## SECTION: ARTICLES

# Academic and scientific production in stricto sensu programs: an analysis under the gender cutting ${ }^{1}$ 

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#### Abstract

Motherhood has an impact on the teaching career. Thus, this study aimed to analyze the productivity of teachers inserted in stricto sensu graduate programs under the field of gender and maternity. This is a descriptive, documental, and quantitative study, carried out from the access to the curriculum Lattes of professors of both genders, inserted in stricto sensu graduate programs in the Northeast of Brazil, in the quadrennium 2017-2020. The data was analyzed by simple descriptive statistics and 90 resumes were included in the sample, being 30 females who got maternity leave, 30 females without leave and 30 males. The findings reveal higher academic and scientific productivity in male professors, in part, due to the gender inequalities identified. We conclude that the gender bias hinders the equal productivity between genders, even more disparate in the face of maternity, which reinforces the need for gender equality policies in the academy.


Keywords: professors; researcher; gender inequity; parental leave.

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# Produção acadêmica e científica em programas stricto sensu: uma análise sob o recorte de gênero 

## RESUMO

A maternidade tem impacto na carreira docente. Dessa forma, objetivou-se analisar a produtividade de docentes inseridos/as em programas de pós-graduação stricto sensu sob recorte de gênero e maternidade. Trata-se de um estudo descritivo, documental e quantitativo, realizado a partir do acesso a currículos Lattes de docentes de ambos os sexos, inseridos em programas de pós-graduação stricto sensu no Nordeste do Brasil, no quadriênio 2017-2020. Os dados foram analisados pela estatística descritiva simples e 90 currículos foram incluídos na amostra, sendo 30 referentes ao sexo feminino que gozaram da licençamaternidade, 30 do sexo feminino sem licença e 30 do sexo masculino. Os achados revelam produtividade acadêmica e científica maior em docentes do sexo masculino, em parte, pelas desigualdades de gênero identificadas. Conclui-se que o viés de gênero dificulta a produtividade equânime entre os gêneros, ainda mais díspares frente à maternidade, o que reforça a necessidade de políticas de igualdade entre os gêneros na academia.

Palavras-chave: docentes; pesquisadora; iniquidade de gênero; licença parental.

## Producción académica y científica en programas stricto sensu: un análisis bajo el corte de género

## RESUMEN

La maternidad tiene un impacto en la carrera docente. Así, este estudio tuvo como objetivo analizar la productividad de los profesores insertados en los programas de posgrado stricto sensu bajo el corte de género y maternidad. Se trata de un estudio descriptivo, documental, cuantitativo, realizado a partir del acceso a las latas curriculares de profesores de ambos géneros, insertados en programas de Posgrado stricto sensu en el Nordeste de Brasil, en el cuatrienio 2017-2020. Los datos se analizaron mediante estadística descriptiva simple y se incluyeron en la muestra 90 currículos, siendo 30 mujeres que disfrutaron de la baja por maternidad, 30 mujeres sin baja y 30 hombres. Los resultados revelan una mayor productividad académica y científica en los profesores varones, en parte debido a las desigualdades de género identificadas. Se concluye que el sesgo de género dificulta la productividad equitativa entre los géneros, aún más dispar frente a la maternidad, lo que refuerza la necesidad de políticas de igualdad entre los géneros en la academia.

Palabras clave: profesores; investigadora; la desigualdad de género; permiso parental.

## INTRODUCTION

The beginning of the $19^{\text {th }}$ century was marked by sexist thinking that believed in the natural inferiority of women due to their physical and biological conditions, being reserved for them the domestic space and procreation, with denial of the right to education or, simply, to permission to learn the first letters (CAMPOS, 2017).

However, during the development of modern society, women perceived the exploitation and oppression to which they were subjected and were led to subversion. With this, they decided to fight for emancipation and the conquest of rights, through the political clash, giving rise to the feminist movement that emerged at the end of the eighteenth century and consolidated in the nineteenth century, spreading through European countries and the United States of America (GREGORY, 2018).

After much struggle for equality, women have achieved numerous achievements, among them, in addition to voting, the right to act in the labor market and access to formal education. At this moment, schools, boarding schools and courses aimed at the female public appear, which began to have access to culture and broadening their horizons (PINSKY; PEDRO, 2003) and made him move beyond the student perspective, starting for initiation into the teaching function.

