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## Prison Duration and Sport Participation as Predictors of Quality of Life Perception among Inmates of Ilesa Prison in Osun State of Nigeria

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### Abstract

*Background:* It is widely believed that prison duration determines the state of wellbeing and personality of inmates. It was generally agreed that inmates' emotional states, health and conduct in the institutions generally improved and reduced over time. The question is: will sport participation and prison duration affect inmate's perceptions of their quality of life? The study is aimed at investigating the interactive effect of sport participation and duration of imprisonment on the perceived quality of life among inmates in Ilesa Prison in Osun State of Nigeria.

*Methods:* The study employed experimental pretest – posttest control research design. This study was carried out over a 10 week period at the Ilesa prison in Osun State, Nigerian. 140 inmates were selected for the study. The respondents were grouped into the three durations of imprisonment of 1-5, 6-10 and above 10 years. The World Health Organization Quality of Life Scale (WHOQOL-BREF) was adapted and used to determine the inmates' perception of their quality of life.

*Analysis:* The data collected were analysed against the categories of duration of imprisonment (1-5, 6-10 and above 10 years) of the respondents with descriptive and inferential statistics. Analysis of variance (ANOVA) was used to determine whether differences observed on the interactive effects of the duration of imprisonment (years already spent in prison and expected years of release) and sports participation on the perceived QOL measurements are significant.

*Results:* The study showed that the calculated F-ratio of 11.701 for inmates perception of their quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within 1-5 years of imprisonment; the calculated F-ratio of 8.125 for inmates perception of their quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within 6-10 years of imprisonment and the calculated F-ratio of 10.408 for inmates perception of their quality of life was also significant at  $p=0.023$  when tested at 0.05 level of significance for respondents within over 10 years of imprisonment.

*Conclusion:* It was concluded that there is duration of imprisonment (years already spent in prison and expected years of release) and sport participation are determinants of general quality of life among inmates of Ilesa prison in Osun State of Nigeria.

**Keywords:** Inmates, prison duration, sport, quality of life

### 1. Introduction

Quality of life has been used to mean a variety of things such as happiness, life satisfaction, health status, improved physical functioning, and decreased symptoms (Cavanaugh and Blanchard-Fields, 2006; Ferrans, *et al.*, 2005; Oleson, 1990) with happiness and satisfaction being the most commonly used terms (Ferrans & Powers, 1992; Netuveli & Blane, 2008). Using these terms synonymously with quality of life along with the heterogeneous manner of reports have further contributed to the conceptual confusion and makes synthesis and comparisons of the findings difficult (Farquhar, 1995).

Different patterns of adaptation have emerged when examining prisoners who have spent different amounts of time in prison. For example, first-time, short-term prisoners demonstrate limited behavioral adaptations (Schmid & Jones, 1993). Zamble & Porporino (1988) found that, over time, long-term prisoners increased participation in work and other regime activities and reduced casual socialization with other inmates (Zamble, 1992). Also, it was observed that long term prisoners find it more difficult to maintain extra prison relationships than short term prisoners (Flanagan, 1981). These inmates also struggle to maintain self-esteem and a self-image in prison, suggesting that they have poorer wellbeing compared to short term prisoners. Prisoners who had spent more time in prison felt more hopeless and were more frequently charged with disciplinary infractions (Dhimi *et al.*, 2007). This suggests that long term prisoners experience prison differently to short term prisoners and may have different needs to those short term prisoners which need to be accounted for (Picken, 2012; Obadiora, 2016).

Like all processes of gradual change, of course, this one typically occurs in stages and, all other things being equal, the longer someone is incarcerated the more significant the nature of the institutional transformation. When most people first enter prison, of course, they find that being forced to adapt to an often harsh and rigid institutional routine, deprived of privacy and liberty, and subjected to a diminished, stigmatized status and extremely sparse material conditions is stressful, unpleasant, and difficult (Craig, 2001).

