and directly attending to the role that the teacher must play during the execution of the Reading Comprehension assessment, it is required that, at the time of the assessment, adjustments are made that allow permeating the conditions for carry out a suitable, pertinent and objective evaluation.

In relation to the above, Pérez (2005) mentions that, when evaluating Reading Comprehension, it is necessary to take into account the cognitive demands or demands that the evaluation procedure used imposes on the student, demands that often do not have to do with Reading Comprehension itself and can bias the data obtained.

It is important to verify if those procedures used in the evaluation meet the appropriate criteria; the instrument used is efficient (valid and reliable); It will allow having in detail and in depth the information necessary to analyze and also identify areas of opportunity. Students who have difficulties in this type of valued skills; Your comprehension scores may be impaired, even if, in fact, comprehension itself is good.

Given the importance of adaptations in the reading assessment process, to carry it out appropriately, Gomez Palacio (1993) describes that “in the design of assessment situations the teacher will consider: the characteristics, of the students of the texts of the questions, as well as the time and periodicity with which the evaluation will be carried out” (p. 22).

For Gibbs and Simpson (2009), it is necessary to propitiate the ideal conditions to develop an evaluation that favors learning, conditions under which the evaluation must promote learning and that are supported by theoretical references, empirical evidence and practical experiences.

It is important to create conditions to develop a more effective and appropriate evaluation and the search for the students' acceptance itself (without any resistance to carrying it out), leads to the creation of an appropriate scenario in which the evaluation procedure of the Reading Comprehension, in which the evaluated student feels motivated and willing to submit to an evaluation that is far from being taken with a coercive vision, is seen with a proactive intention of improvement.

Methodology

The development of this investigation was under the guidance and monitoring of the Paradigm postpositivist taking actions that allowed deepen and analyze the information had to reach, as well as the fulfillment of the purposes, to provide treatment for focal needs research.

In the same way, this study is based on the quantitative approach, which requires knowledge of the most important aspects of it, from what is, to what is intended to do, and the consistency that it has, and the way in which it is suggested to analyze the information, in this sense it is presided under the methodological foundations of the deductive hypothetical method, same as for its rigor and its special features provide the tools necessary to develop research relevant and appropriate.

Particularly due to the actions carried out, the scope of this research is a correlational type scope, under a not experimental design; in relation to this, the parameters underlying the instrumental study were retaken, since they allowed actions to be carried out that lead to the achievement of the stated purposes.

The sample was taken from a total of 303 elementary school pupils with an age ranging from 6 to 11 years on average, was designed a Battery of Tests to Assess Reading Comprehension (BAPRECOLE, for its acrostic in Spanish) looking for it to be pertinent and effective, for application with elementary school students, as input and instrument for data collection, each of the tests that make up the BAPRECOLE was used.

For the elaboration of each one of a test to evaluate the Reading Comprehension it is recommended to carry out an adaptation to the phases for the design and development of the diagnostic evaluation of the Reading Comprehension proposed by Carrasco (2018), giving a follow-up to the five phases proposed to produce a test.

In first instance, it is suggested that the tests aimed at first and second grade primary school students consist of a small number of items, which allow evaluating each of the cognitive skills proposed by Sanz (2003) and the three levels of Reading

Comprehension proposed by Ruffinelli (1982). In the same way, three different types of texts must be incorporated (one of narrative type, another of poetic type, and one of expository type; in that order) considering the typologies of texts proposed by Cooper (1990) and Ruffinelli (1982).

For purposes of the above, the importance of designing different tests for each cycle of primary education is pointed out (first cycle: first and second grade; second cycle: third and fourth grade; third cycle: fifth and sixth grade), that is, one test for first and second having the same structure where the areas of analysis correspond to the three levels of Reading Comprehension and each unit of analysis corresponds to the cognitive skills of Reading Comprehension, however, each test must consist of three different texts and of Different items, in the same way in third and fourth, and in fifth and sixth, the same structure (areas and units of analysis) but different texts and items.

For the design of these structures, the operationalization proposal (see Table 2) of the analysis categories of the Reading Comprehension Assessment, proposed by Carrasco (2018, p. 65) was used:

It is also recommended to make a discrimination of the different types of texts, with the intention of selecting the appropriate ones, considering different sources for each grade, such as the corner books, anthologies designed for each grade, traditional stories and short poems, in each one of the tests intends to use a narrative, a poetic and an expository text; specifically in the narrative text, in the first and second grade a story; in the third and fourth grade a traditional legend close to the context where the student lives, in terms of fifth and sixth grade a fable, all with the intention of adapting the degree of difficulty of the texts as appropriate to the academic level of each grade. In the case of poetic and expository texts, they must be selected depending on the degree of complexity of each cycle.

Table 2
Linking Reading Comprehension levels, cognitive skills and item types.

Reading Comprehension level (Ruffinelli, 1982)	Description	Cognitive skills (Sanz, 2003)	Item types (Gomez Palacio, 1993)

Informational Level:	Answer the question; What? The Relation of the facts (narrative), of the words and images (poetry), of the themes and subjects (essay). A first reading should result in information on the subject. In this sense, the basic recommendation is to attend the title.	• Relate. • Discover the global coherence of the text.	• Questions that require paraphrase • "Cloze" technique. • Multiple choice questions. • Open in two parts. "Cloze" technique.
Stylistic Level:	Answer the question How? The way the facts are expressed (narrative); word and images are arranged (poetry), or subjects or themes are exposed (essay). After capturing your topic and what the author says about it (the thesis), it is important to note how your arguments are presented, what you do with your style to be more convincing.	• Synthesize. • Hierarchical ordering of information. • Classification.	• Questions that require paraphrase. Open questions. • Multiple choice questions. • Preguntas abiertas. • Multiple choice questions. • Open questions.
Ideological level:	Respond to the questions; Why? What for? The expression of concepts and ideas about reality (narrative, poetry, essay). The information flow must be recovered again.	• Deeply process information. • Compare-Evaluate.	• Questions that require paraphrase. Open questions. • Questions that require paraphrase. Open in two parts.

Note: the structure proposed by Carrasco (2018). The diagnostic: appreciation and treatment of Reading Comprehension, allowed to design each of the questions that are embedded in the instrument.

Regarding the general structure of the tests, it must be constituted, initially, by the identification data of the student to be evaluated, located at the top of the first page; immediately after the indications to adequately answer the test; a narrative type text, and a series of questions; a poetic text, followed by their respective questions; similarly, with the third text (expository type) and a third round of questions.

Each question must address a cognitive skill as followed in the previous table and finally it must be averaged, suggesting a passing score of six and the maximum is ten. In the same way, it is necessary to analyze which items were answered correctly and which not to detect which is the cognitive ability that the student masters or not.

Results

To determine the degree of validity of the instrument, certain statistical analyzes were performed based on the results obtained, among which the calculation of the Pearson's r coefficient stands out; with the intention of knowing the level of correlation of the levels of Reading Comprehension. To calculate the correlation coefficient r of Pearson, it was possible to prove that there is a relationship between the levels of understanding and it is not a mere coincidence or an arbitrary relationship proposed (see table 3).

Table 3

Correlations between each of the levels of Reading Comprehension and the average obtained.

		Informational Level	**Stylistic Level**	**Ideological Level**	**Average Obtained**
Informational Level	Pearson correlation	1	.519**	.462**	.790**
	Sig. (bilateral)		.000	.000	.000
	N	303	303	303	303
Stylistic Level	Pearson correlation	.519**	1	.541**	.838**
	Sig. (bilateral)	.000		.000	.000
	N	303	303	303	303
Ideological level	Pearson correlation	.462**	.541**	1	.783**
	Sig. (bilateral)	.000	.000		.000
	N	303	303	303	303
Average Obtained	Pearson correlation	.790**	.838**	.783**	1
	Sig. (bilateral)	.000	.000	.000	
	N	303	303	303	303

Note: the correlation was significant at the 0.01 level (bilateral).

Among the results that you can see in the previous table, it is identified that one of the strengths of BAPRECOLE, the existence of a not linear correlation between each of the levels of Reading Comprehension that were treated, indicating that a tiered relationship between levels of understanding pre-exists; since the values show a positive score; To better understand these results, they were interpreted based on the following parameters (see table 4):

Table 4

Interpretation of the item correlation index.

Range	**Relation**
-0.91 a -1.00	Perfect negative correlation

-0.76 a -0.90	Very strong negative correlation
-0.51 a -0.75	Considerable negative correlation
-0.11 a -0.50	Medium negative correlation
-0.01 a -0.10	Weak negative correlation
0.00	There is no correlation
+0.01 a +0.10	Weak positive correlation
+0.11 a +0.50	Medium positive correlation
+0.51 a +0.75	Considerable positive correlation
+0.76 a +0.90	Very strong positive correlation
+0.91 a +1.00	Perfect positivetive correlation

Source: taken from Mondragón, Use of the Spearman correlation in an intervention study in physiotherapy (2014, p. 100).

Pearson's correlation coefficient r for parametric tests ranged from 0.462 to 0.838, that is, the correlation presented ranges from a medium correlation to a very strong correlation, which indicates a differentiation between each of the levels of Reading Comprehension. In other words, it is a valid instrument. To demonstrate the reliability of this instrument; Garcia (as cited in Barraza, 2007) raises the following rating scale for reliability coefficients:

- From 0.80 to 0.90 is very good.
- From 0.70 to 0.80 is respectable.
- Between 0.65 and 0.70 is minimally acceptable.
- From 0.60 to 0.65 is undesirable.
- Below 0.60 is unacceptable.

In order to have a broader panorama and to know exactly the degree to which each of the designed items have an adequate equivalence with the rest, when correlated or not, the following information obtained (see Table 5) is presented after having submitted these items to this internal consistency test by obtaining the Cronbach's alpha coefficient, as was done with the levels presented.

Table 5
Cronbach's alpha coefficient considering cognitive skills.

Cronbach's alpha coefficient	**Number of Elements**
.854	7

Note: take into account the seven cognitive skills.

The reliability of the instrument was analyzed in relation to cognitive skills that are immersed in each of the three levels, obtaining a very good reliability; when said score is calculated at 0.854, knowing that, the closer this coefficient approaches 1, the items will be more consistent with each other, like its degree of covariance.

Conclusions

The BAPRECOLE gathers a considerable amount of evidence which demonstrate that its use as a relevant instrument to carry out an evaluation, its degree of validity is acceptable, regarding the reliability that it proved to have as an evaluation instrument for Reading Comprehension, is considered as good, in general it is relevant for its use as an evaluation tool this reading competence.

Another aspect that must be considered is the design of templates that facilitate the capture of data and information that is thrown from the application of the evaluation instruments that were carried out, to facilitate and optimize times when performing their interpretation.

The design and application of a test to evaluate the Reading Comprehension of the students allows evaluating the level of achievement of the students on this competence and what it needs, that is to say, which areas or cognitive skills must be taken care of, this will allow the teacher to undertake opportune actions for the promotion of the comprehension of the students' reading, without digressions, since they will know where to start and know how far they have contributed or not in the strengthening of the Reading Comprehension.

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ANALYSIS OF THE RESULTS OF THE READING ABILITY TEST FROM THE PLANEA EXAM APPLIED IN SECONDARY SCHOOL

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Abstract

One of the standardized tests that is applied in the national level since 2015, is the PLANEA exam, which was implemented with the specific purpose of offering to primary and secondary feedback elements for its improvement. Based on this claim, the objective of this research was to analyze the results of the reading ability (HL) test of the PLANEA exam that was applied in secondary school in the summer of 2016. To achieve the objective, the study was based on the application of the quantitative methodological approach through the use of the ex-post-facto method and with a correlational scope. The sample of study consisted of 122 students who completed the 3rd grade of secondary education and their response to the 48 items of the test. The responses were subjected to the quality measurement through the determination of their difficulty and discrimination index; on the other hand, the scores obtained by each student were subjected to hypothesis tests of normality, reliability and correlation. In the latest test, the average grade in the subject of Spanish, obtained in secondary school was used as a reference. The results obtained indicated that in this field and according to the scale selected for the measurement of the indices of difficulty and discrimination, the quality of the HL test was acceptable. From the results of the hypothesis test, it was confirmed the existence of a positive correlation between average reading ability score of the PLANEA exam and the average score obtained for the Spanish subject in secondary school.

Keywords used in the study: Reliability, validity quality and evaluation.

Introduction.

The use of standardized tests in the educational field has been increasing over time, and terms referring to various types of instruments are frequently used, including: tests referring to mastery, objectives, competencies, certification and criteria, among others.

Currently, in our country, performance tests are in full development and the perception of some specialists in the subject is that its application is of little use for evaluation purposes and that its use is linked to pedagogical currents that do not attend in the more appropriate way to the characteristics of individuals.

From another point of view, not a few researchers affirm that the problem lies on the interpretation given to the results from the standardized tests, since there are occasions that they were designed for different evaluation objectives. For the above reason, when building a test, it is important that the object of measurement, its use and the characteristics of the people to be evaluated, are taken into account.

The interest of this investigation is on the standardized test that was implemented into the National Plan for the Evaluation of Learning (PLANEA), which general purpose is to know the extent at which students achieve the domain of a certain learning content at different times in an educational process. Then, the results from the PLANEA evaluations will serve for: educational improvement, through the information to the society about the state of education in terms of the student learning achievement and the equity that exists in educational results; to deliver to the educational authorities relevant information for monitoring, planning, programming and operation of the educational system and its schools; to provide relevant, timely and contextualized information to schools and teachers that help improve their teaching and learning practices with all of their students and; to contribute to the development of proposals for educational improvement with relevant information on educational results and the contexts in which they are developed.

Antecedents.

The evaluation of the student´s knowledge is a fundamental part in the development of educational processes, of school institutions and of the educational system to which they belong.

Assessment of student achievement can be done in a variety of ways, and this role has generally been assigned and developed by teachers, who try their best to assign grade marks as fair as possible to measure the academic performance of the students.

Over the time, there has existed diverse application of methodologies to evaluate student learning and getting results with greater objectivity, validity and reliability, information is shown about three bibliographic research studies carried out by Medina (2013), Foster and Barahona (2008), and Lecuyer (2001):

a) The first, presented an analysis of the evaluation in the classroom through the discussion of its purposes, validity and reliability, suggesting the existence of three types of evidence that the teacher or tutor could use to assess the validity of their evaluations: curricular, interpretive and instrumental.

b) The second, analyze the content validity, instructional validity, and consequential validity; reliability and objectivity from a psychometric perspective in large-scale tests and, in specific evaluations at the classroom level.

c) The third, consisted of making a proposal to measure the impact of an institution and its educational programs on student´s development, arguing that the process cannot be implemented suddenly, but that it is necessary to proceed gradually starting with an smaller evaluation in such a way that the institution can appropriate the process and develop its own evaluation culture.

In the effort to improve the teaching-learning processes, from the 1960s the application of evaluations began to spread to large groups of students, however, until a few years ago, methods and techniques have been implemented that provide greater reliability and validity to the results of evaluation instruments.

The methodology that has been used based on the quantitative methodological approach to achieve the same purpose has been widely disseminated. As a sample two research works carried out with participants at the of primary and secondary level education are exhibited with the main objective of analyzing validity and reliability of Vargas´s questionnaires (2003), and Fidalgo, Gudin, and Olivares (2013), with the following characteristics:

a) The first was carried out with the aim of validating the Scale of Attitudes towards Technology in School Learning (EATAE). It was performed with a sample of 504 primary school children with knowledge in using the technologies.

b) The second investigation, aimed to design and analyze the psychometric properties of reliability and validity of a Self-Efficacy Scale in reading, this was applied to children from primary and secondary education.

In order to improve the processes for evaluation of knowledge and learning of students, the Secretary of Public Education (SEP), began to apply structured learning tests to national samples of primary school children, observing technical failures that could not ensure their equivalence. However, these evaluative actions continued and it was not until the 1990s that with the creation of the National Evaluation Center (CENEVAL), the massive evaluations were extended in primary, secondary, upper secondary and higher education.

> With its standardized exams, CENEVAL began to evaluate applicants for education, students and graduates from secondary and upper secondary level; (…) children in primary and secondary, first by the National Institute for the Evaluation of Education (INEE) and then by the ENLACE test (National Evaluation of Academic Achievement in School Centers) and even an international body, the OECD (Organization for Economic Cooperation and Development) began evaluating secondary and upper secondary students with the PISA test (Program for International Student. (p. 7)

The results published by this center, have been the object of strong expressions of rejection by many students and teachers sector, this aversion is surely motivated by academic reasons, by incongruity between the theoretical and methodological foundations and, some others of a political nature.

