# Entre el trabajo reproductivo y el ingreso al SNI: una disyuntiva para las académicas universitarias 

Between Reproductive Work and Admission to the National System of Researchers: A Dilemma for Female University Academics

Entre o trabalho reprodutivo e o ingresso no SNI: um dilema para acadêmicas universitárias

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## Resumen

Los sistemas de reconocimiento a la labor de investigación para el personal académico de las instituciones de educación superior son mecanismos creados bajo la premisa de incentivar la calidad de la educación mediante estímulos económicos al profesorado, pero en la práctica constituyen uno de los factores que refuerzan las inequidades en el acceso a los recursos económicos entre hombres y mujeres en la academia. El objetivo de esta investigación consistió en explorar el caso de la Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) para identificar las diferencias que experimentan las académicas para ingresar y permanecer en el Sistema Nacional de Investigadores (SNI). Es un estudio exploratorio de información proveniente de diferentes dependencias administrativas universitarias, así como de una encuesta aplicada a una muestra aleatoria simple de 221 miembros del personal académico. En particular, se tomaron las respuestas que se obtuvieron en 14 de 52 preguntas que integraron el cuestionario. Los datos muestran que las mujeres representan apenas poco más de la cuarta parte del total de docentes que gozan del reconocimiento por parte del SNI y se ubican, principalmente, en la categoría de Investigadora Nacional, nivel 1. Como conclusión se sostiene que se debe trabajar para lograr la institucionalización de una perspectiva de equidad que signifique su incorporación en las rutinas cotidianas de todos los espacios y niveles de la universidad, así como de las estructuras que organizan sus políticas, de manera que dicha perspectiva oriente la elección de alternativas y la evaluación de las prácticas.

Palabras clave: género, instituciones de educación superior, investigadoras, mujeres académicas, trabajo doméstico.


#### Abstract

The recognition systems for research work for the academic staff of higher education institutions are mechanisms created under the premise of encouraging the quality of education through economic incentives for teachers, but in practice they constitute one of the factors that reinforce inequities in access to economic resources between men and women in the academy. The objective of this research is to explore the case of the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) to identify the differences experienced by academics to enter and remain in the National System of Researchers (SNI, by its acronym in Spanish). It is an exploratory study of information from different university administrative


units, as well as a survey applied to a simple random sample of 221 members of the academic staff. In particular, the answers obtained in 14 of 52 questions that made up the questionnaire were taken. The data shows that women represent just a little more than a quarter of the total number of teachers who are recognized by the SNI and are located, mainly, in the category of National Researcher, level 1. In conclusion, it is argued that it is necessary to work to achieve the institutionalization of an equity perspective that means its incorporation into the daily routines of all spaces and levels of the university, as well as the structures that organize its policies, so that said perspective guides the choice of alternatives and the evaluation of practices.

Keywords: gender, higher education institutions, female researchers, female academics, domestic work.

## Resumo

Os sistemas de reconhecimento de trabalhos de pesquisa para o corpo docente das instituições de ensino superior são mecanismos criados sob a premissa de incentivar a qualidade da educação por meio de incentivos econômicos aos professores, mas na prática constituem um dos fatores que reforçam as desigualdades no acesso aos recursos econômicos entre homens e mulheres na academia. O objetivo desta pesquisa foi explorar o caso da Universidade Michoacana de San Nicolás de Hidalgo (UMSNH) para identificar as diferenças vivenciadas pelos acadêmicos para entrar e permanecer no Sistema Nacional de Pesquisadores (SNI). Trata-se de um estudo exploratório de informações de diferentes unidades administrativas da universidade, bem como de uma pesquisa aplicada a uma amostra aleatória simples de 221 membros do corpo docente. Em particular, foram tomadas as respostas obtidas em 14 das 52 perguntas que compunham o questionário. Os dados mostram que as mulheres representam pouco mais de um quarto do total de docentes reconhecidos pelo SNI e situam-se, maioritariamente, na categoria de Investigador Nacional, nível 1. Em conclusão, defende-se que se deve trabalhar conseguir a institucionalização de uma perspectiva de equidade que signifique sua incorporação no cotidiano de todos os espaços e níveis da universidade, bem como nas estruturas que organizam suas políticas, de modo que essa perspectiva oriente a escolha de alternativas e a avaliação das práticas .

Palavras-chave: gênero, instituições de ensino superior, pesquisadoras, acadêmicas, trabalho doméstico.

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## Introduction

In recent years, research has proliferated around the need to incorporate measures to mainstream the gender perspective in higher education institutions (HEIs), as one of the pending subjects to seek gender equality. Despite the fact that valuable contributions have been made in the university field in research and teaching from a gender perspective to influence the search for equal opportunities for men and women, it is in the field of the institutionalization of university policies of genre where we find the greatest resistance.

