

## Coping, Personal and Family Life of Professors who belong to the National System of Researchers of a University of the South of México

### Afrontamiento, vida personal y familiar de profesores que pertenecen al Sistema Nacional de Investigadores (SNI) de una universidad del sureste de México

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## Summary

This study aimed to know the self-perception of the dimensions of coping, as well as personal and family life of researchers belonging to the National System of Researchers (SNI) of a public university in southeastern, Mexico. It was developed from a quantitative, descriptive-exploratory perspective. The study was made up of 121 (96%) of the researchers assigned to the SNI, of which 72 (59.5%) are men (M age = 43.3, SD = 9.5 years) and 49 (40.5%) women (M age = 44.2, DE = 8.4 years). The information-gathering instrument was a questionnaire that was answered with a Likert scale, as well as three open questions. It was found that the members of the SNI of the University of the study are young, and have mostly recognition at level I. In relation to the dimensions of coping and personal and family life, the subjects are almost always satisfied with the variables associated with these dimensions. In sum, the factors that influence their permanence or admission to the SNI, are the skills they possess, the interest, the family and the preparation they received in the field of research.

**Keywords:** Researcher; University; Family Influence; Goal Setting.

## Resumen

El presente estudio tuvo como objetivo conocer la autopercepción de las dimensiones de afrontamiento, vida personal y familiar de investigadores que pertenecen al Sistema Nacional de Investigadores (SNI) de una universidad pública del sureste de México. Se desarrolló desde una perspectiva cuantitativa, descriptiva-exploratoria. El estudio estuvo conformado por 121 (96%) de los investigadores adscritos al SNI, de los cuales 72 (59.5%) son hombres (M edad = 43.3, DE = 9.5 años) y 49 (40.5%) mujeres (M edad = 44.2, DE = 8.4 años). El instrumento de recolección de la información fue un cuestionario con escala tipo Likert, así como tres preguntas abiertas. Se encontró que los miembros del SNI de la Universidad en estudio son jóvenes y tienen mayormente reconocimiento en el nivel I. En relación a las dimensiones de afrontamiento, vida personal y familiar, los sujetos se encuentran satisfechos casi siempre con las variables asociadas a estas dimensiones. En suma, los factores que influyen en su permanencia o ingreso al SNI son las habilidades que poseen, el interés, la familia y la preparación que recibieron en el campo de la investigación.

**Palabras clave:** Investigador; Universidad; Influencia familiar; Definición de objetivos.

## Introducción

Educational research in Mexico has been approached from different perspectives: its epistemology (Martínez, 2015; Pons and Cabrera, 2013; Vega, 2013), the recovery of its historical evolution, state diagnoses and evaluations (López et al 2013; Maggi, 2013; Martínez, 2015), the analysis of policy relevance and funding for educational research (Maggi, 2013), as well as (also) the training of educational researchers (Sañudo, 2013; Schmelkes, 2013). In the same vein, and among other aspects, the aim is to understand the conditions of production and management of educational knowledge in institutions (Perales et al 2013; Vergara, 2013).

Although it is true that there are conditions that hinder the scientific production of academics, there are still few empirical studies on the subject (Camarillo, 2015; Cárdenas, 2015; Morales, 2007; Vera, 2018; Zamora et al, 2009). The final aim is to approach researchers who represent the critical mass, generators of knowledge and innovation in the country, from another perspective in order to open up new avenues in educational research. In the search for studies that approach professors from a family and personal perspective, very few works directly related to the object of research were found.

Camarillo's study (2015), refers to a qualitative research, through the Fundamentals Theory, whose purpose was to make a comparison of the experiences, problems and interpretations of full-time teachers (PTC) of two public universities in Northwest Mexico and the evaluation of their academic work by the SNI, the Program for Stimulating Teaching Performance (ESDEPED) and the Program for Improving Teachers (PRODEP). The results point to various situations, including: the anxiety and fear experienced by academics during the evaluation process; concern about the position as first author in publications; the inexorability of academic time; publication in journals with an impact factor; and the meaning of differences in doing research from different institutional settings.