Rejection factors can be cited as following: the value of the evaluation, the counterproductive result from a pedagogical point of view, the contextual inequity and, the inappropriate use of the results.

However, it is important to highlight that, as there is information of rejection towards the type of quantitative evaluation that is applied on a large scale, there is also information that highlights positive aspects of the results. Considering these observations, the opinion of society and the various educational agents is important, according to Santos (2010), who says:

> Evaluation, in addition to being a technical process is a moral phenomenon, it is very important to know at what values it serves, and to whom it benefits. It is very important to evaluate well, but it is more important to know what causes the evaluation serves (….). Evaluation is not an aseptic event, which can be carried out without asking about values, respect for people, and the sense of justice. (p.

11)

Problem statement.

The subject of evaluation of learning has been and is a complicated matter, on one hand, experts on the subject express their perception that the objectivity of measurement instruments has been ignored in the measurement of educational processes that look for the correspondence between what is taught and what is learned. Observing that the quantification has been above a comprehensive evaluation of an educational process and that, despite the fact that this quantitative model is not consistent with the process, it is still used.

The instrumentalist evaluation is widely used in the national educative system, and has become an inherent element of any measurement process. But, according to some experts, not to an educational process, arguing that the exam hides the reality and that it has been overrated by the society as a whole, and by the subjects of the educational process.

For this reason, the results must be known in time and form, and regardless of the area being evaluated or the use made of the results, all the procedures used must possess certain characteristics of credibility. Among the most essential of which are classify validity and reliability, concepts that Rodríguez and Valldeoriola, (2009) state below:

> The "validity" refers to the homogeneity, to the correspondence between the instrument or technique and the attribute that the instrument intends to measure. In other words, we consider that an instrument or technique is valid when it measures what it has been designed for. There are different types of validity: content, predictive, concurrent, and conceptual or construct. (p. 39)

The second of the characteristics that we must have is "reliability", and refers to "(...) the consistency of the scores obtained by the same individuals on different occasions or with different sets of equivalent items." [Arginay (2006), quoted by Zamora (2015)]

Currently, the application of large-scale standardized tests is a reality in the Mexican educational system, such is the case of the PLANEA test, which is applied to students to the 6th grade of primary education and to 3rd grade of secondary education.

The exam object of this investigation, was the one that was applied in June 2016 to the 122 third grade students at the general secondary school No. 6, "Mexico" in Durango City, Mexico. In general terms, the result obtained by the students was low level, registering the following: "In reading ability (HL), 63% of the student population stayed in level I, 33% in level II, and 4% in level III." (Official source, 2017)

Although the results improved a little at the intermediate level of HL, in both fields of evaluation the students are quite far from level III. Due to the above reason, it was decided to carry out an analysis of the results of the PLANEA exam, including analyzes of the properties psychometric of reliability and validity.

Justification.

Considering the purpose and results of the PLANEA exam, specifically the Evaluation of Achievement referring to School Centers (ELCE) that was applied to secondary school students, the concern was raised to carry out a study related to the results and psychometric properties, with the objective to have a clearer perception about the objectivity of the results.

This research work is important because based on the results, it will be possible to have information about the quality of the exam based on properties such as the indices of difficulty and discrimination of each of the items, the reliability of the test and the correlation test between the variables involved.

The information generated from the results of the study, can be used by the agents involved in the teaching-learning processes, contributing to improve the student's learning process, either by improving the quality of the exam and / or with the generation of proposals that could modify the application rule to have more objective results.

Theoretical reference.

From 1930, with the valuable contributions of Ralph Tyler (Skinner, 1973), who is considered the father of the evaluation of learning and conceptualized it as a process that evaluates the changes produced in the student behavior, the effectiveness of the techniques used, the teacher's capacity, the curricular content and everything related to an educational process.

> (…) Only in the 20th century began the task of measuring and evaluating learning according to systematic guidelines, with solid scientific support and the use of a wide variety of techniques. The first standardized tests of intelligence and performance applied during the first quarter of the century were followed by a veritable avalanche of "tests" of different types, levels and purposes. (Bloom, Hastings & Madaus, p. 10)

The adequate evaluation to the behavioral learning model that developed in this period of time, is supported by experimental research and other research methods that are based on psychometric principles and are often associated with terms such as quantitative analysis, scientific research, hard data, variables, hypothesis testing, and statistics.

Casacuberta (2001) characterizes the essence of behaviorism in the following way:

> (...) behaviorism started from the premise that the only thing that psychology could study - if it is wanted to be true - was observable behavior. The mind - if it existed - would be a black box on which no hypothesis could be made. The psychologist´s role would simply be to assign certain responses to certain incentive. (p. 93)

Regardless of the area that is evaluated or of the use of the results, all the procedures that are used must possess certain characteristics of credibility, among the most essential are the validity and reliability, concepts that Rodríguez and Valldeoriola (2009) state:

> The "validity" refers to the homogeneity, the correspondence between the instrument or technique and the attribute that the instrument intends to measure. In other words, we consider that an instrument or technique is valid when it measures what it has been designed for. There are different types of validity: content, predictive, concurrent, and conceptual or construct. (p. 39)

The PLANEA exam has the characteristics mentioned above, it is a standardized exam that has three application modalities with specific objectives; the one that corresponds to the modality of ELCE, has the purpose of measuring the learning achieved by the students in the school communities; affirmation endorsed by National Institute for the Evaluation of Education (INEE 2015) who described that “They have the specific purpose of offering to each school elements of feedback for their improvement. The results of these tests give information about what the school has achieved regarding the learning of its students. ” (p. 21)

Composition of the HL test.

The selection of the kind of item for a test, basically depends on two considerations: the nature of the learning result since it must be measured as directly as possible and its quality.

The multiple-choice items are adapted to both the measurement of learning outcomes and the content of the subject to be assessed; if this condition exists, the items are considered of good quality; in addition, they can measure a wide variety of learning outcomes, from the simplest to the most complex, situations that allow them to be widely used.

These types of items can be used to measure knowledge outcomes and various types of intellectual ability; they contain different types and degrees of difficulty, the mental operations used to answer them are grouped under the concept of taxonomic level and the theory of Benjamin Bloom (1990):

> The taxonomy places the aspects of the objective that are related to the behavior within a hierarchical framework: each category includes more complex, abstract or internalized behaviors with the previous categories. These categories are organized along a continuum from the simple to the complex in the cognitive area. (p. 69)

On the other hand, the fundamental and ideal purpose of the items is to present students with a topic that makes sense, is understandable and can only be answered by those who have the knowledge, for this purpose, Gronlund (1982) suggests the following rules.

1) The item should measure an important learning outcome.
2) Present only one problem in the statement.
3) Describe the statement in clear and simple language.
4) Write the sentence trying to occupy the largest number of words.
5) Write the preference statement in the affirmative.
6) Make the options grammatically consistent with the statement.
7) Avoid verbal cues that facilitate the selection of the correct answer or determine an incorrect one.
8) Avoid using the "all of the above" option and use "none of the above" with caution.
9) Control the difficulty of the item by varying the statement or changing the options.
10) Ensure that each item is independent of the others.
11) Use an effective format for the structure of the reagent. (pp. 47-63)

The items, have the advantage that they can be used to measure a wide range of complex learning outcomes that can go from the lowest level of knowledge to high levels of intellectual ability, with the particularity that appropriate modifications can be made to certain purposes of learning.

Methodology.

The research work was carried out based on the quantitative methodological approach by applying the ex-post-facto method and with a correlational scope; regarding the application of the Bernal method (2010), the states the following:

> They are those in which information about the object of study (population or sample) is obtained only once at a given time. (…), these studies are species of “snapshots” of the phenomenon under study. This research can be descriptive or explanatory. (p. 118)

Selection of the sample.

The study sample was 122 students from six groups taking the third grade at the reference secondary school, in 2016. It is worth to mention that the selection of the participants was of deterministic type for two reasons: the first, due to the fact that the number of students met the requirement for the application of the method used to determine the difficulty and discrimination indices of the test items; the second, because of the fact that trying to select a random sample of such a large number of students would practically yield the total of the population framework.

On the selection of the sample from the study, Babbie (2000) states that: "Sometimes it is appropriate to choose a sample based on our knowledge of the population, its elements and the nature of the objectives of our research, in summary, based on our judgment and the purpose of the study." (pp. 173, 174)

The information analyzed, was the score obtained by the students in response to the 48 items of the HL test.

Tools for information analysis.

Data preparation and tests corresponding to the study were performed using the Excel calculation program and the SPSS statistical program version 22.

Quality of HL items.

One of the first tasks in this research, was to determine the difficulty index and discrimination index of each HL item, in order to know the quality of the item in question and, therefore, the quality of the set of items from which is part of. The discrimination index is related to the evidence of validity in relation to an external criterion; regarding this situation, Aiken (1996) designates the term "discrimination" with a letter "D" and states that:

> In general, the term validity of the items refers to the relation of an item with an external criteria (...). To develop a test that produces scores with high correlation with the external criterion, we must select items that have low correlations with each other but high with the criterion. In this way, the selection of items based on the "D" statistic will result in a different type of test from that consisting of items chosen for their high correlations with external criteria. (p.67)

This test was carried out according to the following process:

> A shorter procedure is to divide the subjects into three groups according to the test scores as a whole: a higher group consisting of 27% of the highest scores, a lower group of 27% of the highest scores, it obtains the lowest qualifications and the remaining 46% in the intermediate group. When the number of subjects is small, groups above and below 50 percent of the total test scores can be used. (Aiken, 1996, p. 65)

The quality of a multiple choice item is a function of the value of the difficulty index and discrimination index, its interpretation is as follows:

1. The difficulty index I_{dif} of an item, is the proportion of people who respond correctly to an item with respect to the number of participants in the response to that item; this arithmetic description is directly related to the indicated process to determine this index and is expressed mathematically as follows:

$$I_{dif} = \frac{A_g\ high + A_g\ low}{\boldsymbol{N}}$$

According to this expression, the difficulty index will oscillate between the values of "0" and "1", representing "zero" the maximum difficulty and "one" the maximum ease; therefore, the optimal level of a reagent is represented by an index of 0.5. This statement is endorsed by Backhoff, Larrazolo and Rosas (2000), since they express the following: "According to the EXHCOBA manual, the average level of difficulty of the exam should range between 0.5 and 0.6".

2. The discrimination index I_{disc} of an item is the difference in the proportion of people in the high group who respond correctly to an item compared to people in the low group who also answer it correctly; this arithmetic description is directly related to the indicated process to determine this index and is expressed mathematically as follows:

$$I_{disc} = \frac{A_g\ high - A_g\ low}{N * 0.5}$$

According to this expression, then the discrimination index will oscillate between the values of "-1" and "1", within this range; a negative value will indicate an inverse discrimination, the "zero" represents no discrimination; and the “one” the maximum positive discrimination. Therefore, the optimal level of an item is represented by an index of "1"; this statement is endorsed by Hurtado (2018), who describes the following:

> The discrimination index (IDisc) can only take values within a range. If a question is answered correctly by all the examinees of the GS and none of the GI will have Ci = N / 2 and Ci = 0, the discrimination index will be IDisc = (0N / 2−0) / (N / 2) = 1.

To determine compliance with this psychometric property of each of the items, it was considered a requirement to remain within the following range of values:

$$0.2 \leq difficulty\ index \leq 0.8$$

$$0.2 \leq discrimination\ index \leq 1$$

Concentrated scores.

Once the data on the operational variables of the study were organized and classified, the scores corresponding to the reading comprehension ability of the PLANEA exam (PHLEP) and the average obtained in the spanish course taken in secondary school (PPES) were concentrated.

Tests for normality of the scores.

In order to define the statistical tests that could contribute to the proper development of the investigation, normality tests were carried out for each of the scores of the operating variables, for this purpose and taking into account the number of participants in the study, the Kolmogorov Smirnov normality test was used, a test on which the authors Herrera, et al, (2011) state “(…) the Kolmogorov Smirnov and Lillierfors tests, it is more convenient when the variable analyzed is of a continuous type or ordinal and is more effective for large samples (…)”. (p. 60)

The proposed normality test will be carried out according to the following hypothesis:

$$Ho = the\ variable\ \text{"}score\text{"}\ has\ a\ normal\ distribution$$

$$H_1 = the\ variable\ \text{"}score\text{"}\ has\ no\ normal\ distribution$$

The decision rule is:

$$if\ the\ value\ \mathrm{p} > \alpha,\ accept\ Ho$$

HL reliability test.

The concept of reliability or reproducibility implies the amount of error that is made when making any measurement, in educational practice it is common to doubt about the reliability or repeatability of a test; if a result is not reproducible, the value and utility of the test is poor; on this concept Dueñas (1998) thinks the following:

> Reliability indicates the precision (consistency and stability) of a test measurement. It gives us the accuracy or precision with which the scale of a test gives us true scores, and is concerned with obtaining the same results on different occasions, by the same group of subjects. (p. 26)

Correlation tests.

To determine the existence of correlation in the pairs of variables PHLEP-PPES, the Spearman's Rho correlation coefficient was used, appropriate for the measurement of variables on interval or ratio scales with a non-parametric distribution.

Martinez, Tuya, Martinez, Pérez y Canova (2009) confirms this information by observing that:

> The correlation coefficient measures the degree of association between two quantities, but it does not look at the level of agreement or concordance. If the measuring instruments systematically measure different quantities from each other, the correlation can be “1” and their agreement is null. The Spearman correlation coefficient is recommended to be used when the data presents extreme values, since these values greatly affect the Pearson correlation coefficient, or before non-normal distributions. It is not affected by changes in units of measurement. (p. 6)

The correlation test between the pairs of variables involved was determined based on the following hypothesis test:

Ho : $there\ is\ no\ linear\ relationship\ between\ the\ variable\ X\ score\ and\ the\ score\ of\ the\ variable\ Y$

H_1: $if\ there\ is\ a\ linear\ relationship\ between\ the\ variable\ X\ score\ and\ the\ score\ of\ the\ variable\ Y$

The decision rule was:

$$if\ the\ value\ \mathrm{p} \leq \alpha\ is\ rejected\ Ho$$

Results.

In the table of figure number 1, (see appendix 1), it is possible to see the value of the difficulty index and discrimination index of each of the items of the HL test included in the PLANEA exam; as well as PHLEP and PPES scores.

HL indices of difficulty and discrimination.

According to the scales proposed to define the quality of an item, it was found that 36 were within the acceptable range, this amount is equivalent to 75% of the total computed, among them are the items:
R1, R2, R3, R4, R6, R7, R8, R9, R10, R11, R12, R13, R14, R17, R18, R19, R20, R23, R25, R26, R27, R28, R29, R30, R31, R32, R33, R35, R38, R40, R41, R42, R45, R46, R47 y R48.

The average value of the score of the indices of difficulty and discrimination of the reading ability items was 0.41 and 0.31 respectively; this result was indicative of the quality of the HL test.

Normality tests.

The contrast of normality of the PHLEP score was made with the Kolmogorov-Smirnov test, adequate for the number of participants in the study, the result gave a value of the statistic D = 0.098 and a "p" value of 0.006; this last value is lower than the confidence level of 0.05, therefore, based on the result, Ho is rejected and it is concluded that the data follow a non-parametric distribution.

Table 1 shows the concentrate of the results of the normality test for the scores of the two operating variables.

Table 1.
Result of normality tests.

Punctuation	Statistical "D"	values "p"	relation	Value α	Decision	Distribution
PHLEP	.098	.006	<	.05	to refuse H_o	nonparametric
PPES	.207	.000	<	.05	to refuse H_o	nonparametric

* Author content

HL reliability tests.

Table 2 shows the number of cases processed to calculate the reliability of the HL that is, the participation of the 122 students who graduated from high school.

Table 2.
Value of the HL test reliability statistic

Reliability statistics	
Cronbach's Alpha	N of elements
.731	48

* Author content

Correlation tests.

To determine the degree of linear association between the PPHLEP and PPES variables, the result of the normality tests of the scores involved was considered, making the decision to use the Spearman's Rho statistic, suitable for the treatment of continuous non-parametric random variables.

Table 3 shows the result of the correlation test and, according to the hypothesis test, the existence of an association between the variables involved was confirmed; observing the following:

Conclusions

The methodological process that was carried out with the aim of analyzing the results of the application of the PLANEA exam, began with the determination of the quality of the items of the test intended to measure the reading ability of the participating students; remembering that particularly, the discrimination index gives an important component of construct validity to an instrument.

