

# Impact of Tension-Type Headaches in the Workplace in Brazzaville

Happhia Dinah Boubayi Motoula Latou<sup>1,2\*</sup>, Josué Euberma Diatewa<sup>1,2</sup>,  
Ghislain Armel Mpandzou<sup>1,2</sup>, Prince Eliot Galieni Sounga Bandzouzi<sup>1,3</sup>,  
Jean Brice Mouendenguia<sup>1</sup>, Karen Lise Obondzo Aloba<sup>2</sup>, Paul Macaire Ossou-Nguiet<sup>1,2</sup>

<sup>1</sup>Faculty of Health Sciences, Université Marien Ngouabi, Brazzaville, Congo

<sup>2</sup>Department of Neurology, Brazzaville University Hospital, Congo

<sup>3</sup>Department of Neurology, Loandjili General Hospital, Pointe-Noire, Congo

Email: \*dboubayi@gmail.com

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## Abstract

**Introduction:** Tension-type headaches are the most widespread of the primary headache disorders. Due to their high prevalence, tension-type headaches represent a major public health problem with an enormous socio-economic burden. Determining their impact remains a challenge. **Objective:** To assess the impact of occupational tension-type headache in Brazzaville and identify associated factors. **Population and Methods:** This was an analytical case-control study conducted in public and private companies in the city of Brazzaville over a period of four (04) months. The case population consisted of cephalalgic employees; the control population was drawn from the same companies and was free of tension-type headaches. Study variables were divided into socio-professional, clinical and individual impact variables. Individual impact variables were represented by: the HIT-6 score, which incorporates a very broad conception of disability, covering several domains, namely: severity of pain during attacks and the restrictive and limiting nature of attacks. **Results:** Individual impact was severe in 18 (62.1%) men and 11 (37.9%) women. Mean age was  $36.3 \pm 6.14$  years for cases with severe impact. The mean duration of headache was  $40.3 \pm 32.7$  months for cases with severe impact. Tension headache evolved in attacks in 22 (75.9%) cases with severe impact, and continuously in seven (24.1%) cases. The average number of attacks per month was  $2.52 \pm 1.04$  for cases with severe impact. Cases with severe impact included 14 (48.3%) with chronic headache and 15 (51.7%) with episodic headache. Pain of severe intensity present in 48.3% of cases was associated with a severe impact of tension-type headache: OR = 151.66 [2.36 - 44245.95] and p-value = 0.037. At least one day's absence from work per year was observed in 47.4% of our cases. The number of days off work per year

due to tension-type headache had an interquartile range between 0 and 3 days and extremes from 0 to 14 days. It was the consequence of a severe impact on daily and/or professional activities. **Conclusion:** The high frequency of tension-type headaches in the workplace and its impact on the condition of workers in Brazzaville represent a real public health problem. It was found that the number of days absent from work per year due to tension headaches was the consequence of a severe impact on daily and/or professional activities. An awareness-raising program in this environment seems necessary, as well as an assessment of working conditions.

## Keywords

Impact, Tension Headache, Workplace

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## 1. Introduction

Headache is pain felt in the head region [1]. They are the main reason for consultation in neurological practice [2]. There are two main types of headaches: primary and secondary.

Primary headaches have a punctual and global prevalence of 47% in adults in the general population [2]. They are classified into four types: migraine, tension headache, trigemino-autonomic headache and other primary headache disorders [1].

Tension-type headaches are the most common primary headache. They account for 80% of all headaches, followed by migraine [1] [3].

They are also one of the most neglected types of headache, due to the frequency of so-called mild symptoms [4]. However, some patients followed for this condition describe frequent and severe headaches, and sources of disability at work, school or home [5]. For example, in 2016, tension-type headaches were responsible for 7.2 million years lived with disability worldwide for 1.89 billion people with this type of headache. Due to their high prevalence, tension-type headaches represent a major public health problem that generates an enormous socio-economic burden [6].

In sub-Saharan Africa, particularly the Congo, data on tension-type headaches are scarce [7]. Determining their impact remains a challenge. It must first be considered at an individual level, because of the functional repercussions and loss of quality of life it can cause.

Hence the interest of this study, whose objective is to assess the impact of occupational tension-type headaches in Brazzaville, and to identify the associated factors.

