



Quality of Life Perception by Inmates in the Central Prison of Mbuji-Mayi, Democratic Republic of Congo

Muasa Patoka Guillaume Kalonji^{1,2*}, Léon Okenge Ngongo³, Félicien Ilunga Ilunga³, Adelin Albert¹ and Didier Giet⁴

¹ University of Liege, Department of Public Health Sciences, Belgium

² Mbuji-Mayi Higher Institute of Medical Engineering, Democratic Republic of the Congo

³ Kinshasa Higher Institute of Medical Engineering, Democratic Republic of the Congo

⁴ University of Liege, Department of General Practice, Belgium

*Corresponding e-mail: guikalonji@yahoo.fr

ABSTRACT

Background: In developing countries, quality of prison life remains a challenge in public health. The present study aimed at determining the quality of life as perceived by inmates during their imprisonment at the Central Prison of Mbuji-Mayi, Democratic Republic of Congo. **Methods:** This cross-sectional study was carried out over a 3-month period (between December 2015 and February 2016) at the Central Prison of Mbuji-Mayi. Three hundred inmates participated to the survey. The World Health Organization Quality of Life Scale (WHOQOL-BREF) was used to estimate health and problems affecting inmates' everyday life. **Results:** Mean age of inmates was 33 ± 10 years (range: 18-70 years) and most of them were male (88.7%). The quality of life score estimated was below 50, on the WHOQOL-BREF scale weighted over 100 points (average overall score: 26 ± 7). When considering each WHOQOL-BREF domain, the lowest scores (0-100 normalized scale) were registered for: perception of physical health (24 ± 11), psychological health (18 ± 8), social relationship (39 ± 15) and environmental relationships (24 ± 8). Overall, inmates aged over 30 years old presented an average score slightly lower than younger inmates (25 ± 6 vs. 27 ± 7 ; $p=0.005$). Depending on the length of incarceration, the average score was lower for inmates imprisoned for more than 6 months compared to others (26 ± 6 vs. 28 ± 8 ; $p=0.015$). Correlations between domain scores were low but statistically significant; no correlation was highlighted between environment and mental health domains. **Conclusion:** Most inmates considered their quality of life as negative, regardless of the WHOQOL-BREF domain. Efforts to improve quality of life should remain a priority for political authorities.

Keywords: Quality of life, Imprisonment, Jail, DRC

INTRODUCTION

In developing countries, quality of prison life remains a challenge in public health. World Health Organization (WHO) defines quality of life as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns; it is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment" [1]. Prison, which is an environment of social, sensory, and intellectual deprivations, cannot correspond to WHO definition, as space is restricted, and inmates have to live in an environment where rules are imposed [2]. Inmates have to face difficult situations, in a totalitarian context overlooked by prison authorities. According to the Addis Ababa Human Rights Watch (HRW) report, torture and ill-treatment of inmates is a mean to extract confessions [3]. Prison is a rehabilitating environment, but the situation in the field does not reflect the reality, as demonstrated by Todris, et al. who reported physical punishment, isolation, and lack of toilets; belongings are taken away, and inmates are held in a small cell without any window, while officers fill in water until ankle or calf height. Inmates remain in the water containing their own feces [3,4]. Esposito, et al. reported the same facts at border controls, in the context of migration-related detention; these practices

are increasingly prevalent and affect illegal immigrants, their family and communities in general [5]. In the medical and psychological fields, numerous investigations demonstrated the pathogenic character of incarceration in terms of mental health, showing for, example, a clear association between length of imprisonment and severity of distress [6-8]. In western Cameroon, 32% of the 755 prisoners had scabies, and the prison cells of more than 10 inmates were more affected than those with fewer than 10 people [9]. It is important to mention that prison populations of sub-Saharan Africa register a high burden of illnesses, along with a poor access to healthcare. The lack of appropriate care and the harsh prison environment influence the deficient prison conditions [10].

Human rights non-governmental organizations (NGOs) and other charitable organizations have repeatedly alleged the deteriorating situation in prisons of the Democratic Republic of Congo (DRC) and this also applies to the Mbuji-Mayi Central Prison [11]. Conditions of detention worsen every day: hygiene is primitive, healthcare is not readily accessible for inmates, lack of food, lack of beds (inmates sleep on the floor) and overcrowding is commonplace [12-14]. According to Renneville, prison can be compared to hell: once incarcerated, the inmate will not be able to escape it, even after being released [12]. Indeed, prison is a question of the inmate's body space, its personal place to live, the cell, and the space in which he/she operates in community, in fine, the prison in its entirety [13].