Table 3.
Correlation result between PPHLP-PPES.

Correlations

			PHLEP
Rho de Spearman	HL test score	Correlation coefficient	1.000
		Sig. (Bilateral)	.
		N	122
	Punctuation of the Spanish course	Correlation coefficient	.220*
		Sig. (Bilateral)	.015
		N	122

**. The correlation is significant at the 0.01 level (2 tails).

* Author content

From the result of the test of quality of the items, it was found that the value of the discrimination index is more critical and tends to reject a greater number of items; in this case, 12 items equivalent to 25% of the total were considered of poor quality; however, even under these conditions, there was evidence to confirm that the PLANEA exam is of acceptable quality, given that the mean value for the difficulty index was 0.41 and the mean value for the discrimination index was 0.31.

Because the items in the HL test were dichotomous, the reliability of the HL test was determined using the internal consistency method and the Kuder Richardson alpha-20 coefficient, obtaining a value of “r” = 0.731; this value is considered as "good" and according to the statement of Kaplan and Saccuzzo (1982) “It has been suggested that reliability estimates in the range of 0.70 to 0.80 are good enough for most purposes in basic research”. (p. 106).

Based on these results, it could be affirmed that the HL test offers a global difficulty close to the mean, and therefore, the answers given to the items of the HL test, were surpassed by slightly more than half of the participants.

Regarding the degree of discrimination of the items, it was also stated that the HL test has the property to identify students according to the knowledge they have on the subject, making it clear that it also offers the possibility of counteracting a possible high degree of homogeneity that could be contained in the exam items.

On the other hand, once the tests that supported the correlation test between the PHLEP and PPES scores were performed, the existence of linear dependence between both variables was confirmed, inferring with this result a high probability that the test could have validity of prediction

In general terms and according to the results of the tests carried out, it was stated that the HL test is of “good quality”, this means that the result in the application of the test does reflect the knowledge that the students have in the field of reading ability.

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APPENDIX 1

Valor de los índices de dificultad y discriminación de HL

	Índice de dificultad item HL	Índice de discriminación item HL
1	.32	.47
2	.63	.56
3	.65	.35
4	.41	.24
5	.31	-.09
6	.68	.29
7	.65	.53
8	.47	.41
9	.69	.21
10	.22	.38
11	.59	.53
12	.60	.38
13	.34	.21
14	.56	.29
15	.41	.06
16	.28	-.09
17	.34	.32
18	.67	.45
19	.63	.44
20	.50	.24
21	.47	.12
22	.40	.03
23	.22	.21
24	.47	.12
25	.34	.21
26	.40	.39
27	.40	.32
28	.43	.44
29	.49	.74
30	.37	.32
31	.50	.65
32	.50	.53
33	.38	.24
34	.25	.15
35	.37	.21
36	.18	.18
37	.12	-.06
38	.35	.35
39	.22	.15
40	.26	.24
41	.41	.65
42	.44	.71
43	.15	.18
44	.19	.09
45	.44	.59
46	.32	.29
47	.29	.24
48	.31	.38
49	.	.
50	.	.

Concentrado de puntuaciones HL

	Puntuación habilidad lectora examen planea	Puntuación promedio español secundaria
1	28	6.00
2	18	9.40
3	14	6.70
4	16	6.50
5	20	6.00
6	24	6.40
7	24	8.70
8	26	8.70
9	22	8.40
10	19	8.40
11	30	8.10
12	17	7.50
13	32	6.40
14	21	6.40
15	18	6.20
16	17	6.50
17	28	8.30
18	24	6.00
19	14	6.50
20	16	7.80
21	29	9.40
22	25	9.50
23	25	6.30
24	20	6.00
25	18	9.30
26	17	9.50
27	15	7.10
28	25	7.70
29	19	6.40
30	13	6.70
31	19	8.00
32	14	6.70
33	17	6.00
34	16	6.70
35	18	6.20
36	17	6.20
37	17	6.30
38	26	7.40
39	12	6.50
40	22	6.50
41	15	6.70
42	22	6.00
43	14	7.60
44	15	6.00
45	18	6.00
46	7	6.00
47	25	8.90
48	13	7.70
49	14	6.20
50	32	9.20

a. Limitado a los primeros 50 casos.

ADVANCES AND LIMITATIONS IN AREAS OF DEVELOPMENT IN A YUCATAN PRESCHOOL POPULATION

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Abstract

Studies and research in child development are still necessary for social evolution. As relevant and accurate interventions are made in childhood, health and social problems are prevented in the future. What is happening at this stage of life significantly influences the continuum of the life cycle. This research shows the advances and limitations of a population of 87 preschoolers, with 49 girls and 38 children from the State of Yucatan. The obtained data shows the similarities and differences existing in the three areas of development between the participants: physical-motor, cognitive and socioemotional. Through spontaneous drawings and a script of questions related to the pictorial context, boys and girls showed physical-motor, mental and social skills that favored to broaden the landscape of the children's world. Similarities between the theory and reality are notorious, and the universality of the tasks of child development can also be seen. This can be very useful for the creation of programs aimed at encouraging and benefiting children, regardless of their geographical origin. If children receive a comprehensive education, society will have individuals who contribute to the benefit of the community. Education based on the stimulation and promotion of the skills and abilities of the three areas of development. Healthy and satisfied children, stable and healthy societies.

Keywords: childhood, developmental fields, health, development processes.

Theoretical framework

Development begins with conception and continues throughout life. It is an inevitable process in which each year of life something is gained and lost; there are phenomena that begin and others that are interrupted. There are foreseeable evolutionary changes and others that are discovered by developmental scientists (Berger, 2007), who study three main areas: physical, cognitive and psychosocial. Body and brain growth, sensory abilities, motor skills, and health are all part of physical development. Cognitive development is made up of learning, attention, memory, language, thought, reasoning, and creativity. And emotions, personality and social relationships are associated with psychosocial development (Papalia, Wendkos and Duskin, 2019).

Cognitive advances and setbacks are closely related to physical, emotional, and social factors; psychosocial development affects cognitive and physical functioning, since, without positive social connections, physical and mental health are affected. Therefore, development is studied from a holistic approach, since the development process focuses on the interrelationships between physical, mental, social and emotional aspects of human development (Shaffer, 2007).

Physical area of development

Growth and body change in children.

The preschool years are marked by a constant increase in height and weight (Feldman, 2007). At this stage, between the ages of three and six, children lose weight and grow rapidly, as they begin to lose their round childishness, to acquire a slim and athletic appearance, as the abdominal muscles develop, their tummy hardens. The trunk, arms and legs are lengthening more and more. The head is still relatively large compared to the other parts of the body. Generally, boys and girls grow between five and seven centimeters per year during this stage and increase between 1.8 and 2.7 kilograms per year. These changes strengthen children's bodies, giving them a firmer shape and protecting their internal organs (Papalia et al., 2019).

The importance of brain development

The growth and development of the brain and nervous system affect all aspects of a child's development. The density of the synapse in the prefrontal cortex peaks at four years. At the age of six, the brain has reached almost 95% of its total volume. In the corpus callosum a great change occurs that allows a better transmission and integration of information and contributes to improving functions such as the coordination of the senses, memory processes, attention and activation, as well as speech and hearing. From three to six years the highest growth occurs in the frontal areas in charge of regulating planning and organizing actions. Then, it can be said that the changes that take place in the connectivity of the brain affect the guidelines that govern the structure and organization of the developing cortex (Oates, Karmiloff-Smith & Johnson, 2012).

Motor skills

Motor development is related to the control of body movements through the coordinated activity of nerve centers, nerves and muscles (Hurlock, 1982). Preschoolers make great progress in gross motor skills, such as running and jumping, that require long muscles. This is due to the fact that their bones and muscles are stronger and have a greater lung capacity, however, it differs depending on their genetic endowment and their opportunities to learn and perform motor skills. *Fine motor skills*, such as buttoning shirts and drawing, involve the eye, hand, and small muscle coordination (Papalia et al., 2019).

The improvement of these abilities propitiates greater responsibility in the child regarding his personal care. In fine motor stimulation the little ones activate the muscles that intervene in the development of fine movements that demand accuracy. Harmony and precision must occur between the muscles of the hands, face, and feet. In order to carry out actions that require the utility of the combination of the senses of sight and touch, minors locate objects or instruments to reach and maneuver them. Almost all the actions we carry out require these skills (Cabrera & Dupeyrón, 2019).

Manual laterality

Lateralization is the process where certain functions are located more in one hemisphere than in another, a process that occurs in the preschool years (LeFrancois, 2001). Manual laterality is the preference for using one hand over the other and is most evident around the age of three. In people with a functionally more symmetrical brain, it usually dominates the right hemisphere, which makes left-handed people, this is more likely in boys than in girls (Mussen, 2014).

Artistic development

Rhoda Kellogg (1970) conducted a study examining more than a million drawings made by children from different cultures but with similarities in realization. This research makes it to conclude that the early stages of drawing reflect the brain and muscle maturation (Mareovich, 2015; Papalia et al., 2019).

This analysis of children's artistic development shows how motor performance skills evolve in every child, and Rhoda Kellog (1970) identifies that two-year-olds record, and these doodles are not random but follow patterns of placement on paper in which perform. These doodles are not random but follow patterns of placement on the paper in which perform. And it is until the age of three that the figure stage begins. It can be considered that most children reach the pictorial stage between the ages of four and five when the child can already draw basic geometric figures. Subsequently, they advance to the design stage, in which they already manage to combine two basic figures in an abstract model of greater complexity (Mareovich, 2015; Papalia et al., 2019).

Kellogg (1970) considers that the transition from abstraction to representation during the later pictorial stage is a fundamental change in children's drawing. However, the little ones leave the shape and design to make portraits more realistic, pleasant and understandable to the demands of the adult world (Mareovich, 2015; Papalia et al., 2019).

Cognitive development area

Jean Piaget said that the preschool period is a stage of stability and change (Feldman, 2007; Piaget and theorists, 1976). He called early childhood the pre-operational stage of cognitive development, because children are not yet ready to perform logical mental operations (Papalia et al., 2019). This stage extends from two to seven years approximately and is characterized by the generalization of symbolic thought or representational capacity (Kail and Cavanaugh, 2011).

Advances in pre-operational processing

The symbolic function. It is a key aspect of pre-operational thinking, based on the ability to use a mental symbol, a word, or an object to represent something not physically present (Feldman, 2007; Piaget & Theorists, 1976). Preschool children demonstrate this function through deferred imitation, which is based on mentally interpreting a previously observed event. This is the case with the simulation game, also called symbolic, fantasy, representation or imaginative, where children can make an object represent or symbolize something else; language, using a system of symbols (words) to communicate (Kail and Cavanaugh, 2011).

To understand the symbolic status of images and use them in various contexts, the development of cognitive and social skills is necessary, since this learning process will be possible thanks to the interaction of children with their social environment (Mareovich, 2015). It is not until the age of three that most children reliably establish relationships between drawings, maps, or scale models with the objects or spaces they represent. Older preschoolers can make use of simple maps and transfer spatial understanding by working with models on maps (Papalia et al., 2012).

Mastery of the concept of identity refers to the fact that certain things remain the same, regardless of changes in shape, size, or appearance. This understanding is necessary for the development of the notion of conservation (Mussen, 2014). Categorization at this stage requires the child to identify similarities and differences, living things of the inanimate. At four years of age, several children can classify by color and shape (Papalia et al., 2019).

Immature aspects of preoperational thinking

Another immature aspect is centration, which is the process of concentrating on a limited aspect of a stimulus and ignoring everything else. Preschool-age children are unable to take into account total information of a stimulus since they only focus on superficial elements that are in sight, and this leads preschoolers to reach illogical conclusions because they have trouble decentering the information (Feldman, 2007; Papalia et al., 2019; Piaget et al., 1976).

Egocentric thinking is one that takes into account the different points of view of others. Children at this stage do not understand that others have different perspectives from them (Kail and Cavanaugh, 2011; Piaget et al., 1976). Egocentrism can explain why children sometimes find it difficult to separate reality from what is happening in their minds and why they show confusion regarding what causes what (Mussen, 2014; Piaget et al., 1976).

Conservation refers to the fact that two things remain the same, even if their appearance is altered, as long as nothing is added or removed. And for preschoolers it is an impossibility to understand this. Since children do not yet have the notion of conservation, they cannot understand that change in one dimension does not necessarily imply transformation in another dimension (Feldman, 2007; Papalia et al., 2019).

As for the Theory of mind, it is the awareness of the wide variety of human mental states and the understanding that others have their own different beliefs, desires or intentions. Children under the age of six cannot distinguish between thoughts or dreams and physical entities since they do not have a theory of mind (Mounoud, 2001; Papalia et al., 2019).

The inability of children three years to recognize false beliefs and deception may be due to egocentric thinking. They think that everyone knows and believes the same as them and it is difficult for them to understand that their own beliefs may be false (Mariscal and Giménez, 2017). Four-year-olds understand that people can know different versions of the same event and that different beliefs conclude from them. However, only at the age of six do they realize that two people who see and hear the same thing can interpret it differently (Papalia et al., 2019).

After 4 years children distinguish between appearance and reality (Mounoud, 2001), only at the age of five or six do children begin to understand the difference between what appears to be and what is. However, the difficulty of three-year-olds to make this distinction is more apparent than real (Papalia et al., 2019; Piaget et al., 1976). Magical thinking in children three and over does not seem to be due to the confusion between fantasy and reality. Many times it is a way of understanding events that do not seem to have obvious realistic explanations, and it descends at the end of the preschool period (Mariscal & Giménez, 2017; Mussen, 2014).

Memory: processes and basic capacities

During early childhood, children increase their action levels, as well as the speed and efficiency which they process information, and begin to form lasting memories (Papalia et al., 2019). In this perspective, the human mind is similar to a computer that captures information, processes it and results in the creation of answers or problem solving (Shaffer, 2007).

Recognition is the ability to identify something that was previously known and recall is the ability to reproduce the knowledge of memory (Kail and Cavanaugh, 2011). Preschool children perform better in recognition than in memory, but these abilities improve with age (Craig, 2009). The accuracy of preschool children's memories is determined in part by how soon these memories are evaluated or how important they are to the child (Feldman, 2007).

Memory formation and retention

The memory of early childhood experiences is seldom deliberate: children only remember events that made a strong impression on them (Papalia et al., 2019). Preschoolers' memories of family situations are often organized in scripts: broad representations of memories of events and the order in which they occurred (Feldman, 2007).

Generic memory starts working around the age of two; episodic memory in children, given the limited capacity of their memory, episodic memories are temporary (Mounoud, 2001). However, they remember more clearly the events that are new to them (Mariscal & Giménez, 2017); autobiographical memory, coming from specific events in one's life. This appears between the ages of three and four (Feldman, 2007; Papalia et al., 2012).

Vygotsky's contributions to cognitive development

Lev Vygostky proposed that cognitive development should focus on the child's social and cultural world, since children learn by internalizing the results of interactions with adults (Feldman, 2007). This learning helps children to cross the zone of proximal development (ZPD), a gap that refers to what they already do and what they are not yet capable of doing on their own. The zone of proximal development combined with scaffolding ("support"), can help adults to the cognitive progress of children. The less ability a child has to perform a task, the more direction an adult should provide (López, 2008).

Language development

Learning to speak is a long and complex process and the first years of life are critical to the development of speech (Hurlock, 1982). Between the ages of three and six, children make rapid advances in vocabulary, grammar, and syntax. This rapid expansion of vocabulary occurs through rapid mapping, which allows the child to grasp the approximate meaning of a new word after listening to it a few times in conversation (Papalia et al., 2019).

Regarding grammar and syntax, children in early childhood increasingly increase sentence length, and the ways in which they combine words and phrases to form sentences are increasingly duplicated, and although they often make grammatical errors, most of the time follow the principles of grammar (Craig, 2009). As children learn vocabulary, grammar, and syntax, they become more proficient in pragmatics, that is, they gain more practical knowledge of how to use language to communicate. (Papalia et al., 2019). This development of pragmatic skills enables children to understand the basics of conversation such as waiting for turns to speak, focusing on a topic, what can be said or not, etc. (Feldman, 2007).

