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# **Journal of Contemporary Sociology**

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## **Presentation of Content**

The first article presents *The elderly and the state of mind in relation to the processes of attention and memory*, by GURROLA-HERNÁNDEZ, Diana Madai, ONTIVEROS-VARGAS, Ángel Adrián, HERRERA-VARGAS, Isela Vanessa and SALAS-NAME, Sagrario Lizeth, from the Universidad Juárez del Estado de Durango, as the next article is *Comparative analysis of women's empowerment in Mexico*, by QUINTERO-ROJAS, Coralia Azucena, as the next article is *Children's instrumental ensembles in the training of the interpreter. A proposal for the class at UAA-UAZ*, by JUAN-CARVAJAL, Mara Lioba, RODRÍGUEZ-JUAN, Arién and VDOVINA, María, with secondment at Universidad Autónoma de Zacatecas, the next article is *Ethnotourism cultural exchange in the municipality of Temoaya*, by GARCIA-CASTILLO, Karla Yazmín, HERNÁNDEZ-MARTÍNEZ, Vianney and JORDAN-GARCIA, Mirsha Jacqueline, with adscription at Tecnológico de Estudios Superiores de Villa Guerrero.

## Content

Article	Page
<b>The elderly and the state of mind in relation to the processes of attention and memory</b> GURROLA-HERNÁNDEZ, Diana Madai, ONTIVEROS-VARGAS, Ángel Adrián, HERRERA-VARGAS, Isela Vanessa and SALAS-NAME, Sagrario Lizeth <i>Universidad Juárez del Estado de Durango</i>	1-11
<b>Comparative analysis of women's empowerment in Mexico</b> QUINTERO-ROJAS, Coralia Azucena	12-21
<b>Children's instrumental ensembles in the training of the interpreter. A proposal for the class at UAA-UAZ</b> JUAN-CARVAJAL, Mara Lioba, RODRÍGUEZ-JUAN, Arién and VDOVINA, María <i>Universidad Autónoma de Zacatecas</i>	22-35
<b>Ethnotourism cultural exchange in the municipality of Temoaya</b> GARCIA-CASTILLO, Karla Yazmín, HERNÁNDEZ-MARTÍNEZ, Vianney and JORDAN-GARCIA, Mirsha Jacqueline <i>Tecnológico de Estudios Superiores de Villa Guerrero</i>	36-42



**The elderly and the state of mind in relation to the processes of attention and memory****El adulto mayor y el estado de ánimo en relación a los procesos de atención y memoria**

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**Abstract**

In people older than 65 years, depression affects quality of life; depressed older adults generally have more anxiety. Objective: To determine mood states and their relationship with mild cognitive impairment in older adults. In the present investigation, depression was evaluated by means of the Beck Test, anxiety by means of the Hamilton Test and cognitive deterioration by means of Mini Mental to 10 participants of the "Geronto Geriatrics" center of the State of Durango. Methodology: This is a quantitative, exploratory, non-experimental, observational and cross-sectional study with descriptive and correlational statistical analysis. Contribution: Chronbach's alpha of the analyzed data refers that the higher the anxiety and depression, the higher the prevalence of mild cognitive impairment with a moderate positive significance. The correlation between anxiety and neurocognitive functions was significant  $r = .50$  with  $p = .55$  with 95% reliability. And the correlation between depression and neurocognitive functions with an  $r = .40$ , with  $p = .15$  with 95% reliability. The high frequency of the incidence of anxiety in the sample studied plus the significant correlation suggest the need to implement programs to address anxiety and depression in adulthood.

**Depression, Anxiety, Older adults, Beck test, Hamilton test, Mini mental test**

**Resumen**

En las personas mayores de 65 años, la depresión afecta la calidad de vida; los adultos mayores deprimidos generalmente tienen más ansiedad. Objetivo: Conocer los estados de ánimo y su relación entre el deterioro cognitivo leve en el adulto mayor. En la presente investigación se evaluó depresión mediante el Test de Beck, ansiedad mediante el Test de Hamilton y deterioro cognitivo mediante Mini Mental a 10 participantes del centro "Geronto geriátrico" del Estado de Durango. Metodología: Es un estudio cuantitativo, de tipo exploratorio, no experimental, observacional y trasversal con un análisis estadístico descriptivo y correlacional. Contribución: El alfa de Chronbach de los datos analizados refiere que, a mayor ansiedad y depresión, mayor prevalencia de deterioro cognitivo leve con una significancia positiva moderada. La correlación entre ansiedad y funciones neurocognitivas resultó significativa  $r = .50$  con  $p = .55$  con una confiabilidad al 95%. Y la correlación entre depresión y funciones neurocognitivas con una  $r = .40$ , con  $p = 0.15$  con una confiabilidad del 95%. La alta frecuencia de la incidencia de la ansiedad en la muestra estudiada más la correlación significativa, sugieren la necesidad de implementar programas de atención a la ansiedad y depresión en la edad adulta.

**Adulto mayor, Depresión, Ansiedad, Test mini mental**

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**Introduction**

The affective or emotional component of the daily life of the older adult, often deprived of the warmth and support of the family group or a minimum of positive social interactions, confers different meanings to the gradual reduction of various biological, cognitive or sensory functions and, with it, a greater vulnerability to various agents or pathogenic factors. (Tello-Rodríguez, T, Alarcón, Renato D., Vizcarra-Escobar, Darwin, 2016, cited by Zambrano-Calozuma & Estrada-Cherre, 2020, p.10).

There are elements to take into account that determine the maintenance of cognition in the elderly patient such as; pathologies of the patient, social support, mood and the presence of geriatric syndromes such as frailty and osteopenia (Zambrano-Calozuma & Estrada-Cherre, 2020, p.9).

With ageing, there is the consequence of a degenerative process at the organic level, due to the accumulation of molecular errors, including in the brain. Dr. María Sagrario Manzano, a neurology specialist in Madrid at the Infanta Cristina Hospital, mentions that in the ageing brain, only certain areas where executive functions and memory are involved are affected. Throughout this process, neurons decrease in size and others die (Riojas-Duarte & Quintana-López, 2021, p. 9).

Memory and attention are higher brain functions that, under normal conditions, allow human beings to perform appropriately in personal and social life. To a large extent we are what we remember, and in doing so we can guide and inform our present and future behaviour (Zanín, Gil, & De Bortoli, 2004, p. 32).

Since these functions are of utmost importance for our lives, the question arises whether mood influences the alteration of these functions, hence the objective of this research which is to know the processes of attention and memory and their relationship with mood in the elderly through the application of the following tests: Hamilton test, Beck test and Mini-Mental Screening Test.

**Justification**

It is known that memory and attention are the main aspects of executive functions; as the years go by, the quality of life and health of people is affected by a decline in their functionality, which has social, mental and physical consequences (Riojas-Duarte & Quintana-López, 2021, p. 8).

Age-related memory problems are a cognitive alteration considered normal, they are mild forgetfulness. It has been suggested as a normal stage in the elderly. This event is known as Age-Related Memory Impairment (ARMD), but this cognitive alteration is not considered a disease (Sosa Sosa, 2016, p. 18).

Carbajal (2007) explains that in our country the majority of older adults who consult for memory loss do not have cognitive disorders, what they present are these subjective memory losses, where they believe they present a decrease in some cognitive function but in reality this loss is not made known after the corresponding tests have been carried out. This subjective loss is strongly related to anxieties, fears of developing dementia, relationship conflicts and attention problems of older adults. (Sosa Sosa, 2016, pp. 18 - 19)

In accordance with the aforementioned and seeing the importance of attention and memory in everyday life, it was considered important to carry out this research in order to verify the impact that the mood of older adults may have in relation to the loss or deterioration of attention and memory.

Based on the above, the interest of the present study lies in investigating attention and memory in older adults and their relationship with mood.

**Problem**

Depression is a common illness worldwide, with an estimated 3.8% of the population affected, including 5.0% among adults and 5.7% among adults over 60 years of age. Approximately 280 million people worldwide have depression. Depression can become a serious health condition. It can cause the affected person to suffer greatly and function poorly at work, at school and in the family. In the worst cases, depression can lead to suicide.

More than 700 000 people die by suicide each year (WHO, 2021).

According to the World Health Organisation (WHO), dementia and depression affect approximately 5% and 7% of the world's older population, respectively. Anxiety disorders affect 3.8% of the older population (WHO, 2017).

Older people with depressive symptoms have poorer functioning compared to those with chronic medical conditions such as lung disease, hypertension or diabetes. (WHO, 2017).

### **Hypothesis**

Ho: "Attention and memory processes are unrelated to older adults' mood states".

Hi: "Attention and memory processes are related to mood states in older adults".

### **Objectives**

#### *General objective*

To identify the current state of neurocognitive functions: attention and memory, and their relationship with mood in older adults.

#### *Specific objective*

- To find out the total score of the Beck test for depressive mood in older adults.
- To find out the total score of the Hamilton test for anxious mood in the elderly.
- To identify the total score of attention and memory using the mini-mental screening test.

### **Theoretical framework**

#### *Background*

Depression is a mental illness that affects more than 350 million people worldwide, with older adults being one of the most vulnerable groups.

According to IMSS, depression is a disease that is related to a decrease in serotonin, which is a neurotransmitter that regulates the emotions of well-being and sleep; it causes a change in their energy, and is reflected in a series of alterations in which feelings of sadness and low willpower dominate. (IMSS, 2020).

According to the National Institute for the Elderly (INAPAM), depression can cause great suffering and disrupts daily life. Worldwide, depression affects 7% of the general population of older people.

In Mexico, studies report that depression is the most frequent affective disorder in people over 60 years of age, that is, 15-20% in the outpatient population, increasing to 25-40% in hospitalised patients (INAPAM, 2019).

Regarding anxiety symptoms, it was found that 19.3% of the adult population has symptoms of severe anxiety, while another 31.3% show symptoms of minimal or some degree of anxiety, so 49.3% do not have it (INEGI, 2021). (INEGI, 2021)

It is estimated that in Mexico at least 14.3% of citizens suffer from generalised anxiety disorders, the most common mental health illness in the country, followed by depression and addictions, both at 9% (Senado de la Republica, 2019). (Senado de la Republica, 2019).

The world's population is ageing rapidly. Between 2015 and 2050, it is estimated that the proportion of older adults in the world will almost double, from around 12% to 22%. In absolute terms, this is an expected increase from 900 million to 2 billion people over the age of 60. Older people face special physical and mental health problems that need to be recognised.

More than 20% of adults aged 60 years and older suffer from a mental or neurological disorder (excluding headache disorders) and 6.6% of all disability (disability-adjusted life years-ADALYs) among people aged 60 years and older is attributed to mental and neurological disorders.(WHO, 2017)

*Attention and memory***Memory:**

Memory is a neurocognitive function that enables previously stored information to be recorded, encoded, consolidated, retained, stored, retrieved and recalled. While learning is the capacity to acquire new information, memory is the capacity to retain learned information (Portellano, 2005, p. 227).

Basically, we can establish two main types of memory depending on the time elapsed for its storage: short-term memory and long-term memory (Portellano, 2005, p. 233).

**1. Short-term memory (STM)**

This is the process of initial retention of information for a short period of time ranging from a few fractions of a second to several minutes, although some authors place the time limit of short-term memory at 30 seconds. Before the perceptual processing of information can take place, it is necessary for the sensory encoding of the stimuli to be memorised, which is why there are several modalities within short-term memory: sensory memory, immediate memory and working memory (Portellano, 2005, p. 233). (Portellano, 2005, p. 233).

**2. Long-term memory (LTM)**

This is the ability to retain information for longer periods of time or permanently. LTM also refers to the ability to recall information after an interval of time in which the subject has focused on another task. (Portellano, 2005, p. 235)

**Attention:**

Attention is in charge of carrying out the information selection process within the nervous system, being the fundamental element that articulates all cognitive processes. Alterations in attention always produce cognitive disorders of greater or lesser intensity (Portellano, 2005, p.143).

Attention is not a unitary process but a complex, dynamic, multimodal and hierarchical functional system that facilitates the processing of information, selecting the relevant stimuli to carry out a specific sensory, cognitive or motor activity. Attention, therefore, consists of selectively focusing on a given stimulus, filtering, discarding and inhibiting unwanted information. In order to carry out any cognitive process, it is necessary that a certain degree of selection of the stimuli that access the nervous system is previously produced, through the implementation of attentional mechanisms (Portellano, 2005, p. 143).

As a complex function, not only are several areas of the nervous system involved, but attention is at the crossroads of multiple sub-functions such as level of awareness, orientation, concentration, processing speed, motivation, direction, selectivity or alternation. According to this, the structure of attention is made up of different hierarchical layers of greater or lesser complexity, which are articulated in the form of neural networks located in various nerve structures. The more passive processes related to involuntary attention are located in the deeper areas of the brain, while those requiring a greater degree of voluntary selection are located in the cortical areas. The supramodal structure of attention is articulated in three levels of increasing complexity: alertness, sustained attention and selective attention. (Portellano, 2005, p. 143 - 144).

**Older adults**

In Mexico, Older Adults are considered to be people over 60 years of age and refer to the stage that adds up all the experiences of life and passes through most of the family, professional and social goals. But it also marks the beginning of a stage where people present conditions of physical, social and economic vulnerability. (GOB, 2017).

Ageing involves a series of physical, psychological and social changes related to changes in all organs, including the brain. With the passage of time, a series of cognitive modifications begin involving memory, language, perception and attention. These cognitive changes constitute one of the central factors of late life (Ardila & Rosselli, 2007, p. 227).

Individuals between 55 and 74 years of age are considered young senile, those over 75 years of age are considered old senile, and those over 85 years of age are considered older senile. (Ardila & Rosselli, 2007, p. 227).

### *Mental health*

According to the WHO, mental health is a state of well-being in which an individual is aware of his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community. (WHO, 2018)

Mental health is fundamental to our collective and individual capacity as human beings to think, emote, interact with each other, earn a living and enjoy life. On this basis, the promotion, protection and restoration of mental health can be considered a vital concern of individuals, communities and societies around the world. (WHO, 2018)

Mental health has an impact on physical health and vice versa. For example, older adults with physical health conditions such as heart disease have higher rates of depression than those who are healthy. In addition, untreated depression in an older person with heart disease can negatively affect their outcome. (WHO, 2017)

Attention and memory impairment in the older adult.

### Memory:

Senescence is associated with a decline in memory and learning ability. The rate of forgetfulness increases while the ability to acquire new information decreases. These difficulties begin around the fifth decade of life and progressively increase. This memory decline is slow in normal ageing, but accelerated in the case of dementia (Ardila & Rosselli, 2007, p. 229).

One of the most striking aspects of memory in the elderly is the difficulty in recalling recent events, despite being able to describe old events with relative ease, particularly those related to emotional situations. Age does not seem to affect older memory, but recent memory does (Ardila & Rosselli, 2007, p. 230).

With age, the capacity to store recent information decreases. The subject manages to assimilate immediate information, but does not adequately convert it into long-term traces. These storage difficulties are evident for both verbal and non-verbal material (Crook et al., 1986), although greater defects are noted in non-verbal memory (Eslinger et al., 1988). Age reduces not only the storage capacity, but also the recall process (Poon, 1985) (Ardila & Rosselli, 2007, p. 230) (Ardila & Rosselli, 2007, p. 230).

Working memory capacity is another factor that appears to alter with age. This type of memory refers to the ability to process information while maintaining in recent memory the results of that processing, the goals and the strategies used (Raz, 2000) (Ardila & Rosselli, 2007, p. 230).

### Attention:

The drawbacks in attention in old age as explained by Pousada et al (2006) are performing several tasks simultaneously, taking and selecting the information that is important at the necessary moment from that which is not important, i.e. difficulties in divided attention and selective attention are present respectively. (Sosa Sosa, 2016, p. 16)

## **Instruments**

### *Hamilton test*

It is a scale whose aim is to assess the intensity of anxiety. It consists of a total of 14 items that assess the psychological, physical and behavioural aspects of anxiety. In addition, one item specifically assesses depressed mood.

The items are non-specific manifestations of anxiety and have not been shown to be useful for the assessment of a specific anxiety disorder.

The time frame of reference is the last three days for all items except the last item, which assesses the subject's behaviour during the interview.

It is a hetero-applied scale, created with simple instructions to assign the most appropriate scores for each patient, in order to increase inter-rater reliability.