The insertion of the female presence in the magisterium could be observed throughout the 19th century by factors related to the identification of the female figure with the art of educating, the departure of men to war and also due to the expansion of professional possibilities for males in other sectors, with more advantageous remunerations (ABDALA; MOURA, 2016).

In fact, even if they hold positions similar to women, men perceive greater advantages. According to the Brazilian Institute of Geography and Statistics (IBGE), gender pay inequality continues to exist. The research points out that, despite being the majority in the labor market, women earn on average $20.5 \%$ less than men (PARADELLA, 2019). According to the same study, in education, for example, in the case of higher education teachers, the female salary is about $17.4 \%$ lower.

In relation to the exercise of teaching, the tendency is to designate men the highest levels of education, and women, the most basic, such as early childhood and elementary education (ATAIDE; NUNES, 2016). Also, when inserted in higher education, women are the majority in traditionally female courses, such as Pedagogy, Social Work, Nursing, Nutrition, Psychology and Letters, and this view influences the value of salaries between the sexes, devaluing careers culturally linked to care (ILO, 2010). Even in view of this vision, women conquered work spaces in predominantly male careers, expanding as teachers in higher teaching and
science, a space that was previously attended only by men (BACKES; THOMAZ; SILVA, 2016; LANDERDAHL et al., 2013).

However, despite the achievement of the Superior Magisterium and the insertion in stricto sensu programs, acting as a teacher and scientist, the female participation in science was, for many years, something restricted or denied. It is noteworthy that the female trajectory in science consists of a culture based on the "male career model", which demands full-time work and encourages productive and competitive relationships; in this context, women need to build their professional identity, being challenged to produce incessantly, even though they have other obligations that, in most cases, men do not take on them (VELHO, 2006).

In the teaching of the Brazilian stricto sensu graduate program, for example, women are still in a smaller proportion (BARROS; MOURÃO, 2020). One of the reasons that may justify the lower number of female teachers inserted in graduate studies is related to gender cutting, linked to the exercise of motherhood, since, in view of the latter, there may be difficulties for professional ascension and to produce, record and prove its academic and scientific production (FARIA, 2018), especially in regions where gender stereotypes are more evident, such as the Northeast region of Brazil, which reinforces the power relations between the sexes, attributing to the hegemony man, and to the woman a submissive cultural identity, centered on being the main responsible for home care and with the offspring (BRILHANTE et al., 2015).

It is a fact that, in relation to motherhood and after her leave, the baby remains dependent on the mother, being primary responsible for her care and feeding, until the child becomes independent. Thus, resuming academic and scientific activities after removal and staying productive is a difficult task, and may cause women to not be able to maintain a satisfactory academic and scientific performance (IVO; FERREIRA, 2019); which is a requirement imposed by stricto sensu graduate programs, for their permanence and qualification.

In view of this conjuncture, the study aimed to analyze the productivity of professors inserted in stricto sensu graduate programs in northeastern Brazil, from the gender and maternity section.

It takes into account the specificity of the Northeast as a region of strong gender representation, as well as the high expansion in this region of access to stricto sensu programs, as disclosed by the Coordination for the Improvement of Higher Education Personnel (CAPES), which showed a $200 \%$ increase in the number of students enrolled in master's and doctorate courses between 2006 and 2017, from 17,000 to 51,000 (CAPES, 2019), in order to allow reflections that evidence possible discrepancies between the sexes in terms of teaching and scientific practice.

## METHOD

This is a descriptive, documentary and quantitative study, conducted between March and August 2020, from access to the Lattes curriculum and the quantitative survey of academic activities and scientific productions of teachers of both sexes, inserted in stricto sensu graduate programs in the Northeast region of Brazil.

For the development of the study, a survey of master's and doctoral programs registered and operating in this region was carried out, through access to the Sucupira Platform, which is a tool for collecting information and evaluating Higher Education Institutions (HEIs) with stricto sensu graduate programs (CAPES, 2014), in which a total of 963 existing master's or doctoral programs and operating in the Northeast/Brazil region were identified; and emails to contact the respective programs are also obtained through this platform.