Development of the psychosocial area

Self-concept and cognitive development

Self-concept is the complete image of our features and capabilities; it is the sense of self; "A cognitive construction" (Amar, 2004), descriptive and evaluative of the own characteristics and capacities. This image begins to establish itself in children as they develop self-awareness and becomes clearer as they acquire cognitive abilities, which they identify according to their gender and the characteristics that distinguish them (Hyde & DeLamater, 2006). Similarly, children use characteristics to describe themselves, this is called self-definition, which changes between the ages of five and seven, reflecting the development of self-concept (Papalia et al., 2019). It should be mentioned that the self-concept will be affirmed in a positive way if the social relationships established by children with others are given in an affectionate, respectful and cooperative way (Barudy & Dantagman, 2005; Loperena, 2008).

Self-concept has a training process that occurs in three stages that take place during the transition from five to seven years. The first stage is known as: Simple Representations, in which children are described in terms of unrelated individual characteristics and all or nothing, they cannot imagine that they can experience two emotions at the same time and of children who cannot recognize that their real self, the person they really are, is not the same as their ideal self, the person they would like to be (Papalia et al., 2019).

Around the age of five or six, children advance to the second stage of self-development: Representational Mapping, in which the child is already capable of making logical connections between aspects of the self, although this image of himself they still express it in terms of all or nothing (Papalia et al., 2019).

The third stage, called: Representational systems, takes place in middle childhood, characterized by an amplitude and balance, as well as the integration and evaluation of various aspects of the self, that is, they understand more than one dimension of themselves. At this stage judgments about the self-become more conscious, realistic, balanced, and general as children form representational systems. Children at this stage progress through the way they describe themselves in terms of all or nothing, and they can also compare their real self with their ideal self (Kail & Cavanaugh, 2011).

Self-concept has as a component self-esteem, which is defined as the judgment on one's value as a person, taking into account the evaluation of the qualities that constitute self-concept. This intervenes in the self-concept of people since it is based on the increasing cognitive capacity to describe and define themselves (Shaffer, 2007). In general, children do not speak of a concept of self-worth until they reach the age of eight, younger children demonstrate their behavior with it (Mussen, 2014).

Play activity: early childhood work

Playing is part of children's life that few people take the time to consider the role it plays in child development (Hurlock, 1982). Play is more than just spending time, it helps children develop socially, cognitively and physically (Brazelton, 2013), since it allows children to get involved with the world around them; use your imagination, discover different ways to use objects and solve problems, and prepare for future roles. Furthermore, through play, children stimulate the senses, exercise muscles, coordinate vision with movement, gain greater control over their bodies, learn to make decisions and acquire new skills (Papalia et al., 2012; Papalia et al., 2019).

In addition to improving motor skills, play generates immediate and long-term health benefits (Kail & Cavanaugh, 2011), since it contributes to physical development, muscle development, all parts of the body are exercised and they release energy to avoid accumulating it and being tense, nervous and irritable. Thus, playing encourages communication between children, satisfies unmet needs and wants, offers opportunities to learn, stimulates their creativity, discovers what their abilities are and how they are compared to their peers, they learn to be sociable, learn social norms, play appropriate sexual roles and to be cooperative, generous, sincere, among other benefits. (Hurlock, 1982).

Methods

The main objective of this study is to identify the similarities and differences of the three areas of child development in a second childhood population.

Specific objectives include knowing the level of physical and motor development, cognitive progress, self-concept and self-esteem, play and its importance, and the way in which boys and girls of this age are related.

To achieve this work, 87 preschoolers were interviewed, comprising the population of 49 girls and 38 boys.

To obtain the information, the boys and girls were asked to make a drawing and to tell a story about the drawing, both tasks were free of context. Subsequently, they were asked a series of questions regarding the drawing: who / is he / she, how old are they, where are they, why are they there, what are they doing, what are they thinking, what is / are feeling, who is the happiest and why, (taking into account that there are several characters in the drawing), who is the good / bad, what makes him / her good / bad.

Results

Below are the results that were obtained. The information was divided as follows: 1) similarities and 2) differences; development area: a) physical, b) cognitive and c) socio-emotional) and by age, three, four, five and six years of age.

1) Similarities

a) Physical and motor area

3 years

The most significant similarity that can be noticed in boys and girls of this age is their physical complexion since they are reported to be of slim complexion.

4 years

Both boys and girls at this age show significant advances in their fine motor skills, with better hand management.

5 years

All the participants were in good condition in both gross and fine motor skills. The significant similarity is the pictorial stage in which they are since all the participants are in the pictorial stage but at different levels, which go from the early to the later; The latter can be influenced by the ages of the participants, although the 5-year-olds had a month difference. Having children of 5 years just turned, as children a few months of turning 6 years.

6 years

It was found that the participants have developed fine and gross motor skills, correctly and according to expectations for their age. They also showed that they are in the pictorial stage; although they ranged from early pictorial to later pictorial. The latter can be influenced by the ages of the participants. Some minors were just six years old, others with months of differences and some others around seven years of age. Which highlights the maturity they have reached due to the distance in months of age.

b) Cognitive area

3 years

It was found that boys and girls of this age use symbols, identification, representation, and compression of identities, cognitive tasks that correspond to the pre-operational stage. Although they still do not consolidate what is real and what is fantasy.

4 years

For these boys and girls, there is greater use of symbols and representations, they know how to recognize the people and places that they have previously seen; there is also a better memory consolidation.

They do not know how to distinguish real from imaginary experiences, easily confusing fantasy with reality. Both the boys and girls who participated in the study think that everyone feels the same as them, they also focused on the story in themselves, showing egocentricity and most of them managed to grasp the instruction quicker.

5 years

Regarding cognitive development, the main similarities that could be observed were that their cognitive advances are in accordance with their age. It was also noted that the majority of the participants use the symbolic function

Likewise, they have a fluent vocabulary in language, it was also observed that the vast majority of preschoolers manage to identify their family members and identify themselves. It was noted that most of the children did not need scaffolding, however, there were some who asked questions to expand the details of the task they were doing.

6 years

It was observed that the cognitive development of the participants is in accordance with their age. They are now able to identify themselves and their families better than younger children.

Nor did they need scaffolding to carry out the requested activities, just as the development of number sense and the use of symbols was notable.

As for language development, vocabulary was more extensive and fluid.

c) Socio-emotional area

3 years

It was found that both boys and girls who were more sociable with other people and who had different activities, achieved a better consolidation of their self-concept and better self-esteem.

4 years

It was discovered that there is better socialization with children of the same age when they go to school and participate in other extracurricular activities typical of their stage of development. They also had a better identification with their peers and reported better self-esteem.

5 years

A very common characteristic that was observed in preschoolers is the gender identification, also they showed a good relationship with their peers.

6 years

Boys of this age show to have a well-defined self-concept and correct identification of their gender. The predominant emotions were also found to be mostly positive, which is also manifested in sharing with peers.

Play development in boys and girls was consistent at all ages. They start with individual play, and when they reach the end of second childhood, games with social integration and rules appear.

2) Differences

a) Physical and motor area

3 years

The marked differences were with respect to both fine and gross motor skills since in some cases they are in the process of consolidation, while in others they still do not have a command of their motor skills, requiring help either to draw or climb stairs. Other differences that could be found were in the physical features such as skin color, eyes, hair and height.

4 years

The main differences identified were in their physical features, such as height, skin color, and body complexion.

5 years

The main differences that were obtained in the participants were the physical features (hair, eye color, skin, and others), as well as the different complexions. However, it was also observed that the complexion influenced the introversion or extroversion of children, since the shorter and thicker the children, the more introverted they were.

6 years

Regarding the reported differences, it was found that the physical features, as well as the complexion and height, were the ones that varied the most among the youngest participants.

b) Cognitive area

3 years

The significant differences go more to the type of scaffolding that these children need, since, according to the results obtained, most still needed support to remember certain events or associate certain things while some were already able to have a better identification and use of symbols.

4 years

The most notable difference during the observations is that not all the participants could carry out the requested activity by themselves, needing the support of other people to achieve or remember some people or events.

5 years

The differences found refer to age, since the closer they are to the age of six, the more mature they are. It is notorious that some infants have a better distinction between fantasy and reality just as some no longer present centration thinking and others are less egocentric.

Regarding language, girls were more participative and more fluent in conversations than boys.

6 years

The differences in cognitive development are a function of the age of both genders. Since they range from six to seven years of age, and the closer they are to the next age, they tend to change their cognitive stage (concrete operational), which makes them more mature. Centration and egocentric thinking were present in some participants, and others did not. It was also noted that few participants still showed animism.

c) Socio-emotional area

3 years

The routines and activities carried out by children will help them establish better relationships with others and consolidate their self-concept and self-esteem. Likewise, it is emphasized that parental styles influence the consolidation of self-concept. And this is one of the main differences in preschoolers, each child has a home with their own rules, routines and activities to follow.

4 years

It was notorious to find that not all boys and girls manage to capture the role they play in their family. They find it difficult to identify what role they play in their families; just as they still do not distinguish their ideal self from the real one.

5 years

Regarding socio-emotional development, it was observed that the representation of the Ego in the participants is not yet well defined, since many of the participants were still described under the ideal Ego, instead of the real Ego. Although there were preschoolers who did manage to describe themselves as close to reality. This is related to how close or far they are from the next age.

According to the stages of self-definition, it was observed that the children were in different stages, or were even in transition from individual representations stage to representational mapping. It was also observed that the parenting styles varied between authoritarian and authoritative. Regarding the emotions identified, the most part of the exposed emotions were positive, in the same way negative emotions were observed, this due to familiar situations that the participants manifested. Finally, regarding self-esteem, it was observed that the vast majority of the participants had good self-esteem, however, it was observed lower levels of self-esteem in children whose family situation was somehow problematic and the presence of authoritarian parenting styles.

6 years

As for the representation of the Ego in the participants, it is not yet well defined, since many were still described themselves under the ideal Ego, instead of the real Ego. Regarding the stages of self-definition, it was observed that the children were in different stages, or were even in transition from the stage of individual representations to that of representational mapping.

It is observed that the parenting styles are diverse; however, the most frequent were found to be authoritarian and authoritarian styles.

There are differences in children's play and they are related to play styles, girls prefer role plays and dramatization; on the other hand, boys were more attracted to functional games, those that involve movement. Age makes the difference in the type of game and sex in the style of the game.

Discussion

With the results obtained in this preschool population, there are data that support the theory and research regarding the evolution that boys and girls have in the three areas of development. The importance of care and attention to child development is inescapable, it is in childhood where the adult is trained in these three areas of development. The data found is reviewed below:

Regarding the physical-motor environment, the similarities are in the advances that boys and girls are having at this moment in their lives. The physical complexion as being thin is a constant in the minors, as well as the achievements in fine and gross motor skills that are occurring. The pictorial skill is also notorious, the more they develop, they improve their pictorial development. Also, their gross motor skills improve, by doing more activities and playing more, it makes them more agile and they dominate their body more.

The differences in the physical-motor area are notable, since the individualities in ages make notable contrasts, some are acquiring skills or characteristics and others have already achieved them. The years and months in the ages that separate minors from others, make them taller, stronger, more agile, more independent, with more physical and motor control in their actions. Depending on the distance to the next age, it is as they become more mature boys and girls in their development.

In the cognitive sphere, the similarities are also distinctive for this second childhood. The use of symbols, role plays in games, being able to identify themselves and the family they belong to, are achievements they acquire. Cognitive maturity will allow them to acquire the sense of belonging to a family, which benefits their affective and emotional state of the minor. Also the improvement or consolidation of memory is another gain that could be seen in the child population.

However, although there are improvements in the cognitive field, limitations were also found. Egocentrism is a characteristic of immaturity in childish thought, the consequences are the centration and the lack of distinction between fantasy and reality. This aspect of cognitive immaturity can last into the third childhood, limiting the understanding of the world around the child.

Differences in cognition due to years and months of age are visible in the scaffolding they need. The older they are, the more skills they show in the development tasks they perform, making them more autonomous and independent. Similarly, egocentrism decreases as they grow and evolve. And with this they also leave the centration and the fantasy.

Regarding language, which is part of cognitive development, there are differences in sex. Girls were more participatory and more fluent in conversations compared to boys. Culture has a very important role in this area of development, making stimulation different in boys and girls.

In the socio-emotional area, the similarities that are presented are based on cognitive maturity, since they achieve gender identification, consequently they acquire a self-concept and self-esteem. The more physical domain and mental dexterity, the better image and value they have of themselves

Similarities were also obtained in social relationships, as they advance in the life cycle, preschoolers are inserted into the social world, learning social norms that help them to have a better coexistence and regulate their emotions. It was found that the predominant emotions in boys and girls are mostly positive, favoring the relationship with their peers. According to developmental psychology, these skills result in social maturity, an essential factor in child development, since depending on the interaction with others, the child will receive feedback on his behavior and his person.

Regarding the differences in the socio-emotional sphere, it was found that according to the age of the boys and girls, routines and activities are established. The older they are, the more complex the tasks to be performed increase; and vice versa. Adults do not consider individual differences in childhood maturity, but only in age. This disadvantages some children in their self-concept and self-esteem, since by not letting them do certain tasks, they are considered unskilled and are discouraged to continue learning.

The subject of play also shows differences in the sexes, again the culture influences how and what boys and girls play regardless of age, adults shape the types and styles of play. Girls tend to play roles and role plays when they play, while boys prefer functional games, as they are encouraged to be more active and dynamic, even aggressive. It is with play that children manifest and develop skills from all areas of development.

Another of the differences identified is that of the stages of self-definition, since by the nature of the research the population differs in ages. Younger children are in the first or second stage (simple representations or representational mapping), while the older children are already in the transition or consolidation of the last stage (representational systems). It is why the representation of the Ego is in a process of constant transition throughout the second childhood.

Among these differences in the socio-emotional sphere is the parenting style, a family hallmark. Beliefs, values, social and moral norms, occur according to the upbringing that the child receives at home. Making a different understanding of himself, his family belonging and his integration into the social world.

These results show details to take into account when raising and teaching children, the similarities and differences obtained should be useful for comprehensive education in second childhood, generating more conscious and real guidelines for this child population.

Research studies carried out so far have shown that childhood is the most important evolutionary moment of the life cycle, since the maturity processes that take place are the basis of the development of every human being (Bustos & Russo, 2018). For this reason, childhood must be a privileged stage of care and attention, in this way individuals will grow more conscious of using their achievements and abilities in a responsible way, being appreciated as people and they will also transmit it to society. In other words, in the way they will grow they will reflect it to others. The future of the world will depend on them. Thus, the more value is placed on childhood, the greater the efforts to ensure their full development (Bustos & Russo, 2018).

For boys and girls to have optimal development, it is necessary that the responsible institutions consider children in their three areas of development, not only the physical aspect; as proposed by the United Nations Children's Fund (UNICEF, 2018), because human development is an interrelation between this three dimensions: physical, cognitive and socio-emotional.

Therefore, the government and society must consider that children need comprehensive care. In our country, Mexico, the implementation of the programs must include objectives that promote the physical, mental and emotional health of children at an early age (Myers, 2015), and continue them until adolescence. Since in this way the protection of healthy child development is guaranteed, resulting in productive, motivated and committed citizens to participate for the benefit of their community and their country.

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THE SOCIETY THAT INOCULATES EMOTIONAL PROBLEMS: A HUMAN NEED THAT IS SATISFIED BY PSYCHOTHERAPY.

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Abstract

This paper constitutes a category derived from a major study on "The internal goods of psychotherapy to support a model of professional ethical excellence from a phenomenological approach" (Martínez, 2017), a model of excellence that cannot be understood without unveiling the human needs that psychotherapy satisfies and that validates a psychotherapist's professional activity. This article clarifies the professional role of clinical psychologists in their psychotherapeutic activity by unveiling a human need considered as vital from the social good perceived by the psychologists interviewed with whose psychotherapeutic intervention provides a specific good for the healthy survival of the human being and the society which they are part of (Cortina, 2000). **Method:** This study is the result of qualitative phenomenological-descriptive research (Giorgi, 2009). The **results** show that clinical psychology contributes to satisfying a vital human need for the healthy survival of the psychological subjects that links them with society. **Conclusion:** The psychologist professional role is to manage a humane relationship with it and its own historical and social context of the subject in psychotherapeutic care.

Keywords: human need, society, emotional problems.

"The society that inoculates emotional problems: a human need is satisfied by psychotherapy" is the topic of this article. Understanding that the profession is born from social reality and, as such, has the purpose of providing a benefit to society as a whole, the profession must satisfy a human need considered as vital for survival of any society (Martinez, 2010).