The following is a brief description (valid for all 13 items)

1. Identify from all possible symptoms for each item the most problematic symptom in the last few days, and which is certainly due to anxiety.
2. Determine for that symptom these three aspects: its severity, its frequency of depression and the disability or dysfunction it produces.
  - a) Severity: 1-mild (minor). 2-moderate (disturbance). 3-severe (very annoying) 4-the worst symptom I have ever experienced.
  - b) Time/frequency: 1- infrequent. 2- occurs in the middle of the day or less. 3-occurs most of the day. 4- occurs almost all the time.
  - c) Disability: 1-symptoms do not interfere with activities. 2 - symptoms interfere with some activity. 3-symptoms cause inability to carry out daytime activities (social, work and family). 4- symptoms cause inability to perform activities in two or more of the above areas.

#### *Correction and interpretation*

It provides an overall measure of anxiety, which is obtained by the sum of the scores obtained. The recommended cut-off points are:

0-5 No anxiety

6-14 Mild Anxiety

>15 Moderate/severe anxiety.

Beck Depression Test (BDI-IA)

The Beck Depression Scale is one of the instruments frequently used to assess depressive symptoms (González et al., 2014).

The Beck Depression Inventory, second edition (BDI-IA) is a self-report instrument composed of 21 items, whose purpose is to measure the severity of depression in adults and adolescents aged 13 years and older.

This version of the BDI was developed to assess the symptoms corresponding to the diagnostic criteria for descriptive depressive disorders in the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV, 1994) of the American Psychiatric Association (Beck, 2009).

The Beck Inventory meets the psychometric requirements for valid use in our setting. In terms of factorial composition, construct validity, discriminant validity and internal consistency, they corroborated the adequate psychometric properties of the BDI-IA, which support it as a sufficiently valid and reliable instrument for the measurement of depressive symptoms in the Mexican population, which also supports the cross-cultural validity of the instrument (Beck, 2009); (Beltrán, 2012).

The cut-off scores proposed by Beck et al. (1996) were appropriate for discriminating between different degrees of depression (see Table 1).

Total scores	Level of depression
<=9	Normal
10-15	Slightly depressed
16-24	Moderately depressed
25-62	Severely depressed

**Table 1** Total score for the interpretation of the results of the Beck Test inventory

#### **Mini-Mental Screening Test**

The Mini-Mental State Examination (MMSE) is a written test commonly used as part of the process when considering a diagnosis of dementia, with a maximum score of 30, with lower scores indicating more severe cognitive problems. It is one of the most widely used tools worldwide for its brevity and easy application (Tombaugh and McIntyre, 1992), it has 10 areas of assessment: spatial-temporal orientation, three-word registration, attention fixation, memory, verbal nomination, repetition and comprehension, reading, writing and visuospatial construction, (Mora Villalobos, et al., 2017). The cut-off point established for the MMSE defines "normal" cognitive function and is generally set at 24, although theoretically it could be anywhere between 1 and 30 (Arevalo-Rodriguez I, cited by Llamuca Quinaloa, Macías Guamangate, Miranda Caisaluisa, & Tapia Cerda, 2020, p. 317).

When starting the test, it is advisable to begin by collecting the patient's data, as well as their level of schooling and the work they did before retirement (the year they started school and the year they finished, approximately). This will also help to create a degree of trust with the patient and facilitate their collaboration.

If we analyse the MMSE, we see that it consists of 5 sections: (1st) Orientation, (2nd) Fixation, (3rd) Calculation and attention, (4th) Memory and (5th) Language and praxis.

When carrying it out, we should not interrupt it, especially the sequence of fixation, calculation and attention and memory. Between the 1st and 2nd, and between the 4th and 5th, we can make a brief pause if the patient is tired or very nervous, trying to reassure them and tell them that it is not an exam.

With all this, we have reached the end of the test and must make the correction for age and cultural level. After reviewing the MMSE, the following agreement was reached (see table 2).

Range	Anxiety level
< = 24	Probable cognitive impairment
> 24	No cognitive impairment

**Table 2** Total score for the interpretation of the results of the Mini-mental screening test

Schooling refers to the age at which they completed their studies, not to the number of years they attended school. Broadly speaking, the first group includes those who have not completed primary school, the second group includes those who have completed primary school and those who have a baccalaureate, and the third group includes those who have a higher baccalaureate or degree. Patients with depression and anxiety tend to score low in this type of test due to impaired attention and concentration, without this being indicative of MCI or dementia (the response of "I don't know, I don't know" to simple orientation or calculation questions is characteristic, and which they end up doing if we insist that they pay attention and make an effort).

### Research methodology

The present study is an exploratory, non-experimental, observational, cross-sectional study with descriptive and correlational statistical analysis.

The complex variables of mood, anxiety and depression were analysed for their relationship with neurocognitive functions by means of minimental. In addition, the following variables were considered: age, gender and school grade.

For the statistical analysis of the characteristics of the studied population, measures of central tendency were used and for the correlational analysis a Pearson correlation coefficient was used.

Inclusion criteria were participants aged between 60 and 90 years at the Geronto Geriatric Centre who wished to participate in the study and who had signed a letter of informed consent; therefore, those who did not wish to participate were excluded.

As elimination criteria, participants who left any of the assessment tests unfinished, previous neurodegenerative diseases and non-attendance at the assessments, as well as patients who wished to withdraw from the study, were excluded.

According to these criteria, out of a total of 20 patients, 10 were eliminated, leaving a total of 10 valid cases for the research.

### Procedure

The participants were patients attending a geriatric geriatric centre called "taking care of those who gave us life" in the city of Durango. Data collection was carried out during February 2021, culminating at the end of February of the same year.

Informed consent was obtained after signing the informed consent form in accordance with the official Mexican standards 004-ssa3-2012 on clinical records and 040-ssa2-2004 on information, and the instruments for data collection and interpretation of the results were applied.

The following tests were used for the study: "Beck test", "Hamilton test" and "minimental screening test".

The Beck depression test is a 21-item self-administered inventory that assesses the intensity of depression. For each item, the subject has to choose the statement that, from a set of four alternatives (always in order of severity), best fits his or her mood during the last week. Each item is scored from 0 to 3 points depending on the alternative chosen, the resulting total score has a range between 0 and 63 points.

The Hamilton test is a hetero-applied scale consisting of 14 items assessing psychological, physical and behavioural aspects of anxiety. The time frame of reference is the last three days for all items except the last item, which assesses the subject's behaviour during the interview.

It is classified by the following severity values: 1, mild, of little importance; 2, moderate severity and alterations; 3, severe alterations derived from the symptoms, very annoying; 4, the worst symptom ever experienced. Each item is rated from 0 to 4 points depending on the alternative chosen, and its cut-off points are: 0-5: no anxiety. 6-14: mild anxiety. >15: moderate/severe anxiety.

The mini-mental screening test is a screening instrument that evaluates cognitive alterations. Depending on the scores obtained by the subject, it is able to distinguish between normal cognitive functioning, mild, moderate and severe dementia.

It consists of 5 sections: (1st) Orientation, (2nd) Fixation, (3rd) Calculation and attention, (4th) Memory and (5th) Language and praxis.

After the application of the 5 sections we will have reached the end of the test and we will have to correct for age and cultural level. After reviewing the MMSE we arrive at the following suggestions or guidelines for interpretation:

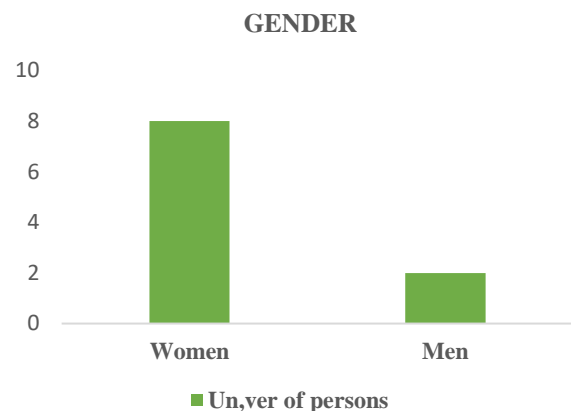
Probable cognitive impairment: Score < 24. No cognitive impairment: Score > 24.

The identification of the signalistic variables and academic performance (gender, age and school average) was obtained through the application of a clinical survey.

Statistical analysis of the information obtained was carried out using Excel software.

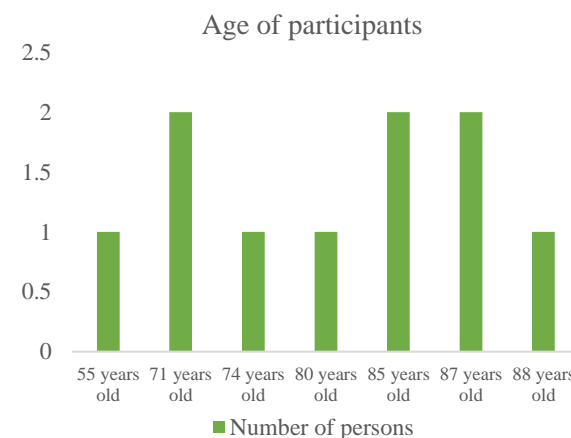
## Results

The sample studied consisted of 10 participants, who attend the "geriatric centre: caring for those who gave us life", of which 8 (80%) are female and 2 (20%) are male (see graphic 1).



**Graphic 1** Frequency by gender

The mean age of the participants was 78.3 years, with a minimum of 55 years and a maximum of 88 years, with a mode of 71 years, the standard deviation was 82.5 (see graphic 2).



**Graphic 2** Frequency by age

The reliability of the results obtained in the evaluation of the Hamilton Anxiety Test was a Chronbach's alpha .69 (very reliable). As for the results obtained from the assessment of anxiety using the Hamilton test, 2 participants (20%) did not show any level of anxiety, while 8 participants (80%) showed some degree of anxiety. Of which, according to the Hamilton scale, 6 participants represent 60% and are at a mild level of anxiety. And 2 participants corresponding to 20% are at a moderate/severe level of anxiety. (See table 3).

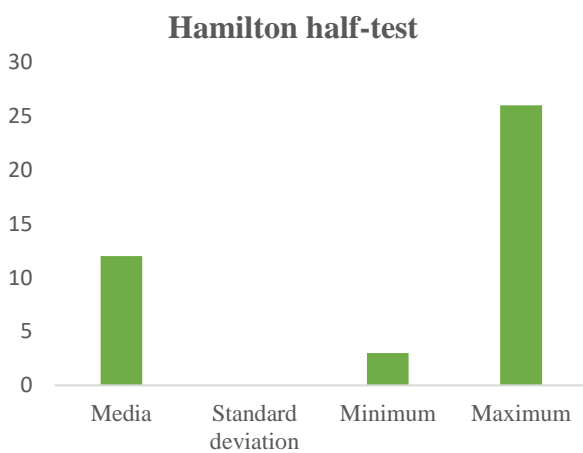


Range	Frecuency	Percent	Anxiety level
0 – 5	2	20 %	No anxiety
6 – 14	6	60 %	Slight
> 15	2	20 %	Moderate/severe

**Table 3** Results of the Hamilton test (Anxiety)

The mean of the total score of the Hamilton Anxiety Test is 12 with a standard deviation of 7.21.

This indicates that most of the participants who show anxiety are at a mild level of anxiety. (See graphic 3).



**Graphic 3** Measures of central tendency of Hamilton's total score

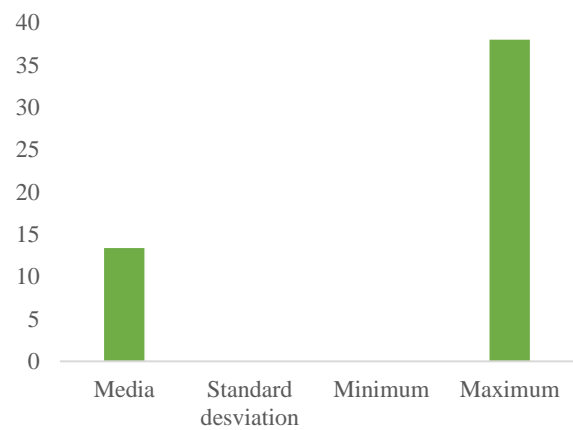
The reliability of the results obtained in the evaluation of the Beck Depression Test was with a Chronbach's alpha of .90 (excellent reliability).

As for the results obtained from the evaluation of depression using the Beck test, 7 participants (70%) did not show any level of depression, while the other 30% showed some degree of depression (see table 4).

Range	Frecuency	Percent	Depression level
< = 9	7	70%	Normal
10 – 15	0	0%	Mild
16 – 24	0	0%	Moderate
25 +	3	30%	Severe

**Table 4** Results of the Beck's test evaluation

The mean of the total Beck test score is 13.4, a median of 8 and a mode of 9, a standard deviation of 14.56, a minimum value of 0 and a maximum of 38 (see graph 4).



**Graphic 4** Measures of central tendency of Beck's total score

This indicates that 70% of the population is within normal parameters while 30% is at a severe level of depression.

The reliability of the results obtained from the Mini-Mental Test was Chronbach's alpha of .66 (very reliable).

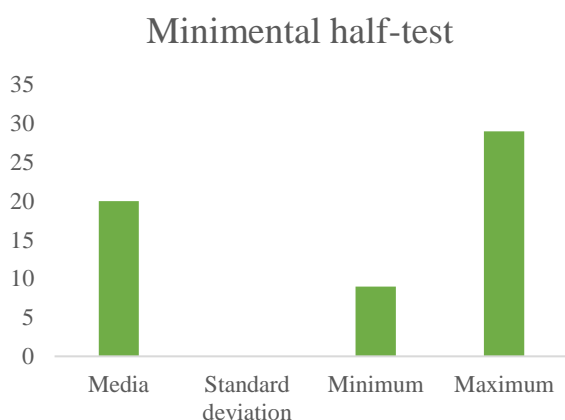
As for the results obtained from the Mini-Mental Test, 8 participants (80%) showed probable cognitive impairment, while 2 participants (20%) showed no cognitive impairment. (See table 5).

Range	Frecuency	Percent	Anxiety level
< = 24	8	80%	Probable cognitive impairment
> 24	2	20%	No cognitive impairment

**Table 5** Results of the evaluation of the Mini-Mental Test

As for the results obtained from the application of the Mini-Mental Test, 8 participants (80%) showed probable cognitive impairment, while 2 participants (20%) showed no cognitive impairment (see table 5).

This indicates that the majority of the participants show probable cognitive impairment (see graph 5).



**Graphic 5** Measures of central tendency of the Mini-Mental total score

### Correlational analysis

When performing the Pearson correlational analysis between anxiety and attention and memory, a moderate positive significance was found with an  $r = .50$  with  $p = .55$  with a reliability of 95%, which indicates that the higher the level of anxiety, the greater the deterioration of the cognitive functions of attention and memory, and therefore, the greater the prevalence of mild dementia.

	Average	anxiety score
Pearson correlation		.50*
Next Bilateral		.55
N.	10	10

\* The correlation is significant at the 0.05 level (bilateral).

**Table 7** Correlation between anxiety and attention and memory

In the following Pearson correlational analysis between depression and attention and memory, he found a level of moderate positive significance with  $r = .40$ , with  $p = 0.15$  with a reliability of 95%, which means that, in a moderate positive way, a higher level of depression greater deterioration of cognitive functions attention and memory.

	Average	anxiety score
Pearson correlation		.40*
Next Bilateral		0.15
N.	10	10

\* The correlation is significant at the 0.05 level (bilateral).

**Table 8** Correlation between depression and cognitive decline

### Conclusion

In the present research we found relevant data between mood states (anxiety and depression) and cognitive skills attention and memory, since 80% of the population shows anxiety correlated with cognitive impairment. However, only 20% of the population showed depression correlated with deterioration in attention and memory skills.

Therefore, the greater the alteration of mood (anxiety and depression), the greater the prevalence of mild cognitive impairment in the elderly.

Finally, the general and specific objectives are fulfilled and our research hypothesis is accepted in the "Geriatric geriatric geriatric centre of the state of Durango".

It is of great interest to continue with the research since the results cannot be extrapolated because it is only a pilot study, however, there is a moderate positive correlation between the alteration of mood and cognitive processes.

Therefore, it is recommended to provide attention and support to the elderly in terms of mood, as it has a great impact on their mental health. It is also proposed to stimulate neurocognitive functions or implement workshops.

### Acknowledgements

We would like to thank the "Centro Geronto Geriátrico: cuidando a quienes nos dieron vida" of the state of Durango for the facilities granted to carry out this research work, as well as Dr. Ángel Ontiveros and the participants of the research.

