

Analysis of the Work Stress Bound in the Conditions of Work of Doctors and Nurses in the Health Institutions of the City of Lubumbashi (in DRC)

MUTELO Kona Cathy

Department of Teaching and Nursing Administration, Higher institute of Nursing School of Lubumbashi,
P.O. BOX 4748, Lubumbashi, DRC.

Abstract: *This study analyzes the work stress of doctors and male nurses, stress bound in the conditions of work of these caregivers in hospitals, health centers and polyclinics of the City of Lubumbashi, in RDC. This investigation was led on a laminated proportional sample of 562 subjects (N=562), among which 432 nurses and 130 doctors. The quantitative approach allowed to collect the data by a questionnaire. These were encoded in Microsoft Excel and analyzed via Epi Info software version 7.2 of 2016 and SPSS 19.0 of 2012. Our hypothesis was tested on base of the test of chi-square. Considering the Odds ratio and the confidence interval (CI) of 95 % in the interpretation, the results indicate that, in this social universe characterized by the societal precariousness, almost all of these caregivers experiment the professional stress. This results in particular from diverse problems of manipulation of handling obsolete materials and from the number of patients received exceeding fifteen, especially during the rainy season. In conclusion, health structures work with a large number of stressed doctors and nurses, which lifts the questioning of the quality of care administered to the patients (by nursing put under stress).*

Keywords: Job stress, working conditions, materials of care, patients

1. Introduction

The caregivers of health structures of Lubumbashi City, in DRC, work in difficult or alarming conditions. The doctors and the nurses of these institutions are confronted in multiple stress in their practice of care. Numerous stress real-life experiences emanate from diverse sources and can be grouped in six categories: the working conditions, the organizational problems, the relational problems, the socioeconomic problems, the judicial problems and individual motivations. In the exploratory investigation, the working conditions reveal several cases of stressful situations (30.4 %) as he is of it in the context of Senegal [1]. That's why this study lingers to analyze the stress of caregivers due to the problematic of working conditions.

This category of working conditions brings diverse situations such as the dilapidation or the lack of materials, lack of bank of blood during the operation, the bad instructions received during successions, died of the sick person or the multiple deaths, the exhibition in the infectious diseases ... This study allows to isolate two of these conditions to examine the way they are lived by the caregivers and, later, their consequence on the quality of coverage of the sick. It is a question of: materials (dilapidated or new) and of the number of patients to deal or to take care in dry season or in rainy season. These conditions create a nervous tension among caregivers and, in turn, create stress to them.

The doctors and the nurses of hospitals, health centers, polyclinics of the City of Lubumbashi work in a social universe characterized by the societal precariousness. Health institutions receive many patients but their caregivers use the former equipment. The occupational hazards become

enormous there. This problem allows to raise this question of research: how do the nurses and doctors of the health structures of the City of Lubumbashi experiment the stress with regard to the manipulation of materials of care and among many patients (in their practice of nursing / medical care)? With regard to this questioning, this study applies this hypothesis: the manipulation of dilapidated materials and the excess of patients would engender more stressful situations in the leader of caregivers investigated in the City of Lubumbashi.

2. Literature Survey

The authors such as Légeron [2], Helleman and Karnas [3] indicate that the stress is a multifactorial complex phenomenon simply because its explanation and/or its understanding depends on a multiplicity of factors of diverse origin (psychological, social and occupational, organizational, relational, technical ...). And considering the analysis of the professional stress of the nursing ones, his stressors result generally from the physical environment, from the psychological environment and/or from the social environment of the service provider.

Belarif [4] lists an outfit of factors which can explain a stressful situation in occupational environment. Even then, these factors are not sometimes exhaustive to explain a real-life stressful situation in a hospital environment, for example. It is advisable to lead individual investigations in very often different or atypical contexts to report diverse stress which live the healthcare professionals.

Considering the multifactorial of its determiners, the professional stress is a complex phenomenon, as says it Banyasz [5], and its explanation extends beyond the

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monofactorial and simplistic analysis to favor an integrative approach, as think of it Kablain and El Kholti [6].