## 2. Population and Methods

This was an analytical, case-control study conducted in public and private companies in the city of Brazzaville registered with the Ministry of Economy, Indus-

try and Public Portfolio (MEIPP) in 2018. [8]

This study was conducted over a period from September 1 to December 30, 2020; a duration of four (04) months.

The target population was salaried headache sufferers in private and public companies in Brazzaville.

The case population was made up of employees of companies meeting the following criteria: having consented to take part in the study; having at least six months' seniority in the company; having presented at least 10 episodes of headache for more than 3 months, at least one of which met the diagnostic criteria for tension-type headache [1].

The control group was made up of employees from the same companies as the case population and had to meet the following criteria: have at least six months seniority in the company, have no criteria compatible with primary headache and whose consent to participate had been obtained.

Excluded from the study were trainees and volunteer workers, workers with other types of primary headaches, and workers who refused to complete the questionnaire.

The sample size in the study was calculated using the SCHWARTZ formula with  $N = Z^2 \times PQ/I^2$ ;  $N$ : sample size;  $Z$ : reduced deviation at risk  $\alpha = 5\%$  (corresponding to 1.96);  $P$ : expected theoretical proportion;  $Q$ :  $1 - P$ ;  $I$ : margin of error, which was set at 5% (0.05). As no previous studies had been carried out in the Congo, we took the theoretical expected proportion from a study carried out in Lomé, Togo, in the workplace. This proportion was 36.7% [9]. The required sample size was 357 employees.

A 1-stage cluster sample was taken from a list of all public and private companies in the city of Brazzaville. The number of clusters required to reach the estimated sample size was calculated using the formula:  $n = N/X$ . " $n$ " for the number of clusters (corresponding to the number of companies to be selected to reach the sample size);  $N$ : sample size and  $X$ : average number of individuals per cluster or cluster size (corresponding to the number of employees in the city of Brazzaville divided by the number of companies).

In 2018, the formal economy of the city of Brazzaville counted 13,151 workers spread across 434 private companies with a workforce of 8363 workers and 29 public companies with a workforce of 4788 workers, selected from different sectors of activity [8] [10].

Thus,  $N = 357$  workers and  $X = 13,151/463$ . The number of companies to be selected to reach the sample size ( $n$ ) = **12.57** or **13 companies**.

The 13 companies selected were chosen by simple draw without discount from among the 463 public and private companies in Brazzaville. The employees of each selected company were counted exhaustively. The number of employees to be surveyed was **490**.

Taking into account the selection criteria, 490 employees were retained, but only 371 (75.7%) were included, including 261 controls and 110 cases.

Study data were collected using a pre-established, standardized survey form (**Appendix 1**) including socio-professional data and the individual impact of headache in a more global way assessed by the HTI-6 scale (**Appendix 2**).

Data were collected through individual interviews with company employees. The interviews were conducted by investigators who had been trained by two neurologists in the questionnaire administration procedure. The diagnosis of tension-type headache was confirmed at the end of data collection by neurologists in the neurology department of the Brazzaville University Hospital (CHUB).

Study variables were divided into **socio-professional, clinical, and individual impact variables**.

The socio-professional variables were represented by: age, gender, marital status, socio-economic level, level of education, and profession further divided into professional categories (white-collar and blue-collar), sector of activity, type of activity, seniority in the company expressed in years, hourly volume according to the norm established in society: high or normal, self-assessed workload: low, normal, high.

The clinical variables were represented by: the subject's history; the existence or not of primary headaches in the family (first degree), the clinical characteristics of tension headaches, and the clinical forms of tension headaches.

Variables with individual impact were represented by: The HIT-6 score, which incorporates a very broad conception of disability, scanning several domains, namely; the severity of pain during seizures and the restrictive and limiting nature of seizures [11]. The number of days absent from work per year was used secondarily, as an indicator of loss of work-related productivity.

Registration and statistical analysis were carried out using SPSS 21 software. Categorical variables were expressed in terms of numbers and percentages. Continuous and discrete quantitative variables were expressed as mean  $\pm$  standard deviation or median with interquartile range, depending on the extent of the Gaussian distribution. Means were compared by Student's t-test or Mann-Whitney test, depending on whether the distribution was normal or not.

