

Smoking among Health Care Personnel in Ouagadougou District Hospitals

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Abstract:-

➤ Introduction:

Smoking remains a reality among health professionals. The aim of this study was to evaluate the smoking behaviour of health care workers in the district hospitals of Ouagadougou.

➤ Methodology:

This was a cross-sectional, descriptive and analytical study conducted from 1 April 2021 to 31 May 2021 using an anonymous self-administered questionnaire. Data were entered and analysed using Epi-info software version 7.2.2.6. Relationships between variables were considered statistically significant at the $p < 0.05$ probability level.

➤ Results:

A total of 246 caregivers participated in the study. The prevalence of smokers was 7.3%, all male. The mean age of smokers was 49.1 years. Cigarettes were the type of tobacco used. Stress and the influence of a smoking environment were the main reasons for smoking initiation. Half of the smokers smoked in the workplace. Passive smoking concerned 24.6% of non-smokers. Length of service ($p=0.01$), professional category ($p=0.007$), male gender ($p=0$) and age of smokers ($p=0.007$) were statistically related to smoking.

➤ Conclusion:

Increased awareness is essential to avoid smoking by caregivers. This would avoid discrediting them among the population and increase the effectiveness of tobacco control.

Keywords: Smoking, Caregiver, Hospital, Ouagadougou.

I. INTRODUCTION

Tobacco use is at the centre of the medical agenda worldwide. It is the leading and most preventable cause of death in the world. It causes more deaths than tuberculosis, HIV/AIDS and malaria combined [1]. According to the World Health Organisation, worldwide tobacco deaths are estimated at 5.4 million annually. This rate is expected to rise to almost 10 million per year by 2030 and 80% of these deaths occur in developing countries. Pathologies related to tobacco use will increase from 5.4% in 2004 to 8.3% in 2030 [2]. Tobacco remains one of the most serious addictions in terms of morbidity and cost worldwide [3]. It

is also one of the most serious risks to the health and safety of workers [4]. In Burkina-Faso, according to the 2013 STEPS study, the prevalence of smoking in the general population was highest among 25-34 year olds and decreased with age [5]. Health professionals are also affected by smoking. However, quantitative data are much rarer than in the general population [6]. Several studies have shown continental disparities. In Europe, Nagahapitiye found a prevalence of 31.8% [7]. On the other hand, in Africa, Ngahane found a prevalence of 3.6% of smokers in Cameroon [8]. A hospital series in Burkina Faso found a prevalence of 18.3% of smokers [9]. The scarcity of studies on smoking in hospitals in Burkina Faso led us to carry out this study, the objective of which was to evaluate the smoking behaviour of healthcare personnel in the two district hospitals of Ouagadougou.

II. METHODOLOGY

The hospitals of Kossodo and Boulmiougou in the health district of Ouagadougou were the study setting. This was a cross-sectional, descriptive and analytical study, conducted from 1 April 2021 to 31 May 2021. The study population was the health care workers working in the different care units of these hospitals. Caregivers who were present at the time of the study and who agreed to participate in the study were included. We used an anonymous questionnaire, administered to different categories of carers. The various parameters studied were the socio-professional characteristics and smoking behaviour of the staff surveyed. The operational definitions of smoking habits were based on the definitions of the WHO Framework Convention on Tobacco Control. A smoker is an individual who smokes every day (daily smoker) or who smokes but not every day (occasional or non-daily smoker). An ex-smoker or former smoker is an adult who has used a tobacco product and no longer uses a tobacco product. A non-smoker or never smoker is a person who has never smoked a tobacco product in their life [10]. Smoking included the use of cigarettes, bidis, cigars, cigarillos, pipes, roll-your-own tobacco and any other form of tobacco. Data were entered and analysed using Epi-info software version 7.2.2.6. Relationships between variables were considered statistically significant at the $p < 0.05$ probability level. Informed consent was obtained from the participants prior to their inclusion in the protocol. Anonymity and confidentiality of results were guaranteed. Prior approval was obtained from the regional health director.