Few studies have focused on the perception of incarceration conditions, from the inmates' point of view, to estimate quality of prison life. Assessing the quality of life allows implementing appropriate rehabilitation programmes, meeting people needs, in order for them to develop skills facilitating their access to environmental resources [2].

The present study aimed at analyzing inmates' perception on their conditions of incarceration to further stimulate research along with policy measures of prison improvement and management in DRC.

MATERIALS AND METHODS

Study Setting

The study was performed in the Central Prison of Mbuji-May, municipality of Diulu, one of the five urban entities of the Eastern Kasai Province. This prison was built in 1952 and was initially meant to host 150 inmates [15-17]. The Central Prison of Mbuji-May is particularly old, and risks of collapse have been reported. Prison population is constantly increasing. In 2006, 286 inmates were hosted, while in 2015-2016, the initial prison population had tripled [11,17]. These dorms have no light and no ventilation in an area where the mean temperature is around 28°C in the shade. The prison accounts with 8 dorms, with a mean of 70 inmates per dorm, 7 showers and 5 toilets with no door [17]. The prison is both a center of detention and of sentences, with a common dorm dedicated to women.

Type and Period of Study

The cross-sectional study was performed between December 1, 2015, and February 28, 2016. The Central Prison is located in Mbuji-Mayi, capital of the Eastern Kasai Province, DRC.

Population and Sample Size

The sample included inmates aged between 18 and 70 years old, mostly men, as women only represent less than 1% of the prison population. Out of the 650 inmates imprisoned by the time of study, 300 of them participated in the study.

Data Collection

Data were collected by health professionals assigned to the prison medical center and by Master students in the Department of Nursing Teaching and Management, Mbuji-Mayi Higher Institute of Medical Engineering. Investigators followed a basic translation training in order to be able to communicate with some inmates in Tshiluba (language of the Eastern Kasai Province, one of the five national languages of DRC, i.e. Tshiluba, Lingala, Swahili, Kikongo and French). A directive interview grid was used, elaborated from the WHO Quality of Life (WHOQOL-BREF) scales, adapted to the context of Mbuji-Mayi prison. The WHOQOL-BREF used, a shortened version including 26 items, is a generic and multidimensional self-assessment questionnaire elaborated from a cross-cultural point of view. It includes an item on global quality and an item assessing health in general [18]. The WHOQOL-BREF instrument considers four distinct domains of life: physical health (7 items), psychological health (6 items), social relationships (8 items) and environment (8 items) [2]. Five types of answers are possible for each item, allowing the assessment of intensity, variable depending on the question asked: (i) very weak, weak, neither weak nor good, good, very good; (ii) totally

unsatisfied, unsatisfied, neither unsatisfied nor satisfied, satisfied, very satisfied; (iii) very bad, bad, neither bad nor good, good, very good. The score allocated to each item varied from 1 to 5. All scores were further weighted over 100 points. The choice of such instrument was based on its ability to help understanding what the inmates could feel in prison, according to their living conditions.

Besides the 26 items assessing the quality of life, the following sociodemographic characteristics were also collected: age (categorised as ≤ 30 and >30 years old), gender and length of incarceration (<6 months and ≥ 6 months).

Ethical Considerations

The study was ethically approved by the Mbuji-Mayi Higher Institute of Medical Engineering (ISTM), the Official Mbuji-Mayi University (UOM) and the Eastern Kasai Provincial Ministries of Health and Justice. The written consent on the investigation form was approved by each inmate. An explanation on the importance of the survey and expected benefits was also provided to each inmate. For inmates who were unable to write, consent was obtained in the presence of an independent witness. Anonymity was guaranteed.

Statistical Analysis

Data were summarized as mean and standard deviation (SD) for quantitative variables and as numbers and percentages in each category for qualitative findings. The Pearson correlation coefficient (r) was used to quantify the association between the different domains of quality of life as perceived by inmates. Student's t test was applied after verifying normality and homogeneity of variances to assess the potential effects of age, gender, and length of incarceration on WHOQOL-BREF domain scores. Results were considered as significant at the 5% critical level ($p < 0.05$). Statistical analyses were performed with STATA 12.0 software.