After this survey and in possession of the e-mails of the coordination of the courses inserted in this platform, we made contact with the coordinations, aiming at the request of the names of the professors registered in the graduate programs in the four-year period 20172020, for the subsequent search of their Lattes curricula in the Lattes Platform, with a request for emphasis on the occurrence of maternity leave in female teachers in the fouryear period; and from this information, three teaching categories were delimited for analysis: i) female teachers with maternity leave (DSF-LM), ii) female teachers without maternity leave (DSF) and iii) male teachers (DSM).

To return the programs with the requested information, a period of two months was stipulated (April and May 2020) and, however, only the return of 43 programs was stipulated. It is noteable that there were numerous incorrect e-mails registered in The Sucupira, as well as justifications for non-participation, mainly due to the current period of complementation of information related to the Sucupira Platform, in view of the completion of the current four-year period and CAPES evaluation.

From the answers issued by the 43 coordinations, the Lattes curricula of the professors were accessed, thus obtaining the following information referring to the four-year period 20172020: i) year of completion of doctoral course, ii) quantitative articles, books and chapters of published books, iii) participation in undergraduate, graduate and stricto sensu, iv) ongoing and completed guidelines for undergraduate, graduate, lato sensu and stricto sensu, v) participation in events and vi) quantitative research and extension projects in progress and completed.

A total of 30 female teachers who took maternity leave (ML) in the four-year period 20172020, 269 female teachers without maternity leave and 405 male teachers were identified. Taking into account the number of female teachers who enjoyed ML, we chose to delimit
the same quantity for the sample of the other teaching categories, in order to perform a comparative of academic and scientific productivity among them. Therefore, female teachers without ML and males were listed and selection was made by simple random sampling, from a draw, in which all had the same probability of being drawn and compute the sample. Thus, at the end, a total of 90 teachers comprised the sample, 30 for each category.

For data analysis, simple descriptive statistics were used, which aims to synthesize a set of values of the same nature, organizing them and describing them through graphs and tables through Microsoft Excel. Furthermore, the average of the productions of the teachers of each category was calculated, and the quantity of their productions was divided by the number of teachers.

This research did not need to be submitted to the Research Ethics Committee, as it involved public domain data contained in the Lattes Platform and the research participants were not identified (BRAZIL, 2012; BRAZIL, 2016).

## RESULTS

Regarding the distribution of stricto sensu programs to which the sample is linked, it is observed that they are mostly concentrated in the state of Rio Grande do Norte ( $n=18.20 \%$ ), followed by Ceará ( $n=15,16.67 \%$ ) and Pernambuco ( $n=13,14.44 \%$ ). Regarding the time of completion of the doctorate, most professors are considered young doctors ( $n=58,64.44 \%$ ), that is, with less than 10 years of completion of the course, being mostly inserted in master's programs ( $n=56,62.22 \%$ ), according to table 01.

Table 01 - Distribution of professors in terms of teaching status, time of completion of a doctoral course and modality of insertion as a stricto sensu professor, Northeast, Brazil, 2020.

| Variables Teachers |  | DSFLM |  | DSF |  | DSM |  | TOTAL |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathrm{N}^{\circ}$ | \% | $\mathrm{N}^{\circ}$ | \% | $\mathrm{N}^{\circ}$ | \% | $\mathrm{N}^{\circ}$ | \% |
|  |  | $\mathrm{N}=30$ | 33.33\% | $\mathrm{N}=30$ | 33.33\% | $\mathrm{N}=30$ | 33.33\% | $\mathrm{N}=90$ | 100\% |
| States | PE | 03 | 33.33\% | 05 | 5.55\% | 05 | 5.56\% | 13 | 14.44\% |
|  | CE | 10 | 11.11\% | 02 | 2.22\% | 03 | 3.34\% | 15 | 16.67\% |
|  | BA | 04 | 4.44\% | 04 | 4.44\% | 02 | 2.22\% | 10 | 11.11\% |
|  | PB | 02 | 2.22\% | 02 | 2.22\% | 03 | 3.34\% | 07 | 7.78\% |
|  | SE | 02 | 2.22\% | 03 | 33.33\% | 06 | 6.67\% | 11 | 12.22\% |
|  | RN | 06 | 6.67\% | 08 | 8.89\% | 04 | 4.44\% | 18 | 20\% |
|  | AL | 03 | 3.33\% | 02 | 2.22\% | 04 | 4.44\% | 09 | 10\% |
|  | PI | 00 | 0\% | 04 | 4.45\% | 03 | 3.33\% | 07 | 7.78\% |
| Doctorate completion year | 1980-1989 | 00 | 0\% | 01 | 1.11\% | 00 | 0\% | 01 | 1.11\% |
|  | 1990-1999 | 00 | 0\% | 03 | 3.34\% | 02 | 2.22\% | 05 | 5.56\% |
|  | 2000-2009 | 05 | 5.56\% | 10 | 11.11\% | 11 | 12.22\% | 26 | 28.89\% |
|  | 2010-2019 | 25 | 27.79\% | 16 | 17.77\% | 17 | 18.89\% | 58 | 64.44\% |