The contribution of the gender perspective to the analysis of the context in which social relations are developed in HEIs is useful to demonstrate the various ways in which inequality emerges among those who make up the university communities. Particularly, in the case of academic staff, the difficulties they experience have to do with an institutional framework that, by not considering the dissonances between the productive and reproductive spheres, limits their personal, professional and work development, and in the case of women, in addition, their access to better levels of income.

Within this institutional framework are, for example, incentive systems for academic performance and recognition of research work, which are mechanisms created under the premise of encouraging the improvement of the quality of education through economic incentives for teachers., but in practice they constitute one of the factors that reinforce inequities in access to economic resources between men and women in the academy.

This is the case because, when they are evaluated in terms of productivity using the same criteria, the differentiated conditions of participation of men and women in reproductive work are not considered, which, according to the results of this analysis, are performed, generally and in greater proportion, by women; that is to say, gender differences are made invisible in the selection process and the fact that women have been culturally linked to the reproductive sphere is omitted, for which reason they must deal with a greater load in their daily work day, which It implies less time available and therefore a greater effort in proportion to their male colleagues to obtain incentives and recognition for their teaching and research work.

In this sense, it has been considered relevant to replicate studies that have provided evidence on how the sexual division of labor is also an important gender barrier for the development of women in academia and the difficulties they experience in reconciling the
labor sphere with the family, in such a way that they cannot dedicate the same energy and time to academic work as male academics, which has unfavorable repercussions in their access to better salaries, to occupy jobs with greater power or to obtain recognition for their academic performance and, in particular, in the access to economic stimuli.

In this research work, the objective was to explore the case of the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) to identify the differences experienced by academics, due to gender, to enter and remain in the National System of Researchers (SNI). ), which is a system that has existed in Mexico since 1984 to stimulate scientific and technological research and to which, year after year, academics attached to IES submit their work for evaluation, with the intention of obtaining recognition that gives them the possibility of obtain an additional income and that, in many cases, is even higher than the income they obtain for being part of the teaching staff of a university, whether public or private.

The intention of this work is to make visible the gender inequalities that persist in the institutions and promote reasoning about the importance of developing policies that favor women in their academic work and open guidelines to reconcile the productive and reproductive spheres, since has evidence that, by doing the above, it is possible to develop the potential that academic women have, thus contributing to a greater generation and transfer of knowledge.

For its presentation, the document is divided into five sections. The first provides an overview of gender differences as a factor of inequality in access to economic stimuli and better levels of income in HEIs; the second describes the work methodology; the subsequent ones present the results and the discussion around them and, finally, reflections are offered that lead to proposing future lines of research that allow the generation of inputs for the design of institutional policies that contribute to the construction of more equitable spaces and relationships between men. and women, particularly in the field of academia in higher education.

## Gender differences as a factor of inequality in access to economic stimuli and better levels of income in higher education institutions

One of the transversal axes to achieve the Sustainable Development Goals (SDG) of the United Nations Organization (UN) and to promote the social agenda in matters of justice and respect for human rights is the achievement of equal rights. gender. In accordance with what has been established in various international summits since the First Regional Conference on Women in Latin America and the Caribbean, in Havana, in 1977, it is necessary to design public policies that focus on the ownership of rights and autonomy of women and that contribute to overcoming reductionist approaches that focus on their vulnerability, as if they were the ones who would have to change and not the social practices that cause inequality (Economic Commission for Latin America and the Caribbean [Cepal], 2016 ).

In this sense, the responsibility of institutions to implement the necessary measures to influence the mechanisms that generate and reproduce inequality is key. As stated in the Convention on the Elimination of All Forms of Discrimination against Women (Cedaw), public authorities and institutions must assume the responsibility of taking appropriate measures to guarantee the full exercise of their rights. human rights and fundamental freedoms on an equal footing with men and modify those sociocultural and behavioral patterns that guarantee de facto equality between men and women (ONU, 1981).

HEIs have been key spaces in the generation of both theoretical and political knowledge that have been aimed at transforming social and cultural patterns that foster discrimination and inequality. But, as various authors have mentioned (Buquet, 2011; Castañeda, 2019; Ortiz et al., 2018; Pacheco, 2018), the contribution of the academy to gender equality has occurred more at the academic level through the creation of spaces that promote research on the subject, or through the training of young people through study plans and programs. And the pending issue in the transformation of social structures that impede the advancement of women in the search for equality has been the mainstreaming of the gender perspective in labor relations in educational institutions.

Although there has been a gradual rise of women in the university sphere, as students and also in the teaching career, the gender barriers that limit their equitable access to decisionmaking spaces and their participation in all areas of knowledge have not been eliminated, and fewer have been able to access the same level of professional and personal development
as men. As Buquet (2011) has mentioned, "we must not confuse the feminization of university environments with gender equity" (p. 219).

