Abstract  This study aimed to analyze teaching work’s temporality aspects in their relationship with health. Qualitative research was conducted with the participation of ten professors from a public university. Six meetings called “Worker’s Health workshops” were held, a research methodology that gathers workers and researchers to discuss topics related to work and health. The material was analyzed through the content analysis technique, in the thematic modality. The main themes were identified from the transcribed materials of the workshops’ dialogues, namely: working time intensification and extension, teacher’s health, working time and sleep deprivation, and health advocacy strategies and solutions. We noticed that health advocacy strategies are located in individuals and the workgroup, through cooperation and social time. The theme of an intensive and extensive combination of working time associated with insecure work conditions was identified. We concluded that teaching work time is underpinned by rules and social values under the historical determination of new managerial standards within the public university.

Key words  Teachers, Universities, Worker’s Health
Introduction

At the end of the twentieth century, precisely in the 1990s, a comprehensive State reform that established a new model for the organization of public universities started in Brazil. At the structural level, it was a new cycle of capital movement that required higher productivity and flexibility from workers to adapt to new work organization and management forms. This new work morphology, in which technological and informational changes stand out, characterizes science as a productive force and generator of innovation, under a pragmatic and instrumental rationale, originating from market rules and values. This scenario is legitimized by the State's austerity policy, which created legal mechanisms to privatize, outsource, and restrict spending on public education, deepening the work insecurity scenario in universities. Thus, under the prism of the establishment of a “managerial” State, public universities were subjected to an economic logic of control and restriction. We are facing an international trend that places education as a market activity.

Changes suffered by public universities, derived from the State reform, defined education as a sector of services not exclusive to the State, which meant that education ceased to be conceived as a right and started to be considered a service that can be private or privatized. The university's organizational vision was emphasized within this political scope, that is, a new institutional form of academic, public management, controlled by management contracts and evaluated by productivity rates. This scenario contributed to the deepening of a central problem, namely, the change imposed on teaching work.

Several laws and decrees were approved within the institutional framework of the universities: The National Higher Education Assessment System (SINAES) was created in 2004, and the Support Program for Federal University Restructuring and Expansion Plans (REUNI) was established in 2007, just to mention two relevant public policies that influenced the organization of teaching work. REUNI establishes the numerical growth of Brazilian universities and the opening of new vacancies for students, without the equivalent creation of vacancies for professors and sufficient input of resources. This set of reforms contributed to the pronounced deterioration of university infrastructure conditions.

Regarding the teaching work process, changes were introduced in the activities routine. Different assignments such as the preparation of papers, books, student guidance, participation in examining boards, research and bench activities, classroom work in undergraduate and graduate courses, the requirement for administrative activities, among others, produce work intensification and prolongation. Indeed, professors have been experiencing profound changes in university working time, configuring new relationships in the academic culture. The pressure exerted to increase the amount of work within the 40-hour day has materialized from the idea that teachers should be “more productive”. Without a doubt, productivity affects intellectual autonomy, causing loss of control over one's work and the subsumption of intellectual work and the production of knowledge in the logic of capital.

Moreover, Luz asserts that there is a lack of knowledge about the teaching work process, which presupposes its own pace of operation, elaboration, advances, and pauses during the development of activities. In turn, these teachers are aware of the need to meet the institutional requirements in force regarding compliance with the “productivity” norms, and strive to perform their tasks to exhaustion, sacrificing rest, leisure and vacations in favor of work, which has consequences for health.

It is worth considering that teaching work is not only objective data characterized by the administrative duration of the teacher's work hours or years. It is also subjective data, in the sense that it contributes powerfully to shaping the worker's identity. In this line of interpretation, the point referring to experience at work is highlighted, which leads us to the perspective of understanding that working time is a continuous and growing process of acquiring knowledge intrinsic to the activity itself, requiring specific collective health studies since it has a protective effect on the health of workers. The assertion that social time nowadays is time tinged with rules and values imposed culturally by the logic of capital seems to be correct.