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| Modality | Master | 23 | 25.56\% | 17 | 18.89\% | 16 | 17.77\% | 56 | 62.22\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| inserted | Doctorate | 07 | 7.78\% | 13 | 14.44\% | 14 | 15.56\% | 34 | 37.78\% |

Source: survey based on access to the Sucupira Platform and Lattes Platform.
Regarding the academic and scientific productivity of teachers, it is observed that, comparatively, in absolute and relative numbers, male teachers present the highest productions among the seven variables demonstrated in table 02 , with a majority in five of them. On the other hand, women teachers who took maternity leave had lower productivity, most of them in the five variables of lower number.

Table 02 - Academic and scientific teacher productivity in stricto sensu programs, Northeast, Brazil, 2020.

| Variables |  | DSFLM |  | DSF |  | DSM |  | $\begin{gathered} \text { TOTAL } \\ \mathrm{N}^{\circ} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathrm{N}^{\circ}$ | \% | $\mathrm{N}^{\circ}$ | \% | $\mathrm{N}^{\circ}$ | \% |  |
|  |  | $\mathrm{N}=30$ | 33.33\% | $\mathrm{N}=30$ | 33.33\% | $\mathrm{N}=30$ | 33.33\% | $\mathrm{N}=90$ |
| Published articles | - | 382 | 32.87\% | 340 | 29.26\% | 440 | 37.87\% | 1162 |
| Books and Chap. Books | - | 105 | 26.92\% | 183 | 46.92\% | 102 | 26.16\% | 390 |
| Participation | Stricto sensu | 190 | 22.38\% | 313 | 36.87\% | 346 | 40.75\% | 849 |
| in newsstands | Lato sensu and graduation | 264 | 35.20\% | 227 | 30.27\% | 259 | 34.53\% | 750 |
| Guidance in progress | Stricto sensu | 89 | 27.30\% | 111 | 34.05\% | 126 | 38.65 | 326 |
|  | Lato sensu and graduation | 20 | 39.21\% | 15 | 29.41\% | 16 | 31.38\% | 51 |
| Completed guidelines | Stricto sensu | 97 | 25\% | 138 | 35.57\% | 153 | 39.43\% | 388 |
|  | Lato sensu and graduation | 262 | 44.56\% | 133 | 22.61\% | 193 | 32.83\% | 588 |
| Participation in events | - | 169 | 25.3\% | 265 | 39.67\% | 234 | 35.03\% | 668 |
| Research and extension projects | In progress | 108 | 33.12 | 101 | 30.99\% | 117 | 35.89\% | 326 |
|  | Concluded | 82 | 36.77\% | 74 | 33.19\% | 67 | 30.04\% | 223 |
| Total | - | 1.768 | 30.90\% | 1.900 | 33.21\% | 2.053 | 35.89\% | 5.721 |

Source: survey based on access to the Sucupira Platform and Lattes Platform.
Calculating the mean teacher productivity in the four-year period 2017-2020, it was identified once again that male teachers presented the highest averages among the seven variables present in table 03, with a majority in five of these, especially the indicators evaluated by Sucupira, as published articles ( 14.66 per teacher), participation in stricto sensu

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newsstands ( 5.77 per teacher) and guidelines completed and in progress stricto sensu, respectively ( 2.55 per teacher) and ( 2.1 per teacher); with female teachers who took maternity leave, having, once again, the lowest productivity, most of them in the five variables with the lowest average.