In this sense, the democratization of educational spaces has a pending issue in tearing down the glass walls that do not allow equal access for women in all areas: access to highlevel positions, to incentive systems for professional performance, to the different hiring hierarchies, etc. In contravention of what was indicated in the Cedaw (ONU, 1981), the necessary public policies have not been generated in the HEIs that allow equal participation of women in relation to men, "what exists is an institutional culture that resists to parity" (Ortiz et al., 2018, p. 13).

From this analysis of the causes that originate the unequal participation of academics in university spaces, it can be pointed out that: 1) there is no harmonization between productive work time and the time necessary to satisfy the needs of the reproductive sphere; 2) the implementation of institutional policies are not aimed at combating gender inequalities, and 3) the responsibility that HEIs have assumed regarding the change in cultural and social patterns in order to promote autonomy and the full exercise of the rights of women, particularly in the instrumentalization of strategies that guarantee their equal access in all spheres of institutional life.

It is worth mentioning that one of the main contributions of feminist economics in the 1970s was to introduce the distinction between productive work and reproductive work, with the aim of "highlighting the invisibility of women's work and its concentration in the unpaid reproductive sphere" (Benería, 2006, p. 9), as well as the majority participation of men in the productive sphere, with its consequent effects on gender relations.

Furthermore, these contributions pointed out by Benería (2006) emphasize the need to consider not only the division between productive and reproductive work, but also to distinguish between paid and unpaid work. This is due to the fact that the most recent changes in the economic sphere, particularly since the 1990s, with the development of the market economy, have promoted the incorporation of women in paid productive work and fostered a greater participation of men in some unpaid tasks; This conceptual precision is important because as family income increases, part of reproductive work becomes paid work, that is, other people are hired to perform domestic and care tasks.

This distinction is also pertinent because, as Pacheco (2018) has pointed out, "the incorporation of women into university academic work has modified family relationships, without having a similar impact on the organization, functionality and gender relations of
university institutions." " (p.11). These conceptual distinctions have helped to generate other measurement indicators in the behavior patterns of men and women, which have been relevant to identify to what extent changes have been generated in gender roles, particularly in reference to the amount and use of time., the differentiated participation of both in paid and unpaid work.

According to data from the National Survey on the Use of Time (ENUT) (National Institute of Statistics and Geography [Inegi]-National Institute of Women [Inmujeres], 2019), in Mexico, by 2019 women spent more time at non-working households, $67 \%$ of their time, compared to men, who devoted $28 \%$ of their time to the same type of work. These data have also revealed the precariousness of the Mexican economy and the need for families to dedicate more time to unpaid household work (49.4\% of the time, compared to $47.9 \%$ of the time they dedicate to work for the market).

These theoretical distinctions and statistical evidence constitute a framework for interpreting the information that, in terms of access to incentive systems and hiring categories, will be exposed to describe what happens in the case of UMSNH academic staff, based on their contract labor conditions and entry or permanence in the SNI.

## Methodology

The analysis presented here is part of the tasks carried out within the framework of the research project "Science, justice and parity. Reflections and proposals from the Universidad Michoacana", which is financed by the National Council of Science and Technology (Conacyt) in Mexico.

This study is of an exploratory type and was carried out using quantitative data collection techniques. The data that is analyzed comes from two types of information sources. On the one hand, databases provided by the Coordination of Scientific Research of the UMSNH were reviewed, which record the number of male and female academics who belong to the SNI and break down the information by sex and academic unit of affiliation for the period 2012-2020. On the other hand, information collected through a survey applied to a simple random sample of 221 members of the academic staff assigned to the university in question in 2021 was analyzed.

The sample estimation was made using the equation for finite populations:

$$
n=\frac{N * Z_{t}^{2} * p q}{d^{2}(N-1)+Z_{t}^{2} * p q}
$$

As:

- $n=$ Sample size.
- $N=$ Size of the population.
- $Z_{t}^{2}=$ statistical parameter corresponding to a confidence level.
- $d^{2}=$ Estimation error.
- $\quad p=$ Probability that the event prevents.
- $q=$ Probability that the event is not the order of the day.

It is important to mention that this estimate considered the total number of higherlevel teachers (undergraduate and postgraduate) assigned to academic units (faculties and research institutes) located in the city of Morelia, Michoacán as the population.

The application was carried out through an electronic form that was sent to the institutional emails of the teachers who had a current contract in the school year August 2021-February 2022 and the call to answer the survey was made by the General Secretariat of the UMSNH , from where institutional support was received, with the intention of guaranteeing the protection of personal data of those who responded to the survey.