### References

- Ardila, A., & Rosselli, M. (2007). *Neuropsicología Clínica*. Mexico, D.F.: El Manual Moderno S. A. de C. V.
- GOB. (2017, Agosto 25). *Gobierno de Mexico*. Retrieved from Gobierno de Mexico : <https://www.gob.mx/pensionisste/articulos/dia-del-adulto-mayor-123010?idiom=es>

- IMSS. (2020, Septiembre 23). *Instituto Mexicano del Seguro Social*. Retrieved from Instituto Mexicano del Seguro Social : <https://imss.gob.mx/salud-en-linea/preguntas-de-salud/depresion-adultomayor>
- INAPAM. (2019, Diciembre 30). *Instituto Nacional de las Personas Adultas Mayores*. Retrieved from Instituto Nacional de las Personas Adultas Mayores: <https://www.gob.mx/inapam/articulos/salud-mental-en-personas-mayores>
- INEGI. (2021). *Encuesta Nacional de Bienestar Autorreportado 2021*. Retrieved from Encuesta Nacional de Bienestar Autorreportado 2021: [https://www.inegi.org.mx/contenidos/programas/enbiare/2021/doc/enbiare\\_2021\\_nota\\_tecnica.pdf](https://www.inegi.org.mx/contenidos/programas/enbiare/2021/doc/enbiare_2021_nota_tecnica.pdf)
- Llamuca Quinaloa, J. G., Macías Guamangate, Y. K., Miranda Caisaluisa, J. L., & Tapia Cerda, V. D. (2020). Test Minimental para el diagnóstico temprano del deterioro cognitivo. *Revista de la Universidad Internacional del Ecuador*, 315 - 328.
- OMS. (2017, Diciembre 12). *Organización Mundial de la Salud*. Retrieved from Organización Mundial de la Salud: <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- OMS. (2018, Marzo 30). *Organización Mundial de la Salud*. Retrieved from Organización Mundial de la Salud: <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- OMS. (2021, Septiembre 13). *Organización Mundial de la Salud*. Retrieved from Organización Mundial de la Salud: <https://www.who.int/news-room/fact-sheets/detail/depression>
- Portellano, J. A. (2005). *Introducción a la Neuropsicología*. España.
- Riojas-Duarte, M. F., & Quintana-López, V. A. (2021). INFLUENCIA DE MEMORIA Y ATENCIÓN EN LA CALIDAD DE VIDA DE LA POBLACIÓN GERIÁTRICA. *Know and Share Psychology*.
- Senado de la Republica*. (2019, Diciembre 07). Retrieved from Senado de la Republica: <http://comunicacion.senado.gob.mx/index.php/informacion/boletines/39699-14-3-de-la-poblacion-mexicana-padece-trastornos-de-ansiedad.html>
- Sosa Sosa, M. J. (2016). Deterioro cognitivo en la Vejez. 01-30.
- Zambrano-Calozuma, P. A., & Estrada-Cherre, J. P. (2020). Salud mental en el adulto mayor. *Polo del Conocimiento*, 03 - 21.
- Zanín, L., Gil, E., & De Bortoli, M. (2004). Atención y memoria: su relación con la función tiroidea. *Fundamentos en humanidades*, 31 - 42.
- González-Olaya, H. L., Delgado-Rico, H. D., Escobar-Sánchez, M., & Cárdenas-Angelone, M. E. (2014). Asociación entre el estrés, el riesgo de depresión y el rendimiento académico entre estudiantes de los primeros semestres de un programa colombiano de medicina. *Revista de la Fundación Educación Médica*, 17(1), 47-54.
- Beck, A. T. (2009). *Inventario de Depresión de Beck: Segunda edición (1a ed.)*. Buenos Aires.: Paidós, 2009.
- Beltrán, M. d.-Á.-G. (2012). El Inventario de Depresión de Beck: Su validez en población adolescente. *Terapia psicológica.*, 30(1), 5-13.

## Comparative analysis of women's empowerment in Mexico

### Análisis comparativo del empoderamiento de la mujer en México

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#### Abstract

Empowering women and reducing gender inequalities boosts economic growth and has multiplier effects across the development spectrum. In this article we will calculate and compare measures of empowerment for Mexico and its 32 states. This will allow us to better understand Mexico's progress on Sustainable Development Goal 5. Achieve gender equality and empower all women and girls.

**Women's empowerment, Empowerment indices, Mexico**

#### Resumen

El empoderamiento de las mujeres y la reducción de las desigualdades de género potencian el crecimiento económico y tienen efectos multiplicadores sobre todo el espectro de desarrollo. En este artículo calcularemos y compararemos medidas de empoderamiento para México y sus 32 entidades federativas. Esto nos permitirá una mejor comprensión de los avances en México respecto del Objetivo de Desarrollo Sostenible 5. Lograr la igualdad entre los géneros y empoderar a todas las mujeres y las niñas.

**Empoderamiento de la mujer, Índices de empoderamiento, México**

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† Researcher contributing as first author.

**Introduction**

"Sustainable development without gender equality it is not development nor sustainable".

United Nations

The 2030 Agenda for Sustainable Development puts gender equality and the empowerment of all women and girls at the centre of the debate through Sustainable Development Goal (SDG) 5. Empowering women and reducing gender gaps in health, education or labour markets reduces poverty and has multiplier effects across the development spectrum. However, gender inequality remains a persistent problem even in the most developed countries.

Given the potential of women's empowerment as an engine of growth and development, in this article we will calculate measures of empowerment for Mexico and its 32 states. This will allow us to analyse the differences between state values and the national average in various dimensions relevant to women's empowerment, such as their decision-making power within the household, their autonomy or freedom of movement, or their perception of traditional gender roles. These three dimensions will then be integrated into an overall empowerment index, from which we will investigate the relationship between women's empowerment and their situation in the labour market. This will allow us to better understand progress in Mexico on *SDG 5. Achieve gender equality and empower all women and girls*. The results show that both nationally and in the 32 states, women have relatively high values of empowerment, although there are some gaps between states and between the dimensions of empowerment, so there is still some way to go to achieve the full empowerment of women in Mexico. Likewise, the econometric exercise shows a favourable impact of labour market participation and educational level on the aggregate empowerment index and a negative impact of age.

The remainder of this paper is organised as follows. Section 1 provides a brief literature review closely related to our topic of study. Section 2 presents data from the National Survey on the Dynamics of Household Relationships (ENDIREH) for 2016<sup>1</sup>. Section 3 presents the method used to construct the empowerment indices. Section 4 discusses the results obtained for Mexico and its 32 states. In section 5, some exploratory exercises are carried out on the relationship between women's empowerment and their situation in the labour market. Finally, section 6 summarises the results of the analysis and draws our conclusions.

**A glance at the related literature**

Gender inequalities are partly due to the existence of social norms, such as gender stereotypes, which traditionally or culturally emphasise women's role as the main caregiver and men's role as the main breadwinner. This division limits women's participation in the public sphere, as they have to take on more of the private sphere. This suggests that the greater the prevalence of gender roles, the less women are empowered and the longer the road society has to travel to achieve SDG 5.

Traditional female roles are closely linked to the concept of domestic work, "defined as the set of activities that are carried out in the domestic sphere and that are aimed at satisfying the primary needs of the members of the family unit, which makes it obligatory and free of charge" (Vega Montiel, 2007).

Research on men's involvement in domestic work agrees that men's participation within the household is noticeable in very specific activities, such as childcare (García Guzmán, 2019). However, in Mexico, the roles that a man should play and those that a woman should play are still deeply rooted, which continues to drive gender gaps (Martínez Salgado & Rojas, 2016). According to García Guzmán (2019), public policies need to recognise and value the contribution of domestic work to social well-being, both in the paid and unpaid spheres, in order to lighten, and as far as possible balance, the burden of unpaid work that today falls mainly on women.

<sup>1</sup> The 2016 survey is used as, to our knowledge, the ENDIREH 2021 data have not yet been published.

Women's empowerment is a term coined in 1995 at the World Women's Conference in Beijing to refer to the increased participation of women in decision-making processes and access to power. Today, the term also reflects an awareness of women's individual and collective power. As an abstract and subjective attribute, it empowerment is a difficult concept to define precisely and, even more, difficult to quantify. This is why there are various measures of empowerment. For example, the United Nations Gender Equality Index measures the effect of gender inequality on the level of human development achieved by a society or geographic region. Germán-Soto (2022) constructed similar indicators using socio-economic data from a survey of women's labour participation in the Oaxaca Metropolitan Area. The author finds that about 56% of the progress in human development in the Oaxacan capital is undermined by the predominance of stereotypes that empower men and women differently; he also identifies the low participation of the female sector in politics and economic activity as two of the variables that most contributed to undermine human development in that city. In the absence of similar surveys applied to the rest of the states, in this article we will use data from the National Survey on the Dynamics of Household Relationships (ENDIREH), which provides relevant data to quantify some aspects of empowerment.

### The data: empowerment and the labour market

Mexico has the National Survey on the Dynamics of Household Relationships (ENDIREH), which provides relevant data to quantify some aspects of empowerment. In general terms, the ENDIREH was conceived to provide information on experiences of gender-based violence against women in order to address and eradicate it. It is in this context that, as part of the analysis of the various surveys, the contributions by Casique (2004), Castro and Casique (2008), Casique and Castro (2014) and Castro (2018) present various indices of female empowerment and extensively study their relationship with gender-based violence.

However, to our knowledge, the databases that collect the point values of the various indices for each individual are not provided, so as a preliminary step to be able to study women's empowerment in Mexico and its relationship with their situation in the labour market we will reconstruct the various indices.

The ENDIREH 2016 consists of several sections, of which the relevant ones for our study are Section XIV. Decisions and Personal Freedom and Section XV. Opinions on male and female roles. Also, as we are interested in studying the relative power of women vis-à-vis men, we will use data from surveys of married or cohabiting women aged 15 years and older. Finally, some socio-economic variables will be used to study the relationship between empowerment and women's situation in the labour market.

### Response frequencies

Subsection 14.1AB of Section XIV considers 7 response codes that take values from 1 to 7 as follows: only you (the respondent), 1; only your husband or partner, 2; both of you, but he a little more, 3; both of you, but you a little more, 4; both of you equally, 5; other people, 6; and not applicable, 7. As the relative frequency of the responses "both of you, but he a little more" and "both of you, but she a little more" was very low, we chose to reduce the three options to "both of you". Also, responses 5 and 6 were removed from the sample as they were not relevant to our study. Thus, the following categories were retained: "only her", "only him" and "both of you".

Table 1 shows the frequencies of responses on who mainly makes decisions in the couple. The first thing that stands out is that the percentage of decisions made only by him is generally low, as most decisions are made by her or by both of them.

Section XIV. Decisions and Personal Liberty (14.1AB)			
Items 14.1AB. Who decides, most of the time, in the household or in your relationship...?	Only him	Both	Only her
1. whether you can work or study?	6.12	39.15	54.73
2. whether you can leave your home?	4.53	27.22	68.25
3. what to do with the money that you earn or have at your disposal?	3.52	40.96	55.53
4. if you can buy things for yourself?	2.67	23.72	73.41
5. when you want or are interested in participating in the social or political life of your community?	3.85	31.21	64.95
6. how do you spend or save money?	4.72	57.46	37.81
7. what do you do with the money you earn?	17.22	61.23	21.56
8. about the type of clothing and grooming for you?	1.8	14.54	83.66
9. about allowances for children?	4.5	78.68	16.81
10. About moving home or city?	7.06	82.47	10.47
11. when to have sex?	3.21	88.74	8.05
12. whether to use contraception?	2.77	79.03	18.2
13. who should use contraceptives?	4.41	74.84	20.75
14. whether or not to have children?	2.38	86.61	11
15. when and how many children to have?	2.39	87.04	10.57

**Table 1** Frequency of responses about decisions

Note. Recoded response codes

Source: Own elaboration based on ENDIREH questionnaires, 2016

Subsection 14.3AB of Section XIV considers seven items on women personal freedom and (see Table 2): must ask permission (from husband or partner), 1; tells him or asks his opinion (from husband or partner), 2; does not have to do anything, 3; does not go alone or go with him, 4; does not, 5; other, 6; and does not apply, 7. In this case only response codes 1, 2, 3 and 5 are retained, which are recoded so that the higher values reflect greater autonomy of women. Table 2 shows that the first 5 items are dominated by the response "tells her or asks her opinion", while in the last two items the responses reflect a clear autonomy of women, who do not have to tell her or ask her permission or opinion to make friends or vote for a candidate.

Section XIV. Decisions and Personal Freedom (14.3AB)				
Items 14.3AB. Now I am going to ask you about the arrangements you make with your spouse or partner when you need to do some activities	Does not go/does not go	His permission	You let him know or ask his opinion	Does not have to do anything
1. To work for pay or remuneration.	5.29	13.81	58.94	21.96
2. If you have to go shopping	7.28	6.38	57.68	28.66
3. If you want to visit relatives or friends	5.58	8.27	62.6	23.55
4. If you want to buy something for yourself or change your personal grooming	2.66	5.58	39.92	51.84
5. If you want to participate in a neighbourhood or political activity.	8.49	8.01	48.64	34.87
6. If you want to be friends with someone	3.95	3.91	25.22	66.92
7. To vote for some political party or candidate	5.55	2.81	18.22	73.42

**Table 2** Frequency of responses on personal freedom  
Note. Recoded response codes

Source: Prepared by the authors based on the ENDIREH questionnaires, 2016

In Section XV, the response options are Yes (agree): 1; and No (disagree): 2. However, the assessment of gender roles will depend on the question asked, as for some questions agreeing means a greater attachment of women to traditional gender roles, while for others agreeing reflects a more egalitarian conception of gender roles. For this reason the response options are recoded so that a value of 0 corresponds to greater attachment to traditional roles; and a value of 1 to more egalitarian thinking.

Thus, questions 1, 2, 6, 7, 8, 9 remain unchanged qualitatively (as the lower value represents attachment to traditional roles) and are only adjusted by changing the 2 to 1 and the 1 to 0. On the contrary, in questions 3, 4 and 5 the 1 changes to 2 and the 2 changes to 0. Table 3 shows that in most of the items a more egalitarian thinking of men's and women's roles overwhelmingly predominates. The two exceptions are item 5. Do you think that women should have the right to go out alone at night to have fun? and item 7. Do you think that working women neglect their children?

Section XV. Views on male and female roles		
Items 15.1. According to what you think or believe, tell me in each of the sentences I am going to read you "yes" when you agree and "no" when you disagree.	Traditional role attachment.	Egalitarian thinking.
1. Do you believe that women should be responsible for the care of children, the sick and the elderly?	38.66	61.34
2. Do you think that men should earn more than women?	16.81	83.19
3. Do you think that women should be as responsible as men for bringing money into the household?	33.15	66.85
4. Do you think that men should be as responsible as women for housework, taking care of children, the sick and the elderly?	14.39	85.61
5. Do you think women should have the right to go out alone at night to have fun?	55.73	44.27
6. Do you think that men should have better jobs than women?	11.66	88.34
7. Do you think that women who work neglect their children?	51.07	48.93
8. Do you think women should dress without cleavage so they won't be bothered by men?	34.31	65.69
9. Do you think married women should have sex with their husbands whenever he wants them to?	8.85	91.15

**Table 3** Frequency of responses on male and female roles  
Note. Recoded response codes

Source: Prepared by the authors based on the ENDIREH questionnaires, 2016

The method for calculating the indices is described below.

## Method for calculating the empowerment indices

In order to better understand women's empowerment in Mexico, both at national and state level, we will apply Casique's (2004) methodology to obtain indices on three dimensions relevant to women's empowerment: decision-making power, autonomy or freedom of movement and women's view of traditional gender roles. In general terms, the higher the prevalence of gender roles, the lower women's empowerment and the longer the road society has to travel to achieve SDG 5.

### Factor analysis

The first step of the method is to conduct a factor analysis in order to identify a set of dimensions underlying the variables and thus identify which questions represent the same dimension (concept or factor). Once these dimensions have been identified, it is possible to replace the original set of variables with a smaller number of factors; generally, factors with an eigenvalue greater than 1 are retained.

Preliminary to this, two tests were used to determine whether the data are factorisable. Bartlett's test for sphericity examines whether the observed correlation matrix is not the identity matrix. If the test statistic is significant it is concluded that at least one of the variables is correlated with some other variable. The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations of the data are sufficiently close to 0, which would suggest the existence of at least one latent factor (or underlying variable). In all three cases, both tests showed that the data are factorisable.