3. Methodology

Study area

The frame of the survey of this study is constituted by hospitals, health centers, polyclinics of the City of Lubumbashi, city situated in the Province of the “Haut-Katanga”, in Democratic Republic of the Congo.

Population and sample

The population of this study is established by the doctors and the nurses of the City of Lubumbashi. With regard to the population of doctors esteemed at 934, this research held 130, is a 13.9 %. The population of the nurses is 2382 subjects. And this research retained 432 nurses, is 18.1 %. And for the whole sample, our research questioned 562 subjects (n=562) about 3316 members of the population of departure, is 16.9 %. The valuable differences in this diversification of the laminated proportional sample are based on the size of each of stratum.

Methods

Following the example of Légeron [2] and Aucoin [7], authors open and maintain the debate on two dominating approaches of the work stress: the socio-organizational approach insisting on the character putting under stress certain forms of organization of the work or on the conditions of the work and the psychological and medical approach poured into the understanding of the stress by considering the individual dimension of the subject, either in the psychological optics, or in the medical optics. The interest of this study is to combine both approaches in an integrative view to analyze the stress of the investigated doctors and nurses.

This study bases itself on the quantitative approach. Data collection was done via a questionnaire directly submitted to the nurses (n=432) and to the physicians (n=130). These data were encoded in Microsoft Excel and analyzed via Epi Info software version 7.2 of 2016 and SPSS 19.0 of 2012. And, the Odds ratio allowed the interpretation of results by considering the confidence interval (CI) of 95 % and the value of p.

4. Results and Discussion

Table 1: Stress and manipulation of equipment

Variables of study	Profession						
	Nurse	Physician	X ²	CI 95%	OR	p	D
Manipulation of the dilapidated material of care							
No	170 (30.25)	45 (8.01)	0.7592	[0.8137], [1.8462]	1.22	0.19	NS
Yes	262 (46.62)	85 (15.12)					
Manipulation of the new material or new technology of care							
No	240 (42.70)	61 (10.85)	2.6568	[0.9542], [2.0952]	1.41	0.05	NS
Yes	192 (34.16)	69 (12.28)					

Of 562 healthcare professionals investigated, it was observed that what follows: 46.62 % of the nurses and 15.12 % of the physicians are put under stress because of the manipulation of the dilapidated material of care, with OR 1,22 in the lower and superior borders of [0.8137], [1.8462] but the test is not significant with value of p 0.19. Besides, the manipulation of the new material and/or the new technology of care puts under stress the healthcare

professionals with 34.16 % of the nurses and 12.28 % of the physicians ; OR=1,41 included in the lower border [0.9542] and the superior border [2.0952], with value of p=0,05; the test not being significant. There is more of nursing investigated who put under stress because of the manipulation of the dilapidated material of care than of the manipulation of the new equipment of care.

Table 2: Stress and number of well-kept patients

Variables of study	Profession						
	Nurse	Physician	X ²	IC 95%	OR	p	D
Number of well-kept patients a day during the dry season							
≤ 15 patients	377 (67.08)	112 (19.93)	0.0334	[0.6214], [1.9528]	1.10	0.42	NS
> 15 patients	55 (9.79)	18 (3.20)					
Stress lived with regard to this number of patients in dry season							
No	288 (51.25)	87 (15.48)	0.0000	[0.6517], [1.4993]	0.98	0.52	NS
Yes	144 (25.62)	43 (7.65)					
Number of well-kept patients a day during the rainy season							
≤ 15 patients	203 (36.12)	48 (8.54)	3.7009	[1.0119], [2.2665]	1.51	0.02	S
> 15 patients	229 (40.75)	82 (14.59)					
Stress lived with regard to this number of patients in the rainy season							
No	281 (50.00)	77 (13.70)	1.2209	[0.8570], [1.9144]	1.28	0.13	NS
Yes	151 (26.87)	53 (9.43)					
Number of patients who often stress							
≤ 15 patients	99 (17.62)	27 (4.80)	0.1559	[0.7021], [1.8319]	1.13	0.35	NS
> 15 patients	333 (59.25)	103 (18.33)					