Univariate and then multivariate logistic regression was used to determine the factors associated with the occurrence of tension headaches. Logistic regression produces the odds ratio (OR) with its 95% confidence interval (95% CI). All variables whose CI included the number 1 were considered insignificant. Significant variables (confidence interval not including the number 1) with an OR less than 1 were considered protective factors, and those with an OR greater than 1 as risk factors. The significance threshold was set at 5%.

### 3. Results

The frequency of tension headaches was 69.1%. The average age of cases was  $35 \pm 6.4$  years [25 - 50 years], with 40 (52.6%) in the [25 - 34] age bracket, 27 (35.5%) in the [35 - 44] age bracket and 9 (11.8%) over 44 years. The average number of years spent at work was  $5.09 \pm 4.33$  years [1 - 20 years].

The breakdown of cases by gender and type of activity is shown in **Figure 1** and **Figure 2** respectively.

- **Individual impact**

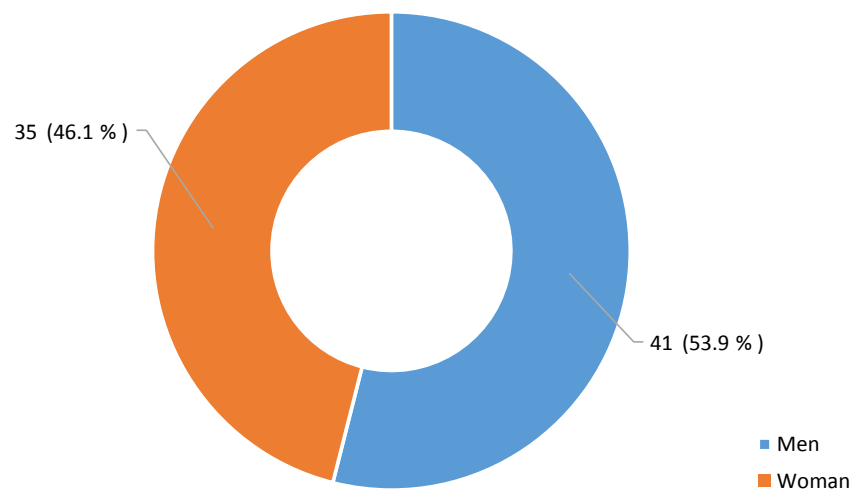
Thirty-six cases (47.4%) had at least one day's absence from work per year, and 40 cases (52.6%) had none.

The median number of days absent from work per year due to tension headache was zero days, the interquartile range [0 - 3 days] and the extremes were zero and 14 days.

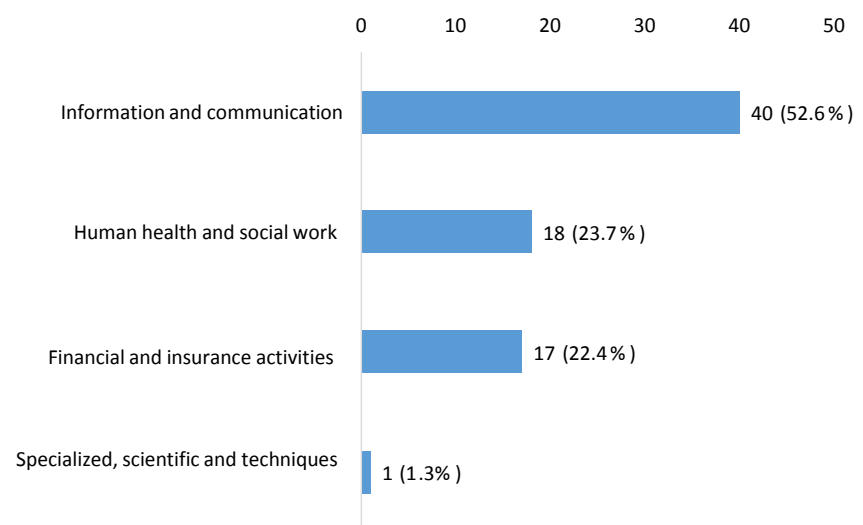
The median number of days for cases with severe impact was 3 days [2 - 4 days], those with mild to moderate impact was 0 days with a zero interquartile range; OR = 1.94 [1.38; 2.72] and p = 0.001.

Individual impact according to HTI-6 score is shown in **Figure 3**.