III. RESULTS

➤ Socio-Professional Characteristics of the Agents Surveyed:

A total of 246 staff members participated in the study, i.e. a participation rate of 57%. The sample was made up of as many women as men, i.e. a sex ratio of 1. The average age of the respondents was 44.9 years, with extremes of 21 and 61 years. Senior health technicians were the most represented occupational category (43.9%). The others were midwives/maieuticians (17.9%), state nurses (15.4%), doctors (12.2%), room boys/girls (5.7%), non-registered nurses (4%) and care assistants (0.9%). Most of the respondents (77.3%) had been in the job for more than 10 years. However, 22.7% had been in the job for 10 years or

less. Alternating work (day/night) concerned 93.1% of respondents.

➤ Smoking Behaviour of the Agents Surveyed:

- Characteristics of Smokers:

Smokers represented 7.3% (n=18), i.e. 5.5% daily smokers and 1.8% occasional smokers. They were all male. The average age of the smokers was 49.1 ± 4.9 years with extremes of 38 and 57 years. The average age at smoking initiation was 27.5 ± 6.9 years with extremes of 13 and 40 years. The peak prevalence (13.5%) was in the age group [46-55 years] (see Table 3). The age at which smoking began was greater than or equal to 26 years in 66.6% of cases (see figure 1).

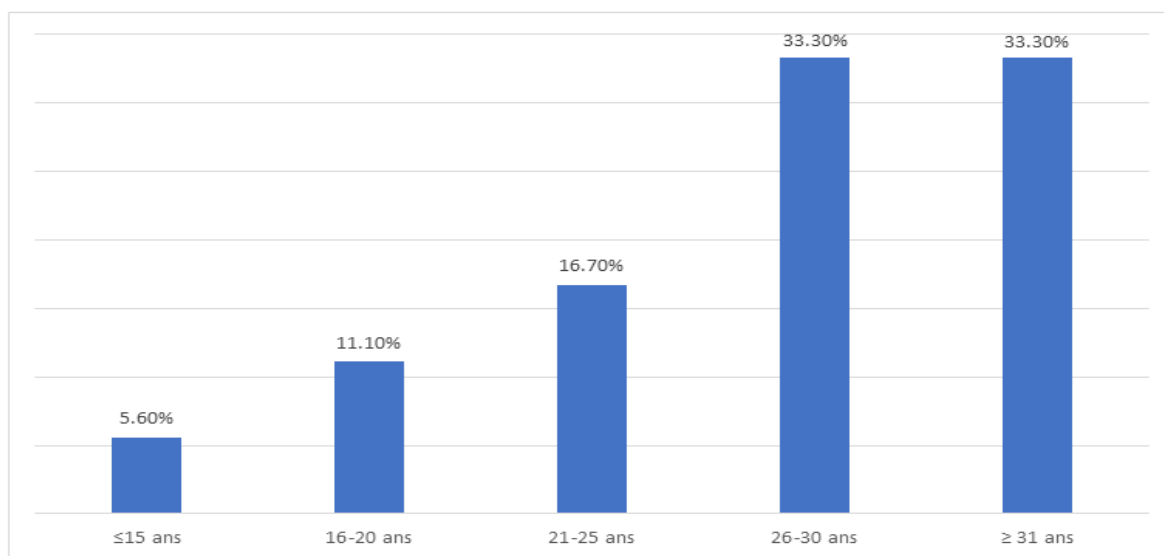


Fig 1 Distribution of Smokers by Age of Onset of Smoking

The average duration of smoking was 21.3 ± 6.78 years with extremes of 10 and 34 years. Half of the smokers (50%) had been smoking for 16 to 20 years and 33% had been smoking for at least 21 years. On the other hand, 16.7% of the smokers had been smoking for 6 to 15 years. The type of tobacco used was exclusively cigarettes. Stress and the influence of a smoking environment were the main reasons for smoking initiation (see figure 2).

