

Analysis of the Work Stress of Doctors and Nurses Resulting from Organizational Problems in the Health Institutions of the City of Lubumbashi (in DRC)

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Abstract: *This article analyzes the work stress bound to the organizational problems which meet the doctors and the nurses in the health institutions of the City of Lubumbashi, in DRC. The objective is to evoke, for information purposes, the organizational springs which go into the understanding of the multiple factors of the stress lived by investigated caregivers. To reach there, a laminated proportional sample of 562 subjects (n=562), which 432 nurses and 130 doctors, allowed to collect of data by questionnaire. These were encoded in Microsoft Excel and analyzed via Epi Info software version 7.2 of 2016 and SPSS 19.0 of 2012. The chi-square test contributed to test our hypothesis, by considering the Odds ratio meanwhile of confidence interval (CI) of 95 % and the value of p to direct the interpretation. The results show of numerous caregivers put under stress by the lack to apply the instructions (for the nurses, 66.12 % and for the doctors, 17.79 %; OR 0.60 in borders [0.3701], [0.9762]; p = 0.02 (p<0.05); the test being significant). On the other hand, we observe less of caregivers put under stress because of the working amplitude (daily or weekly) and of their overuse. Been used to live these situations on a daily basis, these caregivers take for the standard what is abnormal and illegal.*

Keywords: Work stress, instructions, amplitude of the work, overwork

1. Introduction

The professional stress is variously lived in the various work environments (hospital, school, prison, company...) double crossed by multiple organizational, human, relational, technical problems and exposed to risks of any kind. In the Healthcare sector, the hospital, for example, is generally characterized by a working organization which works 24 hours a day requiring of the caregivers permanently, of night as of day. But these nursing have to work in the respect for legal standards.

The article 119 of the Congolese Law No 16/010 of July 15th, 2016 modifying and completing the law No 015-2002 carrying LABOR CODE stipulates what follows: " in all the public or private institutions, even education or charity, the legal duration of the work of the employees or the workers of the one or the other sex, whatever is the shape in which is executed the work, cannot exceed forty five hours a week and eight hours a day. It is reckoned from the moment the worker is held on the scene of the work at the disposal of the employer until the services stop, according to schedules stopped by the employer and reproduced in the company regulations "[1]. These prescribed of the Congolese legislation regarding work oblige the various institutions of health to conform to it.

Within the health institutions of the City of Lubumbashi, it counts several organizational problems: the limits of structures of care, the instructions and their application (during successions, for example), the amplitude of the work, the overuse of caregivers, the late successions, the lack of rest... In a context of precariousness, these situations constitute sources of the stress for a lot of investigated

doctors and nurses. That is why this study allows to deepen three last ones who seem foremost. The central question is formulated in these terms: what proportions of stress ensue from the real-life experience of doctors and nurses of the City of Lubumbashi with regard to the instructions badly applied (during successions, for example), to the amplitude of the work and to the overuse of caregivers? In touch with this question, this study formulates this hypothesis: The doctors and the nurses are much more put under stress by the non-application of the received instructions than by the amplitude of daily or weekly work.

2. Literature Survey

The long lasting in the work is differently lived according to the healthcare professionals. In different contexts, the caregivers work, a week, more than hours than were planned. For example, a study led in Germany on the medical staff shows that 45.6% of the doctors work more than 48 hours a week [2]. In various countries or in various occupations, we notice a gap between legal requirements regarding employment regulations and the reality lived in certain professional circles. And this over professional request is on the basis of diverse consequences connected to the work or to other sectors of the life, even on the health [3].

The literature indicates an association between long hours to the work and the tiredness and even the arisen of the stress [4], for example, for the professional healthcare [5]. It is from this perspective that Siu & al. end that the number of working hours a week has a big impact on several dependent variables [6], of which the arisen of the stress. And the work becomes a source of multiple stress which various

researchers, following the example of Cooper, Sloan and William, try to classify of big categories or to examine its consequences on various parameters: the disturbance of the cycle of sleep, the excessive use of cigarettes, narcotics, alcohol... [7].