Notes on work's social temporality under capitalism

In the pages of “The Capital”, Marx discusses the greatness of the working hours and distinguishes two essential concepts in the analysis of working time: “the necessary work and the extra work” (p.306). Marx defines necessary work as the part of the day when the worker necessarily has to work for his material survival
and “self-preservation”, for his reproduction as a workforce. However, in concrete terms, this part of the work is only a fraction of the real working hours, since the total grandeur of working hours varies with the extent or duration of extra work or overwork, which concerns the unpaid hours worked. Thus, the value produced beyond what is necessary for the reproduction of the labor force is an added value. Capitalist production is essentially the production of extra work and, consequently, added value, leading to the intensification and extension of the working day, which produces debilitation, wear, and exhaustion, and can lead workers to premature death.

Marx formulated important theoretical parameters about the “work intensification” (p.481). This thinker believes that the increased speed and pace of work raises the worker’s intensity. Capital is interested in the fact that workers “can produce more with a greater expenditure of work at the same time” (p.482). This means reducing the porosity of breaks or rest, which imposes a higher expenditure of work and pressure on the workforce. It is also essential to consider that extending the time of the working day also is labor intensification. Thus, the extended post-formal working hours (such as “overtime”) alongside the increased pace in regular working hours doubly predetermines work’s intensification.

We should remember that the late 19th to early 20th century period witnessed the dissemination of the factory work ideology as the dominant model for working time organization and control, not only in industrial settings but also in schools, hospitals, among other social institutions. Indeed, time started to be managed by the (scientific) organization of work to control workers, through the so-called Taylorist/Fordist production standard, with substantial repercussions on the subjectivity and constitutive values of the working class. In this standard, time is reduced, and the work pace increased, intensifying the worker’s oppression and submission to ensure the regular production and continuing added value extraction. However, social time does not flow uniformly and is subject to discontinuities under the action of man.

Thus, at the end of the 1960s, workers’ resistance reached its epicenter through the movement of critical questioning to the social control of production, raising the issue of limits between working time and leisure time. This scenario gained notoriety in the explosion of the worker-mass, “hegemonic portion of the proletariat that operated in the concentrated universe of the productive space” (p.42).

From the mid-1970s onwards, the capital was put on the offensive, that is, against lower working hours. Since then, the dominant and universal trend has been to combine increased productivity and intensified work with an extended working day, an extremely harmful merger for the health of workers.

The transformations in the world of work with the advent of Toyotism that infused the flexible nature of working hours are noteworthy in the history of contemporary capitalism. Basso argues that there is a universal trend of deteriorating working and living conditions for the mass of salaried workers through the establishment of old working days in modern times. In this sense, it ensures that the neoliberal prescription is characterized by labor relationships increasingly based on insecurity, in forging forms and methods of pressure at work, making the boundaries between working time and global life time insecure, allowing gathering old and new risks to workers’ health. Along the same line of understanding, Alves assures that it was precisely through the Toyota method that the new social morphology of capitalism took place, producing the corrosion of the human person through “reduced life” (p.124), that is, through the working time’s invasion of a leisure life time. The essential feature of global capitalism is the structural insecurity of work and the illness of subjectivity, a scenario of suffering and degradation of workers’ health in which the manipulation of emotional capacities is emphasized. A similar finding is mentioned by Dal Rosso when stating that, under capitalism, the Toyotist method may be the one that most mobilizes intelligence and emotional engagement in work activity with control of workers’ autonomy and freedom. This same author argues that contemporary work has different characteristics from other times and focuses on service activities, which requires analyzing the work from the perspective of workers.

Given the above, this study aimed to analyze aspects of the temporality of teaching work in a public university, its relationship with health, from the experience of teachers.