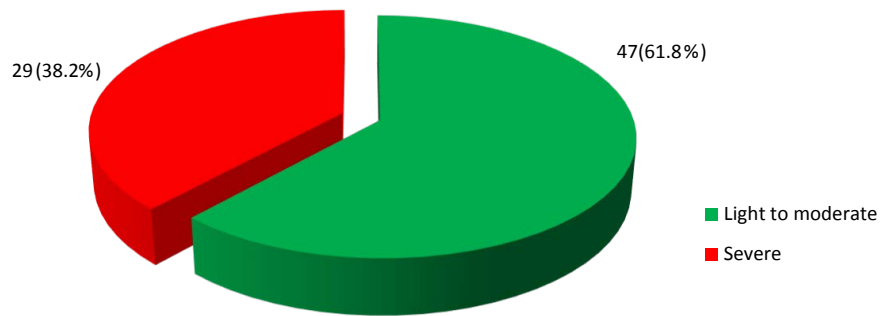
- **Factors associated with individual impact**
- **Socio-professional factors**



**Figure 1.** Distribution of cases by gender.



**Figure 2.** Breakdown of cases by type of activity.



**Figure 3.** HTI-6 score.

The individual impact was severe for 18 (62.1%) men and 11 (37.9%) women; it was mild to moderate for 23 (48.9%) men and 24 (51.1%); OR = 1.71 [0.66; 4.39] and p-value = 0.278.

Mean age was  $36.3 \pm 6.14$  years for cases with severe impact and  $34 \pm 6.47$  years for those with mild to moderate impact; OR = 1.05 [0.98; 1.13] and p-value = 0.159.

Length of service averaged  $6.10 \pm 4.05$  years for cases with severe impact and  $4.47 \pm 4.42$  years for those with mild to moderate impact: OR = 1.09 [0.98; 1.22] and p-value = 0.117.

The public sector included 14 (48.3%) cases with a severe impact and 15 (51.7%) with a mild to moderate impact, while in the private sector those with a severe impact numbered 20 (42.6%) versus 27 (57.4%) with a mild to moderate impact: OR = 1.26 [0.50; 3.19] and p-value = 0.635.

The hourly volume was normal for six (20.7%) cases with a severe impact and high for 23 (79.3%). It was normal for 16 (34.0%) cases with mild to moderate impact and high for 31 (66.0%): OR = 0.51 [0.17; 1.49] and p-value = 0.226.

A comparison of the impact according to other socio-professional characteristics is shown in **Table 1**.

- **History and lifestyle habits**

The comparison between severe and mild-to-moderate impact according to history and lifestyle habits is presented in **Table 2**.

- **Clinical features**

Mean headache duration was  $40.3 \pm 32.7$  months for cases with severe impact and  $22.4 \pm 18.8$  months for those with mild to moderate impact: OR = 1.03 [1.05; 1.01] and p-value = 0.007.

Tension headaches evolved in attacks in 22 (75.9%) cases with severe impact, and continuously in seven (24.1%) cases. For those with a mild to moderate impact, tension headache evolved in 44 (93.6%) cases by attacks and in three (6.4%) cases continuously: OR = 4.67 [1.10; 19.8] and p-value = 0.037.

The average number of seizures per month was  $2.52 \pm 1.04$  for cases with severe impact and  $1.66 \pm 0.98$  for those with mild to moderate impact: OR = 2.17 [1.31; 3.61] and p-value = 0.003.

A comparison of impact in relation to clinical characteristics is shown in **Table 3**.