The form was open to receive responses during the month of August 2021 and its online application obeyed the sanitary restrictions in force due to the 2019 coronavirus disease (covid-19) pandemic, which, at that time, indicated the completion of academic activities virtually.
Since the research team did not have the possibility of sending reminders or new invitations to respond to the survey and there was also no opportunity to extend the deadline for their response, it was only possible to capture information from 221 teachers out of the 250 that the estimate produced. ; that is, there was a response rate that represented $88.4 \%$ of the total sample.

The instrument included a total of 52 questions that were grouped into seven blocks that make up the different categories of analysis proposed as the backbone of the macro project in which this analysis is inserted. The dimensions of the questionnaire deal with the following aspects: socioeconomic characteristics, cultural aspects, use of time, academic and work history, discrimination and harassment, power and leadership, and gender culture in the institution.

For its validation, the instrument was reviewed by three UMSNH research professors who are experts in gender studies, who have a recognized track record in the academic field and who are part of the Gender Academic Links Network (REAG) of the same university. . Once
the experts' suggestions were addressed and it was approved by them in a joint meeting with the research team, it was subjected to a pilot test. Once its content, structure and theoretical relevance were approved, it was applied to the entire sample.

The processing and analysis of the data was carried out with Microsoft Excel and consisted of the estimation of frequencies and the presentation by means of tables and graphs.

In particular, for this study, the answers obtained in 14 of the 52 questions that made up the questionnaire and that refer to the following variables were taken: age, gender identity, marital status, number of children, ages of the children, age at which they had the first child, who is in charge of caring for the children, highest degree of studies obtained, current contract category at UMSNH, affiliation unit, whether or not they have a distinction from the SNI, level of distinction (if you have it), age at which the distinction was obtained for the first time (if you have it), the issues that are considered a priority in life and if you have rejected job offers or postponed postgraduate studies for personal or family reasons.

In said survey, there was a majority female participation ( $72 \%$ ), subject academic staff (55\%) and who are in an age range of 50 years or older (35\% of the academics and $33 \%$ of the males). . The most frequently reported seniority as a teacher was between 11 and 15 years and the academic units with the highest participation in the survey were the Faculty of Law and Social Sciences (11\%) and the Faculty of Accounting and Administrative Sciences (10\%). .

The results shown are intended to show that the academics have obstacles due to gender that limit their entry or permanence in the SNI. The reflections are made from the evident masculinization of the numbers of researchers belonging to the SNI at UMSNH, as well as by contrasting the answers offered by the academics in the survey with respect to the answers provided by their male peers.

## Results

According to data from the UMSNH Personnel Directorate, by 2020 the teaching staff was made up of $60 \%$ men and $40 \%$ women, a proportion that has only changed by $2 \%$ compared to the 2012 data, when it was $62 \%$ and $38 \%$, respectively. These figures reflect a disparity in the number of men and women hired at the UMSNH, without any substantial change over time. However, as we will see later, it is not only a question of the number of men and women, which reflects the unequal access of academic women to the labor dynamics
at the university, but also of the distribution that exists in the levels of hiring and access to stimuli.

Although these figures already show a lack of parity, the review of the distribution by sex and hiring category offers more revealing data on inequalities, since in the category of "full-time tenured research professor", which is the most registered according to the Collective Bargaining Agreement that governs academic staff, only $29 \%$ are women (figure $1)$.

Figure 1. Academic staff assigned to the UMSNH according to sex, category and recruitment day (2020)


Note: the categories, subcategories and contracting levels shown in the figure, according to the Collective Bargaining Agreement of the Teachers Union of the Michoacana University (SPUM), are the following: AY_TACAD = Academic Technician Assistant (A, B and C); AY_DC = Teaching assistant (A, B and C); AY_IN = Research

Assistant (A, B and C); TEC_ACAS = Associate academic technician (A, B and C); TEC_ACTT = Titular Academic Technician (A, B and C); PROF_ASIG = Subject teacher
(A and B); PROF_INV_AS = Associate professor and researcher (A, B and C), and PROF_INV_TT= Associate research professor (A, B and C). These are shown from lowest to highest in terms of the salary perceptions that they imply for academic staff and, in each case, a difference is made between a part-time shift (MT: 20 hours per week) and full-time
(TC: 40 hours per week). , with the exception of the subject teacher, who can cover between 1 and 30 hours per week, in front of a group).

Source: Own elaboration based on information provided by the UMSNH Personnel Department for the purposes of the research project "Science, justice and parity. Reflections and proposals from the Universidad Michoacana" financed by Conacyt in Mexico

Although the legislation on promotions establishes the same requirements for men and women who request access to higher recruitment categories, these guidelines do not really evaluate the intellectual capacity of the applicants, but the availability of time to generate the inputs that are considered by the evaluators to endorse the promotion request. It is in this sense that we can point out that the burden of responsibilities assumed by men and women, not only in the academic space but particularly in the family sphere, is what makes a difference in the conditions of inequality in access to promotions.