Methodology

This study is part of ongoing research in the field of occupational health, which started in 2013 through the establishment of an interdisciplin-
ency and multicenter research group consisting of researchers and university professors. The main proposal of the research group consisted of the development of pedagogical technologies for the production of knowledge and participatory intervention on the health and work of public university teachers. Three research tools were developed, a quantitative (epidemiological survey) and two qualitative: “health handbooks and work”\(^\text{19}\) and “worker’s health workshops”\(^\text{20}\). This study shows the results and discussion exclusively from the “worker’s health workshops”, which are conceived as:

*Spaces where workers and researchers meet to discuss health-related work themes, based on elements of participatory research and Freirean pedagogy*\(^\text{21}\), as well as the fundamentals of worker’s health\(^\text{12,22}\) building a process that, through dialogue, will enable the production of knowledge and educational action to strengthen workgroups and protect health.\(^\text{20}\)

We understand that this type of research enables the construction of knowledge production group practice from a perspective that combines pedagogical interaction and social action. It is realized from a gradual process that requires a certain amount of time for the emergence of interaction and active participation between subjects\(^\text{23}\). This process also allows the understanding and discussion of the living reality, because action, answers, and new questions arise through reflection, leading to the critical growth of all involved\(^\text{21,24}\).

Regarding the development of the workshops, six two-hour meetings were held at the premises of the Institute of a Federal Higher Education Institution (IFES) located in the state of Rio de Janeiro, from 2015 to 2018, in two distinct methodological phases. The first consisted of four meetings held between the years 2015 and 2016, designated as “thematic workshops”, which mainly aim to collect “generating themes”\(^\text{21}\) that can be understood as primary registration units for dialogue, and the qualitative analysis of the content of the discussions. In this approach, the themes arise spontaneously, and there is no prescribed roadmap of questions. We postulate that access to research data is through dialogue, where the identification of generating themes\(^\text{21}\) is based on its content. The second phase of the workshops, called “consensual validation”, consisted of two meetings held during the second semester of 2018, whose central concern was the critical dialogue regarding those topics raised in the first phase, that is, the themes most relevant topics discussed during the thematic workshops were debated, among which the theme of teaching work temporality stood out. Oddone et al.\(^\text{22}\) believe that the consensual validation process occurs by confronting spontaneous observations and the criticisms of each subject involved regarding the work. It refers to the collective judgment, when group members exchange ideas and experiences, favoring specific themes and making the process of knowledge production with more significant reflection potential for action\(^\text{19}\).

As for the profile of the study subjects, ten male and female teachers, aged 30-50 years participated, all with a stable 40-hour weekly workload and a Ph.D. They have 5-10 years’ work experience in undergraduate and graduate programs, and all have been teachers for over 10 years. Teachers requested the study to be conducted at the Institute. The selection criterion was belonging to the same homogeneous workgroup, respecting the assumption present in the field of worker’s health\(^\text{22}\) and those who agreed to participate in the study. The inclusion criterion was to be an active teacher and belong to the same IFES Institute. The exclusion criterion was being a teacher on a removal status due to leave or vacation.

The material was analyzed using the content analysis technique in the thematic modality. The data analysis process comprised the steps used to operationalize content analysis: pre-analysis, material exploration, and treatment and interpretation of the results\(^\text{25}\). Thematic groups were identified from the materials transcribed from the workshops’ dialogues, and established through the classification of excerpts from the dialogues by criteria of similarity and frequency and relevance concerning the objective of the study, enabling the identification of the main themes, namely, working time intensification and extension, teacher’s health; working time and sleep deprivation, health advocacy solutions and strategies.

Regarding the presentation of results, the initials OT (Thematic Workshops) and VC (Consensus Validation Workshops) were agreed to designate, respectively, the meetings held in the first and second phases of the study. For the characterization of the subjects’ reports, the letter P (Teacher) was used, followed by a number measured from the listening sequence of the meeting transcripts.