Table 03 - Average teacher productivity in stricto sensu programs, Northeast, Brazil, 2020.

| Variables |  | DSFLM | DSF | DSM |
| :---: | :---: | :---: | :---: | :---: |
|  |  | N=30 | $\mathrm{N}=30$ | $\mathrm{N}=30$ |
| Published articles | - | 12.73 | 11.33 | 14.66 |
| Books and Chap. Books | - | 1.75 | 3.05 | 1.70 |
| Participation in newsstands | Stricto sensu | 3.16 | 5.21 | 5.77 |
|  | Lato sensu and graduation | 4.40 | 3.78 | 4.32 |
| Guidance in progress | Stricto sensu | 1.48 | 1.85 | 2.1 |
|  | Lato sensu and graduation | 0.33 | 0.85 | 0.26 |
| completed guidelines | Stricto sensu | 1.61 | 2.3 | 2.55 |
|  | Lato sensu and graduation | 4.36 | 2.22 | 3.22 |
| Participation in events | - | 2.81 | 8.83 | 7.8 |
| Research and extension projects | In progress | 1.8 | 1.68 | 1.95 |
|  | Concluded | 1.38 | 1.23 | 1.11 |

Source: survey based on access to the Sucupira Platform and Lattes Platform.
Finally, regarding productivity, in all scenarios, i.e.: average scientific production - articles, books and chapters - average guidelines and newsstands - guidelines in progress and completed stricto sensu, Lato Sensu and graduation -, average of projects and events participation in events and research and extension projects completed and in progress - and overall average productivity - sum of all variables - it is observed that male teachers stand out with the highest averages, with female teachers with maternity leave presenting the lowest values, according to Graph 01.


Graphic 01 - Average overall teacher productivity in stricto sensu programs, Northeast, Brazil, 2020.
Source: survey based on access to the Sucupira Platform and the Lattes Platform.

## DISCUSSION

The stricto sensu graduate program and its system in Brazil is considered an important lever for State policies, in view of the composition of actions that direct the development of public policies, the repercussion of the formation of qualified human resources and the publicization of the science produced (FREITAS; SOUZA, 2018).

To ensure the continuity and improvement of this system, since 1970, CAPES has implemented systematic evaluations of stricto sensu graduate programs, allowing national production to initiate a process of external visibility, although it still presents difficulties to remain in high positions in the ranking of international publications (KUENZER; MORAES, 2005), in part, as a result of a historical deficiency of economic investment in the sector.

However, if, on the one hand, Brazil is not yet part of the selected group of the 10 countries with the highest scientific production in the world, on the other hand, in just 17 years, it increased its collaboration within scientific production in the world, with a jump from 1.12\% previously to $2.22 \%$ today, in relation to the number of articles published (BRAZIL, 2019).

The substantial increase in national scientific productivity is the result of the expansion of Brazilian graduate studies. In 2000, for example, Brazil had 116,000 students enrolled in stricto sensu graduate programs, and this figure increased to 313,000, an increase of $170 \%$ in 2017. Also, in the same period, the number of master's and doctorate scholarships distributed by CAPES increased from 21,501 to 93,801, a growth of $336 \%$, which had a substantial increase in titled, young masters and doctors (BRAZIL, 2019), as identified in this
study. Thus, young doctors are partly the result of the expansion of opportunities over the years, due to the increase in the number of doctoral programs, whose period from 19962014 showed a $210.2 \%$ increase in supply (CGEE, 2016).

Such investment requires commitment of the entities involved with the process of strengthening national science, and CAPES, through the adoption of four-year evaluation parameters, since 1998, has been monitoring the stricto sensu programs, through the feeding made by them in the Sucupira Platform, an important tool to collect information, perform analyses and evaluations, besides being the reference base of the National Graduate System (CAPES, 2014).