Tables 4 - 6 report the results of the factor analysis by the principal components method for each set of items in tables 1 - 3.

Factor	Eigen value Variance (%)	Cumulative variance (%)	Cumulative variance (%)
1	5.5	36.671	36.671
2	2.191	14.608	51.278
3	1.155	7.705	58.983
4	0.838	5.587	64.57
5	0.761	5.073	69.644
6	0.728	4.856	74.5
7	0.636	4.238	78.739
8	0.531	3.543	82.283
9	0.5	3.337	85.62
10	0.456	3.043	88.663
11	0.451	6.009	91.672
12	0.424	2.825	94.498
13	0.369	2.463	96.961
14	0.28	1.866	98.827
15	0.176	1.173	100

**Table 4** Principal components of decision-making power

Table 4 shows that the 15 items on women's decision-making power within the couple represent three distinct underlying dimensions and together explain about 60% of the variance of all decision variables. Thus, depending on the correlation values with the retained factors, each of the original variables can be identified with one of these factors. In particular, the variables corresponding to women's decision-making power are grouped as follows: Dimension 1: Reproductive decisions (items 11 - 15). Dimension 2: Decisions on women's autonomy (items 1 - 6 and 8). Dimension 3: Family decisions (items 7, 9 and 10).

Factor	Eigen value Variance (%)	Cumulative variance (%)	Cumulative variance (%)
1	3.279	46.847	46.847
2	0.97	13.868	60.715
3	0.695	9.931	70.646
4	0.591	8.447	79.092
5	0.555	7.932	87.025
6	0.457	6.536	93.56
7	0.451	6.439	100

**Table 5** Principal components of women's autonomy

### Main components of autonomy or freedom of movement

In the case of freedom of movement (see Table 5), the parallel decomposition analysis indicates that there are 3 factors and one principal component. This, together with the graphical representations of the factor analysis for 1, 2 and 3 factors suggest that the seven items can be grouped into two underlying dimensions (even though one of the eigenvalues is slightly less than 1), which together explain 61% of the total variance.



The variables corresponding to women's autonomy or freedom of movement are grouped as follows: Dimension 1: Freedom to go out (items 1, 2 and 3). Dimension 2: Social freedom (items 4, 5, 6 and 7).

Factor	Eigen value Variance (%)	Cumulative variance (%)	Cumulative variance (%)
1	2.561	28.458	28.458
2	1.184	13.157	41.615
3	1.015	11.274	52.89
4	0.814	9.05	61.939
5	0.78	8.667	70.606
6	0.738	8.205	78.811
7	0.688	7.654	86.456
8	0.675	7.502	93.958
9	0.544	6.042	100

**Table 6** Principal components of gender role views

Finally, Table 6 shows that the 9 items relating to the perception of traditional gender roles can be grouped into 3 dimensions, which together explain 53% of the variance: Dimension 1: items 1, 2, 6 and 9. Dimension 2: items 5, 7 and 8. Dimension 3: (items 3 and 4).

### Communality

The second stage of the method is calculating the percentage of variance that each item shares with the rest; this measure is called communality and serves to assess whether all the items are conceptually similar. Some authors suggest discarding items whose communality with the rest is less than 0.3, since their nature would be conceptually different from that of the rest of the variables.

Decision-making power		Freedom		Gender Roles	
Ítem	Community	Ítem	Community	Ítem	Community
1	0.518	1	0.354	1	0.282
2	0.619	2	0.563	2	0.524
3	0.663	3	0.573	3	0.334
4	0.691	4	0.493	4	0.337
5	0.536	5	0.498	5	0.281
6	0.69	6	0.61	6	0.442
7	0.454	7	0.531	7	0.278
8	0.504			8	0.386
9	0.471			9	0.25
10	0.602				
11	0.564				
12	0.799				
13	0.7				
14	0.849				
15	0.821				

**Table 7** Communalities

Table 7 shows that all items concerning women's decision-making power and freedom of movement are undoubtedly of the same conceptual nature, as they have high common variance values with the rest. In contrast, most of the items on the perception of gender roles show low communalities, but even the lowest ones are relatively close to 0.3, so we decided to keep all items for the calculation of the index.

### Calculation of the indices

The factors retained in the factor analysis involve a specific grouping of the variables under each factor. From this, a sub-index is constructed for each dimension as follows: for each woman  $i=1, \dots, n$  (where  $n$  is the sample size) the value of the recoded responses to each of the questions or items that make up each dimension is summed; the value obtained for each is standardised by dividing it by the highest value that the sum could take (maximum range). Then,

$$I_k = \frac{\sum_{j=1}^m P_{i,j}}{\text{maximum range}} \quad (1)$$

where  $j$  is the index of the  $m$  items that make up dimension  $k$ .

Finally, the indices are obtained by adding the sub-indices weighted by the relative variance explained by each component with respect to the variance explained jointly by all of them. In other words,

$$I^l = \frac{\text{var}_k}{\text{ac.var}} \sum_{k=1}^n I_k \quad (2)$$

In the above expression,  $l$  represents decision-making power, freedom or perception of gender roles;  $(\text{var})_k$  is the variance explained by dimension  $k$ ,  $\text{ac.var}$  is the variance accumulated by the factors of each index and  $n$  the number of dimensions that make up each index.

Thus, we have the following expressions for the Decision-making Power Index (ID), the Freedom of Movement Index (IL) and the Gender Roles Opinion Index (IR):

$$ID = \left(\frac{3.671}{58.983}\right) I_1 + \left(\frac{14.07}{58.983}\right) I_2 + \left(\frac{7.704}{58.983}\right) I_3 \quad (3)$$

$$IL = \left(\frac{4.85}{60.72}\right) I_1 + \left(\frac{13.87}{60.72}\right) I_2 \quad (4)$$

$$IR = \left(\frac{28.46}{52.89}\right) I_1 + \left(\frac{13.16}{52.89}\right) I_2 + \left(\frac{11.27}{52.89}\right) I_3 \quad (5)$$

Finally, the Women's Empowerment Index (IE) is obtained from the equal-weighted aggregation of the three previous indices:

$$IE = \left(\frac{1}{3}\right) ID + \left(\frac{1}{3}\right) IL + \left(\frac{1}{3}\right) IR \quad (6)$$

The following section presents the results of the calculation of the indices.

### Women's empowerment in Mexico and its 32 states

Table 8 shows the average value of the indices obtained for Mexico and its 32 states. This information is complemented by Figures 1 - 4, where the median is also reported in order to have an idea of the distribution of each index.

	ID	IL	IR	IE
Aguascalientes	0.615	0.736	0.775	0.719
Baja California	0.624	0.757	0.775	0.728
Baja California Sur	0.628	0.714	0.774	0.708
Campeche	0.615	0.683	0.724	0.686
Coahuila de Zaragoza	0.622	0.735	0.743	0.708
Colima	0.614	0.707	0.750	0.703
Chiapas	0.542	0.620	0.625	0.602
Chihuahua	0.602	0.749	0.781	0.717
Ciudad de México	0.647	0.744	0.816	0.758
Durango	0.630	0.734	0.739	0.718
Guanajuato	0.631	0.709	0.745	0.721
Guerrero	0.607	0.645	0.646	0.655
Hidalgo	0.600	0.707	0.716	0.688
Jalisco	0.619	0.744	0.762	0.722
Estado de México	0.625	0.727	0.780	0.726
Michoacán de Ocampo	0.611	0.691	0.710	0.694
Morelos	0.626	0.723	0.752	0.714
Nayarit	0.618	0.698	0.712	0.675
Nuevo León	0.631	0.694	0.757	0.706
Oaxaca	0.596	0.646	0.632	0.662
Puebla	0.595	0.711	0.731	0.697
Querétaro	0.600	0.716	0.781	0.712
Quintana Roo	0.601	0.703	0.737	0.679
San Luis Potosí	0.613	0.677	0.727	0.681
Sinaloa	0.626	0.732	0.722	0.701
Sonora	0.618	0.732	0.753	0.711
Tabasco	0.574	0.652	0.689	0.643
Tamaulipas	0.639	0.708	0.734	0.704
Tlaxcala	0.573	0.703	0.749	0.691
Veracruz de Ignacio de la Llave	0.600	0.689	0.689	0.671
Yucatán	0.619	0.725	0.702	0.698
Zacatecas	0.595	0.689	0.701	0.674
MÉXICO	0.610	0.706	0.730	0.696

Table 8 Average indices, Mexico and its 32 states

The indices are normalised so that a value of 0 implies no empowerment of women, while a value of 1 would indicate full empowerment. The results reported in table 8 show that in all cases the level of empowerment is above 0.5.

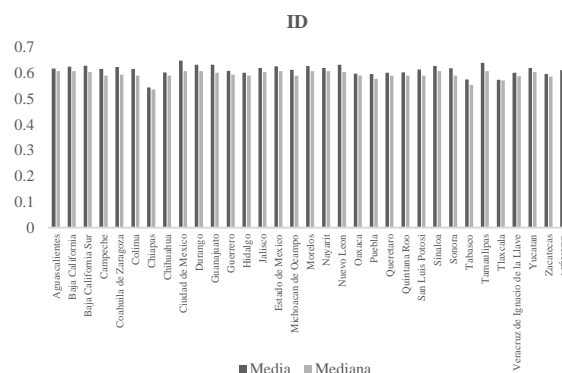


Figure 1 Decision-making power index (ID), Mexico and its 32 states

In particular, the Decision Power Index takes values between 0.54 and 0.65. The national average is 0.61, while the states with the highest average indices are Mexico City, followed by Tamaulipas, Nuevo León, Guanajuato and Durango, with values very close to each other; on the contrary, the worst positioned states with respect to women's decision-making power within the couple are Chiapas, Tlaxcala, Tabasco, Zacatecas, Puebla and Oaxaca.

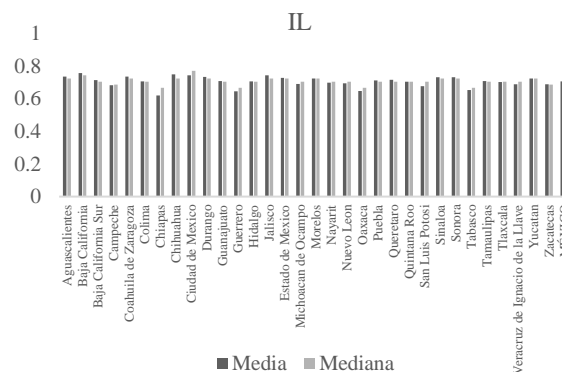


Figure 2 Freedom of Movement Index (IL), Mexico and its 32 states

The Freedom of Movement Index takes higher average values than the Decision Making Power Index, with a range between 0.62 and 0.76. The national average is 0.73, while the states with the highest average indexes are Mexico City, Querétaro and Chihuahua; on the contrary, the states with the worst position in terms of opinion on traditional gender roles are Zacatecas, Oaxaca and Guerrero.

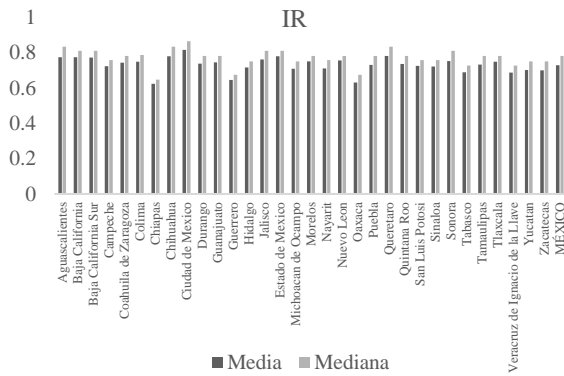


Figure 3 Opinion Index on Gender Roles (IR), Mexico and its 32 states

Regarding the Opinion Index on Gender Roles, the values range from 0.62 to 0.82; that is, of the three, it is the one that reports the highest values in general. The national average is 0.61, while the states with the highest average indexes are Mexico City, followed by Tamaulipas, Nuevo León, Guanajuato and Durango, with values very close to each other; on the contrary, the states with the worst position in terms of women's decision-making power within the couple are Chiapas, Tlaxcala, Tabasco, Zacatecas, Puebla and Oaxaca.

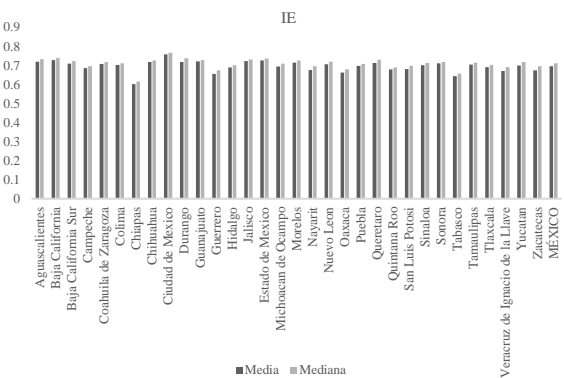


Figure 4 Aggregate Empowerment Index (IE), Mexico and its 32 states

Finally, the Aggregate Empowerment Index takes values between 0.60 and 0.76. The national average is 0.70, while the states with the highest average indexes are Mexico City, Baja California, State of Mexico, Jalisco and Guanajuato; on the contrary, the states with the worst overall ranking in terms of women's empowerment are Chiapas and Tabasco.

### Women's empowerment and their situation in the labour market

As the last part of our analysis, we will use the socio-demographic data section to construct indicators on women's labour market status: employed (E), unemployed (U) or inactive (N); these will be used as explanatory variables for the Aggregate Decision Index, together with the variables of age (age) and educational level (NIV). The table shows the results of the various ordinary least squares regressions. In all cases a constant (c) is included.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	$\beta_1$ (p)	$\beta_1$ (p)	$\beta_1$ (p)	$\beta_1$ (p)	$\beta_1$ (p)	$\beta_1$ (p)
c	.6752*** (.0000)	.6954*** (.0000)	.7249*** (.0000)	.6645*** (.0000)	.6721*** (.0000)	.6972*** (.0000)
E	.0495*** (.0000)			.00325*** (.0000)		
U		.0611*** (.0000)			.0398* (.0155)	
N			-.0501*** (.0000)			-.03276*** (.0000)
Age				-.00072*** (.0000)	-.00073*** (.0000)	-.00072*** (.0000)
NIV				.01083*** (.0000)	.01224*** (.0000)	.01078*** (.0000)
R <sup>2</sup>	.0431	.0006	.0441	.1177	.1007	.1181
F (p)	871*** (.0000)	12.42*** (.0004)	838.1*** (.0000)	808.3*** (.0000)	678.4*** (.0000)	810*** (.0000)

Note: Linear regression models, ordinary least squares. \*\*\* Variables significant at 100%. \* Variables significant at 95%  
R<sup>2</sup>: Adjusted R-squared

Table 9 Models of empowerment and women's labour market status

All variables are significant and have the expected sign. Models 1 and 4 suggest that the higher the employment, the higher the level of empowerment. Models 2 and 5 suggest that unemployment also has a positive impact on women's empowerment; although this sounds strange, it is because both employed and unemployed women are part of the economically active population, so that by participating in the labour market they are in a better position of empowerment than inactive women. Indeed, models 3 and 6 indicate that inactivity negatively affects women's empowerment. On the other hand, models 4, 5 and 6 suggest that as age increases, women have less decision-making power, which can be seen as a generational situation, where older women are those who presumably grew up in more conservative and traditional environments with respect to the subordinate role of women in their couple's life.

Finally, models 4, 5 and 6 also point to the fact that the higher the level of education, the more empowered women are. This could be due to the fact that women with higher levels of education are more likely to be economically autonomous.

It is worth noting that all models have a very low goodness of fit ( $R^2$ ). However, this does not mean that the qualitative information just recapitulated is not valid or relevant. Recall that the  $R^2$  or coefficient of determination is a statistical measure of how close the data are to the fitted regression line. Its value is always between 0 (the model explains no part of the variability of the data around its mean) and 100% (the model explains all the variability of the data around its mean). This is why, in general, the higher the coefficient of determination, the better the model fits the data.

However,  $R^2$  does not indicate anything about whether a regression model is adequate or not, since in some fields, such as social sciences or any other discipline that aims to predict human behaviour, low values of  $R^2$  are expected because social processes are more difficult to predict than natural processes. Moreover, if, as in the models in this article, one has a low  $R^2$  value but also obtains statistically significant predictors, it is possible to draw important conclusions about the association between changes in the values of the explanatory variables and changes in the value of the dependent variable.