Similarly, the qualitative work developed by Cárdenas (2015) "Motivations for joining the NIS. A case study with young researchers" had the purpose of knowing the motivations, stimuli, or factors that have originated entering the NIS. Among its findings, the presence of six types of motivations stands out: symbolic, economic, professional, scientific, social and acquired. At the same time, the figure of the trainers stands out as one of the main elements that encouraged these researchers to enter the system; also, that the educational policies and the guidelines of the scientific profession give rise to this motivation in an imposed way. The absence of better salary and working conditions, the recognition of peers and the economic stimulus, were the motivations that had more weight for these researchers to want to be part of the NIS.

The article by Morales (2007) "Entre la vida académica y la vida familiar: Retos y estrategias de investigadores del sur de México" is a study carried out at the Colegio de la Frontera Sur (ECOSUR), Mexico; in which the researchers' academic productivity data is compared with that of the female researchers. The variables under study were: personal life, academic life, time spent at home, and overall life satisfaction. The most outstanding results were the absence of significant differences between men and women, despite the fact that the latter spend eight hours on household tasks. Likewise, it was found that 73% of the respondents suffered from stress-related problems (depression, anxiety, insomnia, herpes zoster, back pain, among others).

The work carried out by Vera (2018), in which through various sources (documentary analysis, semi-structured interviews in four Mexican public universities and in-depth interviews) identified four adverse effects for researchers, derived from the policies and requirements of Higher Education Institutions (HEI): a) productivism and conspiracy against quality: in which he pointed out that the rates of evaluation give more weight to the quantity than to the quality of what they produce, and whose result has led to projects that are not ambitious and long term; b) reductionism and saturation of evaluators: b) reductionism and saturation of evaluators: the members of the evaluation commissions reward those who have a large number of finished products; c) quantum physics and numerology: rewarding numerical indicators and obsessive dependence on measurement; d) clientelist academia and evaluation simulation: referring to the existence of opaque evaluations, which benefit a few.

Another relevant study was the work of Zamora et al (2009), "Análisis de las funciones del profesorado universitario y sus limitaciones para realizar investigación", in which they investigate the functions of university teachers, as well as the causes and limitations to carry out research in the Universidad Tecnológica de San Juan del Río (UTSJR), Querétaro, Mexico. The findings report that 81% of the CTPs have teaching activities in other HEIs outside the hours of the UTSJR, which restricts their research productivity. With respect to the limitations of access to the NIS, the main difficulties faced by teachers are bureaucratic procedures, workload and diversification of activities. Only 16% of those surveyed published in refereed journals, productivity was limited to 18 publications over 9 years. Teachers spend a range of two to five hours doing research, but this activity is subject to planning and teaching.

Another research that addresses the university teacher, but with a psychological perspective, is the work of González et al (2014), "Performance, stress, burnout and personal variables of university teachers", in a Mexican university. The objectives of the research were to

know the students' perception about their teachers' performance, to investigate the perceived stress, to examine whether the teacher perceived himself as lacking professional recognition and to determine which personal variables were related to the level of perceived stress, burnout and teacher performance. The sample was made up of 100 professors, and the results of their performance assessment, administered to students, were examined. The results showed significant and negative correlations of stress with age, seniority and teaching experience; while lack of teacher recognition and low salaries were the indicators with higher means.

With the exception of the above studies, the remaining research focused on upper secondary teachers (Amador et al, 2014); social educators (Blanch et al, 2002); secondary teachers (Martínez, 2015); and teachers of all educational levels -except university levels- (Esteras et al, 2014).

In sum, we found 10 investigations related to the family and personal life of educational actors. The fact that we found few studies on NIS member researchers under these perspectives shows the originality of this research.

## **Development**

### ***Promotion of research in Mexico.***

The National Council for Science and Technology (CONACYT), is the body that promotes research in Mexico, one of its instances is the National System of Researchers (SNI) that recognizes the quality of scientific and technological research and grants scholarships according to the scientific productivity of its members. To this end, the distinctions conferred by the SNI are "classified into three categories: I. National Researcher Candidate; II. National Researcher, with three levels; and, III. National Investigator Emeritus" (CONACYT, 2018). The NIS brings together the intellectual human resources that demonstrate the best vocation and greatest commitment to creating or developing research in science or technology (Flores, 2014; Reyes and Suriñachi, 2012).