It has been found that inmates who are new to prison, but anticipate serving long sentences in prison, experience the most stress. Inmates who had received long sentences and had already served a lengthy time in prison, on the other hand, experience less stress (MacKenzie & Goodstein, 1985; Obadiora, 2017). This suggests that those inmates who have served time in prison develop a method of coping with the experience. Some prisoners learn to find safety in social invisibility by becoming as inconspicuous and unobtrusively disconnected from others as possible. The self-imposed social withdrawal and isolation may mean that they retreat deeply into themselves, trust virtually no one, and adjust to prison stress by leading isolated lives of quiet desperation. In extreme cases, especially when combined with prisoner apathy and loss of the capacity to initiate behaviour on one's own, the pattern closely resembles that of clinical depression (Smyth, Ivanoff & Jang, 1994). Taylor (1961) opined that "long-term prisoners are particularly vulnerable to this form of psychological adaptation. Indeed, Taylor wrote that the long-term prisoner "shows a flatness of response which resembles slow, automatic behaviour of a very limited kind, and he is humourless and lethargic." (Craig, 2001)

The time remaining until an inmate's parole hearing (expected year of release) was a significant predictor of adjustment Wooldredge (1999). Inmates' emotional states, health and conduct in the institutions generally improved over time. Adaptation improved during the prison term. Zamble (1992). Inmates experience initial transition shock and the majority then experience lessening of maladaptive psychological states (Smyth, Ivanoff and Jang, 1994). No indication of deterioration in coping skills over time (Zamble & Porporino, 1990). Long term prisoners struggled to maintain self-esteem and a self-image in prison. Many long term prisoners develop a 'perspective' to guide their actions which consists of attitudinal principles and behavioural expectations. Like situated inmates form groups (Flanagan, 1981). Lutze (2001) observed an increased sense of helplessness over time. Inmates became less positive towards staff and programs, reported less of a work ethic, and became more assertive and more likely to support hard drugs over time. There was however an observed decrease in stress over time for all categories of inmates (Smyth, Ivanoff & Jang, 1994).

## 2. Materials and Methods

### 2.1. Study Setting

The Nigerian Prisons Service, Ilesa Prison Yard, Ilesa, Osun State, Nigeria is a medium security facility, adjacent to Ilesa Police Area Command Headquarters in Ayeso, Ilesa East Local Government Area of Osun State. Ilesa Prison facility was commissioned in 1943 with capacity to accommodate 600 inmates while the 2013 number of inmates is put at about 526. Despite the population of the inmates which was below the prison capacity, beds and bedding in the prisons were inadequate. In some cells or prison blocks where beds are available, mattresses, bed sheets and blankets were lacking. The prison has an open space of about 60 by 80 m size meant for recreational sports and physical activities. The prison yard lacks basic equipment for sporting activities hence the playing field is hardly put into use.

### 2.2. Type and Period of Study

The study employed experimental pretest – posttest control research design. A total of 140 respondents were selected through purposive sampling technique. The respondents were grouped into three duration of imprisonment range of 1-5, 6-10 and above 10. The study covered a period of ten weeks. The first week was used to administer pre-test questionnaire, the following eight weeks were used for sports participation. The eight weeks included two weeks of teaching on theory and techniques of sports-skills, rules and regulations and officiating as well as six weeks used for active sports practice and within sport group competition sessions. The last week of the study was used for the administration of post-test questionnaire.

### 2.3. Population and Sample Size

The study population comprised male inmates in Ilesa Prison. Study respondents were selected using systematic random sampling technique. The study samples were 140 inmates within age 20 and 35 years, excluding inmates on death sentence and those undergoing medical and/or psychiatric treatment. Inmates within the age range were selected because according to Shephard (1998) young adulthood typically covers the period from 20-35 years of age, when both biological function and physical performance reach their peak. The respondents were randomised into two groups of experimental and control to facilitate comparison of collected data. The study excluded inmates on death sentence or those undergoing medical and/or psychiatric treatment.

### 2.4. Data Collection

The WHOQOL-Bref scale was used to measure three domains of QOL –Psychological, Social and Physical health among inmates of Ilesa prison. The instrument was developed by WHO and simultaneously tested in diverse cultures across the world, this means that the instrument has a strong potential for easy cross-cultural applicability, since the items are framed in

culture-neutral terminology (WHO, 1998). The scale includes widely valued contextual factors of life that are not generally regarded as health-related. Therefore, it is a generic instrument that assesses health-related QOL (HRQOL), and social, environmental and subjective well-being issues (WHO, 1998). The WHOQOL-BREF is a 26-item, self-administered, generic questionnaire that is a short version of the WHOQOL-100 scale. The response options range from 1 (very dissatisfied/very poor) to 5 (very satisfied/very good). It consists of domains of physical health (seven items), psychological health (six items), social relations (three items) and environment (eight items). The scale is aimed at determining an individual's perceived quality of life (Oladimeji, 2005)

### *2.5. Ethical Considerations*

The study was approved by the academic and postgraduate committees of the Obafemi Awolowo University as a doctorate requirement. Also, the study was approved by the State Comptroller of the Osun State Command of Nigeria Prison Service (NPS) following the advice of the command's legal officer. The study obtained a voluntary and written consent of the inmates to participate in the study. The inmates are fully aware of their right to withdraw from the study at any time during the period of the study.