## Conclusions

In this paper, different indices on important dimensions of women's empowerment in Mexico and its 32 states were constructed based on data from the ENDIREH 2016. The results show that the level of women's empowerment in the dimensions related to decision-making power within the couple's life, freedom of movement in the public sphere and the perception of traditional gender roles exceeds 0.5 in all cases. Furthermore, the differences between the mean and median values indicate a distribution slightly skewed to the right, i.e. with the indices concentrated in the highest values. On the other hand, differences between states are not very marked, although several states are consistently below the national average.

However, there is still a long way to go, as the highest values of the indices are around 0.7 for slightly less than half of the states, and policies must continue to be implemented to close the empowerment gaps between states and to favour the full empowerment of women relative to that of their husbands or partners.

The indices were used to make an exploratory analysis of the relationship between women's situation in the labour market and their level of empowerment, finding that the more women belong to the economically active population (employed and unemployed), the higher the level of empowerment. It was also found that women's educational level has a positive impact on empowerment, while age has the opposite effect, reflecting the fact that older women presumably grew up in environments with a strong attachment to traditional gender roles. Therefore, this research adds to the literature on SDG 5 in Mexico by offering insight into the level of women's empowerment.

## References

- Casique (2004), "Índices de empoderamiento femenino y su relación con la violencia de género", en R. Castro, F. Riquer y M. Medina, *Violencia de género en las parejas mexicanas, Resultados de la Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares 2003*, Instituto Nacional de las Mujeres, México.
- Casique, I. y Castro, R. (coord.). (2014). *Expresiones y contextos de la violencia contra las mujeres en México. Resultados de la Endireh 2011 en comparación con sus versiones previas 2003 y 2006*. México: CRIM/UNAM, México.
- Castro, R. y Casique, I. (Coord.). (2008). *Violencia de género en las parejas mexicanas. Análisis de resultados de la encuesta nacional sobre la dinámica de las relaciones en los hogares 2006*, CRIM/UNAM, México.
- Castro, R. (coord.). (2018). *Análisis de los resultados de la encuesta nacional sobre la dinámica de las relaciones en los hogares 2016*, CRIM/UNAM, México.
- García Guzmán, B. (2019). El trabajo doméstico y de cuidado: su importancia y principales hallazgos en el caso mexicano. *Estudios demográficos y urbanos*, 34(2), 237-267.

Germán-Soto, V. (2022). Desigualdad de género y empoderamiento femenino en la ciudad de Oaxaca. En D. y. Castro Lugo, *Pobreza, participación laboral y empoderamiento económico de las mujeres en Oaxaca, México* (págs. 173 - 204). Ciudad de México: Pergamino y Universidad Autónoma de Coahuila.

Instituto Nacional de Estadística y Geografía (2017), Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares (ENDIREH) 2016, INEGI, Ciudad de México, México.

Martínez Salgado, M., & Rojas, O. L. (2016). Una nueva mirada a la participación masculina en el trabajo doméstico y el cuidado de los hijos en México. *Estudios demográficos y urbanos*, 31(3), 635-662.

Vega Montiel, A. (2007). Por la visibilidad de las amas de casa: rompiendo la invisibilidad del trabajo doméstico. *Política y cultura*, (28), 181-200.

## Children's instrumental ensembles in the training of the interpreter. A proposal for the class at UAA-UAZ

### Los conjuntos instrumentales infantiles en la formación del intérprete. Una propuesta para la clase en la UAA-UAZ

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#### Abstract

The professional training of the musician is a result of an integral accumulation of knowledge that is gradually perfected starting from the basic level, in which organizational forms of teaching-learning come together, such as the group lessons or ensembles (vocal and instrumental). In this kind of subject, primary skills that provide students with artistic and sociocultural values are developed. Unlike the musical education that is taught as a part of the general education, at the infant level in art schools such as the Academic Unit of Arts of the Autonomous University of Zacatecas (UAZ), the process is oriented towards the artistic technical development of the student. However, in the specialized literature and practice, it was possible to appreciate that there are contradictions in the conception of the pedagogical process. These facts motivated the objective of this work: to generalize curricular and methodological alternatives for the instrumental ensemble subject at the UAZ Academic University of Arts based on the analysis of manifest contradictions in the pedagogical process at the infant level. The methodology used includes the analysis of documents and participant observation, which led to the proposal of alternatives of a curricular and methodological nature for the subject of instrumental ensembles.

**Musical learning, Instrumental ensembles, Methodological alternatives for the infant level**

#### Resumen

La formación profesional del músico es el resultado de un cúmulo integral de saberes que se perfeccionan paulatinamente desde el nivel básico, en el que confluyen formas organizativas de enseñanza-aprendizaje como la clase grupal de conjuntos (vocal e instrumental). En dicha clase, se forman o desarrollan habilidades primarias que dotan a los alumnos de valores artísticos y socioculturales. A diferencia de la educación musical en la enseñanza general, en el nivel infantil en las escuelas de arte como la Unidad Académica de Artes de la Universidad Autónoma de Zacatecas (UAZ), el proceso se orienta hacia el desarrollo técnico artístico del alumno. No obstante, en la literatura especializada y la práctica, se pudo apreciar que existen contradicciones en la concepción del proceso pedagógico. Ello motivó el objetivo de este trabajo: generalizar alternativas curriculares y metodológicas para la clase de conjunto instrumental en la Universidad Académica de Artes de la UAZ a partir del análisis de contradicciones manifiestas en el proceso pedagógico en el nivel infantil. La metodología empleada incluye el análisis de documentos y la observación participante, lo cual propició la propuesta de alternativas de carácter curricular y metodológico para la clase de conjunto instrumental.

**Aprendizaje musical, Conjunto instrumental, Alternativa metodológica nivel infantil**

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## Introduction

Nowadays, the professional training of the musician is pursued in its entirety in order to equip the performer with the knowledge that allows him to express himself in a versatility of musical genres and styles. The process involves many years of preparation, usually from childhood to university studies or, as the music pedagogue Zoltán Kodaly (1882-1967) said, it starts before birth itself (quoted in Vernia-Carrasco, 2019).

There is documentary evidence of particular and multidisciplinary studies from different areas of knowledge, such as medicine in general, psychology and pedagogy, on the ideal ages for learning music and its relevance in the general education of children, taking into account their psychomotor and cognitive development. Experience also shows evidence, from very early stages, focused on discovering and capturing talent. However, in the practice of teaching linked to the learning of a musical instrument, different levels are recognised, which, in some countries, make the age of the children coincide with the cycles of general education, i.e. basic, upper secondary and higher education (Águila, Núñez, & Raquimán, 2011; Vernia-Carrasco, 2019).

Although there are music teaching academies for pre-school children, and they use their own methods with very dissimilar objectives, in the case in question, the Academic Unit of Arts of the Autonomous University of Zacatecas (UAA-UAZ), the Educational Programme of the Bachelor's Degree in Music with emphasis on instrument, in its 2011 study plan, recognises and integrates the previous levels. Four levels of musical education are typified here: Infant, from the age of 8, which corresponds to primary school; Basic, from the age of 12, which is ideally carried out together with secondary school; Upper Intermediate, which corresponds to high school studies, and Advanced, equivalent to the Bachelor's Degree; at this last level, the student becomes a professional musician playing a specific instrument (Unidad Académica de Artes, 2011).

At the infant level, the child is introduced to musical initiation; the focus is on familiarisation with the chosen musical instrument, as well as with the technical bases of performance. Its objective is to promote an integral development in the child's artistic and musical training. This stage is taken during eight semesters, and from the fifth semester onwards, the Instrumental Ensembles class is introduced (Unidad Académica de Artes, n.d.).

The curriculum for the infant level includes the selection of a musical instrument from among the following: flute, clarinet, trumpet, French horn, guitar, piano, violin, viola, cello, percussion and saxophone. In spite of their variety, and the little experience the children have in handling them, the assignment of the ensemble group is made only once, without taking into account the general and particular characteristics of each instrument (timbre-sound classification, types of tuning, sound production, tessituras, harmonic or melodic correspondences, among others). In this way, the ensemble class at infant level has two ways of being approached: one, through a single heterogeneous instrumental ensemble, and the other, as a homogeneous instrumental ensemble where pupils can use their own instruments or substitute instruments (small keyboards, recorders and percussion instruments); in the latter case, the classes become a repetition of their counterpart in the artistic teaching commonly taught in primary schools.

Practice shows that the difference between one type of ensemble and another indicates the need for a different methodological approach and different objectives in each case, but we do not have the syllabus of the subject that explains the objectives and contents, nor the profile of the teacher who teaches the subject.

These and other contradictions observed in the teaching-learning process, which will be dealt with later, have given rise to reflection on the importance of this subject being taught at infant level and on the most appropriate methodologies to implement. In this sense, the aim of this work is to generalise curricular and methodological alternatives for the instrumental ensemble class at the Academic Unit of Arts of the UAZ, based on the analysis of the contradictions manifested in the pedagogical process at the children's level, in such a way that their application will influence the development of primary skills that will give the students artistic and socio-cultural values that will have an impact on their formative process.

In order to achieve this objective, the methods of document analysis and participant observation were used, their contrastation allowed the observation of the results of the work with the children during the musical training and their subsequent insertion in the following levels of study; the recognition of the theoretical-practical experience in the preparation of the classes of both instruments and instrumental ensembles, as well as the results of the public presentations carried out by the pupils at the end of the semester.

### **Development**

There is an abundant bibliography which values the significance of musical learning in the first stages of general education; in this sense, arts education becomes a basic subject in primary and secondary education. Music education, as part of arts education, has a positive influence on each of the developmental spheres of a child's education; for example, psychomotor development corresponds very closely to music and exploits the sound and movement possibilities of the body. Playing a musical instrument ensures the infant the appropriate recognition of his or her personal value (self-esteem), stimulating a motor and emotionally balanced development (physical contact with objects that have the capacity to respond sonically, encouraging creativity, auditory sensitivity and the management of affective feelings), but playing an instrument as an ensemble potentiates these and many other formative capacities at this important stage of life. In this respect, the famous violinist Yehudi Menuhin (1916-1999) emphasised:

Music and the arts invite participation and constitute an antidote to the obstacles to harmony among men. Making music is not only playing or singing, it is also listening. By learning from an early age to listen to others, children discover what tolerance is. (Yehudi Menuhin Foundation Spain, 2004).

Although the art of making music or practising an instrument in general is useful in many ways, it is worth clarifying that, although children who study music in a specialised school are not guaranteed to go on to the higher level as professionals, for those who do manage to complete the process, the formation of their artistic career begins at the very beginning. It is a long enough path and will last, in the first instance, until the end of the Bachelor's Degree in Music with specialisation in instrument.

Therefore, it is necessary to point out that, for this stage, although there are similarities between music art education in primary schools of general basic level and music classes in an art school, differences are identified fundamentally in the objectives and methodologies, even when dealing with children and similar contents can be developed.

In this sense, reference is made to a previous research carried out by the authors: "Interactions in children's musical teaching with professional and artistic educative ends" (Juan-Carvajal & Vdovina, 2020); in it, some indicators are shown that contribute to general artistic teaching with infants, and others that are specific to the training of children who are perceived, in the first instance, as future professional performers. One of the main differences would be, precisely, the instrument selected, as from then on a direct interrelation with the instrument is created that will last for the rest of the time that the studies are carried out and, possibly, for the rest of one's life.



In a music school with selective characteristics and professional development perspectives, the teaching of music is given from these primary levels, starting not from a specific class, but from the set of several that complement each other in the final objective of the integral formation of the instrumentalist musician, and which are given, some individually and others collectively, such as: the instrument, solfège, musical appreciation and choral ensembles with multi-voice and instrumental development. All of this helps to increase physical abilities and skills such as sharpening the ear (harmonic and melodic), rhythm control, intonation, tone and timbre recognition, hand positioning, posture and body movement, all of which favours artistic technical development.

The objectives pursued and the methodologies used in the work with the children in these schools have as their main aim to guarantee the learning of a specific instrument with quality and creativity, focusing on musical growth. In this sense, the work is focused on individualised attention to each child, ensuring, through agreed classical methods, the progressive learning of the technique for playing a specific instrument, taking into account in each case, the particularities of the development of each student in the cognitive process. It should be noted that specialised teaching implies a reciprocity in which: on the one hand, the presence of one or even two teachers for each child is necessary (the instrument teacher and, in most cases, the piano accompanist teacher), for at least two hours a week, in addition to the group classes, and on the other hand, the support of the parents for the individual study required at home, which balances the cycle of the training process. Generally, at this primary level, pupils are introduced to the musical training of different instruments (piano, violin or guitar, among others). For this, unlike other general education schools, or private schools and/or workshops, an entrance profile is required, for which students undergo a selection process by means of an initial test of musical, physical and psychological aptitudes, where the level of development in general education, according to age, is also taken into account. This test is usually carried out by the teachers who make up the academy of the instrument selected by the child, who is accompanied by his or her family members.

In the profile for entry to the infant level at the UAA-UAZ, it is desirable that the applicant shows aptitudes such as a good sense of tuning and rhythm, the ability to coordinate, memorise, muscular flexibility, discipline, constancy, and that he/she can adapt to teamwork (Unidad Académica de Artes, n.d.). Latorre (1995) cited in Lozano (2007) refers that between 7 or 8 years of age is a good time to introduce the child to systematised musical learning, since the psychological changes that occur in the infant are conducive to learning music. This can be psychologically supported by Piaget (1977 and 1991), who identifies the stage between 7-8 and 11-12 years of age as the period of concrete intellectual operations. Piaget (1977) states that it is in this cycle that intellectual operations are initiated, among which we can mention logic, moral and social feelings of cooperation.

From these readings it can be inferred that, independently of other criteria or the beginning of learning from the age of 4 as is the case in private or special schools, in the UAA, within the infant level, two fundamental stages are identified: a first one that goes from 7 or 8 to 9 or 10 years of age, in which concrete intellectual operations begin to form, but at a very simple level, and a second one, which starts from the latter and continues until approximately 12 years of age, where their development is completed; this final period is the ideal time to begin work on instrumental ensembles.

Instrumental ensembles as a subject are foreseen as a space of primary necessity in terms of experimentation, and are basic in the formative context as they are where the skills acquired in the instrument class and the knowledge learnt in the rest of the subjects or didactic units are put into practice, with the facility that the ensembles make it possible to work on the repertoire corresponding to the different periods and cultural styles (Conservatorio Municipal Elemental de Música de Herrera, 2009).

*The instrumental ensembles class at initial levels*

Once a criterion has been established regarding the preference for the beginning of the instrumental ensemble class, the appropriate syllabus for that level must be known, which includes the methodology, the composition of the groups, as well as the determination of the ideal profile of the teacher who teaches the subject.

Lorenzo (2018), states that the pedagogue Fernández Cobo (2005) pointed out that in its beginnings the instrumental ensemble class generated a great disorientation due to the lack of regulation, specific content, objectives to be achieved and criteria to be taken into account for evaluation, and suggests that today the subject has managed to establish certain canons not only transversal educational standards, but also in terms of musical and artistic techniques, aural distinction, chamber music experiences, all of this with activities that favour the development of social evolution, collective and individual musical reflection and active participation in musical culture.

Several authors, including Lorenzo (2018) and Lizárraga (2012), agree that instrumental ensemble practice benefits the social and collective development of the student, so they propose as objectives of the instrumental ensemble class that students are able to play in groups made up of several instruments. However, the authors leave basic criteria such as tuning and tempo in the background, considering that if the apprentices can maintain correct compliance with these latter aspects during performance, this constitutes a plus for the class.

The above idea shows a contradiction, because if we talk about the ability to listen to each other, it is because, in the first instance, the pupils can listen to themselves, and from there, they are integrated into a relationship with others. It can also be understood that, if we are talking about a musical ensemble which aims to contribute to the training of the instrumentalist and not to the realisation of music as an element of general artistic training, then the care of technical development is basic, and this requires attention to primary aspects such as tuning, rhythm and the elementary treatment of sound.

All this would lead us to the partial conclusion that, at this initial stage, it would be advisable to begin with the creation of small ensembles, made up of the same or similar instruments (belonging to the same families) such as, for example, several violins (first and second) and cellos, understood as the first string ensemble, or a set of woodwind instruments, which may or may not include a harmonic instrument (piano), or there may also be ensembles of instruments with these characteristics such as four-hand pianos or guitar ensembles.