Membership in the NIS is synonymous with prestige and quality among the professors who are part of the country's HEIs. On a personal level, the researcher who is a member of the NIS may receive preferential treatment, reflected in the provision of spaces and equipment, incentives within an institution such as: academic discharges, granting of benefits and economic support, appointment and recognition as an evaluator or accreditor of processes for being a quality researcher.

The NIS is a transcendental program in the technological, scientific and educational development in our country. The main trainer of researchers is the public university, among the most representative institutions in Mexico in this sense are the Universidad Nacional Autónoma de México (UNAM) which contributes to the SNI, about 17% of researchers, and other institutions such as the Universidad Autónoma Metropolitana 4.3% and the Instituto Politécnico Nacional 4.4% (Vega, 2012).

The researcher who is part of this body acquires national and international prestige, and a privileged place in the institution of affiliation. To enter this instance, academic discipline, vision, clear goals and collaborative work are required, among other elements, in order to comply with the criteria required by the NIS. In addition, the working and institutional conditions are not always ideal, so that they limit or slow down the incorporation to this System (Zamora et al, 2009). However, despite these difficulties, there seem to be elements that encourage researchers to make an effort to join the SIN, but it is not known what personal and family conditions contribute to entering or remaining in the SNI.

## Research in Tabasco

The National Ranking of Science, Technology and Innovation (CTI) 2013 developed by the Foro Consultivo, Científico y Tecnológico A.C. (FCCyT), aims to create a synthetic measure that describes the strengths, opportunities and weaknesses of each of the states of the Mexican Republic on the subject of STI, this ranking is divided into 10 dimensions of which we are interested in Dimension 3. Within this dimension Tabasco is positioned in the antepenultimate place in Science, Technology and Innovation (STI) (Foro Consultivo Científico y Tecnológico, 2014).

On the other hand, regarding members in the National System of Researchers, the entity has 192 current researchers in the SNI (CONACYT, 2017). Specifically, the Universidad Juárez Autónoma de Tabasco (UJAT, 2018) concentrates the majority of the NIS of the entity (125). For the University, having this number of researchers represents a great achievement in virtue, as Barrera and López (2000) and Zamora et al (2009) point out, research has not been seen by the institutions as a priority activity and therefore not much was done to promote it.

## Conceptual references of the study

One of the basic concepts considered in the research was personal life. In the bibliographic review, the closest thing to this term was personal or individual goals, referred to the purposes of professional growth development, such as performing a postgraduate course, a postdoctoral stay, reaching a better teaching category in the Institution, obtaining the highest level in the teaching support programs, directly associated with a better economic level.

In that same sense, but from another perspective, there are personal goals such as happiness, fulfillment, love, spiritual peace, among others. Locke and Latham (as cited in Molina, 2000) "in goal setting it should be emphasized that the objective guides action; that is, it encourages the realization of strategies and action plans". "By focusing attention, the person selects which actions are important and leads accordingly" (Naranjo, 2009, p. 162).

With regard to family influence, the fundamental cell of society is the family, a key element in the development of any individual regardless of age, gender, social situation, etc. In the words of Cardoso et al (2012, p.31), family support plays an extremely important role because "it helps to provide meaning to life, provides daily feedback about actions and health, and encourages a series of personal activities associated with positive aspects and oriented towards individual and collective well-being".

An additional concept included in the study was that of satisfaction with life, defined by Carmona (2009, p. 52), "as the valuation of achievements and aspirations over time; it represents the perceived difference between their ambitions and their earnings. It is also often referred to as life satisfaction".

On the other hand, the term coping is directly related to the personal and family dimension, which includes some variables such as parenting, support in household activities, personal and life satisfaction, age, gender and marital status; which are directly linked to work stress (Esteras et al, 2014), and therefore to the coping strategies employed by teachers to overcome extraordinary situations or excessive demands.

In this regard, Montoya and Moreno (2012, p. 207) state that "the cognitive and behavioral resources that a person uses when faced with stressful situations is known as coping". Lazarus and Folkman (as quoted in Montoya and Moreno, 2012, p. 213) define it "as the cognitive, emotional and behavioural efforts directed to manage internal and environmental demands, which may overload or test people's resources".