The implications of this recategorization in hiring, of course, are not minor, since, in economic terms, the category of "full-time tenured research professor" is the one for which a higher salary is obtained. But, in addition, in terms of the distribution of the working day, it is the category that requires the least load compared to the group. This release of time to allocate it to research, commissions and other activities is what opens another gap, in terms of the possibility or impossibility of allocating more time to activities that are those that are evaluated and recognized by the SNI.

The requirements and assessment parameters are made from the possibilities of work and academic performance established from a reality in which the time available to dedicate to paid productive work is prioritized, without considering that this implies making use of time that is incompatible with work. of the reproductive field, activities that are also essential to enable the conditions for carrying out productive work. In this sense, a social inequality is established towards those who, in the sexual division of labor, are in charge of tasks in the sphere of reproduction, who are, for the most part, women. This is what Pacheco (2018) refers to when he points out that "labour relations within HEIs were built based on the reality of men" (p. 16).

On the other hand, the category that concentrates the largest proportion of teachers (men and women) is that of "Subject teacher", which is a very diverse category in terms of the number of subjects and hours in front of the group that can be reached. to be covered by a teacher, but which has as a common denominator the limitations in terms of salary, benefits and access to additional economic stimuli to the latter, as well as restrictions to obtain financing to carry out research, since to access these items must have a full-time contract. This reflects a precariousness of the teaching work at the UMSNH, since one has
to aspire to the maximum load in number of hours in front of a group to obtain a satisfactory remuneration, or else complement the income with other paid activities outside the university.

According to the data provided by the UMSNH Personnel Department, during the analysis period, the category of "Subject Professor" occupied between $48 \%$ and $49 \%$ of the total number of teachers and, if we look closer to the distribution of the academic, in the different hiring categories we found that $52 \%$ of the total of them are subject professors and only $10 \%$ are full-time tenured research professors (figure 2 ).

Figure 2. UMSNH academics according to recruitment category (2012-2020)


Source: Prepared by the authors based on information provided by the UMSNH Personnel
Department for the purposes of the research project "Science, justice and parity.
Reflections and proposals from the Universidad Michoacana" financed by Conacyt in

## Mexico

These data reflect the difficulty that academics have in accessing higher levels of recruitment, since the requirements for promotion involve teaching and research experience, as well as higher academic degrees, requirements that require time that is incompatible with motherhood, since the reproductive stage of women coincides with the years in which postgraduate studies can be carried out. In this way, academics have to choose between motherhood and professional development, or combine both tasks, with the consequences that this implies in relation to double or triple work shifts. Or, as other investigations on the subject have highlighted, going to family support networks or hiring people who provide
care or domestic services for a fee, mostly other women.
When analyzing the data about the academic staff who have a distinction from the SNI, we find materialized the differences that we already envisioned in previous paragraphs, since women represent barely more than a quarter of the total number of teachers who enjoy this recognition and of the corresponding economic stimulus. This proportion has not changed to a great extent during practically the last decade (figure 3). The conditions that must be met for access to this recognition system, as we can see, favor men to a greater extent, for whom the conditions they live in their family environment do not represent a limitation: age, number of sons or daughters or marital status, since their reproductive stage is broader and the exercise of their paternity does not physically subdue them during the upbringing of newborns. In addition, as we have mentioned, it is not only a question of biological aspects but of a series of social and cultural dispositions that make up the socialsexual division of labor.

Figure 3. Proportion of women and men in the SNI at UMSNH, 2012-2020


Source: Own elaboration based on information provided by the Coordination of Scientific
Research of the UMSNH for the purposes of the research project "Science, justice and parity. Reflections and proposals from the Universidad Michoacana" financed by Conacyt in Mexico

In the case of academics who have children, parenting and care time means a time in which their curricular merits lag behind, a disadvantage that takes time to recover and in many cases never manages to level out. Hence, for academics it can be a dilemma to exercise ISSN 2007-7467
or postpone the exercise of their motherhood, and even not to exercise it, in order to dedicate their time to the development of intellectual work.

Furthermore, the inequality deepens when looking at the data by sex for each level of distinction. It is worth mentioning that, according to article 28 of the SNI regulations:

The distinctions (...) are classified into the following categories and, where appropriate, levels: I. National Researcher Candidate or Candidate; II. Researcher or National Researcher with levels 1, 2 and 3, and III. Researcher or National Emeritus Researcher (Conacyt, 2022, p. 5).