However, we reiterate that the instrumental ensembles class should certainly provide the student with the practice of playing in groups, preferably starting with ensembles of the same family or, if there is no other, of varied instrumentation, although with similar characteristics, with the aim of exploring different sonorities, timbre combinations and facilitating listening and collaborative work that will prepare them for their future projection in many areas of life, including that of becoming a professional musician.

Musical practice in ensembles aids the teaching of music at the infant level, which favours the integral formation of the child, individual and collective development and the creation of habits of respect and standards.

Its procedure is gradual, that is to say, it becomes more complex as the child progressively moves on to more advanced levels. Intonation, the ability to interpret a selected repertoire and the appropriation of basic concepts on a technical, competitive, social and cultural level are developed with the gradual increase in the diversity of content inherent to the different academic levels. In this sense, it is important to be clear about what and how an ensemble should be, and what its importance is in the formative development of the instrumentalist, as well as the methodology of the class, which requires the existence of a syllabus.

In principle, both the ensemble class and the instrument class are complementary. In both, more than one voice is practised, but there is a fundamental difference in their objectives: The instrument class emphasises individual and competitive work, while the ensemble class has a collaborative approach. From a practical point of view, this can be seen in the existence of numerous initial violin methods, for example, where children play the first voice and are accompanied by their teacher.

These methods are fundamental to give confidence and security to the pupil who feels stimulated by being supported by his teacher; however, if one analyses these scores, one can see that the role of the second violin is that of accompaniment, and that it complements the rhythmic motor and harmonic movement thus creating the foundations of the knowledge of the constitutive, formal and structural elements of music. The same happens when the piece or the children's concert is accompanied by the piano accompaniment of a teacher who plays, precisely, the complement of all the mentioned parts.

When talking about the ensemble, one can say that exactly the same thing happens. There is a second, a third and perhaps many other voices, but unlike the instrument class, the repertoire used here is not written for a solo voice and other accompanying voices, but becomes more complex in the exchange of roles, between all the voices, and therefore, they must all be listened to and followed in a different way. The objective and therefore the learning and methodologies are dissimilar, and also start from a good selection of the material to be used.

Lorenzo (2018) has suggested that the teaching-learning model to be followed should start from constructivism and apply group dynamics such as collaborative and cooperative learning and situated learning, always from the perspective of the socio-cognitive paradigm and/or the socio-cultural paradigm. It expresses that the use of cooperative learning in the social construction of knowledge is an essential element of the class, always observing the whole as a harmonious whole, with a single musical objective, regardless of the attention to the particularities of its members.

In this methodological approach, unlike the competitive and individualistic approach, the members of the cooperative group - our instrumental or vocal ensemble - are aware that group performance depends on the effort of all; this awareness of being part of an ensemble that seeks a joint purpose motivates the members to make an effort and to obtain results that exceed the individual capacity of each one of them (Lorenzo, 2018, p. 52).

In the same way, the use of group techniques is invited as methodological tools developed through serial activities in terms of the level of difficulty that facilitate the results.

Taking as a basis what is expressed by Serrano and Pons (2011), the characteristics of the constructivist model put forward by Vygotsky can be listed, in relation to the ensemble class: the teacher professes more of a guiding role during the teaching-learning process, which is more interesting than the final product, "the assembly of the repertoire is but the excuse to address the planned competences" (Lorenzo, 2018, p.53). Thus, from a social perspective in the construction of knowledge, the ensemble is a dynamic group that is in action and change, in which students construct new knowledge starting from that already apprehended. The resulting dialectical activity makes it possible to approach new learning by facilitating and making content and activities more flexible in a more dynamic way.

As can be seen, the model facilitates several factors that trigger motivation and the creative capacities inherent to the students who, from the collective, interact by supporting solidarity and plurality. It has the advantage of increasing the child's motivation. Its practical application includes: normalisation, the habit of listening and silence, (respect and tolerance), learning the relationship between colour-sound and their relationship, from the instrumental or choral with the emotions of joy and sadness, among others. This supports the idea that children can be stimulated through various complementary subjects such as solfège, which is also basic at this stage of the process, where together with the instrument and the different ensembles they end up creating their own small compositions.

As part of the methodology, it is important to define when and how to start. Different authors agree in recognising that to start teaching the subject of children's instrumental ensembles it is necessary to have spent at least two semesters of musical education, due to the obvious lack of technical, theoretical and musical skills that the student presents. In our opinion, it may even be later, however, from the very first moment it is possible to begin choral practice with several voices, in relatively large ensembles, which would prepare the start of instrumental ensembles for when there are sufficient minimum technical skills to develop the ensemble.

At the infant level, the subject aims, among its primary objectives, to bring children closer to music in a pleasant and entertaining way; but it also develops communication, affectivity, creativity, concentration and motor skills, among others, as well as fostering values such as respect, honesty, compliance with rules and collective work, all of this combined with the reinforcement of the mastery of the selected instrument.

Agudiéz (1996) suggests that, for the initial course, where students are still beginners, it is necessary that the first ensembles to experiment with are duos and, as they get more practice, they proceed to form larger ensembles.

For his part, Lorenzo (2018) proposes a series of criteria that should be taken into account when creating ensemble formats in the classroom, all based on the type of students in the centre:

- a) Ensembles of similar instruments or of the same family, this, as has already been expressed, can be very beneficial for the instrumentalist who is starting out in the subject.
- b) Groupings according to the age of the students, mainly marked by the stages of cognitive development: infant, adolescent and adult.

- c) Pairing according to the level of skill they present in the instrument, which does not necessarily mean that they must be in the same semester or course, always depending on the particularities of each instrument.
- d) Group formats ranging from duos, trios, quartets, chamber ensembles (for string instruments), bands (for woodwind and/or brass instruments) to larger ensembles such as symphony orchestras.

If we carry out the process of discriminately choosing a group of children with a view to a possible professional future, we consider that orchestral activity, in the symphonic sense, should begin a little later, after the group ensemble classes have been developed, and starting from the recognition of the instrument families themselves: strings (fretted, plucked and plucked); woodwinds (woodwinds and brass); and percussion ensembles.

A little more time in ensembles or small orchestral ensembles of a single family (fretted strings, guitar ensembles, percussion, woodwind, brass) guarantees attention typified by a methodological model, which is fundamental at these levels to avoid problems and bad technical habits, body posture, tuning and rhythm, text reading, among others.

Although, in general, there is a similarity in the result of collective and collaborative work which, as we have already seen, benefits not only musical performance, we must not lose sight of the fact that in professional schools which contemplate these levels as previous ones, the process of individualised work with the pupil is defended from the first moments of teaching, hoping that these, who have already passed a selective and discriminatory process of abilities and aptitudes towards music, can maintain and develop them coherently.

We have already noted that there are different schools, different levels and different ages at which music studies can begin. In some cases, such as the UAA-UAZ, as has been mentioned, there is an infant level where children arrive between the ages of 8 and 11, and from the age of 12, they move on to the next Basic Level.

It happens that pupils can, without having any knowledge of music and without having attended the infant level, enter directly to the basic level at 12-13 and even older. This happens in many music schools in some countries, and therefore needs to be taken into account when composing ensemble types for the instrumental ensemble class.

An essential point would then be to take school levels into account when putting together ensembles. This has not been made clear in the previous proposals and hence, perhaps, the contradictions when talking about the beginnings of teaching the subject with small groups of duos or trios, in contrast to large orchestras.

In the case of children, it would be ideal to create ensembles or chamber ensembles such as a small orchestra of violins, or of violins with cellos, for example, but in the case of instrumental ensembles starting at higher levels (young people and adolescents) where there is already a basic mastery of the instrument, a discipline of study created and an adequate handling of solfège, then it is ideal to begin with duos and trios, as these groups will have other objectives, specific to the complexity of the level of study and the psychomotor development of the young student.

Once the characteristics of the possible ensembles have been proposed, it is time to look at the duration and frequency of the lessons. Observation and analysis showed that the practice of the subject requires at least one hour of work for small ensembles (duos, trios and quartets), which is similar to the approaches already seen by Agudiéz (1996) and Lorenzo (2018) in terms of class time.

Ideally, one hour would be available for small ensembles of up to 6 or 7 students. With less than an hour, it is impossible to develop this subject given that they have to take out instruments, tune them - and this is a task that should take time -, rehearse the repertoire calmly and correcting mistakes, suggesting musical ideas, analysing details, making themselves heard among themselves and working in subgroups. They should also clean and store the instrument afterwards (Lorenzo, 2018, p.59).

This aspect of duration must also consider the school levels and the ages at which the ensembles start, as young people and adolescents are already more skilled in the contact and handling of the instruments and, in many cases, are able to tune them by themselves. Depending on the characteristics of the schools, the programmes may propose different times for each subject. In some schools, solfège is practised on five working days, while ensembles (orchestra type) are given only once a week, as is the instrument. In fact, we are of the opinion that no lesson should last longer than the instrument lessons, which are the main objective of the training.

Based on what Lorenzo (2018) says about time, we consider that the frequency of the classes could be from one to two hours a week, which would be conditioned by the regulations in the syllabus, the capacity of the teachers and the structure of the school.

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The selection of repertoire is another controversial point even today. The tendency to observe different ensembles at mass cultural events and civic events has led some to defend - as the only option - regional and folkloric tradition as the main part of children's cultural education. Although these events do not correspond to professional training, but to the subject of artistic education in general primary and secondary schools, there are currently manifest tendencies in Latin American education systems that music education, even in specialised schools, can and should change the European tradition of using a "classical" repertoire to a nationalistic formative repertoire. To this end, contemporary composers have taken on the task of creating works to increase the children's catalogue of different instruments, with traditional thematic elements (which we consider, in any case, a real success for the development of Latin American culture).

This is an issue that we have logically seen overcome, for example, in the Soviet school towards the second half of the 20th century, where the children's repertoire for specialised music schools was created by working teams composed of composers, pedagogues, and methodologists who chose traditional and folk songs close to the essence of children and made the relevant didactic arrangements for the creation of a children's school.

This kind of proposal is understandable and praiseworthy for the formative development in the cultural sphere of children. The danger would be if it were to become the only option, and above all if it were to be applied to all the interrelated subjects (solfège, complementary piano, instrument, choir, in addition to the ensembles), as there would be an absence of the universal cultural vision in the formative perspective of the students; keeping the classical programmes already tested in force and complementing them with new didactic compositions would make it possible to enrich the repertoire and obtain pertinent and satisfactory results. However, and in the case we are dealing with, i.e. children's ensembles, we must consider that sometimes (and especially when it comes to ensembles of the same instrument), the function of the instruments in folk music is very diverse, and does not always correspond to the didactic proposals and the formative objectives; in the case of using this type of repertoire, we must be very attentive to the particular distribution of the voices, to the quality and the purposes of the musical arrangements.

Agudiez (1996) states that if there is a good relationship between the elements of the group, resolution is easy. Generally, teachers of fretted strings and woodwinds (mostly violinists and flautists) have works that can be accompanied by piano, but, depending on the technical and musical level, it is necessary to find those that have enough quality and musical dignity to favour the achievement of the objectives proposed in the programme. The need to differentiate the class of instruments with accompaniment from the class of ensembles has already been mentioned, and this also affects the selection of repertoire. It is desirable for children to be able to perform repertoire with at least two voices (even if accompanied by piano).

Lorenzo (2018), considers it important to motivate students by involving them in the choice of repertoire, suggesting the need to perform both traditional folk music from different cultures and the great masterpieces of classical music. For her, one of the great challenges is, precisely, the assignment of the repertoire to those ensembles that are non-traditional or similar in terms of timbre and family of instruments. It is here that the ability to adapt and arrange works with the professionalism of a methodologist, rather than simply transcribing notes, plays a fundamental role. In general, these transcriptions are made of folk and popular works, although also, to a lesser extent, of other pieces from the classical repertoire. In this case, the selection must respond to the methodological objectives and the motivation must be achieved by the artistic challenges aspired to in the ensemble, above all, when it is a question of children in the middle of their formative stage.

In community work, it would be desirable that the repertoire of the children's ensembles positions the children in congruence with the context. This forms them with values of identity and helps them to be happy and aware of their social role; in addition, it is up to the teachers and methodologists of the music schools to ensure that this repertoire, together with a more extensive and international one, is of sufficient quality to enable them to learn basic concepts that allow them to know, appreciate and interpret music with the discipline and rigour that will guide them in their academic training.

In the case of a mixed ensemble, it is necessary to be selective with the catalogue; even if a popular repertoire is used as a basis, it must be for several voices, there must be a balance of instrumental sound and arcades and fingerings must be worked on (for example with fretted strings), and/or phrasing, breathing, distributions and sound balances must be worked on: the skills learnt in the instrument class must be tried to complement each other in the development of the learning process.

An essential point when choosing the repertoire is the number of works to be performed, which in these initial levels should be a single work in a short format; other songs or other movements can gradually be incorporated if it is a classical work. Small musical forms in binary or ternary combinations and children's songs are ideal for this type of initial work, in the case of children's ensembles.

The assessment process in the subject is quite complex, as in the vast majority of the subjects that make up the curriculum; in this sense, according to Lorenzo (2018), it would be ideal if teachers from the same institution were to use a common assessment rubric, which would facilitate the assessment of learning. However, there is a need for clarity and precision in the objectives to be achieved per course, as well as a repertoire that, although broad, is appropriate for the achievement of the required competences.

Considering the above, assessment processes can be very different in each academic institution. In many cases, the programmes themselves cannot be totally objective in the definition of evaluative parameters when it comes to artistic creation or musical performance. Some elements can be pointed out, but their assessment by the evaluators will still have its shades of subjectivity, even in professional life and in competitions. This is not something to be concerned about at these early levels: for the children, the option of public performance is more than a necessary motivation for their growth. Playing in public and showing the results of their rehearsals and lessons is fun and can fulfil the objectives of the subject if it is taken into account that the important thing is the formative process and not the partial results.

Finally, it is necessary to address the profile of the teacher. According to Lorenzo (2018), the assignment of teachers for the subject is sometimes based on the criterion that if the ensemble is a string ensemble, the teacher should be a string teacher, if it is a wind ensemble, the teacher should be a wind teacher; it is worth asking, then, what happens with mixed ensembles? How many types of ensembles can exist and what should their specific characteristics be? From this point, it would be appropriate to ask what would be the ideal profile for the teacher guiding these ensembles?

The pedagogue has a fundamental role in the development of the class, in the sequence of learning and in the individual and collective results. From the above aspects and the proposed questions, it can be inferred that the teacher's profile must include certain general and specific knowledge related to the particularities of the instruments. Above all, the teacher must possess a general and formal musical culture that allows him/her to be selective in terms of the organisation of the class, the choice of the appropriate repertoire for each group, the make-up and nature of the groups, the correct analysis of the objectives and methodologies, and a perspective of the results to be expected.

In this sense, the teacher must have completed formal music studies, including a bachelor's degree where, among other subjects, he/she has had the necessary experience to know not only a specific instrument but also general complements of the families of instruments, the characteristics of the types of tuning, mastering musical forms, harmony, as well as artistic genres and styles. They must also have experience in ensemble practice (not to be confused with chamber music, which is in itself another specialisation and does not correspond to this level) and, of course, have studied pedagogical training in order to be able to handle educational work with children appropriately.

It is desirable in the current circumstances, that the teacher has basic knowledge of software and computer music programmes and can arrange, instrument, transcribe, orchestrate and create for didactic and specific purposes to meet the needs of each student. Creating a favourable climate for the development of the class, together with all of the above, will facilitate the experience and the academic evolution of the learner.

Methodological alternatives for the Instrumental Ensembles class at the Infant Level at UAA-UAZ.

The methodological alternatives suggested here are based on the analysis of the Study Plan for the Children's Level of the Academic Unit of Arts of the Autonomous University of Zacatecas, where the subjects, semesters, ages and instruments to be studied are defined.



Based on the constructivist educational model, it is proposed to carry out activities that encourage cooperative and collaborative learning, taking into account the level at which they are working. The class time established in the current curriculum map at UAA-UAZ is two hours per week divided into two sessions on different days; however, in the initial semesters, this could be reduced to 45 minutes per class, as the level of attention should be kept active at all times, whether playing or interacting in some other way.

Games, challenges, and fantasy stories are an excellent means of communication in the early ages. There are many initiatives to develop in the classroom, the pieces can be sung and solfeggio'd, the teacher can play them on the piano, emphasising each of the voices, and create simple variations that stimulate creativity in the child's playing, etc.