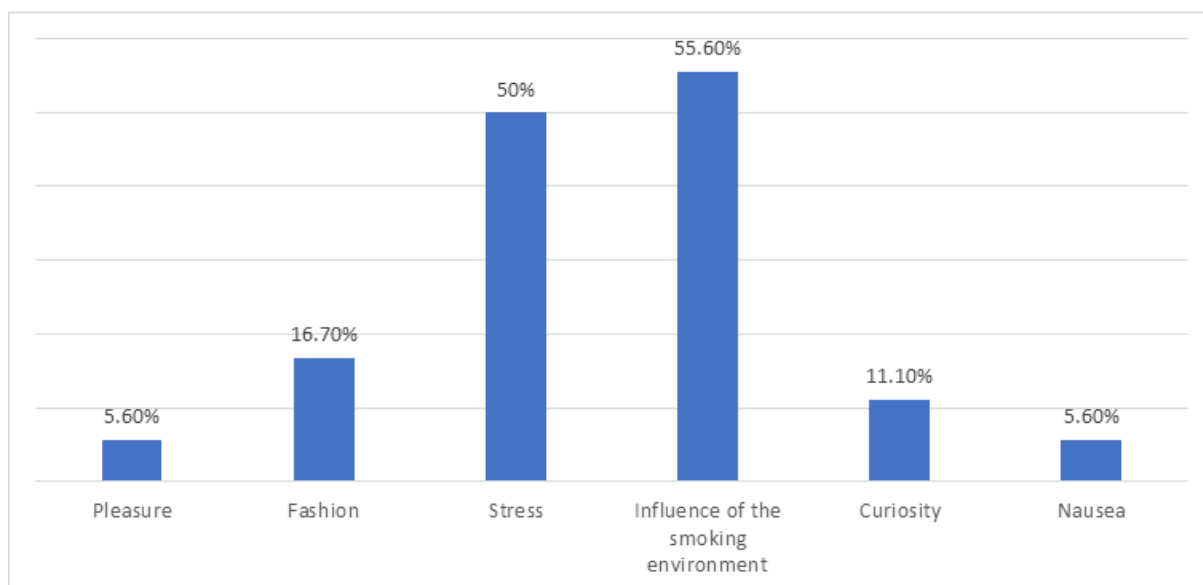


Fig 2 Distribution of Smokers according to Reasons for Smoking Initiation

Half of the staff who smoked (n=9) smoked at work and 55.6% smoked their first cigarette of the day between ½ hour and one hour after waking up. Cigarette consumption did not exceed 10 cigarettes per day in 44.4% of cases (see table 1).

Table 1 Distribution of Smoking Staff by Smoking Habits

Variables	Numbers (n=18)	Percentages (%)
Time to take 1st cigarette after waking up		
6-30 min	2	11.1
31-60 min	10	55.6
After 60 min	6	33.3
Number of cigarettes smoked/day		
≤ 10	8	44.4
11-20	7	38.9
21-30	2	11.1
≥ 31	1	5.6

According to the Fagerström test, 61.1% (n=11) of the smokers were not addicted to tobacco (see table 2).

Table 2 Levels of Nicotine Dependence by Socio-Professional Characteristics

Levels of dependency	Non dependence n (%)	Moderate dependence (2-3) n (%)	High dependance (4-5-6) n (%)	P-value
Sex				0.001
Female	0 (0)	0 (0)	0 (0)	
Male	11 (61.1)	6 (33.3)	1 (5.6)	
Professions				0.085
Care assistants	0 (0)	0 (0)	0 (0)	
Senior health technicians	10 (55.6)	5 (27.8)	1 (5.6)	
Room boys/girls	0 (0)	0 (0)	0 (0)	
Non-registered nurses	0 (0)	1 (5.6)	0 (0)	
State nurses	1 (5.6)	0 (0)	0 (0)	
Doctors	0 (0)	0 (0)	0 (0)	
Midwives/Maieuticians	0 (0)	0 (0)	0 (0)	
Working hours				0.513
Day	0 (0)	0 (0)	0 (0)	
Night	0 (0)	0 (0)	0 (0)	
Day/night	11 (61.1)	6 (33.3)	1 (5.6)	

- *Smoking Cessation by Number of Quit Attempts:*

Most smokers 94.4% (n=17) wanted to quit smoking. Quit attempts ranged from 1 to 10. Half of the smokers had made 3 quit attempts while 23.5% had made 4 quit attempts. Smoking staff who had made two, five and ten quit attempts represented 5.9%, 11.8% and 5.9% respectively.