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Before explaining the goals of this paper, it is necessary to clarify that the profession of psychotherapy is a human activity that aims to satisfy a human need through expert knowledge and a practice carried out both technologically and scientifically. However, this profession is an activity that is performed not only on an individual basis, but also in an organized way since its practice is socially accepted and must be legitimized, that is, carried out in an institutionalized way. Martínez (2010) and Etxeberria (2007) would synthesize professional practice as an institution as follows:

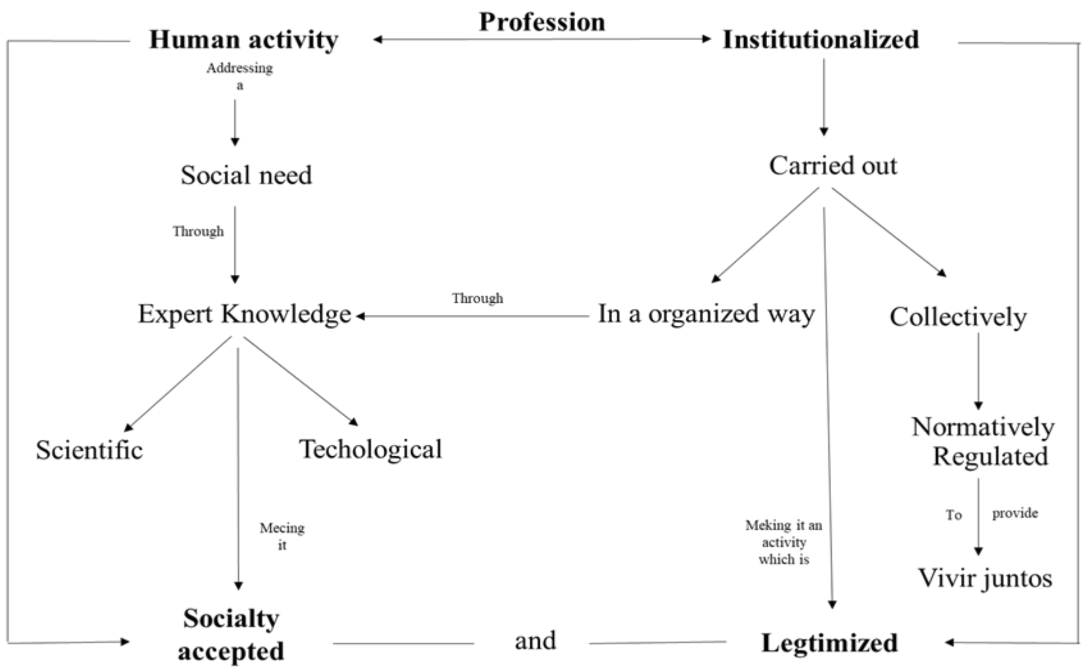

Figure 1. The profession as an institutionalized human activity
Source: own elaboration with data from Martínez (2006) and Etxeberria (2007)

The profession of the clinical psychologist is the object of interest of the study that generated the theme of this article. Given this, the professional practice, in its connection with the variable "human need" that makes the legitimacy of its exercise depends on the historical, social, economic, geographical and cultural conditions to validate its social legitimacy while the profession cannot abstain from being an institutionalized activity of the practice of organized knowledge. However, because it is organized, it means that professional activity is meaningless if it's not carried out on the basis of scientific knowledge, which has an important collective dimension and returns to practical institutional knowledge. The profession is an institution because it's a structure of *living together* within a historical community, not reducing it to personal ties, but linked to a clear concept of distribution of rights, duties, assets, powers, etc. (Etxeberria, 2007) whose meaning is based on the satisfaction of human needs considered vital for the survival of society, needs that have an important role in the own purposes or internal goods of each profession.

On the basis of the above, this paper describes how a group of clinical psychologists, perceive the fact that the social environment of people transmits or promotes psycho-emotional alterations as a key human need and that is satisfied by the psychotherapist. For this, 8 clinical psychologists were interviewed, questioning them about the particular responsibility that their profession demanded. Among a group of needs presented by the interviewed psychologists, they outlined the one presented below and which allows the necessary presence of the psychotherapist as a professional serving a society.

This inquiry only took one of the four needs derived from the study. The professional conscience of the interviewees revealed the needs perceived by them, certainly on the basis of a specific context where they practice, also inserted into a temporal system typical of the world of participating psychotherapists. Thus, the description of the results that will be presented was the product of the natural attitude of what was narrated by the participants, rescuing from the interviews those words that served the study, which is why detailed citations of the transcribed interviews were chosen looking for a minimum number of generality in order to adhere to the demands of the methodological approach proposed by Giorgi (2009).

Method

The method that was used was the psychological phenomenology of Giorgi to find meanings in the words of the participants, judgments that arise from their professional behaviour and therefore linked to the facts (their practice). An attempt was made to recover the events and psychotherapeutic experiences of the professionals, from which the goals of their practice and the human needs that were satisfied, of course, were rescued from the experience as perceived by the interviewees (Husserl, 2012).

Scenario and subjects

The study, from which this article was generated, was conducted with clinical psychologists from the city of Durango, capital of the state that bears the same name and located northwest of the Mexican Republic, composed of 6258 communities that make up the federative entity and in the which 82% have less than 100 inhabitants (INEGI, 2015) that have a high rurality index (31%) and that show poverty and low socioeconomic development.

The participating psychologists were chosen intentionally and by theoretical sampling, the aim was to find informants willing to share their experience as psychotherapists, deliberately chosen based on the needs of the study (Martín-Crespo & Salamanca, 2007). The inclusion criteria were: psychotherapists who were graduates in psychology and had at least two years of professional practice in the area of psychotherapy. Psychologists of recent graduation, without professional practice in psychotherapy of less than two years and other professionals, professionals who did not graduate in psychology, who had a postgraduate degree in psychotherapy or psychology but dedicated to psychotherapeutic practice were excluded from the study.

Table 1 describes the participating psychotherapists, whose code was used as an empirical reference in the results, where the PS means “psychotherapist” while the number refers to the participant (Martínez, 2017).

Design and instruments

The study from which this article emerged was qualitative, exploratory-descriptive with a focus on the psychological phenomenology of Giorgi (2009) encompassing an equally phenomenological, but also constructive and interpretive phase. The raison d'être of the phenomenological study was to broadly describe the meanings of the goals set by the psychologists and their impact on professional practice lived by the participants. We sought to achieve a not a sensory view but to understand the experience as it is lived by the participant. The intention was to discover, from the point of view of the psychotherapist (based on phenomenology), to get to know their perspective (in the practice of psychotherapy), and therefore we sought to narrate the experience of the participants from an immanent view and reflexive awareness. We narrated what the psychotherapists expressed through a phenomenological attitude, in order to put in brackets the experience of the researcher, with the intention of generating an attentive and phenomenological opening of his practice, as it is lived by the professional; This requires bracketing the previous experience of the researcher to be open and attentive to listen to what psychotherapists reveal of their professional practice, in this case, the human needs they seek to meet through their practice.

Table 1.
Participating psychotherapists

Code of the participating psychologist	Age	Gender	Years of experience in psychotherapy
PS1	56	M	25
PS2	56	F	30
PS3	39	M	10
PS4	44	F	12
PS5	50	F	25
PS6	46	M	15
PS7	39	F	12
PS8	50	M	19

In order to get to know the background of the psychotherapists’ experiences through their personal and unique narration, embodied in judgments deriving from their oral discourse, discourse from which the needs of their professional efforts emerged, the Giorgi method (2009) was applied. One of those needs being a motivation for this paper.

The in-depth interview was used in order to approach the ideas, beliefs and assumptions maintained by the psychotherapists, interested in the explanations they give of their practice, the way they name reality, the meaning attributed to their practice and the needs that their profession aim to satisfy (Rodríguez, Gil & García, 1999). Thanks to this interview, the interviewees become informants where, their role is to reveal their own ways of seeing and describing what their professional activity has meant (Taylor & Bogdan, 1987; González, 2000).

The procedure consisted of the following: preparation of the in-depth interview through a topic guide (supposed: judge with experts and pilot application of the interview to three clinical psychologists); application of the interview (establishment of rapport with informed consent to record the conversations and conduction of the interview asking as many questions as the intended objectives required but also asking questions that arose from the answers obtained from each participant).

Two records were made: (1) a field diary that revealed in writing the subjectivity of the interviewer both before conducting the interview in order to be aware of the preconceptions, and after the interview to express feelings and working hypotheses; (2) textual transcription of the recorded interviews using linguistic signs that showed the oral code from which the interviews came (Tannen, 1982), which allowed to capture spontaneous expression throughout each meeting of dialogic research, the transience of verbal emissions, the capture of everyday expressions related to the personal and professional world of the participant, that is to say, the sign transcription that reflected oral speech sought a phenomenological listening that tried to reflect how the process of verbal exchange between the interviewer and the psychotherapist was lived. The sum of transcribed interviews formed a document called “Research Corpus” that constitutes the empirical support of what is stated in this article (Martínez, 2017).

Data Analysis

The data analysis represented, as previously said, the phenomenological moment with a constructive and interpretative character. Such analysis required at least a partial epoché or suspension of judgment. It had two moments: (1) particular analysis of each interview (within them) and (2) shared analysis between the interviews. The first moment consisted of a holistic reading of each interview transcribed without looking for themes or discriminating units of meaning; later another reading was made, but this time trying to find units of meaning to which a tentative coding was assigned; to reflect on the sense of such units of meaning to discover an invariant structure within the interviews. The second moment, demanded a reading that sought to understand the tentative coding but in a shared way between the interviews and that led to the discovery of common themes between the different interviews to build an emerging code that, by presenting at least three quotes obtained from three different psychotherapists (Giorgi, 2009), allowed the emergence of each of the categories that initially had an emerging code to give way to the establishment of an analysis category. Each moment of the analysis was supported by the elaboration of a scheme that gave each interview a unitary sense and, in addition, common or shared sense among them. This last moment of analytical reflection that was imaginatively transforming into each meaning obtained with the intention of opening to the supposed and shared or invariant (generalizable).

Next, a documentary exhibition of the issues found in the empirical data analysis is made. It should be noted that this section, even when it is exposed before the description of the results, was constructed after the analysis of phenomenological data in order not to influence the results obtained from the field work. The central theme of the documentary review section are the social needs that the psychotherapeutic practice seeks to address.

Literature Review

When reviewing the literature on the human needs that psychotherapy addresses, González Bravo (2009) considers that the profession of clinical psychologists, through their intervention, faces the need to understand the decisions and behaviour of people related to contextual aspects (intrapersonal and interpersonal relationships). Pont (2007) refers to the role of the psychologist as intervening when, circumstances of life of people whose diverse social experiences constitute critical moments that have a tremendous impact on life and the decisions involved in it; therefore, there is a crucial task of the psychologist's role in dealing with the crises of the different stages of life (Pont, 2007), which are the product of parental, family, social and contextual relationships.

The bibliography is also conclusive in that psychotherapy is oriented to necessities of daily life such as the following:

- Arbacco (2015) talks about the human being and contemporary society exposing problems that seem like current human needs and their link to the need for well-being, meaning and life project, this treated from existential psychotherapy.
- De Castro y García (2011) in his book Clinical Psychology: *Existential Foundations* talks about the fact that the human being evaluates situations that arouse anxiety in individuals when they discover that there are no absolute certainties that guarantee to carry out the life project itself that, many times, it is presented as a failure, that is, it also deals with psychosocial processes and the decisions made, while these do not always allow them to approach the planned project; The above can make this human being need to be perceived as valuable, showing what we have to confront constructively.

García (2010) also refers to the fact that a psychological treatment is essential to overcome affective disorders, a product of social development so that people feel useful again, with new expectations and motivations. On the other hand, Aguado (2014) states that emotions depend a heavily on the way we evaluate the environment, which is why psychotherapy becomes relevant when people need to judge reality cautiously and correctly, in order to relieve their internal suffering.

Literature refers to sociocultural aspects which clinical psychology cannot ignore. Sánchez (2008) states that one of the psychologist's key functions is diagnosis which is carried out thought the analysis of symptoms and situations originated in a specific context and time. Thus, the psychological diagnosis describes contexts, circumstances and meanings of things in patients. Many times, the individual presents situations that are not necessarily pathological because their framework of action and suffering has to do with processes of loss, adjustment or rehabilitation. This is precisely because the clinical diagnosis of the psychologist refers to a specific person, with particular history and mentality. Thus sex, social class, roles played by people, political-religious beliefs, expectations and values assumed influence a pathological condition; therefore, the clinical psychologist is a hermeneut who interprets structures of real and imaginary objects that are contextualized in a dimension marked by the perimeter of a specific time and a particular subjectivity. The clinical diagnosis treats the symptom that is not always understood by the patient and in this way, its role is to discover those symptomatic codes that allow to explain to the consultant the characteristics of what he lives, in which symptoms that are signs to be interpreted are presented, in a kind of deep, private, therapeutic and also irreplaceable dialogue with the patient. These may be sociocultural factors, economic situations, somatizations, primary organic dysfunctions, group pressure or membership, etc. (Sánchez, 2008).

Also Sánchez (2008), in the same text: *Clinical psychology*, talks about the fact that enjoying health is a basic need of the human being, where physical health is as important as mental health; suffering from mental and behavioural disorders is the product of a complex interaction of biological, psychological, social and personal factors where clinical psychology comes to propose solutions. Therefore, mental and behavioural diseases are a field of action of clinical psychology which responds to the human need of achieving mental health while considering aspects of the environment and context.

This paper seeks to contribute to the professional ethics of the clinical psychologist, while this ethics must address the issue of human needs that are satisfied by professional practice. According to the literature, there is a human need that demands the presence of the professional in society and emphasizing that the "human need" construct connects with the purpose of the profession because it is a key matrix of psychological activity. The authors mentioned, reveal the complexity of studying this dimension, which is why it is necessary to penetrate the phenomenological analysis of the subject from the experience of the professional practice of clinical psychology.

Results

This part shows the results of one of the categories obtained from the study from which this article derives (Martínez, 2017). The empirical citations that are shown are constructed using the participant's code and their respective number indicated in Table 1, the literal quotations of the participants were highlighted with quotation marks, those that are in square brackets are interventions that the researchers made in order to narrate with semantic coherence the unity of the different sayings of the shared analysis within the interviews themselves, example: PS1, means that the empirical quote comes from the psychologist 1 who names the transcribed interview of such participant.

Society that imposes lifestyles: inoculates emotional problems

This category was obtained when professionals expressed that people also suffer from imbalances when living in “a society that is still very afraid of being open to their emotions, (…) of recognizing themselves unhappy” and with “fear of recognizing that they need help”. One of the psychologists interviewed stated that "we Mexicans are a society that has been taught to endure because they can put their "masculinity" "at risk" (PS2). Psychotherapists talk about the demand for sociocultural aspects that considers the fact of "holding on" as manly behaviour (PS2), which, for the same reason, is the presence of "men (...) with emotional frailty" often "weakened by women who surpass them”and with much “fear of infidelity” on their behalf (PS4). This can prevent people from becoming "integral" and "more complete" human beings. The society thus "inoculates" many "very serious emotional problems" (PS2) where "the personalities which are most at risk are men" and which can surely be the cause of "crime, addictions and accidents". One of the psychotherapists set as an example the case of Mexico, where "men are dying" because of organized crime, much has to do with the "pattern of machismo" that "has instilled", leading even to "commit acts against themselves". Sometimes the family raises “men [people in general] with a lot of suffering” because “a lifestyle is imposed”, there are many “men killed (…) due to illness, addictions, crime, there are many men who are cracking their lives[2] (…) because of this sociocultural and emotional-psychological situation" (PS2).

Thus, the social structures condition a harmonious psycho-emotional development that affects everyone, adults, children, babies, etc. An interviewed psychologist gives an example of a small patient with limited resources who went to his office, narrates the following:

"(...) a girl whose voice I never heard, had selective mutism, but she started talking outside [referring to outside the office], she came from a small village and was immersed in a very low socioeconomic context, they paid me $ 50 pesos per session, I mean…, and, then ((erm)) she ((erm))[3] could sit in the same position the whole session, right? Then for example with her I started doing all my best, right? We are going to play, right? Let her relax, right? I began to explain that my interest was genuine, right? To help her; I knew that ..., what happens is that she is ..., was the daughter of a woman who was very ashamed of being pregnant because she was a widow and got pregnant from a married man, and she was a 42-year-old lady, right? who had grown up children, in a small village, then the lady hid a lot her pregnancy and at birth she hid the girl, also hid a lot from village because when they came out, they were insulted, that is when the girl was about 1 year or 2 years old they insulted her and then he decided to leave their small village for Durango, but the girl was very distrustful of all people, that is, she did not talk to anyone, that is, if she went to the cornershop she had to go with the mother (...) "(PS3).