According to the data provided by the UMSNH for the purposes of this analysis, the academic personnel who have entered or remained in the SNI between 2012 and 2020 are mainly in level 1 of the Researcher or National Researcher category and women represent a lower proportion in all categories and levels; It was even just in 2020 when two academics managed to reach level 3 (one of them attached to the Institute of Historical Research and the other to the Faculty of Architecture) (figure 4).

Figure 4. UMSNH academic staff belonging to the SNI by sex and level of distinction


Source: Own elaboration based on information provided by the Coordination of Scientific
Research of the UMSNH for the purposes of the research project "Science, justice and parity. Reflections and proposals from the Universidad Michoacana" financed by Conacyt
in Mexico
The marked difference in inequality in the access of women to this academic distinction should set the standard for evaluating the actions that are needed from the HEIs and the SNI itself to promote equal access possibilities, not as an end but as a the result of
the implementation of measures that guarantee and stimulate the professional performance of the academic sector from a more human perspective. The foregoing under the premise that the development of the human being must consider the potential of all their capacities, including the emotional, affective, self-care part (reproduction of the human being), and not only their productive capacity. In this way, a pattern of incentives based on parameters that do not consider a balance between personal and professional development and that requires excessive time to meet quality standards should be questioned. As Carrasco, Borderías and Torns (2011) point out in relation to the current debates around the social responsibility of the State in relation to care work, a new social pact and a new social organization of care is necessary where the daily work of the domestic and care spheres are not considered only a women's issue.

Regarding the distribution of the teaching staff in the SNI by areas of knowledge, it is noteworthy that, by 2012, in the area of exact sciences, earth, sea and atmosphere, academics had only obtained the distinction as Candidates; the area of social sciences was the one that showed a less unequal distribution between men and women in terms of levels of distinction, and the area of health sciences, despite concentrating a significant proportion of academics, half of they enjoyed the distinction in the category of Candidates. The areas of economic-administrative sciences, as well as the humanities and behavioral sciences were the ones with the greatest participation of academics and, finally, it should be noted that in the category of National Researcher level 3, only men enjoyed such a distinction ( figure 5).

Figure 5. Persons to the academic in the SNI according to sex, SNI category and area of knowledge (2012)


Note: the areas of knowledge shown in the figure are the following: Bach: Baccalaureate (it is worth mentioning that UMSNH also offers upper secondary education); Bio_Quí: Biology and chemistry; Btec_Agro: Biotechnology and agricultural sciences; Exa_TMA: Exact sciences, of the earth, of the sea and of the atmosphere; Soc: Social Sciences; Dep_Ad: Administrative dependencies; Eco_Adm: Economic administrative; Hum_Con: Humanities and behavioral sciences; Ing_Tec: Engineering and technology; Med_Sal: Medicine and health sciences.

Source: Own elaboration based on information provided by the Coordination of Scientific
Research of the UMSNH for the purposes of the research project "Science, justice and parity. Reflections and proposals from the Universidad Michoacana" financed by Conacyt
in Mexico

For 2020, said distribution had some changes. For example, the exact sciences, of the earth, of the sea and of the atmosphere already had representation of academics, both in candidacies and in level 1 of National Researcher; in the social sciences there were already women at level 2 ; in the economic-administrative all the women who enjoyed the distinction were level 1, and in the humanities and behavioral sciences there were researchers who reached level 3. For that year, there was an equitable distribution between men and women in the SNI in personnel assigned to administrative units (figure 6).

Figure 6. Academic staff in the SNI according to sex, SNI category and area of knowledge (2020)


Source: Own elaboration based on information provided by the Coordination of Scientific
Research of the UMSNH for the purposes of the research project "Science, justice and parity. Reflections and proposals from the Universidad Michoacana" financed by Conacyt in Mexico.

Some of the data obtained through the survey, which can be taken as a reference to explain the difficulties that academics have in reconciling professional and family life, are described below.

Although, like the men, most of the women who responded to the survey indicated that they were married, the proportion of men is higher ( $56 \%$ vs. $45 \%$ of women). While in the cases of personnel who said they were divorced, the relationship changes, being mainly women who most frequently report this situation ( $16 \%$ women, $8 \%$ men). The marital situation does not limit men in their participation in the labor market despite how demanding academic work may be, on the contrary, it encourages them to respond to the expectations that society places on them as household providers. Not so in the case of women, for whom the high demand for time required by academic life and its consequent lack of compatibility with family life causes greater conflicts in couple relationships.

To deepen the analysis regarding family life, the responses were reviewed regarding the number of children the teachers have, the age at which they had their first child, the ages of the children, and who is in charge of their care. In this sense, most of the teachers answered that they have two children ( $31 \%$ ) and $26 \%$ that they do not (at least that is assumed, since
they answered "Not applicable"); On the other hand, $33 \%$ of the men declared having two children and the same frequency was found for the response "Not applicable".