**Table 1.** Impact in relation to socio-professional characteristics.

	HTI score-6			p-value
	Severe not (%) (n = 29)	Mild to moderate not (%) (n = 47)	GOLD [95% CI]	
<b>Level of study</b>				
Primary	-	1 (2.1%)	0.00 [0.00; .]	0.625
Secondary	6 (20.7%)	9 (19.1%)	Ref.	Ref.
Superior	23 (79.3%)	37 (78.7%)	0.93 [0.29; 2.96]	0.900
<b>Marital status</b>				
Bachelor	11 (37.9%)	29 (61.7%)	0.41 [0.14; 1.17]	0.105
Married	12 (41.4%)	13 (27.7%)	Ref.	Ref.
Divorce	1 (3.5%)	-	. [.; .]	0.500
Cohabitation	5 (17.2%)	5 (10.6%)	1.08 [0.25; 4.70]	0.920
<b>Type of activity</b>				
Financial and insurance activities	8 (27.6%)	9 (19.1%)	0.00 [0.00; .]	0.500
Specialized, scientific and technical activities	1 (3.4%)	-	Ref.	Ref.
Human health and social action	4 (13.8%)	14 (29.8%)	0.00 [0.00; .]	0.278
Information and communication	16 (55.2%)	24 (51.1%)	0.00 [0.00; .]	0.415
<b>Work load</b>				
Low	1 (3.5%)	1 (2.1%)	1.74 [0.10; 29.4]	0.741
Normal	19 (65.5%)	33 (70.2%)	Ref.	Ref.
High	9 (31.0%)	13 (27.7%)	1.20 [0.43; 3.34]	0.727
<b>Socio-economic level</b>				
Very low	1 (3.4%)	-	. [.; .]	0.391
Low	8 (27.6%)	14 (29.8%)	Ref.	Ref.
Pupil	18 (62.1%)	32 (68.1%)	0.98 [0.35; 2.79]	0.970
Very high	2 (6.9%)	1 (2.1%)	3.50 [0.27; 45.0]	0.398

OR = Odds-ratio, CI = Confidence interval, *n* = effective, *p* = probability, Ref. = reference.

- **Associated signs**

A comparison of the impact of tension-type headaches versus associated signs is shown in **Table 4**.

- **Psychosocial characteristics at work**

A comparison of the impact of tension-type headaches in relation to psychosocial characteristics at work is presented in **Table 5**.

- **Clinical forms**

Cases with a severe impact numbered 14 (48.3%) for chronic headache and 15 (51.7%) for episodic headache. Those with a mild to moderate impact numbered three (6.4%) for chronic headache and 44 (93.6%) for episodic headache: OR = 13.7 [3.45; 54.3] and *p*-value < 0.001.

**Table 2.** Impact of history and lifestyle habits.

	HTI score-6			p-value
	Severe not (%) (n = 29)	Mild to moderate not (%) (n = 47)	GOLD [95% CI]	
<b>Alcohol</b>				
Yes	14 (48.3%)	20 (42.6%)	1.26 [0.50; 3.19]	0.635
No	15 (51.7%)	27 (57.4%)	Ref.	Ref.
<b>Tobacco</b>				
Yes	2 (6.9%)	1 (2.1%)	3.41 [0.29; 39.4]	0.375
No	27 (93.1%)	46 (97.9%)	Ref.	Ref.
<b>History of headaches</b>				
Yes	8 (27.6%)	13 (27.7%)	1.00 [0.35; 2.81]	0.998
No	21 (72.4%)	34 (72.3%)	Ref.	Ref.

OR = Odds-ratio, CI = Confidence interval, *n* = effective, *p* = probability, Ref. = reference.

**Table 3.** Impact of headache on clinical characteristics.

	HTI score-6			p-value
	Severe not (%) (n = 29%)	Mild to moderate not (%) (n = 47%)	GOLD [95% CI]	
<b>Seat of pain</b>				
Aside	2 (6.9%)	6 (12.8%)	0.48 [0.09; 2.63]	0.43
Bilateral	22 (75.9%)	32 (68.1%)	Ref.	Ref.
One side then the other	5 (17.2%)	9 (19.1%)	0.81 [0.24; 2.74]	0.75
<b>Pain intensity</b>				
Light	1 (3.45%)	8 (17.0%)	0.33 [0.04; 2.89]	0.33
Moderate	14 (48.3%)	37 (78.7%)	Ref.	Ref.
Severe	14 (48.3%)	2 (4.3%)	18.5 [3.72; 92.0]	<0.001
<b>Seizure frequency</b>				
Daily	2 (8.7%)	2 (4.3%)	0.75 [0.09; 6.39]	0.813
Weekly	12 (52.2%)	9 (19.1%)	Ref.	Ref.
Monthly	7 (30.4%)	17 (36.2%)	0.31 [0.09; 1.06]	0.069
Irregular	2 (8.7%)	19 (40.4%)	0.08 [0.01; 0.43]	0.001
<b>Average number of days with headache per month</b>				
Less than a day	3 (10.3%)	21 (44.7%)	0.27 [0.07; 1.11]	0.066
One to 14 days	12 (41.4%)	23 (48.9%)	Ref.	Ref.
More than 14 days	14 (48.3%)	3 (6.4%)	8.94 [2.14; 37.3]	0.001

OR = Odds-ratio, CI = Confidence interval, *n* = effective, *p* = probability, Ref. = reference.