- *Characteristics of Ex-Smokers:*

Ex-smokers represented 8.5% of the sample. The average age of ex-smokers was 50 ± 8.0 years. The average age of smoking initiation was 20.9 ± 5.9 years. These ex-smokers had quit smoking on average 13.8 ± 6.9 years ago. The reasons for quitting were: personal decision (28.6%), guilt (23.9%), advice from family and friends (19%), health problems (19%), indisposition of family and friends (14.3%), religion (9.5%), financial concerns (4.8%), medical issues (4.8%).

- *Characteristics of Non-Smokers:*

The prevalence of non-smokers was 84.1%. The main reasons for not smoking were the harmful effects of tobacco

on the body (28%), health problems (25.6%) and lack of desire to smoke (21.2%). Other reasons were: allergy to tobacco smoke (12%), personal reasons (10.1%), respect for religion (6.3%), economic problems (2.4%), influence of non-smokers (1%), family education (1%).

- *Passive Smoking:*

It affected 24.6% of non-smokers. The workplace was the main site of exposure to passive smoking (68.7%). Public places (5.9%) and the home (19.7%) were the other sites of exposure.

- *Analytical Results:*

The prevalence of smoking differs significantly according to seniority in the job from 21 to 30 years ($p=0.01$). It increases significantly with male gender ($p=0$) and the age of smokers between 46 and 55 years ($p=0.007$). It differs significantly according to age group and professional category ($p=0.007$).

Table 3 Socio-Occupational Characteristics by Smoking Behaviour

Variables	Ex-smokers n (%)	Smokers n (%)	Non-smokers n (%)	Total n (%)	P-value
Sex					0
Female	0 (0)	0 (0)	123 (100)	123 (50)	
Male	21 (17.1)	18 (14.6)	84 (68.3)	123 (50)	
Age groups (years)					0.007
≤ 25	1 (20)	0 (0)	4 (80)	5 (2)	
26 – 35	0 (0)	0 (0)	32 (100)	32 (13,1)	
36 – 45	4 (4.7)	3 (3.5)	78 (91.8)	85 (34.5)	
46 – 55	11 (11.5)	13 (13.5)	72 (75)	96 (39)	
≥ 56	5 (17.9)	2 (7.1)	21 (75)	28 (11.4)	
Professional categories					0.007
Care assistants	0 (0)	0 (0)	2(1)	2 (0.8)	
***SHT	13 (12)	16 (14.9)	79 (73.1)	108 (44)	
Room boys/girls	1 (7.1)	0 (0)	13 (92.9)	14 (5.7)	
Non-registered nurses	2 (20)	1 (10)	7 (70)	10 (4)	
State nurses	3 (7.9)	1 (2.6)	34 (89.5)	38 (15.4)	
Doctors	2 (6.7)	0 (0)	28 (93.3)	30 (12.20)	
Midwives/Maieuticians	0 (0)	0 (0)	44 (1)	44 (17.9)	
seniority in the job					0.01
≤ 10	3 (5.3)	1 (1.8)	52 (92.9)	56 (22.8)	
11 - 20	4 (4.4)	5 (5.6)	81 (90)	90 (36.6)	
21 - 30	10 (12.7)	11 (13.9)	58 (73.4)	79 (32.1)	
≥ 31	4 (19)	1 (4.8)	16 (76.3)	21 (8.5)	
Working hours					
Day	1 (5.9)	0 (0)	16 (94.1)	17 (6.9)	0.426
Nigh	0 (0)	0 (0)	0 (0)	0 (0)	
Day/Nigh	20 (8.7)	18 (7.9)	191 (83.4)	229 (93.1)	
Total	21 (8.5)	18 (7.3)	207 (84.2)	246 (100)	

***SHT : Senior Health Technicians

Nicotine non-addiction was significantly ($p=0.001$) higher among male staff (see Table 3).

IV. DISCUSSION

The participation rate in the study was 57%. This is higher than that observed by Ouedrago (41.81%) in Burkina Faso [9] and equal to that of Fougere (57%) in France [11]. The sex ratio was 1. This contrasts with the results of several studies conducted in hospitals where gender disparities have been observed [8,12,13]. The average age of our sample was 44.8 years. This result differs from those of Toure in Senegal (36 years) and Khfacha in Tunisia (37.8 years) whose mean ages were younger [12,14]. The most represented professional category was senior health technicians (43.9%). In contrast, Mezghani reported a predominance of nurses in his study [13]. In fact, in Burkina, district hospitals have a diverse range of medical and surgical activities. In order to compensate for the lack of specialist doctors in the specialised units, recourse to the training of specialist nurses is opted for. This justifies the high number of senior health technicians in our study.