To this are added those "conditions that children suffer from, childhood (...) that previously did not exist [because they were] active children running in the countryside, playing marbles, climbing trees, tying knots" (PS5) and, now instead,

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2It is important to note the following in these quotes that refer to the death of Mexican men: the interviewees are located in the geographical are that has been ravaged by organized crime for decades, but whose impact has been worsened in the recent years in the region of Mexico classified as "The Golden Triangle" of which Durango takes part along Sinaloa and Chihuahua, places where it is not possible to quantify the number of men killed as a result of disputes between drug cartels. This could explain claims of psychologists who speak of dead men who are cracking their and commiting against themselves.

3 It should be clarified that de double parentheses represent a sign of orality that means interpretations of the transcriber, while the expression that was heard is represented with the phoneme "m" but it is not necessarily the verbal expression as it emitted by person interviewed, its transcription supposed an interpretation whose notification is made by the use of double brackets. All this empirical quotation from psychologist 3 and from paragraph 280 (PS3, 280) has signs of orality and verbal repetitions that were kept from the transcript of the interview, for example, the expressions: ¿no?, even if they have negative linguistic sense, they do not mean "no", if not they have a sense of everyday language with an affirmative sense (¡yes!) of what is expressed.

they have “depressed, locked children[4], (…) who don't know how to cross a street” (PSF4). Thus, our society is generating “limitations that did not exist but that are forming pathologies” such as the freedom that childhood had before to “play in the street, learn with others” is “being limited a lot” (PS4). Given the above, the psychologist who told us these differences in the lives of today's children with respect to those of previous generations communicates that it is where the psychologist "can (...) [influence society with] what he does" because he is the professional who knows that “if the feelings are being covered by an emotional load (…) then [can, from the individual, family and group level] be introducing a kind of emotional health culture” (PS4) that “go seeking physical health ”because you can even talk about “ill social relationships” (PS4) because “we are still in a world, in a society, too (...) ascetic (…) because there is a lot of misery at the level of emotional ties "(PS6) and children, future citizens," are adapting to the structure of [such] society "(PS8).

There are sayings in psychologists that suppose their intervention, circumstances such as when people suffer from “lack of attention”, which lead to the “depression” caused by the environment and experienced not only by adults but by children (“shorties”) that “They even have ideas of dying”. It is no longer only older people get depressed about problems such as “divorce”, because “they suffered from infidelity”, family problems such as “being chucked out of school”[5] or being "very violent, aggressive and hostile"; in short, there is this need for balance when faced with different “life circumstances that [people, within their social nucleus] cannot handle and which makes them suffer terribly” (PS2).

Other details of the sociocultural context that make the role of the psychologist necessary for people and society are circumstances such as parents whose behaviour is the "main problem" reflected in "the child's life (...) [because these], children , they will always need limits ”that many parents do not know how

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4 Here it is once again made clear that the fact that the interviewed psychologist speaks of “locked children# is precisely due to the aggravation of the situation in Durango due to organized crime, which has generated not only disputes within the city capital (shootings) but situations of insecurity such as kidnappings, which makes parents limit the children’s freedom, preventing the from going to the streets outside alone, and not being able to play as they did before because of the fear of kidnapping or a stray bullet.

5 “Being chucked out of school” means being expelled from school in American english.

to solve (PS8). There is also the need for clarity for "what really matters in people's lives" because, sometimes, these, "interests, are a function of the anger that people have towards others or [even] obedience to others" (PS3). There are aspects of life that produce suffering when the individual focuses on "showing someone" something or "getting rid [of the power exerted by another person]." Also to understand that in their own existence, human beings face “fragments [of their biography that are] like puzzles that do not fit (…) and that are blurred” in order to “clarify them” in “psychotherapy” and, once they place the pieces "they have a clearer identity" (PS3).

Summary of empirical quotes and phenomenological map

Next, the empirical quotes from the interviewees whose transcripts have already been analyzed and that are linked to this category are shown, a total summary of quotes and participants is offered:

Table 2.
Empirical questions concentrate

Psychologists Cateory	PS1M56	PS2F56	PS3M39	PS4F44	PS5F50	PS6M46	PS7F39	PS8F51	Total quotes	Total of psychotherapists who provided quotations
Society that imposes lifestyles: inoculate for emotional problems	-	3	1	3	-	1	-	1	**9**	**5**

Note: Columns indicate not only the number of psychologists but the age and gender, M = Male, F = Female

The data analysis was an interpretive phenomenological moment for which we used the construction of a graphic resource that shed light on the empirical quotes inside and between the interviews. The above-mentioned scheme is shown below where the colour of the letters represents empirical quotes from diverse participants.

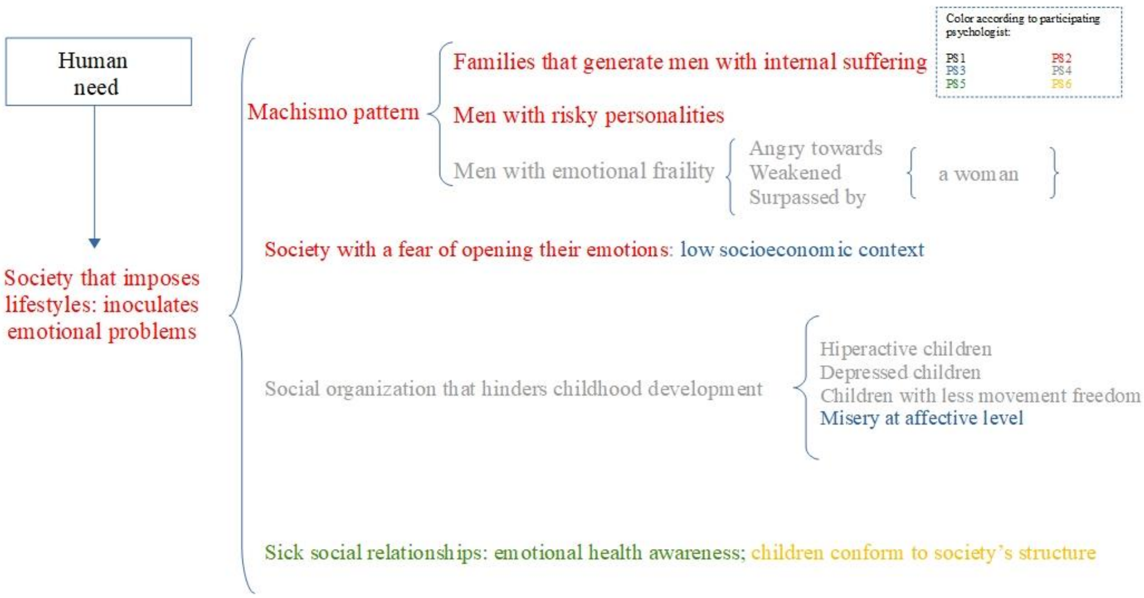

Figure 2. Phenomenological map
Source: Martínez (2017)

Discussion

The interviews suggest an important human need that is first discovered as the need of the -clinical psychologist to contextualize the life of the consultants, assuming their history, the specific facts of their biography and the context where they grew up, where the problem situations and / or internal suffering occur. This confirms what Pedro Sánchez (2008) says, which, focused on the diagnostic problems necessary for a correct intervention, includes as essential elements, the collection of data that places the psychologist in a specific context and time that allows understanding meanings and signs given by patients because, many times, their framework of action and suffering link to organic contexts or structures such as those described by the interviewed psychologists, such as men with fear of expressing their emotions, formed to “endure”, even leading them to commit actions against themselves; or the girl with selective mutism that showed mistrustful behaviour for living in a society that punished her (a mother who hid her and a people who insulted her).

Personal stories, the contexts surrounding situations, social class, religion, political ideas and even the economy can become pathological conditions, where the second need of unveiling these data is not only to build an objective diagnosis by the professional, but that the clinical psychologist becomes a hermeneut who helps the patients to interpret themselves so that they understand the values they have assumed and makes them ill, the suffering they carry, the expectations that they have inherited from society which is not always humane, generous and rational. The need to discover to patients those symptomatic and symbolic codes that allow them to understand what they are and what society has done of them (Sánchez, 2008): the structures, being these of any kind. The human need to relate to oneself to understand and open to comprehend the extrinsic, in order to discover the organic dysfunctionality of his life, product of social pressure (Sánchez, 2008), a society that inoculates emotional problems, as one of the psychologists rightly put it.

There are also coincidences with the literature as to what was stated by González Bravo (2007) that refers to the psychological problems that people have in their interpersonal aspects because, many times, the interviewed professionals express that the interests of people are based on anger or in obedience to others that produce suffering because, sometimes, human beings focus their lives towards the need of demonstrating something to someone or of getting rid of the power that a person can exercise over them and, where the role of the clinical psychologist as a psychotherapist is to help clarify "what really" has to "be meaningful in life" in order to rebuild oneself, that is, one’s identity that is a basic intrapersonal aspect, because a key criterion of Mental Health is the exact perception of reality (Jahoda, 1958), in addition to the new problems posed by modern life to the socialization of children who must be helped to manage a healthier, less violent and repressive psychosocial future.

Conclusion

It is concluded, in this article, that psychology is a profession that satisfies human needs considered as vital, an essential aspect to deserve the name of “profession”. Psychology contributes to rescue the psychological integrity of people, in this case, within their historical contexts of sociocultural realization; integrity that is a crucial part for the survival of people and condition of the possibility of a life worth living (Martinez, 2000).

In a first approach, we descriptively identified a human need that psychologists manage to express. Their statements are associated with a specific human need that impacts the well-being of the psychological subject. An important role of the psychologist was identified in the face of supporting people so that they, through psychotherapy, can recognize themselves in the midst of a society that restricts psychic freedom.

Thus, the descriptive part, which led us to a phenomenological interpretative moment, made it possible to name one of the human needs perceived by the psychologists interviewed and that they seek to satisfy in their professional intervention: the need to get rid of the social burdens however rational these be. Thus, supported by Doyal and Gough (in Boltinvink, 2003), this profession (the psychology), involves a cooperative activity that, among other needs, is dedicated to relieving and shedding light to the psychological, emotional or affective suffering produced by the context and socio-cultural historicity of people.

Clinical psychology, through psychotherapy, satisfies a vital human need that would help to update what potentially human beings are, helping them to *be*; managing a human relationship with themselves, with their history, their social context and with others; in a word, it seeks to satisfy the human need to recognize oneself in the middle of the structural dysfunctionality of the user's historical context of psychotherapeutic assistance.

Certainly in this paper, at the conclusion of the role of psychology against the assumption of a false self of the psychological subject, being this a product of the collapse of cultural and moral experiences that inoculate emotional problems in people, also inevitably leads us to the risk that psychology bears of atomizing the

user of psychotherapy into a possessive individualism because, while psychology tacitly intervenes the difficulty of human beings to free them from negative social charges, it must also help them remain in the life of social relations, the latter cannot be stimulated without encouraging the fact of placing the needs and preferences of each consultant never above the commitments to others.
In other words, by applying Eva Illouz's ideas (2010), psychotherapy, in order to free the human being from the social burdens that lead to mentally and socially unhealthy lifestyles, does not dissolve social relationships with a pernicious utilitarianism that fosters people's lack of commitment to others, the family and, in general, social institutions because, otherwise, it will be fostering a narcissistic and superficial identity and will go from helping the psychological individual solve the socio-structural dysfunctionality, to giving way to another dysfunctionality, equally or worsely dangerous: to lead the psychological assistance subjects to an empty shell of community and socio-political content that they replace with an ego-narcissistic concern of themselves.

This human need, solved by psychotherapy, must allow us to discover the present and past of the psychological subject that helps in coping with the context of social structures to settle accounts with them, always presupposing the possibility beyond contextualized reality, so that the psychotherapist sets the individuals in conditions of psychological possibility and direct them to the design of an architecture of hope and in it, as Bloch would say (2007/1959) an architecture of the new earth in the common waiting of a common future.

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Chapter seven

IMPLEMENTATION OF QUESTIONNAIRE BASED ON SEVEN CORE SUBJECTS OF ISO 26000 ON SOCIAL RESPONSIBILITY

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Abstract

The aim of this paper is to discuss the theoretical approaches, perspectives, and issues of Corporate Social Responsibility and study how ISO 26000 (2010) matches within two predominant Corporate Social Responsibility instruments, Global Reporting Initiative, Sustainability Reporting Guidelines (GRI) in 1999, and the United Nations Global Compact (UNGC) in 2000. The analysis presented is based on secondary data such as literature reviews, publications and online resources and databases from the UNGC, GRI and ISO. Also. The present chapter has as its main goal to design and validate a questionnaire for measuring Social Responsibility based on the seven core subjects of ISO 26000, to be implemented to do research in a Business School at a Public University in Durango, México. Operationalize this variable of social responsibility according to the Standard was made, and 65 items were established. Then, data was processed in the statistical package SPSS for Windows, version 23, reliability of .939 was obtained in Cronbach's Alpha, which can be used to develop diagnoses on social responsibility in an organization, from the perception of the stakeholders. Bartlett sphericity test was significant in .000, and KMO test, of adequacy of the sample, reached .915. Also, a correlation matrix of the dimensions created for this instrument was made.

Key words: Corporate social responsibility, variable, reliability, stakeholders.

Introduction

In recent decades, the guiding principle of sustainable development and its corporate nomenclature, known as corporate social responsibility (CSR) or corporate sustainability (CS), has become popular in the business world (Montiel and Delgado-Ceballos, 2014). There are multiple definitions and interpretations of CSR and, to date, none has emerged as generally accepted (Montiel, 2008; Schwartz and Tilling, 2009). However, the newly released social responsibility (SR) guidance standard ISO 26000 provides the most recent definition of social responsibility as:

The responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that:

- Contributes to sustainable development, including health and the welfare of society;
- Takes into account the expectations of stakeholders;
- Is in compliance with applicable law and consistent with international norms of behavior; and
- Is integrated throughout the organization and practiced in its relationships (ISO, 2010, p. 3).

ISO 26000: 2010, Guidance on Social Responsibility is a first attempt to harmonize the socially responsible behavior of enterprises at international level. It is to be pointed out that ISO 26000 is not for certification, contractual or regulatory use. ISO 26000 is a guidance standard that offers orientation and recommendations on how to improve responsible behavior towards society. ISO 26000 dropped the word “corporate” from the title in order to communicate that the standard is applicable to all types of organizations, since the objective of social responsibility (SR) is to contribute to sustainable development in which everyone has a share of responsibility (ITC, 2014).

So, people and organizations are socially responsible if they behave ethically and with sensitivity toward social, cultural, economic and environmental issues. Social responsibility helps individuals; organizations and governments have a positive impact on development, business and society with a positive contribution to bottom-line results. ISO 26000 signifies guidance on corporate social responsibility and it is, at the present time, one of the most important documents on CSR in the world.

Without being mandatory or regulated, ISO 26000 is focus on seven core subjects that have to be approached synergistic: Organizational Governance, Human Rights, Labor Practices, The Environment, Fair Operating Practices, Consumer Issues, and Community Involvement and Development. The present chapter aims to present and analyze the seven core subjects of ISO 26000 from the construction and validation of a questionnaire made for measuring Social Responsibility, to be implemented to do research at the School of Economics, Accounting and Business Administration of University Juarez of the State of Durango (FECA UJED), Mexico, where 65 items were created, and 77 surveys were applied randomly in the Postgraduate Division at FECA UJED, specifically in Master´s in Public Management and Business Management, during 2018.

Validation results of the questionnaire were content, through an expert panel, as well as the reliability in Cronbach's Alpha of .939. Bartlett's sphericity test was significant at .000, and the KMO sample adequacy test reached a value of .915. Also, a correlational matrix of the dimensions created for this instrument was made.

This questionnaire aims to be used for graduate students to seek and evaluate the relevance of Social Responsibility based on the adequacy between what society expects of the organizations and what they do, and above all, they, as business professionals and future entrepreneurs or managers, can reverse the future, interceding for human rights, the common good of our globalized world, and, in general, the achievement of sustainable development through what is called social responsibility. it is important that Social Responsibility is rooted in the beliefs of future leaders of organizations and society.

In addition, it is expected this questionnaire will provide robust praiseworthy principles and best practices related to CSR, with a strong focus on identity of philosophy, values and principles, socially responsible; and committed to the care and conservation of the environment presented by the objectives of the United Nations 2030 Agenda.