3. Methodology

- Study area

The diverse medical trainings (hospitals, medical health centers or center, polyclinics) of the City of Lubumbashi, in DRC, constitute the ground of survey of the present study.

- Population and sample size

Two groups establish the population of this study: it is about doctors and about nurses. In the City of Lubumbashi, the number of doctors amounts to more or less 934 and that of the nurses, in 2382. What makes a total of 3316 subjects if we are held to the statistics collected during our research. All in all, this study built its sample around 562 subjects (n=562), is 16.9 %. It was stratified in this way: 130 doctors, that gives 13.9 % and 432 nurses, or 18.1 %. The valuable differences in this diversification of the laminated proportional sample are based on the size of each of stratum.

- Methods

Of quantitative reach, this study collected, at first, the data from a questionnaire sent directly to the nurses (n=432) and to the doctors (n=130). Then, a matrix was conceived in the Excel format and in the Epi Info software version 7.2 of 2016 and SPSS 19.0 of 2012 to encode and process the data. In the bivariate and multivariate analysis of data, the test of chi-square was put in contribution and the odds ratio facilitated the interpretation of independent variables with regard to the dependent variable (the professional stress) by considering the confidence interval (CI) of 95 % and the value of p.

4. Results and Discussion

Table 1: Work stress bound to the badly applied instructions

Variables of study	Profession						
	Nurse	Doctor	X ²	OR (CI 95%)	OR	p	D
Stress connected to the received but badly executed instructions							
No	66 (11.74)	30 (5.34)	3.7584	[0.3701], [0.9762]	0.60	0.02	S
Yes	366 (65.12)	100 (17.79)					

In view of data of this table, we notice that 65.12 % of the nurses and 17.79 % of the doctors are put under stress having seen badly applied diverse instructions relative to the exercise of their profession. This test turns out significant with regard to the OR 0.60 included in borders [0.3701, 0.9762] with value of p = 0.02 (p<0.05).

Table 2: Amplitude of the work a day

Variables of study	Profession						
	Nurse	Doctor	X ²	OR (CI 95%)	OR	p	D
Hours of daily service							
≤ 8 hours	245 (43.59)	93 (16.55)	8.5545	[0.3405], [0.7980]	0.52	0.00	S
> 8 hours	187 (33.27)	37 (6.58)					
Stress and number of hours of daily service							
No	336 (59.79)	110 (19.57)	2.4500	[0.3754], [1.0786]	0.63	0.05	NS
Yes	96 (17.08)	20 (3.56)					

With regard to the daily hours of work, 43.59 % of the nurses and 16.55 % of the doctors work during a time ≤ 8 hours a day and 33.27 % of the nurses and 6.58 % of the doctors work more than 8 hours a day. He becomes established an association with value of p 0.00 (p<0.05); the OR 0.52 in the lower and superior borders of [0.3405], [0.7980]. With regard to the Congolese Labor code [1], nursing 39.85 % work illegally more than 8 hours a day.

With regard to these illegal services, we record 17.08 % of the nurses and 3.56 % of the doctors who develop of the stress with the OR 0.63 with regard to borders [0.3754], [1.0786], with value of p 0.05, test not being significant.

Table 3: Amplitude of the work a week

Variables of study	Profession						
	Nurse	Doctor	X ²	OR (CI 95%)	OR	p	D
Hours of weekly service							
≤ 45 hours	165 (29.36)	65 (11.57)	5.2827	[0.4164], [0.9171]	0,61	0.01	S
> 45 hours	267 (47.51)	65 (11,57)					
Stress and number of hours of weekly service							
No	328 (58.36)	105 (18.68)	1.0657	[0.4606], [1.2242]	0,75	0.15	NS
Yes	104 (18.51)	25 (4.45)					