**Table 4.** Impact of associated signs.

	HTI score-6			p-value
	Severe not (%) (n = 29%)	Mild to moderate not (%) (n = 47%)	GOLD [95% CI]	
<b>Photophobia</b>				
Yes	8 (27.6%)	10 (21.3%)	1.41 [0.48; 4.12]	0.541
No	21 (72.4%)	37 (78.7%)	Ref.	Ref.
<b>Phonophobia</b>				
Yes	6 (20.7%)	13 (27.7%)	0.68 [0.23; 2.06]	0.516
No	23 (79.3%)	34 (72.3%)	Ref.	Ref.
<b>Pericranial tenderness</b>				
Yes	11 (37.9%)	9 (19.1%)	2.58 [0.91; 7.33]	0.083
No	18 (62.1%)	38 (80.9%)	Ref.	Ref.

OR = Odds-ratio, CI = Confidence interval, *n* = effective, *p* = probability, Ref. = reference.

**Table 5.** Impact of psychosocial characteristics at work.

	HTI score-6			p-value
	Severe not (%) (n = 29%)	Mild to moderate not (%) (n = 47%)	GOLD [95% CI]	
<b>Psychological state</b>				
Stress	16 (55.2%)	19 (40.4%)	1.81 [0.71; 4.62]	0.223
Not stressed	13 (44.8%)	28 (59.6%)	Ref.	Ref.
<b>Stressful work situation</b>				
Yes	4 (13.8%)	7 (14.9%)	0.91 [0.24; 3.44]	0.914
No	25 (86.2%)	40 (85.1%)	Ref.	Ref.
<b>Well being at work</b>				
Yes	16 (55.2%)	32 (68.1%)	0.58 [0.22; 1.50]	0.271
No	13 (44.8%)	15 (31.9%)	Ref.	Ref.

OR = Odds-ratio, CI = Confidence interval, *n* = effective, *p* = probability, Ref. = reference.

- **Impact factor (final model)**

After multivariate analysis, the pain of severe intensity present in 48.3% of cases was associated with a severe impact of tension headache: OR = 151.66 [2.36 - 44245.95] and *p*-value = 0.037.

## 4. Discussion

In our study, the diagnosis of tension-type headache met ICHD-3 criteria. The individual impact was assessed by the HTI-6 scale, which evaluates the impact of headaches in a more global way. The HTI-6 has the advantage of incorporating a

very broad conception of disability, sweeping across several domains, namely: the severity of pain during attacks and the restrictive and limiting nature of attacks [11]. It is recommended by the Société française d'étude des migraines et des céphalées. The number of days absent from work per year has been used secondarily, as an indicator of workers' work-related loss of productivity.

A male predominance of tension headache was found in our study, for both severe and mild-to-moderate forms, with no statistically significant difference in the occurrence of headache. This finding is superimposed on those of numerous authors who, in their series, have not established a correlation between gender, the occurrence of tension headaches, the severity of symptoms and their contingent consequences in terms of individual disability [10] [12] [13] [14] [15]. This result is therefore attributable to the predominance of men in the workplace, which is reflected in the population of subjects with tension-type headaches.

The average age of subjects with tension-type headaches was 35 years, with a peak between 25 and 34 years; the lowest age range of workers with tension-type headaches in our study. Headache sufferers with a severe impact of symptoms according to the HTI-6 scale had a mean age of  $36.3 \pm 6.14$  years. The young age of headache sufferers may be explained by the stress of integrating into the workplace and the need to assert oneself in this environment with a view to possible career advancement [16].

The socio-demographic variables studied, such as level of education, marital status, type of activity, workload and socio-economic level, showed no statistically significant correlation with the severity of headache impact. The findings of our work are corroborated by the results of a large Korean survey, conducted to study the prevalence, demographic characteristics and disability of primary headache in Korean adults aged 19 to 69 [17]. In this work, the risk of higher impact was influenced by quantitative factors such as duration and frequency of attack occurrence, and qualitative factors such as pain intensity and aggravation by routine activities.