In the same sense, Lazarus and Folkman (as quoted in Palacio et al 2012, p. 537) refer "The response will depend both on the situation itself, and on the cognitive assessment, the perceived control, the emotions and/or the physiological activation experienced by the person". That is, the sensations or emotions perceived by the subject will be the way in which he or she reacts; although all individuals have a habitual or preferred coping style, conscious or unconscious.

Coping styles "refer to the usual cognitive and behavioural response pattern that characterises the subject to stress events and can be focused on the problem, the emotion or the assessment of the situation". According to the situation that the person focuses on, this will be the coping style used and are the following:

When addressing the problem, the coping style is aimed at manipulating or altering the conditions responsible for the threat. When addressing the emotional response, the coping style is oriented to reduce or eliminate the emotional response generated by the situation. If it is aimed at modifying the initial assessment of the situation, the coping style tends to re-evaluate the problem (Palacio, et al., 2012, p. 537).

Likewise, according to Fernández-Abascal and Palmero (as quoted in Londoño et al 2006, p. 328), cognitive or behavioral efforts can be active, passive or avoidant. It is active when the subject seeks different solutions to the problem or situation faced; it is passive, when the subject does not act, waiting for the conditions to change by themselves; and, it is avoidant, when the subject tries to escape or avoid the situation and/or consequences.

As can be perceived, the ideal would be for the subject to take an active attitude, because it is the style of confrontation "related to greater well-being and a positive or optimistic affective state, aimed at solving problems" (Chávez et al, 2014, p. 33). This type of attitude seeks to reduce discomfort and/or increase well-being. To do so, the subject must employ strategies focused on primary and secondary control; Sanjuán and Ávila (2016) define these as follows:

Primary control implies changing the situation, solving the problem, and includes both action-oriented strategies (active coping) and decision-making strategies (planning). Secondary control implies changing oneself, that is, the person modifies the perception that he/she has of the situation, that he/she carries out a positive cognitive restructuring of the situation (p.3)

Contrary to this positive, ideal attitude, it must be recognized that cognitive or behavioral efforts can also be, in many cases, passive or avoidant; directly associated with emotional distress. In short, it will depend on the subject how he or she reacts or employs his or her usual coping style to the stressful events to which he or she is constantly subjected.

## Method

The research was developed under the quantitative methodological approach (Monje, 2011). The study was transectional and its scope was descriptive-exploratory (Pérez-Tejada, 2008).

The units of analysis were made up of 121 (96%) of the researchers attached to the NIS - who agreed to answer the questionnaire - of whom 72 (59.5%) were men (M age = 43.3, SD = 9.5 years) and 49 (40.5%) women (M age = 44.2, SD = 8.4 years). The information collection instrument was an adapted and validated questionnaire. Once content validity was established by expert judgement (three researchers), the identified semantic adjustments were piloted and made.

**Personal and family life.** An adaptation of the Valdés scale (2013) was made, which included 11 items (examples: has had family problems due to work, support in housework).

Prepared in Likert type format with five response options ranging from 0 (never) to 4 (always). The reliability measured with Cronbach's Alpha was .75.

**Facing.** Similarly, it was an adaptation to the Valdés scale (2013) taking the five items that made up the original scale (examples: can handle the stress of his job, exercises constantly). Developed in Likert format with five response options ranging from 0 (never) to 4 (always). The reliability measured with Cronbach's Alpha was .77.

On the other hand, three open questions, developed by Valdés (2013), were asked: What are the most important permanent goals you wish to achieve in your professional life, and what do you think are the aspects that facilitate your work as a researcher? And what difficulties do you encounter in your work as a researcher?

This section of the research was approached from a "comprehensive perspective that prioritizes the meaning and significance that subjects give to their individual actions and decisions; focused on action and social interaction" (Rojas-León, 2014, p. 40).

## Results

Of the total number of professors surveyed, 59.5% belong to Level I; 37.2% are candidates, and only 2.5% are located in Level II; distributed among the 12 Academic Divisions (Campuses) that make up the University.

In relation to gender, 59.5% are men, and women represent 40.5%. The age ranges of the professor-researchers go from 30 to 40 years old (44%), from 41 to 50 (31%), from 51 to 60 (19%) and from 61 to 72 years old (7%).