Regarding the age at which they had their first child, the majority, in both cases, indicated the age range between 26 and 35 years ( $57 \%$ men and $44 \%$ women).

When comparing this information with the marital situation and with the tasks of raising and caring, it was found that $17 \%$ answered that they are in charge of caring for their sons and daughters alone and $27 \%$ indicated that their partner also participates in these tasks. On the other hand, $54 \%$ of the academics report that both they and their partners care for their sons and daughters and only $7 \%$ do it alone. This is particularly relevant if we consider that the majority of teachers have minor children ( $46 \%$ of women and $50 \%$ of men) and that most of the teachers who participated in the survey are of reproductive age ( $47 \%$ declared be between 25 and 45 years old).

One of the items in the questionnaire asked to indicate the order of priority that five different topics have in the lives of academics (work, obtaining higher academic degrees, partner, caring for sons and daughters, and caring for others). And as a response, it was obtained that it is precisely the care of sons and daughters that is the main priority for academics ( $36 \%$ indicated it), while for men it is work (33\%) (figure 7).

Figure 7. Aspects that are self-assessed as priorities in the life of the academic staff surveyed


Source: Own elaboration based on information collected through the survey created for the project "Science, justice and parity. Reflections and proposals from the UMSNH".

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In the same sense, the response to another of the items in the questionnaire is observed, referring to knowing if the academic staff has rejected any job offer or postponed postgraduate studies for personal or family reasons, to which $72 \%$ of the academics responded that yes and $61 \%$ of men answered in the affirmative. However, most of the academics have doctorates (figure 8 ).

Figure 8. Highest degree of studies of the academic staff surveyed


Source: Own elaboration based on information collected through the survey created for the project "Science, justice and parity. Reflections and proposals from the UMSNH".

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On the other hand, only $18 \%$ of the academics surveyed claimed to have a current distinction from the SNI, however, in addition to this data, the fact that $24 \%$ of the academics declared that they have obtained said distinction after the age of 45 stands out. years, while only $8 \%$ of men have obtained it up to that age ( $76 \%$ of them have obtained it at 40 years of age or less).

All of the above makes it visible that female academics have great difficulties in reconciling work and private life and that the opportunities they have to participate in the generation of knowledge are limited and respond to gender issues, because even having the same academic degree as male men (or higher), the restrictions that they live in personal or family terms, as well as those imposed by institutional and regulatory structures, prevent them from accessing better positions and opportunities for recognition of their academic, scientific and research work.

## Discussion

The sex-gender system operates in different ways, depending on the economic, social and cultural context in question. Hence, it is necessary to characterize the ways in which gender relations develop in the university environment; particularly, for the case at hand, the evidence provided by the data obtained in relation to the problem of the teaching staff of the UMSNH.

## The gender pay gap

The university academic staff belongs to a sector of the population that has had access to one of the fundamental rights, formal education, not only at the undergraduate level but even at postgraduate level. However, as we have shown in our analysis of the figures for the case of the UMSNH, despite having access to higher educational levels, the gender wage gap remains, since, despite having the highest academic degrees, women continue to have unequal access to promotions and academic distinctions that earn them the same level of income as their male colleagues.

As we have mentioned, the promotions are not limited only to access to higher income levels, but to the possibility of having a download in teaching tasks that grant time availability that is destined to the development of other academic and research activities that also generate greater recognition and prestige in the academic field. The system of values in a patriarchal society and with a market economy overvalues the activities that belong to the paid productive field, above the recognition and valuation given to domestic and care work, typical of the reproductive sphere, despite that the latter are essential for productive activities to be carried out.

The possibility of professional development for academics is limited by the sexgender system, which attributes to them the responsibility of addressing the field of social reproduction as a priority in their daily work, a cultural system that does not exempt the academic sector. This system of values is reproduced in the public sphere, institutionally, through the guidelines for assigning places and distinctions, and also in the private sphere. In universities, gender discrimination tends to be legitimized and female academics are blamed for their situation through an institutional framework that appears to promote equality with their male peers, and when they accuse gender inequalities, it is argued that they are not promoted by the institution, but rather that is due to individual or personal issues, such as: lack of ability, merit, track record, profile, academic degrees, recognitions, appointments,

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academic productivity, or even lack of interest (Moncayo and Zuluaga, 2015 ; Palomar, 2008), which means that stereotypes and prejudices emanating from patriarchy still prevail in these institutions (Escolano, 2008).

This lack of institutional recognition of the responsibility that universities have in terms of inequalities and inequities based on gender is unjustified, since even from a reductionist and quantitative perspective, the importance of promoting professional growth and the consolidation of the academic trajectories of women, since the proportion of academic personnel in the SNI is considered one of the indicators by which the academic quality of these institutions is measured and compared (Martínez, Preciado y Cordero, 2008).