The study was approved by the Research Ethics Committee of the Sérgio Arouca National School of Public Health, Oswaldo Cruz Foundation, and the co-participating Institution.
Results and discussion

Working time intensification and extension

The increased work demand and pressure to meet productivity goals will reconfigure teaching work in higher education that transcends the physical and temporal boundaries of the university and becomes present on weekends, holidays, and breaks of the academic year:

Science is not an industry. People work on weekends. They sometimes have to be here at 6 a.m. or leave at 10 p.m. [...] We end up living science, nowadays, as if it were an industry. You have to deliver a final product. (OT, P2).

Moreover, I think we have to have a little peace, some conditions to be creative in what we do. Many assignments, the thousand things we do… We get so stressed about having to do, having to be busy even with things and, sometimes, ‘pre-occupation’ too, right? [...] the word preoccupation very good, because it is pre-occupation. (OT, P3).

The university professor’s work activities are characterized by bringing together “lots of assignments” and “products”, as well as the requirement for qualification, constant updating, and demand for quality teaching. The work demand does not end in the classroom; it requires constant dedication to scientific production, participation in projects, among other “thousand things”. From the teaching viewpoint, these multiple occupations generate “preoccupation”, feelings of restlessness, anxiety, and stress, which contrasts with the need for focus and concentration specific to their work process. The combination of poor working conditions and work overload contributes to the intensification and extension of the teacher’s working hours, configuring a new working temporality with possible consequences for the health of these workers. Harvey\textsuperscript{26} calls attention to the social manipulation of the temporality of work as a fundamental feature of capitalism. Under the rationale of productivity, the author alleges that work is not measured by a real day’s work, but by the number of products.

Moreover, the participants observed that poor working conditions at the university generate increased working hours:

[...] the lack of conditions that we have, which I think contributes a lot to increase our working hours. Because, many times, you cannot do what you could do while you are here inside the institution, because the institution does not give you the proper conditions. And then you get home, you do what you should have done here, and you cannot do, right? (VC, P3).

Furthermore, you mix the personal with the professional. (VC, P2).

Exactly. Then you come home; you review some academic work because you had no time to do it here. There is no structured place for you to concentrate and do it here. (VC, P3).

The dialogues show that when it is not possible to perform tasks in the university environment, the tendency is to take home what has not “been accomplished” within the regular working hours. The lack of conditions translates into the idea of precariousness under several aspects, such as deteriorated building infrastructure, shortage of equipment and material, lack of support from the administrative sector, an inadequate work environment with the absence of individual workstations, among others. The combination of such elements suggests substantial impacts on health in its physical, emotional, and cognitive aspects\textsuperscript{27}.

Teacher’s health

Based on the theoretical contribution of the field of workers’ health, it is stated that the analysis of health must be based on the study of the context in which work takes place. In this sense, it was mentioned that feelings of frustration, demand, guilt, and depression emerge in the face of non-ideal work conditions:

I know colleagues of mine who work in other institutions, but who have already fallen ill, gone into depression due to professional problems, and many of these problems are precisely this issue of being in a physical situation or in conditions that are not ideal working conditions, to do what one wants to, and then end up frustrated. They are usually people who ask of themselves a lot more and cannot cope well with this difficulty, and then end up depressed. (OT, P3).

They can take some guilt for themselves, right? Those who ask too much of themselves. I think it has to do with the whole relationship with work. (OT, P4).

Exactly. This is a very high prevalence in our environment; people with these health problems sometimes do not even realize that they are experiencing this problem. Many even refuse to accept that it can be a problem, but when they seek help, they find this situation, which is something that comes from the conditions of all that we experience. (OT, P3).

During the workshops, teachers highlighted a chain of organizational impediments, which is in contradiction with the effective engagement at
work. Studies evidenced by Activity Ergonomics in Brazil, such as those by Jackson Filho\textsuperscript{28}, show that these constraints put workers’ health at risk. Dialogues that outlined feelings of discouragement, frustration and guilt experienced in collective terms were heard. In this line of interpretation, it is worth mentioning that both in the national and international literature, references to mental health in this professional category stand out, and diseases such as stress, a permanent state of fatigue, depression, and even suicide\textsuperscript{29,32} are mentioned.