The academic and scientific production of the professors inserted in the stricto sensu graduate program in Brazil is imported to the Sucupira platform through the Lattes Platform, being a curricular information system, where one can evaluate the productions of researchers through the records of scientific and technological productions (BRITO; QUONIAM; MENA-CHALCO, 2016). From these imports, the programs are evaluated quantitatively and qualitatively for predefined criteria by concentration area by CAPES.

To this end, aiming at achieving evaluative excellence, the programs and their teachers inserted in them are encouraged to develop their activities in order to meet CAPES' evaluative criteria, such as the program proposal, the composition and qualification of the faculty and student, the quantity and quality of theses and dissertations defended, intellectual production and social insertion, with great emphasis on the increase and performance of academic and scientific productivity, which is more expressive in Brazilian regions that concentrate the largest educational complexes (KAWASAKI, 2017).

It is a fact that the offer of stricto sensu graduate programs tends to focus on more privileged regions of the country, such as those that have greater economic activity and greater population concentration. In fact, in 2017, a high concentration of stricto sensu graduate studies in the Southeast region was identified, with 1,554 programs (43.69\%), followed by the Southern regions, with 780 (21.93\%); Northeast, with 729 (20.49\%); Midwest, with 303 (8.52\%) and North, with 191 (5.37\%) (BRAZIL, 2019).

Currently, with its 963 stricto sensu graduate programs registered in the Sucupira Platform, the Northeast has been highlighted by the increase in academic and scientific productivity and the number of professors linked to its programs (CAPES, 2014). In 2017, after the Southeast region, which concentrated 47,870 teachers ( $47.73 \%$ ), the Northeast region remained in second place, with 19,888 teachers (19.83\%) (BRAZIL, 2019).

Regardless of the fixation region, stricto sensu teachers are oriented to an intellectual productivist logic, which focuses on the results of scientific production, gives little value to the work process itself and disregards too many factors that directly imply in this production, as the social, human, political and cultural dimensions, such as gender and maternity issues, which end up interfering in stricto sensu teaching activity and impact on the rise and permanence of female teachers in the programs (MELLO-CARPES et al., 2019).

Although women and men can complete their doctoral courses in similar percentages, in fact, the difference between them appears in the stricto sensu teaching exercise (CAPES, 2018). In this scenario, female teachers occupy the smallest spaces (approximately 42\%), although they outnumber men in the percentage of doctorates graduated year by year in the country (CAPES, 2018).

Some conditions interfere in the trajectory of female scientists, such as gender inequalities and stereotypes, and this condition is identified in the study sample, since, in relation to the general productivity in stricto sensu graduate programs, female teachers, especially those who took maternity leave, presented lower production when compared to male teachers.

Corroborating this result, Crispin (2015) points out that, after consulting the National Council for Scientific and Technological Development (CNPq/Lattes), the representativeness and productivity of female PhD teachers is lower than that of males; one of the explanations for discontinuity in productivity are the responsibilities with education and care for children, in addition to dedication to household tasks, activities that are historically delegated to women and that consume a lot of their time.

The study by Sousa e Guedes (2016) reinforces this role by analyzing data from the National Household Sample Survey (PNAD) from 2004 to 2014 on domestic duties among men and women over 16 years of age, with a percentage above $90 \%$ of this attribution performed by females, to the detriment of just over 50\% for males. The 2016 Human Development Report (UNDP, 2016) still says that while busy men allocate only 10 hours a week for housework and family moments, busy women make up more than twice as much as 24 hours a week.

This reality is ratified by the sexual division of labor, which is the responsibility of women's reproductive work and domestic tasks. There is a work overload due to few mechanisms and tools that allow the reconciliation between domestic activities and paid work exercises (JABLONSKI, 2010).

In addition to domestic duties, other obligations are said to be exclusive to the female public and, among these, maternity stands out, as it brings with it several changes in the woman's family, social and professional field, which can happen from the beginning of pregnancy and
already bring repercussions on her day-to-day life. Thus, it is necessary, in the case of the research professors inserted in stricto sensu programs, to reconcile pregnancy, care with offspring and the development of their research (IVO; FERREIRA, 2019), which reinforces the culture that they are responsible for the care of their children and should be carried out in the maternity ward. For teaching and scientist men, exclusive career care is intended, maintaining their high level of productivity, even after the birth of their children (ANDRADE, 2018).

