

Profile of Factors of Arduous Work among Healthcare Professionals in Healthcare Facilities in Northern Benin in 2021

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Abstract

Introduction: Work environments create the basis for arduous nursing work. This is what led us to research the factors of arduousness in the exercise of the health profession in North Benin, through this study. **Methods:** This is a cross-sectional and descriptive study which focused on health professionals in the health zones of Parakou-N'dali and Tchaourou. The sampling was an exhaustive census. All health workers who had given their free and informed consent were included. The data was collected using a questionnaire. The variables studied were the factors of arduous work and socio-professional characteristics. The data collected was processed and analyzed with the Epi info 7.2.0.1 software. **Results:** A total of 692 were surveyed, the participation rate was 85.11% and the sex ratio (M/F) equal to 0.7. The average age was 38 years old. Nurses made up 32.66% of the sample. They were 86.42% subject to night work and 82.66% to alternating work. Overall, 70.23% worked more than 40 hours per week. Between 78.12% and 96.46% of non-specialist doctors, nurses, midwives and biomedical analysis technicians were required to work night shifts. Nurses, midwives, radiology and laboratory technicians were between 89.53% and 97.35%, organized in alternating work. In the sample, 55.20% complained about the insufficient number of work materials, 26.29% handled harmful chemical substances. Among those surveyed, 58.14% had been attacked. **Conclusion:** All professional categories of caregivers are subject to arduous work. Measures are needed to reverse the situation.

Keywords

Hard Work, Professionals, Health, North-Bénin

1. Introduction

Health is determined by social factors, lifestyle and access to health care. But health does not consist only of the absence of disease or infirmity; it is a complete state of social, mental and physical well-being. The World Health Organization reports that healthcare professionals are subject to increasing insecurity and an increasingly complex work environment that can harm their health [1]. In addition to traditional occupational risk factors, particularly biological, are present in healthcare establishments, anesthetic and antiseptic gases and vapors, physical and psychological loads, pressures and frequent work reorganizations [2]. All of this makes the caregiver's work difficult. The arduousness of the work is due to its demanding, restrictive nature, likely to cause suffering or pain to its author and to cause inconvenience. Violence and moral harassment are also constraints that health professionals face in the workplace exercise of their profession [3]. According to the WHO, for adequate health coverage, each country must have at least 23 health professionals (doctors, nurses and midwives) per 10,000 inhabitants. This density of healthcare personnel is 7.72 per 10,000 inhabitants in Benin (2016). Feelings of helplessness in the face of the patient's suffering and/or death are also found in healthcare settings [3] [4] [5]. Taking into account these difficult work situations to which health workers are exposed in the exercise of their activities in several countries [2] [3] [4] [5] [6], this study was carried out in order to determine the profile of work arduousness factors among health professionals in health facilities in northern Benin.

2. Methods

It was a cross-sectional and descriptive study which lasted three months from August 1 to October 30, 2021. Data collection was carried out from September 5 to 30, 2021. It concerned practicing health professionals (Doctor, Nurse, midwife, laboratory technician, physiotherapist, caregiver) in training courses. public, religious and private sanitary facilities in the Parakou-N'dali health zone and that of Tchaourou, which are two neighboring health zones. These are two of the four health zones in the department of Borgou. These two areas have a population of 462,942 inhabitants served by two university hospitals, three area Hospitals and 19 health centers (infirmary and maternity ward). The Beninese health system is pyramidal with three levels. The national or central level brings together four hospitals. The departmental or intermediate level includes departmental hospitals (six), and the peripheral level which brings together health centers supported by Health Zone Hospitals (34). The sampling was non-probabilistic with an exhaustive census of health personnel stationed in health facilities in these two areas. Included were all health workers of both sexes who gave their free and informed verbal consent to participate in the survey, and who were present at their workstation during the data collection period. The data were collected using a questionnaire comprising 89 items, during a direct face-to-face interview between the interviewer and the respondent. The questionnaire was

developed by us. The variables studied were the work environment (physical and chemical), the sector to which the health facility belongs, the organization of work, stress over the last six months, and socio-professional characteristics (age, sex, marital status), professional category, seniority of the subjects. The search for stress was carried out on the basis of the Karasek questionnaire (see appendix). The questionnaire designed was tested in a health zone neighboring those under study (Nikki-Kalalé-Pèrèrè). The study was carried out with respect for confidentiality. The data collected was processed and analyzed with the Epi info 7.2.0.1 software.