### *2.6. Data Analysis*

The data collected were analysed against the duration of imprisonment (below 5, 5-10 and above 10 years) of the respondents with descriptive and inferential statistics. Analysis of variance (ANOVA) was used to determine whether differences observed on the interactive effects of years already spent in prison (below 5, 5-10 and above 10 years) and expected years of release (below 5, 5-10 and above 10 years) and sports participation on the perceived physical health, social and psychological wellbeing domains of QOL measurements among the inmates are significant. Statistical significance was set at  $P < 0.05$ .

## **3. Results**

### *3.1. Interactive Effect of Years Already Spent In Prison and Sport Participation on Quality of Life Perception*

Sport participation and quality of life scores were analysed against the categories of years already spent in prison (1-5, 6-10 and over 10 years) by inmates in Ilesa Prison. The mean scores of quality of life by sport participation and years already spent in prison by inmates were presented in Table 1 and the result analysed to test for level of significance using Analysis of Variance (ANOVA).

Elements	Athletics						Badminton						Table Tennis						Volley ball					
	Experimental n=16			Control n= 16			Experimental n=16			Control n=16			Experimental n=14			Control n=14			Experimental n=24			Control n=24		
Years	1-5	6-10	>10	1-5	6-10	>10	1-5	6-10	>10	1-5	6-10	>10	1-5	6-10	>10	1-5	6-10	>10	1-5	6-10	>10	1-5	6-10	>10
GOOL	80.7 0	79.6 2	82.8 3	80.2 0	77.20	72.0 0	92.8 8	73.3 9	69.8 3	63.3 3	64.9 1	60.75	74.12	83.13	79.00	60.60	63.8 0	63.0 0	97.8 3	82.6 5	100.50	82.88	90.25	83.38
PH	26.0 0	24.5 6	26.0 0	23.9 0	23.00	23.5 0	28.8 8	23.9 4	22.0 0	16.6 7	17.6 8	17.25	22.75	26.25	23.00	16.60	18.3 0	16.7 5	30.2 2	25.8 8	30.00	23.31	24.96	21.88
PW	24.6 0	24.5 6	24.3 3	22.7 0	21.85	20.0 0	26.7 5	22.3 3	22.1 7	18.3 3	18.5 9	17.25	23.50	24.75	23.25	16.90	17.1 0	17.0 0	28.3 9	24.8 5	29.50	23.50	25.13	23.00
SW	30.1 0	30.5 0	32.5 0	33.6 0	32.35	28.5 0	37.2 5	27.1 1	25.6 7	28.3 3	28.6 4	26.25	27.87	32.12	32.75	27.10	28.4 0	29.2 5	39.2 2	31.9 2	41.00	36.06	40.17	38.50

Table 1: Mean Scores for Perceived Quality Of Life By Years Already Spent In Prison And Sport Participation

Sport Participation	Year already spent	ANOVA					
			Sum of Squares	df	MS	F	Sig.
Athletics	1-5years	Between Groups	4084.950	3	1361.650	11.701	.000
		Within Groups	1862.000	16	116.375		
		Total	5946.950	19			
	6-10years	Between Groups	3953.322	3	1317.774	8.125	.000
		Within Groups	5189.900	32	162.184		
		Total	9143.222	35			
	>10years	Between Groups	1332.208	3	444.069	10.408	.023
		Within Groups	170.667	4	42.667		
		Total	1502.875	7			
Badminton	1-5years	Between Groups	4513.274	3	1504.425	2.907	.087
		Within Groups	5175.083	10	517.508		
		Total	9688.357	13			
	6-10years	Between Groups	4313.106	3	1437.702	3.869	.017
		Within Groups	13376.869	36	371.580		
		Total	17689.975	39			
	>10years	Between Groups	501.894	3	167.298	6.843	.001
		Within Groups	880.081	36	24.447		
		Total	1381.975	39			
Table Tennis	1-5years	Between Groups	3235.767	3	1078.589	3.151	.108
		Within Groups	2053.833	6	342.306		
		Total	5289.600	9			
	6-10years	Between Groups	8919.528	3	2973.176	20.784	.000
		Within Groups	2002.750	14	143.054		
		Total	10922.278	17			
	>10years	Between Groups	11234.038	3	3744.679	19.617	.000
		Within Groups	4199.500	22	190.886		
		Total	15433.538	25			
Volleyball	1-5years	Between Groups	5748.167	3	1916.056	31.508	.000
		Within Groups	486.500	8	60.812		
		Total	6234.667	11			
	6-10years	Between Groups	3800.698	3	1266.899	4.812	.007
		Within Groups	7898.861	30	263.295		
		Total	11699.559	33			
	>10years	Between Groups	874.167	3	291.389	.996	.443
		Within Groups	2340.750	8	292.594		
		Total	3214.917	11			