In our series, only severe pain intensity was associated, after multivariate analysis, with a severe impact of tension-type headache. This discrepancy between results could be explained by the narrowness of our study population, which consequently restricted the scope of observations.

We have observed the impact of tension-type headaches on the productivity of some of the workers concerned. At least one day's absence from work per year was observed in 47.4% of our cases. Anayo *et al.* [18] in Lomé, Togo, made a similar observation.

The number of days absent from work per year due to tension-type headache had an interquartile range between 0 and 3 days and extremes from 0 to 14 days. It was the consequence of a severe impact on daily and/or professional activities. A significant relationship was found, in our study, with the level of disability due to headache, assessed by the HTI-6 score ( $p = 0.001$ ). This shows that a severe handicap on the HTI-6 score doubles the risk of being absent from work due to headache.

Disability assessed by the HTI-6 score was severe in 29 (38.2%) cases. Anayo *et al.* [18] in Lomé, Togo, reported 4% of patients with a major disability. In our study, severe disability included both major and significant disability.

Thus, severe pain, present in 48.3% of our cases, was associated with severe disability according to the HTI-6 score ( $p = 0.037$ ). Severe pain, irrespective of its origin, may be responsible for dysfunction in attentional processes, memory and executive functions, which increases with pain intensity [19].

## 5. Conclusion

The high frequency of tension-type headaches in the workplace and its impact on the condition of workers in Brazzaville represent a real public health problem. It was found that the number of days absent from work per year due to tension headache was the consequence of a severe impact on daily and/or professional activities. An awareness-raising program in this environment seems necessary, as well as an assessment of working conditions.

## Conflicts of Interest

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

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## Appendix 1. Survey Form

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**File number:** \_\_\_\_\_ /\_\_/\_\_/\_\_/

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**I. SOCIO-PROFESSIONAL DATA**

**Q01. Gender:** 1. Male 2. Female \_\_\_\_\_ /\_\_/

**Q02. Age:** \_\_\_\_\_ /\_\_/

**Q03. Level of education:** 1. Primary 2. Secondary 3. Higher \_\_\_\_\_ /\_\_/

**Q04. Marital status:** 1. Single 2. Married 3. Divorced 4. Widowed 5. Cohabiting \_\_\_\_\_ /\_\_/

**Q05. Profession:** .....

**Q06. Professional category:** 1. white collar; 2. blue collar \_\_\_\_\_ /\_\_/

**Q07. Position held:**.....

**Q08. Length of service (in years):**.....

**Q09. Company:** .....

**Q10. Sector:** 1. Public 2. Private \_\_\_\_\_ /\_\_/

**Q11. Type of activity:** .....

**Q12. Type of employment contract:** 1. Fixed-term 2. CDI \_\_\_\_\_ /\_\_/

**Q13. Hourly volume:** 1. Normal 2. High \_\_\_\_\_ /\_\_/

**Q14. Workload:** 1. Low 2. Normal 3. High \_\_\_\_\_ /\_\_/

**Q15. Socio-economic level:** 1. Very low 2. Low 3. High 4. Very high \_\_\_\_\_ /\_\_/

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**II. CLINICAL DATA**

**II.1 Background:**

**Q16. HTA:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q17. Migraine:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

If yes, stop interview

**Q18. Do you take:**

**Q19. a. Alcohol:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q19. b. Tobacco:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q19. c. Narcotics:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q19. Headaches in the family:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q20. Do you often suffer from headaches:** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q21. If yes, since when:** 1. Less than 3 months 2. More than 3 months If less than 3 months stop interviewing \_\_\_\_\_ /\_\_/

**Q22. If more than 3 months, please estimate the duration (in months):** .....

**Q23. Regular use of medication (antidepressants, estrogens, NSAIDs, painkillers):** 1. Yes 2. No \_\_\_\_\_ /\_\_/

**Q24. If yes, does the onset of headache coincide with the use of this/these medication(s)?** 1. Yes 2. No \_\_\_\_\_ /\_\_/