3. Results

Socio-professional characteristics of investigated

Ultimately, 692 health professionals were surveyed out of the 813 in the two health zones, resulting in a participation rate of 85.11%. Female subjects constituted 57.51% of the sample compared to 42.49% male subjects, thus introducing a sex ratio (M/F) equal to 0.7. The average age was 38 years old. Those who belonged to the age group [28 - 38 years] (36.56%) and those who had one to 10 years of seniority (45.66%) were more represented. Of all professional categories, nurses (32.66%) were the most numerous. Overall, 63.29% of respondents worked in public health facilities. The rest of the socio-professional characteristics can be found in **Table 1**.

Working conditions

In the sample, 598 (86.42%) were subject to night work. These are 99.36% of caregivers, 96.46% of nurses and 91.86% of biological analysis laboratory technicians. Alternate work occupied 82.66% of respondents particularly 97.35% of nurses, 95% of midwives and 94.27% of caregivers. There were 486 (70.23%) of them working beyond the regulatory 40 hours per week. Nurses, caregivers and general practitioners were more concerned, respectively 83.63%, 75.16% and 70.31% in their professional category (**Table 2**). Among the investigated, 55.20% complained of insufficient work equipment, 36.42% luminous discomfort and 33.24% of heat in the workplace. Among the respondents, 21% said they inhale anesthetic gases and 26.29% said they handle harmful chemicals in the workplace. There were 400 of them (58.14%) who were victims of attacks (verbal, physical, sexual, moral) in the exercise of their professional activities. Anxiety affected 26.59% of the sample (**Table 3**).

4. Discussion

The objective of the study is to determine the profile of arduousness factors in the exercise of the health profession in North Benin. This cross-sectional, descriptive study with prospective data collection was appropriate. The results of the study can be extrapolated to the entire department to which the two zones belong because they are full of more caregivers than the others combined.

The female gender was predominant in the sample (sex ratio (M/F) = 0.7).

Table 1. Distribution of investigated according to their socio-professional characteristics, Parakou-N'dali and Tchaourou health zones, 2021.

	Numbers	Percentage
Age (years)		
<28	121	17.49
[28 - 38[253	36.56
[38 - 48[220	31.79
[48 - 58]	95	13.73
>58	3	0.43
Seniority (years)		
<1	74	10.69
1 - 10	316	45.66
10 - 20	257	37.14
≥20	45	6.50
Qualification		
General practitioner	64	9.25
Consultant	49	7.08
Nurse	226	32.66
Midwife	80	11.56
Caregiver	157	22.69
Biology laboratory technician	86	12.43
Radiology laboratory technician	13	1.88
Physical therapist	17	2.46
Sector of belonging		
Audience	438	63.29
Private	178	25.73
Confessional	76	10.98

Table 2. Distribution of investigated according to the organization of work and their professional category, Parakou-N'dali and Tchaourou health zone, 2021.

	Total	Night work		Work with alternation		Duration of work/ week > 40 hours	
		n	%	n	%	n	%
General practitioner	64	50	78.12	22	34.37	45	70.31
Consultant	49	15	30.61	8	16.33	32	65.31
Nurse	226	218	96.46	220	97.35	189	83.63
Midwife	80	71	88.75	76	95.00	51	63.75
Caregiver	157	156	99.36	148	94.27	118	75.16
Biological technician	86	79	91.86	77	89.53	36	41.86
Radiologist technician	13	9	69.23	12	92.31	9	69.23
Physiotherapist	17	0	0.00	9	52.94	6	35.29

Table 3. Distribution of investigated according to their assessments of working conditions, Parakou-N'dali and Tchaourou health zones, 2021.