Worth mentioning are mental health-related factors, as well as musculoskeletal and vocal disorders\textsuperscript{33,34}. In the workshops, teachers relate this last point (vocal health) due to the overexertion of speech in the classroom, since most of the working day is usually carried out in poor working conditions due to the budgetary constraints of public universities, in inappropriate physical environments, without acoustics, and an excessive number of students. Alves et al.\textsuperscript{34} argues that vocal changes often lead to situations of removal and incapacity for the performance of teaching functions:

I have to be careful with my voice, because, in the long run, I lose my voice almost totally. This has already happened two or three times this year. (VC, P1).

Out of the blue? Or is it decreasing? (VC, P2).

[... it decreases and then [...] disappears. I have been like this for a month or two; I lost my voice. [...] I’m taking care, taking care by always bringing water, so that I can always drink [...]. (VC, P1).

Furthermore, the study by Santana\textsuperscript{35} points out that there are essential cases of coronary heart disease and strokes (hemorrhagic and ischemic), which may be associated with the high number of tasks, pressure for intense scientific production, and prolonged working hours. Other issues that are also related to the emergence of these conditions are the lack of a balanced diet, regular physical activities, and absence of medical visits, justified by the lack of time due to work overload.

Working time and sleep deprivation

The organization of working time for university professors shows other aspects of the concept of “24-hour society”, by which an increasing number of people are faced with the demand for work during non-day hours and weekends\textsuperscript{36}. It was verified through the dialogues in the workshops that the teachers experience a situation of excessive demands at work. It is a set of requests that, from the perspective of the teachers, must be complied with even if they exceed the regular working hours. Therefore, many teachers work more than the number of weekly hours provided by law, and do so at night, leaving aside the family and the necessary rest for the working hours of the next day\textsuperscript{37,38}, as reported below:

I have to deliver on a specific time agreed; I will do everything to deliver on that deadline, even if I have to pull an all-nighter, I will do that, especially when there are other people involved. I don’t think it’s fair that I hinder the other’s work because of something that I assumed, and I’m not managing to do it. I always used the early hours of the day a lot to account for everything I assumed, the commitment. (OT, P2).

In a study conducted by Rotenberg and Carlos\textsuperscript{39}, noteworthy is the idea of accelerating work among university professors. The findings show that teachers feel in constant professional debt, leading them to work after the regular working hours, and this behavior leads them to have an irregular sleep-wake cycle, which is accompanied by partial sleep deprivation, resulting in adverse consequences for health and work performance\textsuperscript{40}:

I can’t relax to sleep. For example, some people prefer to sleep, wake up much earlier, like four o’clock in the morning, when they have to deliver something the next day that is not finished. I can’t because I don’t relax. I am unable to sleep if I don’t finish that. (OT, P2).

[... You have a worse memory, which I think is very much related to sleep. It is called sleep deprivation. Because I think that we, faculty and researchers, should sleep less than we usually need. [...] I live tired. I am not even sleepy but tired with a bad memory. (OT, P4).

It is understood that “sleep deprivation”, an expression mentioned and shared in the workshops, is a clear reference to teaching work intensification, considering that the time outside the working hours should be mostly dedicated to relieving tensions, rest and recovery from accumulated fatigue. Moreover, some people have reported that the lack of time affects family ties and personal relationships.

Ambiguities of teaching work and health advocacy

It is evident through the dialogues in the workshops that teachers develop different health advocacy strategies, and this type of mechanism is a way to alleviate suffering in the face of as-
pects related to work situations and conditions, especially concerning mental health. These health protection strategies allow transforming and changing the perception of workers vis-à-vis reality, especially those that can cause suffering; these would be responses to the “subjective relationship with pathogenic pressures”. The workers of “passive victims put themselves in the position of active agents of a challenge, a provocative attitude or a minimization before pathogenic pressure” (p.128), as evidenced in the dialogue below:

[...] It is because our conditions are not adequate. So you depend on your emotional state to resist, right? It is resistance. I think we resist and insist on doing research [...] I do not consider these things, my students are great, the group of teachers gets along very well, they collaborate. So, it turns out that these things feed me more than the negative part. (OT, P5).