With respect to marital status, 66% of the teachers are married, 23% are single and 10% reported having another status. With regard to the number of children, 35.5% have no children; 16.5% have one child, 28.1% have two children, 15.7% have three children and four teachers reported having more than three. In terms of work, only three of the 121 teachers work for another institution; that is, 97.5% have exclusive dedication to the UJAT.

With regard to the personal and family life of teachers assigned to the NIS, the following was found:

1. With respect to the variable related to family problems due to their work, 43% of the professor-researchers stated that they have never had problems with the family due to their work. Twenty-five point six percent said almost never. 23.1% indicated that they have sometimes had family difficulties, 4.1% responded almost always, and 4.1% responded always.
2. NIS members were asked if they perceived that their family understood the demands of their work, to which 41.3% always responded, 31.4% almost always responded, 15.7% sometimes responded, 5% almost never responded and 5.8% never responded.
3. Regarding the variable if they share recreational activities with their family, the researchers' responses were distributed as follows: always (33.9%), almost always (34.7%), sometimes (19.8%), almost never (7.4%) and never (3.3%).
4. When asked if NIS attend the academic activities of their children, the answers were: 30.8% always, 29% almost always, 17.9% sometimes, 6.6% almost never and 15.7% never.
5. When asked if they attend nonuniversity social events, the answers were: 20.7% always, 19% almost always, 27.3% sometimes, 21.5% almost never and 9.9% never.

6. Another question was whether they support their housework, according to the researchers, 47.9% always, 26.4% almost always, 16.5% sometimes, 5.8% almost never and 3.3% never.
7. When asked if they usually go on vacation with their family, 39.7% said that they always do. 25.6% almost always, 23.1% sometimes, 9.1% almost never and 2.5% never go on vacation with their family.
8. Regarding the questioning of whether they live with their colleagues outside of working hours, it was found that only 9.9% of teachers always do so, 15.7% do so almost always, 42.1% sometimes, 19% almost never and 13.2% never live together.
9. When participants were asked if they lived with their friends in recreational activities and the results were: 10.7% always do, 17.4% reported doing it almost always, 43% mentioned sometimes, 18.2% almost never and 9.9% never live together.
10. Another item was whether they were satisfied with their personal life, to which 59.5% always stated; 27.3% almost always; 9.9% considered that they have only sometimes been satisfied with their personal life, 2.5% considered that they almost never and 1% never. To complement the section, this questioning was crossed with gender, finding that the average for women is always, while for men it is almost always.
11. The researchers were also asked if they were satisfied with their family life, 57.9% stated that they were always, 27.3% almost always, 9.9% referred sometimes, 3.3% almost never and 1.7% never. This item was also crossed with gender, finding that the average for women is always, while for men it is almost always.

To account for the coping employed by NIS teachers, the following findings are shown:

1. When asked if they maintain a good state of health, 24.8% said that they always, 42.1% said almost always, 24.8% said that they sometimes maintain good health, 4.1% said almost never and 1.7% never maintain good health.
2. When questioning the informants about the management of stress in their work, 31.4% stated that they have always been able to control it, 42.1% almost always, 20.7% sometimes, 3.3% almost never and 2% never managed to control it.
3. The third question was focused on managing time pressures at work. In this regard, 33.9% stated that they have always known how to manage it, 42.1% almost always, 18.2% sometimes, 3.3% almost never and 2.5% have never been able to control it.
4. Researchers were also asked if they effectively manage the demands of new skills required in their work, 37.2% always responded, 45.5% almost always, 14% sometimes, and 1% never.
5. Another question posed to NIS members was whether they exercised constantly, with 21.5% always responding, 19% almost always, 31.4% sometimes, 21.5% almost never, and 4% never. This variable was crossed with gender, where it was found that groups of men and women sometimes exercise.

The results to the open questions included in the survey are presented below. The first one was What are the most important permanent goals you want to achieve in your professional life?

The highest proportion of informants (64) indicated that they wish to maintain and move up a level in the NIS, this may be due to the fact that many of the NIS are located in Level I (59.5%) and (37.2%) as Candidates. In the same vein, 30 teachers said they want to be recognized nationally and internationally. 20 researchers indicated that their priority is to train human resources for research.