Literature Review

The Theoretical Approach of Corporate Social Responsibility (CSR)

Regarding Mihaela (2016) the concept of CSR has changed from social issues to social responsiveness and has been developed over the years to social responsibility. This author states some categories of social responsiveness (economic, legal, and ethical) started with Carroll (1979) and the agency theory (Friedman, 1970), continues, in nowadays, with stakeholders theory (Freeman, 1984, Donaldson and Preston, 1995, Jones, 1995) and resource-based view of the firm approach (Baron, 2001, McWilliams et al. 2002). The concept was incorporated into the companies' strategies and become a bottom line for most of them as shown in table 1.

Table 1

Development of The Theoretical Approach of CSR

Autor	Theoretical perspectives	Results
Friedman (1970)	CSR is indicative of self-serving behavior on the part of managers, and thus, reduces shareholders wealth. It is one and only one social responsibility of business to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.	Agency theory
Johnson (1971)	Rather than striving for higher returns for its shareholders, a responsible company takes into account the interests of employees, suppliers, distributors, local communities and the nation as a whole.	Stakeholder approach
Carroll (1979)	The concept consists of corporate responsibilities (i.e. financial, legal, ethical and philanthropic), the company's social issues (for example, labor standards, human rights, environmental protection and the fight against corruption) and corporate actions.	3-dimensional model
Friedman (19840)	Managers should tailor their policies to satisfy numerous constituents, not just shareholders. These stakeholders include workers, customers, suppliers, and community organizations. For all of the analytical power stakeholder theory offers and its narrative refocusing on a broad set of stakeholder relationships rather than a narrow set of purely economic relationships, there is relatively little agreement on the scope of this theory.	Stakeholder theory
Wartick y Cochran (1985)	Integration of the principles of corporate responsibility, policies for managing social issues and the process of action in a system of evolution.	Three-dimensional model (principles, policies and processes)

Wood (1991)	There are four types of corporate responsibilities (i.e. legal, ethical, economic and philanthropic) related to the three institutional levels (i.e. legal, organizational and individual).	Institutional framework and extension of corporate actions
Donaldson and Preston (1995)	Stressed the moral and ethical dimensions of stakeholder theory, as well as the business case for engaging in CSR.	Stakeholder theory
Jones (1995)	Firms involved in repeated transactions with stakeholders on the basis of trust and cooperation have an incentive to be honest and ethical, since such behavior is beneficial to the firm.	Stakeholder theory
Hart (1995)	For certain companies, environmental social responsibility can constitute a resource or capability that leads to a sustained competitive advantage.	Resource-based view of the firm
Baron (2001)	The use of CSR to attract socially responsible consumers is referred to as strategic CSR, in the sense that firm provide a public good in conjunction with their marketing/business strategy. CSR is often supported as a normative component of the social contract between business and society, yet competition and markets demand efficiency.	Theory of firm
McWilliams et al. (2002)	CSR strategies, when supported by political strategies, can be used to create sustainable competitive advantage.	Resource-based view of the firm
ISO 26000 Standard (2010)	Seven core of social responsibility, governance, human rights, labor practices, environment, fair operating practices, consumer issues and community involvement and development.	Stakeholders

Source: Based on Proksch, Abe, Svedova and Wokeck (2013) and ISO 26000 (2010)

Similarly, it is important to note that, over the years, CSR has been approached from different theories and currents. Thus, Garriga and Melé (2004) provide a mapping of the different theories that are related to CSR, classifying them into four common dimensions that contain different approaches, as Table 2 indicates.

Table 2
Map of Theories on Corporate Social Responsibility (CSR)

Theory	**Objective**	**Approach**	**Description**	**Authors**

Instrumental	Focus on achieving economic goals through social activities	Maximizing shareholder value	Maximizing shareholder value	Friedman (1970), Jensen (2000)
		Social cause marketing	Socially recognized philanthropic activities, used as a marketing tool	Varadarajan & Menon (1988), Murray Montanari (1986)
		Competitive advantage strategies	Social investment in a competitive context	Porter & Kramer (2002)
Policies	Focus on the responsible use of business power in the political arena	Integrative social contract theory	Assumes the existence of a social contract between the company and society	Donaldson & Dunfee (1994, 1999)
		Corporate citizenship	The company is understood as a citizen who has a certain relationship with the community	Wood & Lodgson (2002), Andriof & McIntosh (2001), Matten & Crane (2004)
Integrators	They focus on the inclusion of social demands	Social affairs management	Corporate processes of reaction to social and political issues that can have a considerable impact on it	Sethi (1975), Jones (1980), Vogel (1986), Wartick & Mahon (1994)
		Public responsibility	Law and existence of public policies considered as a reference for social performance.	Preston & Post (1975, 1981)
		Stakeholders management	Balances the interests of the organization's stakeholders.	Mitchell et al (1997), Mitchell (1999)
		Corporate social performance	Search for social legitimacy and processes to give appropriate answers to social issues.	Carroll (1979), Wartick & Cochran (1985), Wood (1991b), Swanson (1995)
	They focus on the right things to	Normative theory of stakeholders	Consider fiduciary duties towards the	Freeman (1984, 1994), Evan y

		stakeholders of the company. Its application requires reference to some moral theory (Kantiana, utilitarianism, theories of justice etc.)	Freeman (1988), Donaldson y Preston (1995), Freeman y Phillips (2002), Phillips et al (2003)
Ethics	Universal rights	Theoretical frameworks based on human rights, labor rights and respect for the environment.	UN Global Compact (1999)
	Sustainable development	Aimed at achieving human development taking into account the present and future generations.	Brundtland Report (1987),
	Common welfare	Orientadas hacia el bien común de la sociedad.	Alford & Naughton (2002), Melé (2002), Kaku (1997)

Source: Based on Garriga and Melé (2004: 63-69)

Existing Status of CSR Instruments

Over the past decade, and more notably since the release of the ISO 26000 in 2010, the main developers of CSR instruments have worked to align their frameworks so that they are easier to use by companies. A range of instruments has started globally to help companies implement corporate social responsibility (CSR): principles, management standards, reporting indicators and others. These instruments have been developed in the absence of clear legal frameworks on the roles and responsibilities for businesses in the areas of environment, labor, human rights, corruption and others.

This chapter studies the growth of the main global CSR instruments, specifically the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines in 1999, the ISO 26000 standard on Social Responsibility in 2010, and the United Nations Global Compact (UNGC) in 2000. Therefore, it is important to understand the current status of CSR instruments and study ISO 26000 within the prominent existing standards.

UNGC and the GRI Guidelines have cleverly pursued association for nearly a decade at the institutional level as well as at the level of particular instruments. The two are complementary in nature with UNGC providing the high level principles and commitment mechanism, and the GRI Guidelines providing guidance on monitoring and reporting on progress on CSR implementation. Until recently, what was missing were the integral components linking principles to reporting, i.e. a comprehensive standard for CSR management and implementation. This gap has now been completed in the form of the ISO 26000 standard.

While each of them is a different type of CSR instrument, they work together as a mechanism and complement each other, covering all three areas of sustainability; economic, social and environmental (Levy et al., 2010). Table 3 briefly describes the three CSR instruments selected to provide a better understanding of the mission, origin and world spread of each of them. In the following subsections, we briefly describe the three CSR instruments chosen to provide origin, goals, characteristics and criticisms concerning each.

Table 3

Brief description of the three main global CSR instruments

	UNGC	**GRI**	**ISO 26000**
Mission	To align business operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption	To make sustainability reporting standard practice by providing guidance and support to organizations	To assist organizations in contributing to sustainable development to promote common understanding in the field of social responsibility, to complement other instruments and initiatives for social responsibility
What	World's largest voluntary strategic policy initiative	World's most widely used sustainability reporting framework	Guidance standard on social responsibility
Release year	2000	1999	2010
Governance body	UN	GRI	ISO
Main body	10 principles	G4 Part 1–94 pages G4 Part 2–266 pages	ISO 26000–120 pages

Number of participants	12,800	6,920	NA
Countries	145 countries	84 countries	163 countries
Note: a Countries where ISO-member bodies have translated and made ISO 26000 available to the market			

Source: Own elaboration on the basis of information from UNGC (2013); (GRI (2013); ISO (2010)

United Nations Global Compact

The goal of the UNGC is to offer a platform for all types of organizations and industries to advance according to ten principles in the areas of human rights, labor, the environment and anti-corruption (Kell, 2005). The UNGC is a strategic policy instrument that provides general guidelines and facilitates a culture of respect in businesses by observing social responsibility (Rasche, 2009). Each of the ten principles is supported by a United Nations implementing agency, and to the following conventions: the Universal Declaration of Human Rights, the International Labor Organization's Declaration on Fundamental Principles and Rights at Work (ILO), the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption.

Global Reporting Initiative’s Sustainability Reporting Guidelines (GRI)

The GRI provides all companies and organizations with a complete sustainability-reporting framework to show practices on economic, environmental, social, and governance performance. Also, the GRI’s Sustainability Reporting Guidelines are divided into two sections. The first section consists of a set of principles that help companies determine the content of their report (materiality, stakeholder inclusiveness, sustainability context, completeness). The second section of the Guidelines contains a set of sharing guidance and performance indicators that companies can use to report on their management performance on environmental, social, and economic; as well as governance issues (Levy et al., 2010).

ISO 26000 Guidance on Social Responsibility

ISO 26000 concentrates a globally relevant understanding of what social responsibility is and what organizations need to do to operate in a socially responsible way. ISO 26000 provides guidance rather than requirements and unlike other ISO standards cannot be certified. Instead, it helps clarify what social responsibility is, and helps businesses and organizations translate principles into effective actions and guidance for implementation.

It is aimed at all types of organizations regardless of their activity, size or location and provides further guidance on implementing and integrating social responsibility into the organizations and on reporting and communications. Leading companies supporting CSR have been using the ISO 26000 guidance to benchmark their own activities and identify strengths and weaknesses in their approaches (Balzarova and Castka, 2012).

Principles of Social Responsibility

According to ISO 26000, social responsibility is to maximize organizations' contribution to sustainable development as their fundamental objective. Within this objective, although there is no definitive list of principles for social responsibility, organizations should respect the seven principles outlined below as an objective for an organization. ISO 26000 is centered on the following seven core principles:

- *Ethical behavior*: Behavior based on honesty, ethics and integrity and in accordance with accepted principles of right or good conduct.
- *Respect for the rule of law*: Compliance with all applicable laws and regulations.
- *Respect for international norms of behavior*: Compliance with international laws and regulations.
- *Respect for and consideration of stakeholder interests*: Taking into account the rights, claims, and interest of all stakeholders.
- *Accountability*: Being responsible for decisions and activities and their impacts on society, the economy and the environment.

- *Transparency*: Openness about decisions and activities of the organization regarding the relevant social, economic and environmental aspects of its operations.
- *Respect for human rights*: Respect and foster the rights covered in the international Bill on Human Rights.

Therefore, the ISO 26000 standard provides guidance on the integration of social responsibility into management processes and on matters relating to stakeholder engagement. Its core subjects and issues are presented hereunder in Table 4. ISO 26000 represents one of the most essential areas of social responsibility that an organization should take into consideration in order to maximize its contribution to sustainable development.

Table 4
Core Subjects and Issues of ISO 26000

Core Subjects	Meanings	Issues
Organizational Governance	It is the system by which an organization makes and implements decisions in pursuit of its objectives. This is the most fundamental factor in enabling an organization to take responsibility for the impacts of its decisions and activities. It should be the starting point for integrating social responsibility throughout the organization. Effective governance should be based on incorporating the principles of social responsibility (accountability, transparency, ethical behavior, etc.) into decision-making and implementation.	* Create a culture of Social Responsibility * Promote Social Responsibility strategies and objectives * Progress in terms of commitment and accountability * Encourage the participation of members of the organization in RS activities * Improve communication with stakeholders * Address the needs of stakeholders and future generations
Human Rights	They are the basic rights to which all human beings are entitled. There are two broad categories of human rights. The first category concerns civil and political rights and includes the right to life and liberty, equality before the law and freedom of expression. The second category concerns economic, social and cultural rights and includes such rights as the right to work, the right to food, the right to the highest attainable standard of health, the right to education and the right to social security.	* Due Diligence * Human rights risk situations * Avoidance of complicity * Resolving complaints • Discrimination and vulnerable groups * Civil and political rights * Economic, social and cultural rights * Fundamental principles and rights at work

Labour Practices	It is an expression that incorporates all the policies and practices relating to work performed on behalf of the organization, including the recruitment and promotion of workers; disciplinary and grievance procedures; transfer and relocation of workers; termination of employment; training and skills development; health, safety and industrial hygiene; and any policy or practice affecting work conditions. The most important socio-economic contributions of an organization are the creation of jobs, wages and other compensation forms of payment, for the work performed, amongst others.	* Employment and employment relationships * Conditions of work and social protection * Social dialogue * Health and safety at work * Human development and training in the workplace
Environmental Responsibility	It is a requirement for the survival and prosperity of human beings. As the global population and global consumption continue to increase, several environmental and social threats are posed. Pollution, use of natural resources, climate changes, destruction of natural habitats, and loss of biodiversity are some of the environmental issues covered by ISO 26000. In the last few years, many organizations are taking steps toward becoming environmentally and socially responsible.	* Prevention of pollution * Sustainable resource use * Climate change mitigation and adaptation * Protection of the environment, biodiversity and restoration of natural habitats
Fair Operating Practices	They concern the way an organization uses its relationships with other organizations to promote positive outcomes. These include relationships between organizations and government agencies, as well as between organizations and their partners, suppliers, contractors, customers, competitors, and associations, which they belong to.	* Anti-corruption * Responsibility for political involvement * Fair competition * Promoting social responsibility in the value chain * Respect for property rights
Consumer Issues	Consumer issues regarding the social responsibility are related to, among other matters, fair marketing practices, protection of health and safety, sustainable consumption, dispute resolution and reparation, data and privacy protection, access to essential products and services, reference the needs of vulnerable and disadvantaged consumers, and education.	* Fair marketing, factual and unbiased information and fair contractual practices * Protecting consumers' health and safety * Sustainable consumption * Consumer service, support, and complaint and dispute resolution * Consumer data protection and privacy * Access to essential services * Education and awareness

Community involvement and Development	These are two of the most important initiatives that all the organizations, public and private, can take towards developing a sustainable society. Social responsibility issues through which an organization can contribute to their communities include their involvement in and support for civil institutions. It can also contribute through social investment, wealth and income creation and health promotion.	* Promotion of culture and education * Creation of employment opportunities and skills development * Provision of full access and safe access to modern technology * Contribute through social investment, wealth and income creation * Health promotion

(ISO 26000, 2010)

ISO 26000: CSR and Organizational Psychology

This research has the importance to offer understanding into how ISO 26000 as an approach to CSR that is rooted in a quality management framework, impacts individuals representing various stakeholder groups (e.g., consumers, shareholders), as well as it impacts on providing guidance on stakeholder identification and engagement, so ISO 26000 advises the practicing organizations to take into account their varied stakeholders' interests (ISO 26000, 2010). The organizations that are well known for their CSR credentials will have a better reputation and image among stakeholders. This will result in significant improvements to the firms' bottom lines.

Consequently, ISO 26000 or the psychological study of how corporate social responsibility (CSR) affects individuals, is gaining significant attention within industrial/organizational psychology and organizational behavior, as a result of a wide range of issues ISO 26000 is covering such as governance issues, environmental management, social justice and fair labour practices, and addressing pressures coming from employees, customers, consumers, governments, and others.

Here, we focus on integrating the existing CSR and Organizational Psychology literatures with the purpose to highlight synergies that could expand our understanding for work in general. Because of length limitations, we will focus on a few key themes. A more detailed overview can be found in Figure 1.