So, if you have a group that is all cohesive [...] You want to work well, do well, do your best under the conditions you have. Great! Everyone is focused in that direction. (OT, P3).

I feel this very much. I think that our group is united in this sense, and strengthens itself with good things and moves forward. (OT, P5).

Teachers seek balance with the situations that cause suffering in their work routine through pleasure-triggering attitudes. Pleasure and suffering are subjective experiences from the perspective of the work’s psychodynamics: each individual lives a situation differently. However, if several people experience the same situation, they can join their efforts to build a collective defensive strategy. When observing the dialogue above, factors that generate pleasure are identified, such as, for example, committed students, and especially the good relationship and union between teachers, which are perceived as facilitators “feeding” the daily work of teachers positively. Faculty malaise can be mitigated by the use of suffering mediation strategies, which would be ways used by teachers vis-à-vis work demands, some compensation through pleasure experiences.

In the workshops, teachers validated forms of resistance to unfavorable work conditions, among them: the insistence on continuing research and training students; resisting adversity; being part of a group of collaborative and cohesive teachers; finding, in this case, affective and collective work support; breaks generated by social interaction, especially with the family; and the “passion” to keep on doing what one likes.

Nevertheless, we should bear in mind that workshops’ dialogues were marked by conflicting meanings, such as enthusiasm and sadness, passion, and displeasure. One could identify ambivalent visions concerning the subjective experience of work, interpreted by some participants as extreme and conflicting feelings, such as “we are either crazy, or we like what we do”.

Indeed, the arguments reported here were produced in a context of insecurity, intensification, and extended working time at universities. Thus, they assume a conflicting nature, since they preserve some normality, but do not realize real changes. These are styles of teaching resistance to be better understood and deepened in university work.

Final considerations

In historical terms, it appears that 152 years after Marx’s time, the working class still resists in the sense of consolidating the working hours in the universal civilizing frameworks of work. Therefore, the structural aspects identified here, which lead to the intensification and extension of the teaching workday, are old for capital and new in organizational configurations of work in public universities, causing new collective consequences for the health of their workers.

This new organization of working time in public universities is materialized, invariably, by the excessive procurement of products, transforming thoughts and ideas into commodities. Thus, although higher education professors are part of a qualified group and considered as a social elite, it can be seen that precariousness, intensification, and extension of the working hours take place under parameters of the work managerial organization. Reports of suffering and complaints referring to physical and mental health were observed during the workshops. Work overload and lack of time for rest and leisure was observed. As a result, workers reported sleep deprivation, constant fatigue, and lack of memory. The theme of the intensive and extensive combination of teaching work associated with poor working conditions was centrally identified.

According to Santos, “temporality” refers to the particular ways of using the time of each agent, class, or social group. The author affirms that these are practical ways of living and gain concreteness through their interpretation in real life in each place and space.
Additionally, it is worth noting that, currently, working time in the educational services sector is subject to a new organization and control forms. Dejours states that all work organization leads to the theme of real work’s plurality, which raises the issues of the different ways of doing it through its functioning. It was noticed that the health advocacy strategies are located at the individual level and in the working group itself, with the valorization of cooperation, cohesion, and interactive time. Thus, it seems right to affirm the importance of generating changes on a collective basis, through resistance, in order to produce participatory policies and institutional interventions in universities, which includes the support of the teaching union organization. From this perspective, fighting against the invasive time of work implies fighting against life domination and control, reviving the true meaning of teaching work that should mean autonomy, creation, freedom, and human and social emancipation.
Collaborations

AMS Rodrigues and KR Souza participated in the design of the study, field research, data analysis, drafting of the manuscript, and approval of the final version of the paper. LR Teixeira and AL Larentis contributed to the drafting of the manuscript, critical review, and approval of the final version.

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