RESULTS

Among the 300 inmates there were 266 (88.7%) males and 34 (11.3%) females. Their mean age was similar (32.5 ± 10 vs. 34 ± 11 years; $p=0.45$). The majority of inmates (88%) had been in prison for more than 6 months. Quality of life prison was described as negative by more than 75% of inmates (score below 50), regardless of the WHOQOL-BREF domain (Table 1).

Table 1 Description of sociodemographic variables, length of incarceration and WHOQOL-BREF domains (N=300 inmates)

Parameter	Mean \pm SD	Number (%)
Sex (male)	-	266 (88.7)
Age (years)	33 ± 10	-
Length of incarceration (≥ 6 months)	-	264 (88.0)
WHOQOL-BREF		
Physical health	24 ± 11	-
Psychological health	18 ± 8	-
Social relationships	39 ± 15	-
Environment	24 ± 8	-
Global score	26 ± 7	-

SD: Standard Deviation; WHOQOL-BREF: World Health Organisation Quality of Life

The analysis of age, sex, and length of incarceration influence on quality of life as perceived by inmates through WHOQOL-BREF is summarized in Table 2.

Our results show that length of incarceration influences the perception with regards to mental health and environment domains. Inmates incarcerated for more than 6 months showed a lower perception score ($p < 0.05$). When considering a potential age effect, the physical health score was significantly lower for inmates aged less than 30 years, compared to other inmates (22 ± 10 vs. 25 ± 12 , respectively; $p=0.021$). No significant effect of sex, age and length of incarceration on quality of life was observed for the social relationships domain (Table 2).

Table 2 Analysis of WHOQOL-BREF scores in function of sociodemographic variables and length of incarceration (N=300 inmates)

WHOQOL-BREF domain	Mean ± SD	P value
Physical health		
Sex		
Male	23 ± 11	0.62
Female	22 ± 12	
Age (years)		
< 30	25 ± 12	0.021
≥ 30	22 ± 10	
Length of incarceration (months)		
< 6	23 ± 12	0.9
≥ 6	24 ± 11	
Psychological health		
Sex		
Male	18 ± 8	0.076
Female	15 ± 4	
Age (years)		
< 30	18 ± 8	0.46
≥ 30	17 ± 8	
Length of incarceration (months)		
< 6	20 ± 9	0.045*
≥ 6	17 ± 7	
Social relationships		
Sex		
Male	39 ± 15	0.64
Female	37 ± 16	
Age (years)		
< 30	41 ± 16	0.051
≥ 30	37 ± 15	
Length of incarceration (months)		
< 6	43 ± 19	0.058
≥ 6	38 ± 15	
Environment		
Sex		
Male	23 ± 8	0.49
Female	22 ± 8	
Age (years)		
< 30	24 ± 8	0.13
≥ 30	23 ± 8	
Length of incarceration (months)		
< 6	27 ± 6	0.013*
≥ 6	23 ± 8	

SD: standard deviation; WHOQOL-BREF: World Health Organisation Quality of Life

Overall, quality of life was perceived as weak; global score was influenced by inmates' length of incarceration and age. The significantly lowest score ($P < 0.05$) was registered for inmates imprisoned for more than 6 months, and those aged 30 years and above (Table 3).

Table 3 Analysis of WHOQOL-BREF global score according to sociodemographic variables and length of incarceration (N=300)

Variable	Mean ± SD	P value
Male	26 ± 7	0.24
Female	25 ± 5	
Age (years)		
< 30	27 ± 7	0.005
≥ 30	25 ± 6	
Length of incarceration (months)		
< 6	28 ± 8	0.015
≥ 6	26 ± 6	

SD: Standard Deviation; WHOQOL-BREF: World Health Organisation Quality of Life

As seen in Table 4, scores of different domains (weighted over 100), physical health, mental health, social relationship and environment, were only weakly but significantly correlated ($r < 0.03$). No linear dependency was observed between environment and psychological health domains (Table 4).