The teacher should have essential knowledge of the different types of instruments that make up their groups (in the case of several groups with different characteristics), as well as a basic knowledge of the piano, an instrument that should not be missing in the classroom. He/she will also have to help students with certain difficulties that they do not yet manage on their own, such as, for example, assembling and/or tuning some instruments.

In view of the research carried out, and with the knowledge of the curricular map of the children's level at the UAA-UAZ, it is proposed that those students who began studying at the regular age of 8 should start the instrumental ensemble class from the 7th semester (and not the 5th as it appears in the syllabus) after having been playing the instrument for several years. In the same way, and in view of the irregularities that exist in entry, those who enter at an older age should take the subject after at least two years of practising their instrument, or when the teacher of the particular instrument considers them suitable, and they also have complementary classes such as solfège and children's choral practice. This may lead them, without detriment to their development, not to take ensembles until the basic level, after the age of 12.

Ensemble practice should not be compulsory if the instrumental teacher considers that the pupil is not yet ready for it, however, the pupil should continue consecutively, once it has been started, regardless of the level at which he/she is at present.

It is suggested that in no case in these children's ensembles should pupils be assessed in a particular way, nor should they receive failing grades, as this initial practice should foster positive values in all aspects of artistic development and human growth.

The composition of the groups should be age-appropriate and take into account the years of studies completed, so the ensembles should be small orchestras or ensembles of the same instrument or family for the children, it is recommended to form several groups that correspond to the characteristics and developmental needs of the students.

If the minimum age of entry allowed at the children's level at UAA-UAZ is 8 years old, it should be considered that, by the 7th semester, the age will be around 11 years old, which is an acceptable time for the beginning of the ensembles. Therefore, and considering that the enrolment may be small at these levels, it is suggested that the groups be made, according to the instruments studied at this level, as follows:

- Flute ensembles; or flute and clarinet ensembles; saxophone ensemble; or woodwind ensembles.
- Trumpet ensembles; or brass ensembles.
- Four-hand piano ensembles (the piano may also be present in all ensembles as a harmonic instrument).
- Violin ensembles; cello ensembles, or string ensembles (rarely do any students appear with a viola at this level, since, methodologically, the children here who could be future violists must be playing the violin in order to lay the technical foundations of their development properly).

As the semesters progress, the groups may be mixed, within a congruent methodological order, and may be larger in number.

The groups can be made up of students from different semesters as long as the levels of skill achieved with the instrument itself, age empathy and cultural preferences are valued, so that the ensemble teachers should be in direct contact with the teachers who teach the instrument class when creating them so that there is homogeneity in the collaborative work.

Although the teacher assumes full responsibility for the selection of a methodologically appropriate repertoire for the group at the corresponding level, he or she can investigate and get to know the characteristics of the students, their preferences and musical tastes, without losing sight of the fact that the aim is to educate and form an artistic and aesthetic culture in accordance with age and cognitive development, as well as to prepare the pupil to grow gradually in his or her social and cultural development. The foundations of culture and education are also acquired from the beginning of the schooling process.

Another aspect to consider is that the selected works should be of short duration and sufficiently attractive to stimulate joint performance. All the voices in the work should have equal significance in terms of learning, so that the selection of repertoire will be rigorous in meeting the objectives.

The teacher will be aware that the repertoire should be a motivational source for the student, as well as a bridge to be crossed in order to achieve learning, never the product itself; on occasions it will be necessary for the teacher to adapt, transcribe and instrument some of the music. The practice of repetition in class should respond to the search for artistic quality and the development of creativity.

## Conclusions

Music education in general education differs from music teaching at the children's level in a school of the arts fundamentally in terms of objectives, aims and methodology.

The contradictions in the pedagogical process of instrumental ensemble classes, found in practice or inferred from the articles analysed, indicate the need to perfect aspects of a curricular and methodological nature for the infant level.

The methodological proposals offered for instrumental ensemble classes at this level are aimed at improving the organisation of the process and the methodological design of the classes.

## References

Agudiéz, E. (1996). Reflexiones sobre la enseñanza de la música de cámara. *Monográfico, Quolibet*, (4), 67-72. <http://hdl.handle.net/10017/22201>.

Águila, D., Núñez, M., & Raquimán, P. (2011). Las artes en el currículo escolar. En A. Giráldez, & L. Pimentel. En Giráldez, A. y Pimentel, L. (Coord.). *Educación Artística, cultura y ciudadanía. De la teoría a la práctica*. Madrid: Organización de Estados Iberoamericanos para la Educación, la Ciencia y la Cultura (OIE). pp. 21-30.

Conservatorio Municipal Elemental de Música de Herrera. (2009). *Programación de Conjunto Instrumental*. Recuperado 10 de noviembre de 2022, de <http://www.conservatorioherrera/Programacion-de-Conjunto-instrumental.pdf>.

Fundación Yehudi Menuhin España. (2004). *Memoria de Actividades 2004* [Sitio web]. Recuperado 20 de noviembre de 2020, de <https://fundacionyehudimenuhin.org/wp-content/uploads/2020/06/2-Memoria04.pdf>.

Juan-Carvajal, M.L. & Vdovina, M. (2020). Interactions in children's musical teaching with professional and artistic educative ends. *ECORFAN Journal-Republic of Colombia*, 6(11), 1-13. <https://doi.org/10.35429/EJC.2020.11.6.1.13>.

Lizárraga, P. (2012). *El aprendizaje de la música* (Vol. 9). México: Universidad Veracruzana. Biblioteca Musical Mínima.

Lorenzo, M. (2018). La docencia de la música de conjunto en las Escuelas de Música. En busca de soluciones a su problemática dentro y fuera del aula. *ARTSEDUCA*, (20), 44-67. <https://www.e-revistas.uji.es/index.php/artseduca/article/view/3386/2784>.

Lozano, J. (2007). *Bases psicológicas y diseño curricular para el grado elemental de música* [Tesis doctoral, Universitat de Valencia]. <https://roderic.uv.es/bitstream/handle/10550/15422/lozano.pdf?sequence=1&isAllowed=y>.

Piaget, J. (1977). *Psicología y pedagogía* (6ta ed.). (F. J. Fernández, Trad.) Barcelona, España: Ariel.  
<https://www.uv.mx/rmipe/files/2017/02/Psicologia-y-Pedagogia.pdf>

Piaget, J. (1991). *Seis estudios de Psicología*. (J. Marfá, Trad.). Barcelona: Editorial Labor.  
[http://dinterrondonia2010.pbworks.com/f/Jean\\_Piaget\\_Seis\\_estudios\\_de\\_Psicologia.pdf](http://dinterrondonia2010.pbworks.com/f/Jean_Piaget_Seis_estudios_de_Psicologia.pdf).

Serrano, J. M., & Pons, R. M. (2011). El constructivismo hoy: enfoques constructivistas en educación. *Revista Electrónica de Investigación Educativa*, 13(1), 1-27.  
<https://redie.uabc.mx/redie/article/view/268/431>

Unidad Académica de Artes (2011). Programa Educativo. Licenciatura en Música con énfasis en instrumento. Zacatecas: Universidad Autónoma de Zacatecas.

Unidad Académica de Artes. (s.f). *Bienvenidos* [Sitio web]. Recuperado 10 de noviembre de 2020, de <https://artes.uaz.edu.mx/>.

Vernia-Carrasco, A. M. (2019). Educación musical en el panorama español. Contexto, niveles y perfiles educativo. *Didáctica*, (7), 17-29.  
<https://revistes.ub.edu/index.php/didacticae/article/view/28920>.

**Ethnotourism cultural exchange in the municipality of Temoaya****Etnoturismo intercambio cultural en el municipio de Temoaya**

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**Abstract**

In the State of Mexico there are indigenous groups that settled in specific areas of the territory, each of these groups has its own characteristics that distinguish them from others, forming their own customs and traditions that have prevailed until today. In this work we studied the central region of the state of Mexico, where the Otomi group is located, so we studied the municipality of Temoaya, considered "the homeland of the Otomi culture". Therefore, it was decided to conduct a field study, through research and exploration of resources, in order to classify them according to their importance and relevance within the culture. For this information we used the design of an ethnotourism route, taking as a reference point the existing cultural manifestations of the municipality of Temoaya. As an activity framed in ethnotourism, since the design will be based on the way of life and set of knowledge, beliefs, experiences, practices, natural and cultural attractions and ethnic skills manifested in their Otomi culture, as part of their ancestral worldview.

**Resumen**

En el Estado de México hay grupos indígenas que se establecieron en zonas específicas del territorio, cada uno de estos grupos cuenta con sus propias características que las distinguen de los demás, formando sus propias costumbres y tradiciones que han prevalecido hasta la actualidad. En el presente trabajo se estudió la región centro del estado de México, en donde se encuentra el grupo otomí, por lo que se estudió el municipio de Temoaya, considerado "la patria de la cultura otomí". Por lo anterior se optó por realizar un estudio de campo, por medio de la investigación y exploración de los recursos, esto con el fin de poder clasificarlos según su importancia y relevancia dentro de la cultura. Para la presente información se utilizó el diseño de una ruta de etnoturismo, tomando como punto de referencia las manifestaciones culturales existentes del municipio de Temoaya. Como una actividad enmarcada en el etnoturismo, ya que el diseño se basará en el modo de vida y conjunto de conocimientos, creencias, experiencias, prácticas, atractivos natural y cultural y aptitudes étnicas manifestadas en su cultura Otomí, como parte de su cosmovisión ancestral.

**Ethnotourism, Temoaya, Tourism****Etnoturismo, Temoaya, Turismo**

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**Introduction**

The cultural diversity in the State of Mexico is very extensive and enriching, due to its total integration of 20 indigenous languages and 5 native languages such as Nahuatl, Mazahua, Matlazinca, Tlahuica and Otomi that cover the 43 municipalities of the State of Mexico whose data appear in the State Council for the Integral Development of Indigenous Peoples CEDIPIEM. They are important because each one of them brings us traditions, customs, languages, forms of dress and gastronomy. Being part of the socio-cultural mosaic that gives us identity and plurality without them our cultural wealth would be scarce and limited (Cantero, 2012).

It is possible to identify the negative factors that ethnic groups possess at the national level, such is the case of the management of reducing cultures to snapshots of brochures, the excessive use and deterioration of their main attractions and facilities, the lack of ethical behavior by considering local residents as oddities and not as people, their culture and identity are being altered as a result of migratory flows where they stop speaking their native language and no longer wear their typical costumes, and finally the lack of resources that leads to marginality (Mastny, 2003, p.164).

Temoaya is a municipality in the central zone of the State of Mexico, with an area of 190.34km<sup>2</sup>. And a population of just over 90 thousand inhabitants, with a strong presence of the Otomí indigenous community (INAFED, 2016).

They are dedicated to the embroidery and weaving of Otomi rugs where they offer decorative designs of different ethnicities (Huichol, Mazahua, Tepehua, Mazatec and Otomi). Currently there are fewer weavers, there is a loss of interest and they no longer preserve their traditions such as traditional medicine, little employment is generated, the sale of their handicrafts is poorly paid, the use of the Otomi language has decreased, and they lose their identity and culture when they leave their municipality.

In terms of tourist attractions, there is an Otomi ceremonial center of national architecture of indigenous spirit, a place to witness the ceremonies and visit the Otomi museum. Other attractions of Temoaya are its Christian churches, temazcales, lakes where it has wooded and natural landscapes. Therefore, the working hypothesis was implemented: "If the ethnotourism route is implemented in the municipality of Temoaya, tourism activity will be detonated and the conservation of customs and traditions of the local ethnic group will be favored, improving local development".

**Development***Indigenous peoples*

Indigenous peoples are heirs and practitioners of unique cultures that have preserved social, cultural, economic and political characteristics. They are characterized by being different from the dominant societies in which they live.

According to the National Institute of Anthropology and History (INAH, 2018), an indigenous people is that human group that preserves pre-Hispanic cultural traits.

It is considered as a historical community, with internal structure, that occupies or has occupied a territory, that shares a language or tongue and has a culture differentiated (generally) to the rest of the society that makes up the country.

Because of the diversity of indigenous peoples, no official definition of "indigenous" has been adopted by any agency of the United Nations system. Instead, the system has developed a modern interpretation of this term based on the following elements:

- Free-identification as a member of an indigenous people on a personal level and accepted by the community as its member.
- Historical continuity with pre-colonial and pre-settlement societies.
- Strong link to the surrounding territories and natural resources.

- Well-determined social, economic or political systems Differentiated language, culture and beliefs, they are an integral part of groups that are not predominant in society.
- They decide to preserve and reproduce their ways of life and their ancestral systems because they are distinct peoples and communities.

*Culture and identity*

Indigenous peoples possess particular languages, knowledge and belief systems and have significant knowledge of practices related to the sustainable management of natural resources. Their relationship with the land and the traditional use they make of it have their own particularity. Their ancestral lands are of fundamental importance to their collective physical and cultural survival as peoples. Indigenous peoples have their own concepts of development, based on their traditional values, their conception of the world, their needs and their priorities (Masaquiza, s. f, par.4).

*Problems of ethnic groups in Mexico*

Mexican indigenous communities suffer more from poverty and lack of educational opportunities, although the degrees of discrimination vary in the different states of the country.

Many of the most serious problems suffered by this group of ethnic groups are poverty and marginalization, the low quality of educational and health services, the lack of democracy in their political life and the lack of respect for their human rights. Indigenous groups are so diverse and plural that they have different cultures in different regions, in the countryside and in the city. These indigenous peoples of Mexico represent a local and community autonomy, towards the respect of their human rights and to defend their ways of thinking and their culture (Navarrete ,2008, p.136,137).

*Indigenous tourism*

It is the activity where indigenous communities and peoples offer visitors the opportunity to share their traditions, uses and customs, which allows revaluing and preserving their cultural elements in addition to the knowledge of their identity, in daily interaction with the environment in a sustainable manner. At the same time, an integral community development is promoted in a conscious, responsible and supportive manner. Indigenous tourism has the characteristic of having a participatory unit to conserve and protect indigenous peoples within their environmental regions and their ancestral cosmovision (Morales, 2008, p.133).

*Ethnotourism*

According to SECTUR (2004), it stipulates that Ethnotourism is carried out when trips are related to indigenous peoples and their habitat in order to learn, interact, observe their culture and traditions. Ethnotourism can be defined as specialized and directed tourism that is carried out in the territories of ethnic groups for cultural, educational and recreational purposes that allows to learn about the cultural values, ways of life, environmental surroundings, customs of ethnic groups, as well as aspects of their history (Jafari, 2005, p.125).

*Ethnotourism activities*

SECTUR, (2004, p.125) lists nine activities that are practiced in this tourism segment.

Folklore and cultural activities: set of beliefs, practices and customs that are traditional of a people or culture, with the objective of creating, disseminating or promoting the culture of a group or social sector.
Agrotourism: Visit to agricultural areas of native peoples and peasant societies that share the idiosyncrasy, agricultural techniques and cultural manifestations.
Dialect learning: Consists of participants learning dialects of the host community, as well as their customs and beliefs.
Eco Archeology: consists of making tourist tours in archeological sites to learn about the cultural past of rural tourist destinations.
Rural Photography: It is established to capture images of the different cultural manifestations and landscapes within the community.
Ancestral medicine: Allows to know and participate in the rescue, preparation and use of traditional medicine.
Religious practices: The way people live together is often a reflection of their worldview and beliefs.
Gastronomic workshop: Consists of the preparation and tasting of typical food in the host communities, showing their gastronomic diversity.

**Table 1** Ethnotourism activities

Source: Own elaboration based on information from SECTUR (2004).

**Methodology to be developed**

The present research is a descriptive exploratory study (Seltz, 1965), through which the way in which the processes between the Otomí cultural tradition and its incorporation as a new productive strategy associated with tourism is investigated. Within it, surveys, interviews and field visits are applied, which allow obtaining truthful information of the reality through the analysis of the problems that arise during the time of the research.

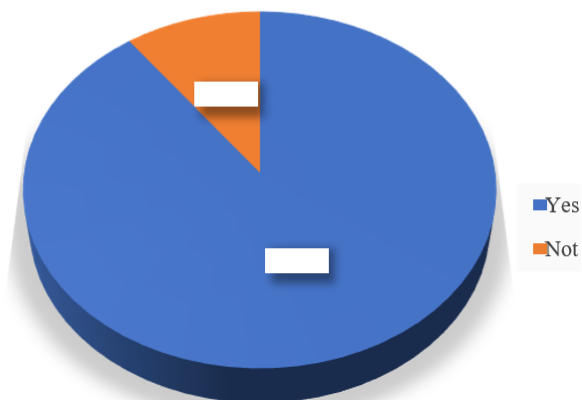
The choice of these types of research is justified by the fact that field research collects information through surveys among residents to learn about the main problems that afflict the locality, and through descriptive research, surveys and interviews are carried out to identify and describe activities with tourism potential and thus define development proposals that are conducive to generate a positive impact on the community.