If yes, stop interview

**II.2 Headache characteristics**

**Q25. Where is your pain located?** 1. One side 2. The whole head 3. One side then the other \_\_\_\_\_ /\_\_/

**Q26. If one side:** 1. Occipital 2. Parietal 3. Temporal 4. Temporo-orbital 5. Parieto-temporal 6. Vertex

**Q27. What does your pain feel like?** 1. Tapping 2. Burning 3. Squeezing 4. Grinding 5. It weighs. 6. Like a shock 7. Like a stab wound \_\_\_\_\_ /\_\_/

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Continued

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<b>Q28. How would you rate the intensity of your pain (VAS)?</b> 1. Mild 2. Moderate 3. Severe 4. Very severe	/___/
<b>Q29. How does your headache evolve:</b> 1. In attacks 2. Continuously	/___/
<b>Q30. If seizure, duration:</b> 1. 30 minutes to 7 days 2. More than 7 days 3. Less than 30 minutes	/___/
<b>Q31. How frequent are your seizures?</b> 1. Daily 2. Weekly 3. Monthly 4. Irregular	/___/
<b>Q32. Number of crises per month:</b> .....	
<b>Q33. Average number of headache days per month:</b> 1. Less than one day 2. 1 - 14 days 3. More than 14 days	/___/
<b>Q34. Is your headache aggravated by routine physical activities (walking, climbing, etc.)? stairs...)?</b> 1. Yes 2. No	/___/
<b>Q35. Is your headache accompanied by:</b>	
<b>Q35. a. Feel like vomiting:</b> 1. Yes 2. No	/___/
<b>Q35. b. Vomiting:</b> 1. Yes 2. No	/___/
<b>Q35. c. Light sensitivity:</b> 1. Yes 2. No	/___/
<b>Q35. d. Noise annoyance:</b> 1. Yes 2. No	/___/
<b>Q35. e. Pericranial sensitivity:</b> 1. Yes 2. No	/___/
<b>Q36. Is your headache preceded or accompanied by:</b>	
<b>Q36. a. Visual problems:</b> 1. Yes 2. No	/___/
<b>Q36. b. Sensory or motor:</b> 1. Yes 2. No	/___/
<b>Q37. Headache triggers:</b>	
<b>Q37. a. Annoyance/stress:</b> 1. Yes 2. No	/___/
<b>Q37. b. Hormonal factors (menstruation, oral contraception):</b> 1. Yes 2. No	/___/
<b>Q37. c. Dietary factors (chocolate, other):</b> 1. Yes 2. No	/___/
<b>Q37. d. Sensory factors (flashing light, scratched decor, noise, smell):</b> 1. Yes 2. No	/___/
<b>Q37. e. Prolonged sleep:</b> 1. Yes 2. No	/___/
<b>Q37. f. Hypoglycemia:</b> 1. Yes 2. No	/___/
<b>Q37. g. Heat:</b> 1. Yes 2. Yes	/___/
<b>II.3 Psychosocial factors at work (Karasek questionnaire):</b>	
<b>Q38. Decision-making latitude:</b> 1. Low 2. High	/___/
<b>Q39. Psychological demand:</b> 1. Low 2. High	/___/
<b>Q40. Social support:</b> 1. Low 2. Normal	/___/
<b>Q41. Psychological state:</b> 1. Stressed 2. Active 3. Relaxed 4. Passive	/___/
<b>Q42. Stressful work situation:</b> 1. Yes 2. Yes	/___/
<b>Q43. Workplace well-being:</b> 1. Yes 2. No	/___/
<hr/>	
<b>III INDIVIDUAL IMPACT (HTI-6 score):</b>	
<b>Q44. Impact:</b> 1. Slight to moderate 2. Severe	/___/
<b>Q45. Number of days absent in a year:</b> .....	

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## Appendix 2. HIT-6 Score (Headache Impact Test)

	Never (6 points)	Rarely (8 points)	Sometimes (10 points)	Very often (11 points)	Constantly (13 points)
1-When you have headaches, is the pain intense?					
2-Is your ability to carry out your usual daily activities (household chores, work, study or activities with others) limited because of your headaches?					
3-When you have headaches, would you like to be able to lie down?					
4-In the past 4 weeks, have you felt too tired to work or carry out your daily activities because of your headaches?					
5-In the past 4 weeks, have you experienced a feeling of “ras-le-bol” or annoyance because of your headaches?					
6-Over the past 4 weeks, has your ability to concentrate on your work or daily activities been limited because of your headaches?					
<b>TOTAL</b>					