About the number of weekly hours of work, we observe that 29.36 % of the nurses and 11.57 % of the doctors work hours ≤ 45 a week, on one hand, and 47.51 % of the nurses and 11.57 % of the doctors count hours > 45, on the other hand, with OR 0.61, being borders [0.4164], [0.9171], with p=0,01; the test is significant. With regard to the Congolese Labor code [1], 59.08 % caregivers work illegally more of > 45 hours a week. With regard to other countries, we identify, for example, that 11 % of the populations in the UK work between 49 at 60 hours a week and, on average, the workers have 44.7 hours a week [8], contrary to the cases of Germany (39.9 hours), Denmark and Netherlands (39 hours) [3], Italy (between 36 and 39 hours) and in Belgium (38 hours) [9]. According to the statistics of 1990, the workers of the United States and those of Japan make 41 hours a week [10]. But in 1999, the Americans worked 47 hours a

week and 20 % of them achieved even 49 hours a week.

As regards those who put under stress, in our study, because of this number of hours of weekly service, we register 18.51

% of the nurses and 4.45 of the doctors. It does not become established an association by considering the OR 0.75 in the lower and superior borders [0.4606, 1.2242] with value of $p=0.15$.

Table 4: Stress bound in overwork of caregivers

Variables of study	Profession						
	Nurse	Doctor	X ²	OR (IC 95%)	OR	p	D
Overwork of caregivers							
No	146 (25.98)	35 (6.23)	1.8588	[0.8961], [2.1425]	1.38	0.08	NS
Yes	286 (50.89)	95 (16.90)					
Stress and overwork							
No	320 (56.94)	96 (17.08)	0.0000	[0.6475], [1.5813]	1.01	0.52	NS
Yes	112 (19.93)	34 (6.05)					

The investigated relate or not that except their attributions, the investigated doctors and nurses execute other tasks (administrative or foreign to the profession). It is what makes that they are on employees. With regard to the request of the nursing in other tasks, we observe that 50.89 % of the nurses and 16.90 % of the doctors are on employees. With the OR 1.38 contained in the lower and superior borders [0.8961, 2.1425] and the value of $p=0.08$, the test turns out not significant. The execution of tasks except service makes that 19.93 % of the nurses and 6.05 % of the doctors can put under stress. There is no association with OR of 1.01 with regard to the lower and superior borders of [0.6475, 1.5813] and value of $p=0.52$.

5. Conclusion

In the Congolese context, generally, and of the City of Lubumbashi, in particular, the hospitals, the health centers, the polyclinics, as organizations, work with instructions or deposits. The non-application of the received instructions is on the base of numerous cases of stress registered in these circles with the doctors and the nurses.

Besides, more than half (59.08 %) doctors and nurses work more than hours a week (> 45) contrary on the total number being a matter of the labor law in DRC. Yet, we know, according to the magazine of the literature, that the long working hours impact not only on the arisen of the stress but also on the health of the nursing and on the quality of care of administering. And these nursing are on used in other purposes that their professional tasks. But, in the context of the City of Lubumbashi, we register weakly of case of stress due to these last two situations. One of the explanations in this low rate of nursing put under stress is bound to the fact that certain doctors or nurses consider that the exception becomes the rule, we become used to the illegal.

6. Future Scope

The analysis of sources of the professional stress for two categories for nursing opens the way for similar studies by considering other professional categories of the health. The analysis of the professional stress of the doctors and the nurses, the analysis based on some organizational parameters, also opens the way for other studies by deepening other problems in the dynamics of the work or by widening the field of sources of the stress. But by analyzing the stress bound to the working amplitude of doctors and nurses, this study questions others based on the questioning

of consequences as well on the nursing themselves that on the patients, even on the reputation of the sanitary institutions. Besides, a study on the sources of the stress remains a little incomplete without analyzing the mechanisms of coping or of adaptation. Later searches can exploit this vacuum in terms of management of the stress.

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