This imposition actually reflects in the reduction of female academic and scientific productivity. According to Lacerda et al. (2008) maternity has a negative impact on academic careers in $81 \%$ of the women interviewed. This is due to the fact that, while childless researchers maintain a regular rate of scientific production, mothers tend to have this productivity significantly reduced, maintaining this fall during the first four years of the child's life. It is emphasized that low productivity can cause dissatisfaction and professional discontent (ALVES, 2017), and there may be greater losses in dedication and motivation for teaching practice, the adoption of active methodologies, extension and research, with subsequent exhaustion of physical and mental health.

Another highlight, besides scientific productivity, is the greatest difficulty that these teachers present in maintaining high levels of qualification. As an example, participation in scientific events is pointed out as an important instrument of training - both from the personal and academic point of view - in addition to allowing communication, although informal, of the science produced, which can contribute to the greater visibility of the researcher (LACERDA et al., 2008; HAYASHI; GUIMARÃES, 2016) and provide them with prominent positions in disputes in the scientific universe. However, in the study sample, female teachers on maternity leave presented the lowest indicators of participation in scientific events, possibly due to the obstacles imposed to its displacement and care for the offspring, which can impact on its productive capacity, institutional partnerships and delays in the monitoring of scientific evolution in its area of operation.

This is a situation that needs to be thought and discussed within stricto sensu graduate programs, mainly by the evaluating agencies, considering that the repercussions of gender and maternity cut out negatively impact not only on female teacher productivity and their lives, but also on the markers and evaluative indicators of the programs. In view of the first aspect, academic requirements can lead to the physical and mental exhaustion of the professor, since, in order to remain in the scientific profession and in master's and doctoral programs, basic requirements are required, being required, among others, a number of activities, publications and research projects to build a stable and successful academic career, requiring an expressive production in order to compete equally with scholarship,
resource and project notices, as well as ensure their permanence in these programs (SILVA, 2013).

This situation reinforces a hierarchical segregation of gender in the academic-scientific space, characterized by the deficit in the speed with which women ascend in their careers, even with abilities and abilities identical or superior to their male counterparts (VAZ, 2013). This phenomenon is rooted in discriminatory, visible or invisible practices, which put the female cognitive aspect to the test (MARRY, 2008).

Thus, taking into account the historical and cultural differences in the insertion and maintenance of female teachers in academic and scientific spaces is necessary and important, seeking to distance ourselves from androcentric standardization of behaviors, which stipulates for female teachers the construction of a professional identity according to the "male model", which involves full-time commitments to scientific work, competitive and productive relationships (VELHO, 2006), thus incompatibility between the time spent for domestic work, the care for offspring and the reinforced dedication in the intellectual environment.

Therefore, it is pointed out the need to evaluate the curriculum of a female teacher, especially if mother of young children, in a differentiated way, either in the quadrennial evaluation processes of CAPES, or before a teaching competition, or in the attempt to apply for a scholarship or compete for edicts, it is necessary to think of strategies to signal that this teacher was on maternity leave, which would justify a possible "production gap in lattes" in this period (NUCCI, 2018) and would guarantee a level playing field for these teachers with the other.

## FINAL CONSIDERATIONS

This study encourages reflections on the gender bias instilled in the scientific scope of stricto sensu graduate studies, which can hinder equitable productive performance between men and women, since, in the sample studied, there was a disparity in relation to the frequency with which male teachers develop scientific and didactic activities, to the detriment of lower productivity in the same activities among women without maternity leave, which still overlap in production in relation to women on maternity leave. This result raises reflections of a double impact, not only under the focus of the devaluation of women in productive work, but also because of the deficit in the compatibility of reconciliation of productive and reproductive work, which may lead to tensions in the roles of mother and researcher, which reflect negatively on their performance.

Thus, the study directs the importance of reflecting on gender equality policies, both for the resizing of reproductive work in the domestic sphere, as well as for the greater valorization of women in the work field of the academic-scientific universe. In addition, the need for institutional public policies that equate opportunities in scientific and teaching production between men and women is pointed out, so that they do not have to choose the role of mother, to the detriment of the role of researcher and scientist.

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