## Reconciliation between the productive and reproductive sphere

The woman-work relationship is tense and paradoxical; The tensions are due to the fact that women continue to assume traditional roles in the field of reproduction and care for others, while at the same time they assume new roles in the productive context; However, the labor market does not guarantee an insertion in accordance with those reproductive and care tasks that they are socially and culturally obliged to fulfill (Moncayo and Zuluaga, 2015), since the participation of men in the family environment, in the work of care and domestic work is not always equitable, resulting in an overload of work that is reflected in double or triple work shifts for women that make it practically impossible to reconcile paid work and domestic work (Acuña, 2008).

Gender segregation occurs both vertically and horizontally in HEIs because, in addition to observing a reduction in the proportion of female academics as higher academic degrees and higher hiring hierarchies are considered, the proportional participation of women is also lower in the disciplines that enjoy greater recognition in the scientific field (Escolano, 2008).

Finally, it is worth mentioning that the quantitative analysis has allowed us to approach the dimension of the dilemma faced by academics to reconcile the teaching career with the work in the field of reproduction. However, a qualitative analysis is needed to delve into the ways in which these dilemmas manifest themselves.

## Conclusions

The analytical approach that we have presented emphasizes the need to ensure the full exercise of the rights and autonomy of people, in order to guarantee the necessary conditions for their personal and professional development, in conditions of justice and equality. In Mexican HEIs, it has not yet been possible to influence the democratization of working life due, from our axis of analysis, to the lack of institutional initiatives that operationalize the mainstreaming of the gender perspective, which give as a result, and not as a condition. , the equal participation of men and women in all areas of university life.

According to the evidence from our case study, although in labor terms the difference between the number of men and women who are part of the academic sector is minimal, it is in the categories of hiring and access to incentives where we find the true difference. The participation of academic women in the highest levels of recruitment barely reaches $29 \%$, and although the promotion guidelines set the same requirements for men as for women, it is the living conditions linked to the reproductive dynamics that set the standard. the difference in access for reasons of gender.

The requirements and assessment parameters are made from the possibilities of work and academic performance established from a reality in which the time available to dedicate to paid productive work is prioritized, without considering that this implies making use of time that is incompatible with work. of the reproductive field, activities that are also essential to enable the conditions for carrying out productive work.

It is necessary to promote the possibilities of equal access, not as an end but as the result of the implementation of measures that guarantee and stimulate the professional performance of the academic sector, but from a more human perspective. The foregoing under the premise that the development of the human being must consider the potential of all his capacities, including the emotional, affective, self-care part (reproduction of the human being) and not only in his productive capacity.

It is also important to point out the evidence that the requirements that have been established as criteria to stimulate academic performance are established from a perspective that privileges productive activity over the quality of life of the academic sector and, also, to the detriment of family relationships and the equal participation of men and women in the family environment, a situation that puts women at a greater disadvantage in terms of possibilities of access to incentive systems such as the SIN.

Therefore, it is important to point out, as an emphasis from the perspective of analysis, the need to reconcile academic life (as part of the paid productive work carried out by the academic sector) with family life. This is due to the fact that it is only from the articulation of all the spheres of the life of the individuals that a full development of their individual and collective capacities can be achieved. The transformation in the systems of evaluation and encouragement of their professional performance must move towards a more human perspective, which does not mark inequality for reasons of sex, age, marital status, reproductive stage, access to support networks, reproduction options ; finally, for reasons related to gender.

In this sense, work must be done to achieve the institutionalization of an equity perspective that means its incorporation into daily routines, in the regular practices of all spaces and levels of the university, as well as the structures that organize their policies, of so that said perspective guides the choice of alternatives and the evaluation of practices. This would then allow gender equality to be part of a continuously repeated, sanctioned and sustained procedure, which is at the origin of a new institutional routine, of a new common sense understood both as a shared belief and as an internalized value.

## Future lines of research

Based on the identification and description of the differences experienced by the UMSNH academics due to gender in order to enter and remain in the SNI, it is proposed as new lines of research to delve into the analysis of the cultural systems of the academic sector that reproduce situations of inequality in the family environment and that translate into disadvantages in the availability of time for personal and professional development.

In addition, developing qualitative analyzes that help us to deepen the knowledge of whether the academics have undertaken daily negotiations in the family and professional sphere for the redistribution of domestic tasks; regarding the emotional and health costs that they have to face in the face of intense working hours, as well as regarding the way in which they deal with gender stereotypes, when trying to assume professional competence on an equal footing with their male colleagues.

Finally, to analyze the working conditions of the administrative sector to understand its problems and characterize the ways in which the sex-gender system manifests itself in the productive and reproductive sphere.

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