The prevalence of smoking was 7.3%. This is lower than that found by Badri (16.3%) [15] and Bouaoud (26%) [16]. This prevalence is also lower than that found by the 2013 STEPS survey of the general population of Burkina Faso (19.8%) [5]. This low prevalence of smoking among health professionals is thought to be related to their knowledge of the effects of smoking. Smoking was

exclusively among men. Also in Burkina, Ouedraogo made the same observation in his study [9]. Other African studies confirm this predominance of smoking among men [12,17]. In France, Orset observed a much higher rate of smoking in hospitals (28.7%), with no significant difference according to age, sex and function [18]. The absence of female smoking in our study would be due to the fact that it is hardly tolerated in our African societies. The prevalence of smoking increased significantly according to the male sex ($p=0$), the age of smokers between 46 and 55 years ($p=0.007$) and the length of time they had been practising from 21 to 30 years ($p=0.01$). There were more smokers in the age group [46 to 55 years], i.e. 13.54%. This predominance of smoking among the elderly had been observed by Mezghani [13]. In Europe, where smoking is a cultural phenomenon, Nagahapitiye and Fougère found higher prevalence of smoking in the younger age groups [7,11]. The average age of smokers was 49.1 years. This age is higher than those found in the series by Toure (37.4 years) [12] and Khfacha Aissa (35.3 years) [14].

The mean age at smoking initiation in our series was 27.5 years. However, it was relatively younger in some studies [19,20]. Indeed, the desire to appear older, the influence of advertising in favour of tobacco as a means of well-being, of being mature, of seduction and relaxation would partly explain this early smoking. The average

duration of smoking in our series was 21.3 years and is higher than those found by Touré (17.2 years) [19] and Ouédraogo (13 years) [17]. This situation exposes these smokers to cardiorespiratory diseases. Cigarettes were the only type of tobacco used. Other African studies conducted in Togo [21] and Burkina [17] corroborate our results. Indeed, cigarettes are the most available and accessible tobacco on our markets. The most frequently cited reasons for smoking initiation were stress and the influence of the smoker's entourage. In Tunisia, pleasure, the influence of the smoking environment and stressful situations were the main factors for smoking initiation [14]. Overall, peer pressure and stress appear to be the main factors in smoking initiation [12,14]. Smoking in the workplace was a reality (50% of smokers). This practice was described in other studies [13,14,17]. Almost all smokers had expressed a wish to stop smoking. Bouaoud observed that 90% of smokers wanted to quit [16]. In our series, 55.6% smoked the first cigarette of the day between 30 and 60 min after waking up, compared to 45.7% in Khfacha's study who lit their first cigarette within half an hour after waking up [14]. Nicotine dependence null by the Fagerström test was 61.1% and was significantly associated with male sex ($p=0.001$). In contrast, Ndiaye observed a predominance of medium nicotine dependence (59.3%) [20]. This assessment is of interest in determining the therapeutic strategy to be chosen for effective smoking cessation. Ex-smokers represented 8.5% of the sample. They had quit smoking on average 13.8 years ago. The most common reason for quitting was a personal decision (28.6%). In the educational sector, the main reasons for quitting smoking were fear of parental reaction and fear of illness [22]. Passive smoking concerned 24.6% of non-smoking staff. They were exposed in the workplace in 15.5% of cases. In Algeria, the workplace was the main site of exposure to passive smoking (73% of cases) according to Bouaoud [16]. This exposure could favour smoking-related diseases and/or active smoking.

V. CONCLUSION

Smoking remains a reality among these professionals who should serve as a model for the rest of the population. Indeed, a smoking health worker will not contribute optimally to tobacco control. It is therefore important to ban smoking in health facilities. The establishment of an anti-smoking surveillance committee in the workplace and the reinforcement of awareness of the harmful effects of tobacco are of essential interest. Ultimately, the exemplarity of professionals would increase the effectiveness of the fight against tobacco.

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