The second question revolved around the aspects that make it easier for them to work as researchers. The professors (50) stated that it was mainly their academic training (postgraduate) and the preparation they received in the field of research. Other professors (30) considered that it is their personal skills that allow them to perform adequately. In the same proportion, 20



researchers consider that the key has been the administrative and institutional support they have received.

The third question sought to inquire what were the difficulties encountered to perform as a researcher. The most recurring response of the researchers was the bureaucracy that exists within the University (40); followed by the lack of equipment and infrastructure for investigations (38); In this same sense, other researchers consider that economic resources are needed for research (11); for eight researchers the difficulties are basically the lack of support from the institution.

## Conclusions and discusión

The study aims to understand the self-perception of the coping, personal and family life dimensions of researchers belonging to the NIS of a public university in southeast Mexico. The most significant results are presented based on the objectives of the research. Firstly, the UJAT professors attached to the SNI are young and in level I. Most of the professors are married. As far as paternity is concerned, about 40% do not have children. Likewise, all the teachers are exclusively dedicated to the UJAT.

One of the objectives of the study was to find out how the NIS perceive their family environment. In this respect, 68% stated that they had not had any problems with their families because of their work. Likewise, 72.7% of the researchers consider that their family understands the demands of their work. According to teachers, 68.6% share leisure activities with their families.

Regarding attendance at academic activities of their children, 60% do attend. On the other hand, 74.3% of the teacher-researchers indicated that they help with household chores. Similar data was found by Morales (2007), with both men and women reporting that they spend a good deal of time on household tasks (childcare, cooking, cleaning). The difference is that men mentioned that their partners spend more time on household tasks than they do.

Another significant finding was related to the questioning of satisfaction with their family life. In the case of the UJAT, the average for women is always, while for men it is almost always; this contrasts with Morales (2007), who reported that more than 50% of those interviewed in ECOSUR feel that they have neglected part of their life. As well as by Magaña and Sánchez (2008), who report that developing research is highly demanding.

According to the informants, 66.9% stated that they try to maintain a good state of health. In contrast, Palacios and Montes de Oca (2017) refer to the existence of high levels of stress and frustration, and likewise, Morales (2007) reported that 73% of the researchers referred to suffering from stress-related health problems: heart disease, depression, anxiety, insomnia, herpes zoster, immunodeficiency, back pain, hypertension, chronic exhaustion and gastritis.

Another objective of the study was to identify the cognitive and behavioural resources used by university teachers in the face of stressful situations, known as coping.

The average values of the relationship between stress and marital status were the same, that is, there were no differences between the single and married researchers.

Finally, for the members of the NIS of the UJAT, it is of great importance to maintain and increase their level in the System. Similarly, they consider that their academic training and research skills are the factors that have facilitated their performance in research. Findings that coincide with those of Cárdenas (2015), Didou (2007) and Didou and Durand (2013) when they indicate that entry to the NIS, according to the informants, derived from their process of research

training, from the quality of the postgraduate course they took and from the figure of the trainers, as a motivation for joining the system.

In the case of the difficulties encountered in carrying out research, the NIS of the UJAT, point to the existing bureaucracy, which coincides with that indicated by Magaña and Sánchez (2008), Rivas and Aragón (2003), Surdez, Magaña and Zetina (2013) and Surdez, Magaña and Sandoval (2017) and Zamora et al (2009), who point out that the main difficulties expressed by the professors were the bureaucracy in the procedures, the workload and the diversification of administrative activities that they have to carry out, which further limits the time to carry out some kind of research.

In this sense, Villamar, Juárez, Gonzalez and Osnaya (2019), recommend implementing actions at the institutional level that contribute to improving working conditions and welfare, as well as preventive programs to reduce work stress and improve the quality of life of academics. In sum, most members of the NIS, from the University Juárez Autonomy of Tabasco, positively channel their cognitive, emotional and behavioral efforts to manage personal, family and institutional demands that can generate stress.

The results of the research are submitted to the higher education research community, CONACYT and the National Association of Universities and Higher Education Institutions (ANUIES), in order to deepen the human dimension of the NIS member professors in Mexico.

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