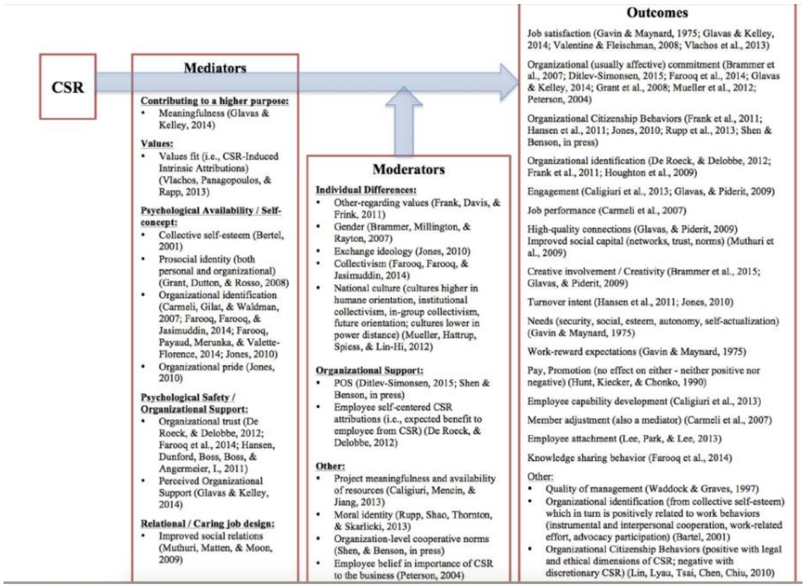

Figure 1 The effects of perceived corporate social responsibility on employees
Glavas, A., and Kelley, K. (2014)

As can be seen in Figure 1, CSR has numerous positive effects on employees. For example, scholars have found a positive relationship between CSR and organizational commitment (Glavas and Kelley, 2014; Ditlev- Simonsen, 2015) as well as job satisfaction Vlachosetal, 2013; Glavas and Kelley, 2014).

Other positive relationships between CSR have been found to organizational citizenship behaviors (Shen and Benson, 2014). These findings suggest that if the organization goes above and beyond its primary task (financial goals) to contribute to the greater good of society (CSR), then employees will go above and beyond their primary tasks to contribute to the greater good of the organization.

In addition, CSR is positively related to organizational identification (De Roeck and Delobbe, 2012). These studies suggest that CSR improves an organization’s reputation, which in turn leads to employees being proud to work there. Also, social identity theory would suggest that if treating others well is part of an employee’s self-concept, then they would find greater identification with an organization that treats others well (Dutton et al., 2010).

CSR has also been found to be positively related to high quality relationships among co-workers (Glavas and Piderit, 2009) as well as trust in relationships (Muthuri et al., 2009). Therefore, it follows that organizations that put effort into creating quality relationships with external stakeholders could create a culture in which caring relationships inside the organization are important as well.

As shown in Figure 1, CSR is also positively related to other outcomes such as employee engagement (Glavas and Piderit, 2009), creativity (Shenand Benson, 2014). These findings suggest that if the organization goes above and beyond its primary task to contribute to the greater good of society, then employees will go above and beyond their primary tasks to contribute to the greater good of the organization.

Furthermore, CSR is positively related to organizational identification (De Roeckand Delobbe, 2012). These studies suggest that CSR improves an organization's reputation, which in turn leads to employees being proud to work there. Also, social identity theory would suggest that if treating others well is part of an employee's self-concept, then they would find greater identification with an organization that treats others well (Dutton et al., 2010).

Methodology

For this research, as indicated by Hernández et al. (2010), it is necessary to build an instrument, questionnaire type, to collect information related to the variable Social Responsibility of Organizations based on Standard 26000; through 65 questions that contain positive affirmations and a Likert-type response format with four ascending options: (1) strongly disagree, (2) disagree, (3) agree, (4) strongly agree.

This instrument was applied to 77 students, randomly selected, in the Postgraduate Studies of FECA UJED, of the Master in Public Management and in Business Management. Therefore, the informants were chosen based on the availability and time of the students contacted.

Prior application, the questionnaire was validated by a panel of experts who, based on their work experience and academic knowledge, analyzed the questionnaire and made an analysis on the validity of the content and made their respective observations and suggestions. This panel was made up of 10 academics with experience in the public, the private and educational sector; with academic specialty in Public Business Administration and Education, all professors of FECA UJED.

Results

Collection of Data from the Questionnaires

Before starting the data collection of the questionnaires, the authorization of the Postgraduate director was requested. Then, the surveys were conducted in a self-administered and printed version. The confidentiality of the participants was guaranteed, where it is not requested to provide any name, or any other data that could expose their participation in the instrument. In this way, the participants who completed the questionnaires were certain of confidentiality.

Once the data was collected, the analysis of the information was carried out through a coding procedure for each of the questions in the questionnaire in the Statistical Package for the Social Sciences (SPSS 23.0) for its respective data analysis process.

Also, questionnaire's Cronbach's alpha coefficient was calculated, obtaining a high reliability of .939, very close to unity, the closer the index gets to extreme 1, the better the reliability, considering a respectable reliability from 0, 80 (Hernández, Fernández & Baptista, 2010), as can be seen in Table 5.

Table 5
Cronbach's Alpha

Alfa de Cronbach	No. de preguntas	Encuestas aplicadas
.939	65	77

Source: Own elaboration based on the data obtained

As a general criterion, George and Mallery (2003, p. 231) suggest the following recommendations for evaluating the values of Cronbach's alpha coefficients: a) Alpha coefficient> .9 is excellent; b) Alpha coefficient> .8 is good; c)

Alpha coefficient> .7 is acceptable; d) Alpha coefficient> .6 is questionable; e) Alpha coefficient> .5 is poor; f) Alpha coefficient <.5 is unacceptable.

According to George and Mallery, the instrument has excellent reliability globally, as well as for each of the 7 dimensions: Organizationl Governance, Human Rights, Labor Practices, The Environment, Fair Operating Practices, Consumer Issues and Community Involvement and Development, as indicated by the results in Table 6.

Operationalization of Variables

This research uses a quantitative approach to obtain statistical information on the perception of students in their organizations and jobs. This information is obtained through the application of the instrument "CSR based on ISO 26000" (Appendix 1) through 65 questions, which identify the perception of students around 7 dimensions: Organizational Governance, Human Rights, Labor Practices, The Environment, Fair Operating Practices, Consumer Issues, and Community Involvemente and Development.

Table 6 shows the operationalization that particularly states the Cronbach's alpha coefficient of the 7 dimensions of the variable CSR based on ISO 26000.

Table 6

Cronbach's Alpha Coefficient of the Variable Corporate Social Responsibility based on ISO 26000

Variable Responsabilidad Social de las Organizaciones ISO 26000					
Dimensions	**No. cases**	**No. ítems**	**No. questions on the instrument**	**Cronbach's Alpha**	
Organizational Governance	77	11	1,2,3,4,5,6,7,8,9,10,11	.896	Likert scale 1-4
Human Rights	77	12	12,13,14,15,16,17,18,19,20, 21,22,23	.859	
Labor Practices	77	8	24,25,26,27,28,29,30,31	.876	
The Environment	77	11	32,33,34,35,36,37,38,39,40, 41,42	.938	
Fair Operating Practices	77	6	43,44,45,46,47,48	.888	
Consumer Issues	77	8	49,50,51,52,53,54,55,56	.945	
Community involvement and Development	77	9	57,58,59,60,61,62,63,64,65	.941	

Source: Own elaboration based on the data obtained

Thus, table 7 shows the results of KMO, Landero and González (2012), indicate KMO values relate the correlation coefficients such as below 0.5 are considered inadequate; between 0.5 and 0.6 indicate low dependency, between 0.61 and 0.70 median, between 0.81 and 0.90 high and above 0.91 very high. The results obtained in the KMO test of adequacy of the sample reached a value of .915.

According to Bernal, Martinez, Sánchez, (s/f) and Landero and González (2012), they indicate on the Bartlett sphericity test, if the null hypothesis is maintained (p> = 0.05) it indicates independence of the variables. If it is rejected (p <0.05) it is dependency between the variables. In this case the result is 0.000 less than 0.05, which means that the principal component analysis can be carried out. Bartlett's sphericity test was significant at .000, as shown in Table 7.

Tabla 7
KMO and Bartlett[a] test

Kaiser-Meyer-Olkin measure of sampling adequacy		.915
Bartlett's sphericity test	Approx. Chi squared	461.082
	Gl	21
	Sig.	.000

On the other hand, Table 8 shows the correlation matrix of the dimensions, according to Lind, Marchal, Wathen (2012) is the linear relationship between two variables; and can vary from -1 to 1; a value close to zero indicates that there is little association between the variables, a value close to 1 indicates a direct or positive association between the variables and a value close to -1 indicates an inverse association.

According to the results, the cells marked in yellow are the ones with the highest correlation. Those with the highest correlation are: Labor Practices with .771; Fair Operating Practices with .765; Consumer Issues with .778; and Active Participation and Community Development with .870

Table 8

Correlational matrix of dimensions based of ISO 26000

		Gobernanza	Derechos Humanos	Prácticas Laborales	Medio Ambiente	PJOperacion	Asuntosde Consumidores	Participación Activa
Correlación	Gobernanza	1.000	.701	.725	.641	.658	.672	.656
	Derechos Humanos	.701	1.000	.771	.704	.711	.704	.723
	Practicas Laborales	.725	.771	1.000	.652	.765	.701	.702
	Medio Ambiente	.641	.704	.652	1.000	.628	.706	.652
	PJOperacion	.658	.711	.765	.628	1.000	.778	.769
	Asuntos de Consumidores	.672	.704	.701	.706	.778	1.000	.870
	Participación Activa	.656	.723	.702	.652	.769	.870	1.000
Sig. (unilateral)	Gobernanza		.000	.000	.000	.000	.000	.000
	Derechos Humanos	.000		.000	.000	.000	.000	.000
	Practicas Laborales	.000	.000		.000	.000	.000	.000
	Medio Ambiente	.000	.000	.000		.000	.000	.000
	PJOperacion	.000	.000	.000	.000		.000	.000
	Asuntosde Consumidores	.000	.000	.000	.000	.000		.000
	Participación Activa	.000	.000	.000	.000	.000	.000	

a. Determinante = .002

Source: Own elaboration based on the data obtained

Conclusions

We believe this paper which aims designing and validation of a questionnaire based on the 7 core subjects of ISO 26000 Standard and CSR, to be implemented at FECA UJED, can serve as a starting point for future research, as well as the basis for practical implications to managers in industries, business entrepreneurs in small and medium enterprises for their impacts in economic, environmental and social sustainability areas, from the perception of stakeholders.

Furthermore, exploring the motivations as to why these organizations adopt ISO 26000 rather than other similar instruments and its impact on the organization’s performance would also add important insights to the CSR field, as well it implies that research on these topics would require collection of primary data in the form of qualitative interviews or a survey focusing on a specific set of companies. ISO 26000, within this framework, can conduct qualitative studies in the form of case studies.

Also, we would also like to encourage future research to dig deeper on the interactions between ISO 26000 and the two most prominent CSR instruments discussed in this chapter (UNGC and GRI), in conjunction the Psychological study of how corporate social responsibility (CSR) affects individuals, because is gaining significant attention within industrial/organizational psychology and organizational behavior; such as humanitarian work psychology, person-centered work psychology, organizational justice, corporate citizenship.

Finally, it would be significant to do research agenda, for illuminating opportunities for future research, that goes beyond addressing gaps and focuses on how Organizational Psychology and ISO 26000-CSR can be partners in helping move both fields forward—specifically, through a humanistic research agenda rooted in positive psychology.

There is now much evidence that industries/organizations can do well by doing good. By following the guidance of ISO 26000, businesses and organizations can operate in a socially responsible way and act in an ethical and transparent way that contributes to the health and welfare of society.

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Appendix 1

Corporate Social Responsibility (CSR) Questionnaire based on ISO 26000

The main objective of this questionnaire is to identify practices, activities of social responsibility in public and private organizations, so we require answers with the utmost honesty. Results will be handled CONFIDENTIALLY.

Type of job/Occupation:	**Age:** **Gender:**				
Ítems	**Your Organization …**	1	2	3	4
1.	Supports strategies and objectives of Corporate Social Responsibility				
2.	States commitment to accountability				
3.	Encourages the participation of employees in Social Responsibility activities				
4.	Identify and formulate social responsibility policies				
5.	Establishes incentives to achieve a positive performance in Social Responsibility				
6.	Takes ethics-related issues into account during the staff recruitment process.				
7.	Improves opportunities for vulnerable groups (women, ethnic minorities, diversity, etc.) to occupy leadership positions				
8.	Responds the needs of stakeholders and future generations				
9.	Encourage communication with stakeholders				
10.	Promotes dialogue policies to respond quickly to the suggestions, requests, efforts or demands of its interested parties.				
11.	Rely on a continuous review of the governance of the organization				
12.	Guarantees non-discrimination based on gender, religion, ethnic-racial and disability in the processes of admission and internal promotion				
13.	Develops a policy to provide employment opportunities to disabled people				
14.	There is a diversity policy in the code of ethics and the declaration of values of the organization				
15.	Supports norms and mechanisms to report possible abuse and harassment situations without fear of revenge				
16.	Respects freedom of opinion, freedom of association and freedom of information				
17.	Provides a food and nutritional orientation program				
18.	Incorporates physical exercises during working hours				
19.	Stimulates a stress-fighting program for employees, especially for those in more stressful positions				
20.	Offers prevention and treatment program for drug and alcohol addiction				
21.	Use work practices that favor a balance between work-family, work-school that address issues related to working hours and overtime				
22.	Affords supplemental social security programs to all of its employees				
23.	Schedule social activities in which employees and their families participate				
24.	Contributes to increasing the quality of people's working life through the creation of jobs				
25.	Enhance job stability and decent work				
26.	Promotes training activities focused on the performance of specific tasks				
27.	Grants legal guarantees and the implementation of policies aimed at mitigating risks of social exclusion (old age, unemployment, disability, etc.)				
28.	Facilitates agreements, negotiations and information exchange to establish consensus among representatives of governments, employers and workers regarding their economic and social concerns				

29.	Provides an inclusion program for hiring specific or minority groups in executive or managerial positions				
30.	Affords a health program for the mental, physical and social well-being of its workers				
31.	Creates safety measures at work to prevent health damage that may be caused by working conditions				
32.	Fosters habits that promote ecological awareness				
33.	Create a policy for the use of less polluting fuels / energy				
34.	Favors an institutional policy for the protection and improvement of the environment				
35.	Supports relevant measures to become less dependent on non-renewable resources, for example through technological innovations				
36.	Provide employee training in environmental processes and subjects				
37.	Implements practices and activities to minimize its negative environmental impacts by assuming the consequences of its actions				
38.	Obeys the minimum requirements established by national and international environmental regulations				
39.	Complies with the “polluter pays” principle by accepting the cost of the pollution generated by its activities				
40.	Prioritizes the hiring of suppliers that verify good environmental behavior				
41.	Establishes a system to minimize the emission of greenhouse gases to reverse the negative impact of organizational and human activity				
42.	Increases the use of natural resources for the protection of the environment and restoration of biodiversity and ecosystems				
43.	Engage an ethical behavior in their relationships with other organizations as well as with their stakeholders.				
44.	Implements policies and practices that prevent corruption such as bribery, fraud, cheating, and influence trafficking				
45.	Fosters training, motivation and education of staff and employees on anti-corruption behaviors				
46.	Enables processes and public policies to improve the quality of life of the people within the organization				
47.	Creates mechanisms to develop fair trade and not take advantage of possible unfavorable contexts (such as poverty) to obtain economic benefits				
48.	Influences other organizations, with which it is related, in the value chain so that they adopt socially responsible behavior				
49.	Assumes responsibilities with its consumers, to provide education and truthful information on marketing and contracting strategies				
50.	Takes on socially responsible marketing and communication				
51.	Guarantees health and safety to consumers by offering healthy, well products and reliable services				
52.	Sponsors consumption patterns consistent with sustainable development				
53.	Encourages consumption that guarantees the satisfaction of the needs of present generations without compromising the ability to satisfy the needs of future generations				
54.	Ensures consumer satisfaction through warranty certificates, technical support, and provisions related to return, repair, and maintenance				
55.	Protects the right to privacy and confidentiality of consumers				
56.	Develops activities to facilitate rights and responsibilities to empower the consumer so that he can make decisions with greater freedom				
57	Grows policies and processes that contribute to the political, economic and social development of the communities				
58	Participates actively in supporting institutions or civil society groups in order to help solve problems in the community				
59	Supports education and culture permanently from within the organization				
60	Sponsors programs for the development of communities				
61	Puts in action its potential impact on employment and seeks to maximize skill development and quality job creation				

62	Facilitates development and access of citizens to modern technologies, directly or through alliances with other organizations and associations				
63	Strengthens economic resources and social relations that generate benefits for the community (vulnerable groups: ethnic minorities, women at risk, unemployment, the environment				
64	Favors activities that minimize risks and maximize positive effects for the health and welfare of the community				
65	Affords investment and innovation projects to reverse greenhouse gases and improve the quality of life for community citizens				

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