Table 4 Pearson's correlation matrix between the different WHOQOL-BREF domains (N=300)

Domain	Physical health	Psychological health	Social relationships	Environment
Physical health	1	-	-	-
Psychological health	0.23*	1	-	-
Social relationships	0.17*	0.21*	1	-
Environment	-0.22*	0.055	0.20*	1

*P<0.01

DISCUSSION

The present study aimed at analyzing the conditions of detention, as perceived by inmates imprisoned in the Central Prison of Mbuji-Mayi, according to their length of incarceration. According to the WHOQOL-BREF scale, more than 75% of inmates negatively estimated quality of prison life, regardless of the domains (physical, psychological, social and environmental). In contrast, Saloppé et al reported a positive perception of quality of life in Belgium, as revealed by a mean score above 50 (on a scale weighted over 100). Such comparison reveals two different environments. In DRC, prison conditions are poor due to the lack of hygiene, sufficient food, housing conditions and healthcare [2]. For what Mbuji-Mayi prison was concerned, results were influenced by inmates' age and length of incarceration. Inmates who had been imprisoned for less than 6 months, and who were younger than 30 years old, perceived their quality of life as more or less acceptable compared to inmates aged ≥ 30 years. Throughout our analysis, we observed that the length of incarceration influenced perception, from the psychological and environmental points of view. Saloppé, et al. reached the same conclusion, namely that imprisonment effects were influenced by length of sentence and place of detention. Indeed, when the length of incarceration exceeded 6 months, quality of life was less appreciated which can be explained by overcrowding and unsanitary conditions in different DRC prisons. Our results confirm the observations of Topp, et al. who described interactions between underlying and relational factors influencing the health of Zambian inmates [9]. Overall, we observed that correlations perceived at the different questions between domains were statistically significant, but weak. No association between environment and psychological health was highlighted. However, the authors referred to above estimated that prison environment can partly explain the quality of life as perceived by inmates, through its structure and management; it is especially worth from the psychological point of view [2]. Quality of life is quite similar in most African prisons. Our results show that DRC prisons, and especially the Central Prison of Mbuji-Mayi, ignore the International Covenant on Civil and Political Rights, of December 19, 1966, which specifies that: "All persons deprived of their liberty shall be treated with humanity and with respect for the inherent dignity of the human person" [19-24].

Our results confirm previous results on perception and access to healthcare in prison [19-24]. Quality of life is perceived differently by each inmate, according to the conditions he/she benefits from the heads of cells, prison guards and management [2]. In prison, the inmate most often suffers the consequences of a system based on a strict authority. According to Santorso, the prison system, combined to the lack of stable funding and adequate resources, deeply affects the inmates' living conditions and welfare [21]. The quality of life, as perceived in the Central Prison

of Mbuji-Mayi, depends on the actual reality of the Congolese prison system and its modus operandi, which is far below international standards. The consequences of imprisonment on individuals vary from one person to the next, due to the length of detention and aptitude to support prison constraints [12]. The distrust towards fellow inmates is a reality, and does not encourage the development of relationships. The prison population suffers many evils, among which, overcrowding and the difficult access to satisfactory health conditions; both factors are intrinsically linked and contribute to strengthening the vulnerability of a category of the population often forgotten in developing policies, due to its invisibility [23]. Our results are in agreement with such observation. Problems related to conditions of hygiene and nutrition in central prisons, and the difficulty to meet appropriately inmates' fundamental needs, have an alarming impact on their health status and the respect of human rights [24].

Limitations of the study

This study has been conducted in a single prison and it may have been interesting to compare the Central Prison of Mbuji-Mayi to the Nyongolo Military Prison located in Baudine 1 (same city).

CONCLUSION

The study showed that 75% of the prison population perceived negatively their quality of life (WHOQOL-BREF) in Mbuji-Mayi prison, regardless the domain (physical, psychological, social, and environmental). Inmates imprisoned for less than 6 months had a higher score, compared to inmates detained for 6 months and longer. Efforts should target the improvement of prison conditions, along with appropriate treatments. The humanization of prison conditions should be seen as imperative by the Congolese state if one wants to transform the prison environment into a rehabilitation facility, rather than a place of deprivation.

DECLARATIONS

Competing Interests

The authors declare that they have no competing interests.

Authors' Contributions

All authors contributed to the study.

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