	Yes		No	
	n	%	n	%
Sufficiency of work materials	308	44.51	382	55.20
Adapted work equipment	475	68.64	217	31.36
Work equipment in good condition	463	66.91	229	33.09
Permanent availability of consumables	366	52.89	326	47.11
Availability of protective equipment	467	67.49	225	32.51
Bright comfort in the workplace	440	63.58	252	36.42
Thermal comfort at workstations	462	66.76	230	33.24
Radiation protection	281	40.61	411	59.39
Regular cleaning of workplaces	534	77.17	158	22.83
Existence of hand washing device	478	69.08	214	30.92
Handling of chemical substances	173	25.00	519	75.00
Emission of anesthetic gas	140	20.23	552	79.77
Assault (verbal, physical and sexual)	400	58.14	288	41.86
Anxiety	184	26.59	486	73.41

Gounongbé and colleagues had already found this female predominance among health professionals in the Parakou-N'dali health zone in 2011 (sex ratio = 0.6) [7]. This same observation has been made in other countries around the world, notably at the Niamey National Hospital in Niger (Gounongbé *et al.*, 2021) [8], in Morocco (Laraqui *et al.*, 2002) [9], in Tunisia (El Ghoul *et al.*, 2017) [10], in France (Pocheron, 2007) [11] and in São Paulo in Brazil (Luciane *et al.*, 2011) [12] where the sex ratios were respectively 0.09; 0.8; 0.7; 0.7 and 0.8. There is therefore a feminization of the health profession.

The average age of our respondents was 38 years old. It is similar to the average age (38.2 ± 8.1 years) of health professionals in Parakou hospitals in 2015 (Codjo *et al.*) [13] as well as that (37.9 ± 10.7 years) of health workers in Lomé in Togo (Bagny *et al.*, 2010) [14]. But it is below that (45.65 ± 8.92 years) reported by Korrida and colleagues in Morocco in 2011 [15]. However, no respondent was under 18 years old; which is in compliance with the recommendations of the International Labor Organization (ILO) on the minimum age for admission to employment [16].

Subjects aged 28 to 38 made up 36.56% of our sample, what makes this age group the most important. Researching the health consequences of night work among nursing staff at the Niamey National Hospital, Gounongbé *et al.* (2021) have found that the most numerous (40.80%) were of a similar age bracket (30 and 39 years old [8].

Our study highlighted that 45.66% of participants had been in the profession for between 1 and 10 years. This was the highest level of seniority. At the Niamey

National Hospital (Gounongbé *et al.*, 2021), it was those who had 8 to 15 years of seniority (49.19%) who were the most numerous [8]. In Iran (2018), among the shift staff of the hospitals of the Kerman University of Medical Sciences, were coming to the forefront, subjects (34.40%) with 5 - 10 years of seniority (Zare *et al.*) [17].

The Beninese labor code sets the legal working hours for employees, regardless of their gender and the method of remuneration, at forty hours per week [18]. In the sample, 70.23% of the workers beyond the 40 hours prescribed by law. However, the majority (63.29%) of subjects come from the public sector. This state of affairs is due to the insufficient number of healthcare personnel in this sector, consequently leading to an overload of work for the healthcare professional.

In addition to the already pathogenic work overload, there is exposure to chemical substances in 25% of respondents, light discomfort declared by 36.42% and the hot thermal environment mentioned by 33.24%. Henchi *et al.* (2009) also found chemical exposure at the Monastir University Hospital in Tunisia [4]. At the Nantes university hospital center (France, 2007), 29% of participants mentioned light discomfort in this workplace [19]. In the same French series, 40% of subject stated that the temperature was not suitable at the workstations [19]. Managers at various levels must therefore take rigorously applicable measures to maintain working environments that comply with standards.

The study found 82.66% of participants who worked alternating day and night. The rate of caregivers in Niamey (Gounongbé *et al.*, 2021) working alternately is higher (97.60%). On the other hand, it is lower (65.4%) in Spain (Gomez-Garcia *et al.*, 2006) [20]. The proportion of Norwegian caregivers (Buchvold *et al.*, 2015) [21] who work alternately is also low (24.8%). In the study by Buchvold and colleagues [21], only 8.2% of health workers in Norway worked night shifts only, whereas more than 10 times more workers did so in the health zones in our study.

The results of our study have a qualitative and valid scope for the sample. However, the declarative nature of the survey constitutes a limitation.

5. Conclusion

This work revealed the factors that make practicing the nursing profession difficult in North Benin. All health facilities, whether public, religious or private, include factors that make work difficult. All professional categories of caregivers are subject to it. Some are more so than others due to insufficient resources in terms of materials and humans. It is up to health authorities to implement measures to reverse the situation in healthcare establishments with a view to guaranteeing the well-being of these people whose role is to save the lives of patients. This is all the more possible in an ecosystem approach.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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