In touch with the number of patients taken care a day and during the dry season, 67.08 % of the nurses and 19.93 % of the doctors look of patients ≤ 15 and 9.79 % of the nurses

with 3.20 % of the doctors take care of patients superior to 15; OR 1.10 with the lower and superior borders [0.6214], [1.9528]; the value of p 0.42; the test is not significant. And

in touch with the number of patients taken care or handled during this season, 25.62 % of the nurses and 7.65 % of the doctors put under stress; OR 0,98 with the lower and superior borders of [0.6517], [1.4993] and the test is not significant with value of p 0.52.

During the rainy season, 36.12% of the nurses and 8.54% of the physicians take care of patients ≤ 15 . And 40.75% of the nurses and 14.59% of the doctors take care of patients > 15 ; OR 1.51 included in the lower border [1.0119] and the superior border [2.2665] and the value of p 0.02; the test is significant. The nursing take care of many sick during the rainy season that during the dry season. The reality is such as we register, to Lubumbashi, many diseases during the rainy season that during the dry season. Concerning the number of patients taken care or handled during this season, 26.87 % of the nurses and 9.43 % of the physicians put under stress; OR 1.28 with the lower and superior borders of [0.8570], [1.9144] and the test is not significant with value of p 0.13. We notice, however, that nursing investigated put under stress much more in rainy season than in dry season.

By pushing farther the analysis with regard to the number of patients who puts under stress much more the nursing during the rainy season and/or during the dry season, we observe that 17.62 % of the nurses and 4.80 % of the doctors are put under stress if the number of the patients ≤ 15 whereas 59.25 % of the nurses and 18.33 % of the doctors are put under stress if the number of the patients > 15 , OR 1,13 with the lower and superior borders of [0.7021] and [1.8319], value of p 0.35 and, with regard to the latter, the test is not significant.

These analyzed working conditions (manipulation of the especially dilapidated material and the coverage of an excess of patients) engender the professional stress of investigated healthcare professionals and participate to limit the possibilities of a good coverage as he was raised in a study led in the context of Senegal [1].

5. Conclusion

The Congolese context, generally, and of Lubumbashi City, in particular, hospitals, health centers, polyclinics receive several patients but these institutions of health work with of dilapidated materials. As a consequence, investigated physicians and nurses in the City of Lubumbashi experiment the phenomenon of the occupational stress connected to the problematic working conditions, in particular the manipulation of equipment and the excess of number of treated people. It is the dilapidated materials of care that put under stress the investigated a lot that the manipulation of new equipment. Patients' coverage > 15 is on the basis of numerous registered cases of stress. After all, the medical care and the care of the sick are prescribed or administered, in this social universe, by healthcare professionals put under stress, in particular by the working conditions evoked in this study. What opens the way on a double reflection: Concerning the quality of care provided in the well-kept and the consequences of the stress on the very nursing.

6. Future Scope

By deepening the analysis of the stress of the doctors and the nurses of the City of Lubumbashi, stress in touch with the manipulation of materials and the number of patients to look, this study remains limited in terms of professional categories implied in the medical profession, in terms of context and in terms of approach. But it opens the way to examine other avenues of research, in particular:

- The thorough analysis of the other sources of stress so bound to the professional conditions as to the organizational, relational, communicational... problems.
- The study of the appearances of the professional stress of the strategies of coping which adopt the doctors and the nurses when they grapple with the studied stressful situations or others else.
- The possibility of spreading this study to other contexts and professional categories.

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Author Profile

MUTELO KONA Cathy is Master's degree in Epidemiology and Prevention of the diseases and Bachelor of Science Nurses of the School of Public Health of the University of Lubumbashi. At present, she is Leader of Works to the Higher Institute of Medical Technics of Lubumbashi and prepare its doctoral thesis in Public Health in Epidemiology and Maternal and infantile Health.