Finally, for data collection, interviews, field visits and surveys will be used as instruments to obtain qualitative and quantitative data. As a reference, the use of qualitative tools is considered, which allows a more personal and deeper approach to the communities of Otomí groups.

**Results**

The following are the results obtained through the surveys applied by means of a Google form and others directly to the local population and tourists:

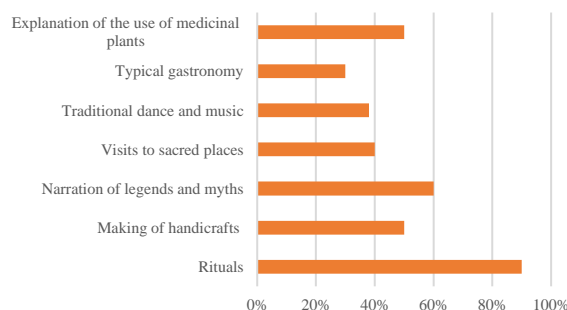
¿If you had the opportunity to participate in a tourism project in the municipality, would you participate?



**Graphic 1** Participation in the project  
Source: Own elaboration

90% of the population is interested in participating in the tourism project and the remaining 10% of the population is not interested in participating, therefore, most people are interested in participating in the project within their municipality.

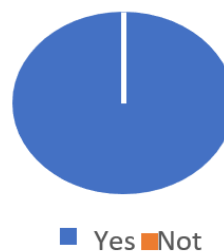
Order of importance from 1 to 7 What activities would you like to see as part of a cultural route?



**Figure 1** Activities for a cultural route  
Source: Own elaboration

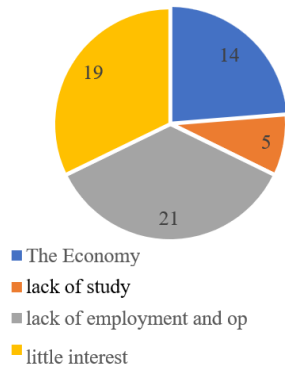
The order of importance of the activities for the cultural route with 23.7% the realization of handicrafts and 25.4% typical gastronomy, 20.3% the visit to sacred places and 25.4% traditional dance and music, while 23.7% narration of legends and myths and 10.12% the explanation of the use of medicinal plants and finally with 66.1% the rituals. Based on the results, it can be said that the product will have a wide range of activities since it generates an interest for them to carry out and learn more about the activities that would be offered within the municipality of Temoaya.

Do you think that the visit of tourists benefits the economy of your inhabitants?



**Graphic 2** Tourists  
Source: Own elaboration

100% of the surveyed population supports the visit of tourists because they obtain economic benefits for their inhabitants. This allows us to consider that the project to be carried out will be of great help to the inhabitants and indigenous groups.



**Graphic 3** Participation of the Otomí group in tourism development

Source: Own elaboration

The population surveyed 36% of the people surveyed because of the lack of employment and opportunities, 32% because of little interest and 24% because of the economy and finally 8% because of the lack of studies. Based on the results obtained, the inhabitants of indigenous groups prevent them from participating in tourism development due to the lack of employment and opportunities in their municipality, which will allow us to have a broad participation in the tourism route within the municipality of Temoaya.

*Proposed Ethno-tourist Route of Temoaya*

We intend to develop a route that has as its main theme Ethnic tourism that offers tourists the opportunity to interact with members of communities of Otomi indigenous groups, which allows the development of various activities of an experiential nature on a frequent basis by the inhabitants.

*Type of route*

It is proposed that the route be guided by local agents of Otomí groups, who should initially have training and education in order to offer quality services, complementing the displacement with promotional material that guides on the various attractions and activities offered by the ethno-tourist route.

*Name and Slogan*

Since this is an ethnotourism route, the name "OtomíTur" was established to represent the indigenous groups and all the activities that will be related to tourism.



**Figure 2** Name and Slogan

Source: Own elaboration

*Tourism activities*

Activity	Description	Where	Image
Cultural Tours	• To learn about the history of the municipality of Temoaya	Churches, temples and tourist attractions	
Interpretive Trail	• Traveling along a predefined path equipped with information, signs or guided by nature interpreters whose specific purpose is the knowledge of a natural environment.	• Otomi ceremonial center • La Ventoraza farm	
Artisan workshops	The experience consists of learning and participating in the elaboration of different handicrafts.	• House of artisans of Otomis groups	
Recreational fishing	• It is carried out personally or in a team of people for leisure, in rivers, springs or lakes.	• hatcheries such as la aventuroza farm	
Environmental education workshop	Didactic activities in contact with nature, involving as much as possible the local population, with the purpose of sensitizing and raising awareness among participants.	• Otomi ceremonial center	
Mystical beliefs	To live the experience of knowing and participating in the richness of the beliefs, legends and rituals of the Otomi people.	• Equinox Day at Otomi ceremonial center	
Dialects learning	Learn the dialect of the place visited, as well as its customs and social organization.	• Otomi ethnic groups	
Ethnotourism	• Engage with indigenous peoples and their habitat in order to learn from their culture and traditions.	Municipality of Temoaya in the patron saint festivities, day of the dead and the festivity of the queen of the mat.	

**Table 2** Tourism activities

Source: Own elaboration



Proposed routes and itineraries

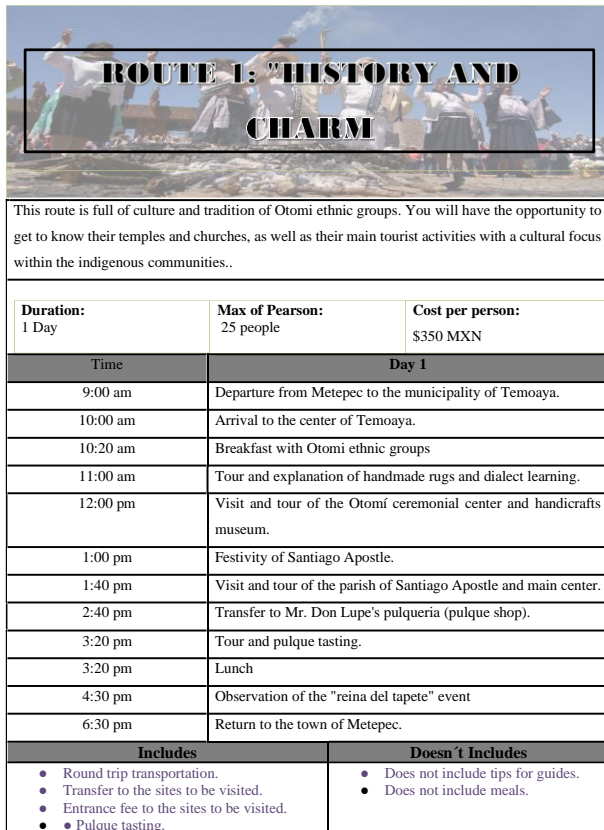


Figure 3 Route 1 Otomí history and charm  
Source: Own elaboration

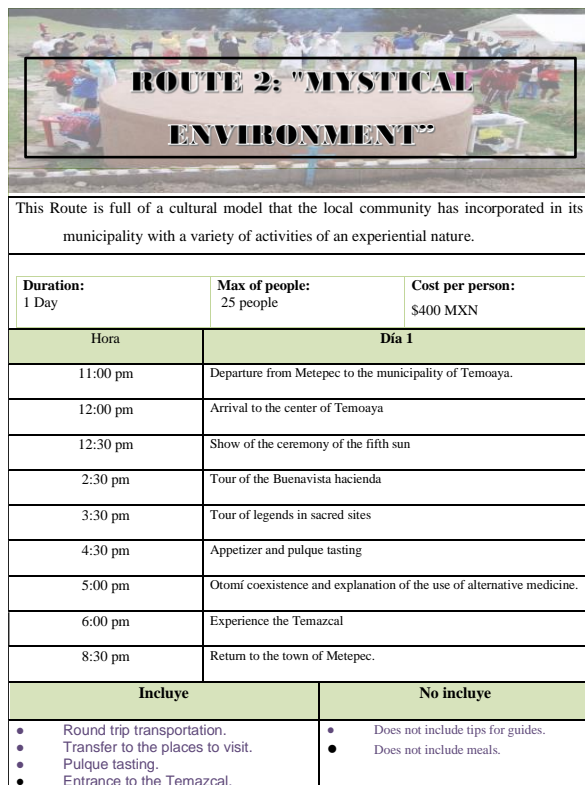


Figure 4 Route 2. Mystical Environment  
Source: Own elaboration

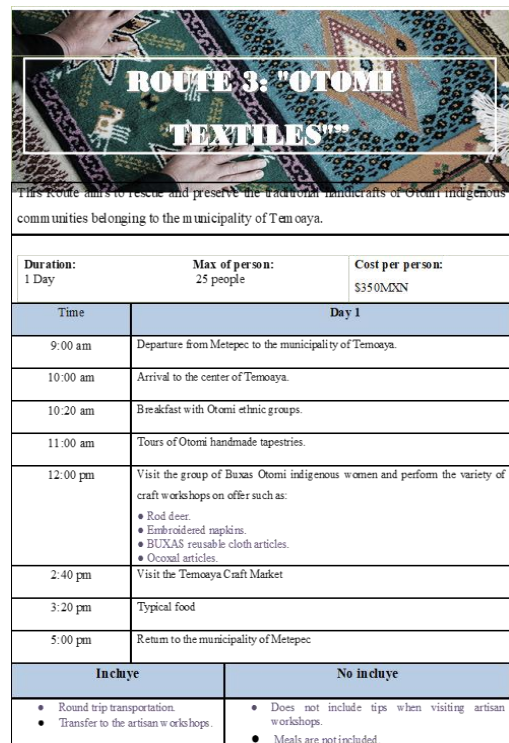


Figure 5 Route 3 Otomí textiles  
Source: Own elaboration

Conclusions

The proposal for an ethno-tourist route in the municipality of Temoaya has a high level of acceptance among both national and local tourists who show great interest in developing activities with the community and actively participate in them, since the Otomí ethnic group wishes to be involved in the ethno-tourist route because, without a doubt, it has a great cultural richness and the communities belonging to it have the potential to actively participate in the route.

The design of an ethno-tourist route captures the attention of travelers, who are looking for new alternatives to a tourist product that shows the culture of the area.

This project promotes the recognition of the Otomí ethnic group by referring to the locality of indigenous groups in the municipality of Temoaya.

**References**

- Acuña, D. & Gañán, P. & Arango, S. (2019). Etnoturismo: una aproximación a las oportunidades y amenazas que implica para las culturas indígenas. *Cuadernos de Turismo*, (43), pp. 17-38. Recuperado desde: <https://revistas.um.es/turismo/article/view/374681/261761>.
- Cárdenas, H. (2016). Turismo étnico en las comunidades indígenas y los atractivos de sur de Colombia. *Revista Intersección: Eventos, turismo, gastronomía y moda*. Año 2, N3. ISSN 2357 -5875. Tecnología en Organización de Eventos. Facultad de Comunicación Audiovisual. Grupo de Investigación en Comunicación-GIC. Politécnico Colombiano
- Jaime Isaza Cadavid. Medellín- Colombia & Facultad de Ciencias de la Comunicación de la Universidad Autónoma de San Luis Potosí-UASLP-México. Págs. 61-71. Obtenido de <https://www.politecnicojic.edu.co/images/downloads/publicaciones/revista-interseccion/interseccion-03/pdf/turismo-etnico.pdf>.
- Delgado, J. (2018). Desarrollo del etnoturismo en las comunidades indígenas yaguas y Macagua de las amazonas (Título profesional). Facultad de ciencias Administrativas, Bogotá D.C. Recuperado de [https://repository.libertadores.edu.co/bitstream/handle/11371/1991/delgado\\_jenny\\_2018.pdf](https://repository.libertadores.edu.co/bitstream/handle/11371/1991/delgado_jenny_2018.pdf)
- García, J. (2013). Cálculo de tamaño de la muestra. Obtenido de [http://www.scielo.org.mx/scielo.php?script=sci\\_arttext&pid=S2007-50572013000400007](http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S2007-50572013000400007)
- Guevara, J. (2012). Fundamentos del etnoturismo y su aporte en la promoción turística sostenible de costa rica. Universidad para la cooperación de <https://biblioteca.uci.ac.cr/Tesis/PFGMGTS91.pdf>
- INEGI. (2020). Población. Obtenido de <https://www.inegi.org.mx/default.html>.
- Morales, M. (2008). Etnoturismo o Turismo Indígena. Artículo Instituto Politécnico Nacional, Escuela Superior de Turismo, 4(5),125-136. Recuperado de <http://www.teoriaypraxis.uqroo.mx/doctos/Numero5/Morales.pdf> .
- Palacios, P. (2016). Redes de conocimiento y pueblos indígenas de Latinoamérica. En Cernadas, A. et al. (Ed) *El hilo de Ariadna en la sociedad del conocimiento* (pp.4-20). CEASGA. Disponible en <file:///C:/Users/x/Downloads/El%20Hilo%20de%20Ariadna%20en%20la%20Sociedad%20del%20Conocimiento.pdf>
- Pereiro, X. (2014). Reflexión antropológica sobre el turismo indígena. Universidad de Trás-os-Montes e Alto Douro, Vila Real, Portugal. 2015, pp. 18-35 Recuperado de <http://www.scielo.org.mx/pdf/desacatos/n47/n47a2.pdf>
- Pilquiman, M. (2018). Turismo, actores e imaginarios- experiencias de turismo comunitario de comunidades mapuche región de Los Ríos-Chile. En *Tendencias de investigación en Turismo de América Latina Estudio de Casos* (1.ª ed., pp. 64-76). Ecuador: Facultad de Ciencias Humanas. Disponible en [http://www.pasosonline.org/Publicados/pasos\\_difunde/Clait2018.pdf](http://www.pasosonline.org/Publicados/pasos_difunde/Clait2018.pdf) .
- Salvador, C. (2011). Proyecto etnoturismo indígena en la selva de las cataratas. Turismo sostenible y desarrollo local. República de Argentina. Obtenido de [https://issuu.com/mauricioalvez/docs/etnoturismo\\_indigena\\_en\\_la\\_selva\\_de\\_cataratas](https://issuu.com/mauricioalvez/docs/etnoturismo_indigena_en_la_selva_de_cataratas)
- Zarate, P. (2016). Diseño de servicios una estrategia para el etnoturismo. Escuela de Diseño Industrial, Facultad de Artes, Universidad Nacional de Colombia. Bogotá, Colombia, 19(2), 289-301. Recuperado de <http://bdigital.unal.edu.co/65469/1/54514-339934-2-PB.pdf>.

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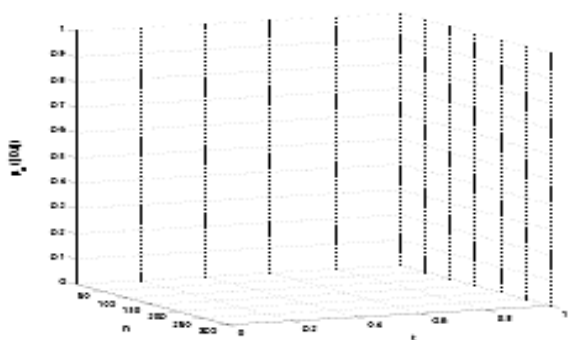
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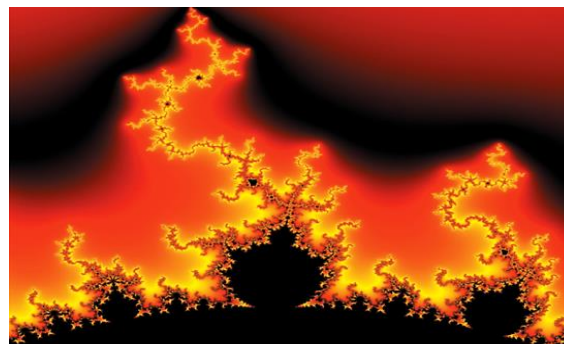
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