*P*<0.05

Table 2: Analysis of Variance of the Interaction Effect of Years Already Spent in Prison and Sports Participation on Quality of Life

Table 2 shows results of analysis by different sports sub-groups and by categories of years already spent in prison. For Athletics, the calculated F-ratio of 11.701 for inmates perception of their quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within 1-5 years of imprisonment; the calculated F-ratio of 8.125 for inmates perception of their quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within 6-10 years of imprisonment; the calculated F-ratio of 10.408 for inmates perception of their quality of life was significant at  $p=0.023$  when tested at 0.05 level of significance for respondents within over 10 years of imprisonment. For Badminton, the calculated F-ratio of 2.907 for inmates perception of their quality of life was not significant at  $p=0.087$  when tested at 0.05 level of significance for respondents within 1-5 years of imprisonment; the calculated F-ratio of 3.869 for inmates perception of their quality of life was significant at  $p=0.017$  when tested at 0.05 level of significance for respondents within 6-10 years of imprisonment; the calculated F-ratio of 6.843 for inmates perception of their quality of life was significant at  $p=0.001$  when tested at 0.05 level of significance for respondents within over 10 years of imprisonment.

For Table Tennis, the calculated F-ratio of 3.151 for inmates perception of their quality of life was not significant at  $p=0.108$  when tested at 0.05 level of significance for respondents within 1-5 years of imprisonment; the calculated F-ratio of 20.784 for inmates perception of their quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within 6-10 years of imprisonment; the calculated F-ratio of 19.617 for inmates quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within over 10 years of imprisonment. For Volley-ball, the calculated F-ratio of 31.508 for inmates perception of their quality of life was significant at  $p=0.000$  when tested at 0.05 level of significance for respondents within 1-5 years of imprisonment; the calculated F-ratio of 4.812 for inmates perception of their quality of life was significant at  $p=0.007$  when tested at 0.05 level of significance for subjects within 6-10 years of imprisonment; the calculated F-ratio of 0.996 for inmates perception of their quality of life was not significant at  $p=0.443$  when tested at 0.05 level of significance for respondents within over 10 years of imprisonment.

These findings showed that there is no significant interaction effect of 1-5 years already spent in prison and participation in Badminton or Table Tennis game on inmates' perception of their quality of life and that there was also no significant interaction effect of spending over 10 years in prison and participation in volley-ball game on quality of life perception among inmates of Ilesa Prison. Since only three out of the twelve interactions of years already spent (1-5, 6-10 and above 10 years) by sports participation (athletics, badminton, table-tennis and volleyball) were not statistically significant, it was concluded that there is interaction effect of years already spent in prison and sport participation on quality of life perception among inmates of Ilesa Prison.

#### 4. Discussion

This investigation is concerned with the effects of sport participation and duration (years already spent in prison and expected years of release) on inmates' quality of life. The finding considers years already spent in prison and expected year of release as the duration of imprisonment. The finding provides information on the interaction effect of sports participation and duration of imprisonment (years already spent in prison and expected years of release) on physical health, psychological wellbeing and social wellbeing.

The study revealed that there is interaction effect of years already spent in prison and sport participation on quality of life among inmates of Ilesa Prison. It was further observed that years already spent in prison and sports participation affect physical health, psychological wellbeing and social wellbeing perceptions of inmates in Ilesa Prison. However, further analysis of the findings showed that there is low significant interaction effect of longer year already spent in prison and sport participation while there is high significant interaction effect of shorter year (1-5) already spent and sports participation on quality of life among inmates. This finding is in line with the observations of MacKenzie and Goodstein (1985) that inmates who are new to prison, but anticipate serving long sentences in prison, experience the most stress. Inmates who had received long sentences and had already served a lengthy time in prison, on the other hand, experience less stress.

This also confirmed the earlier assertion of Craig (2001) that the longer someone remains in an institution, the greater the likelihood that the process will transform them. In other words, the more the years already spent in prison, the less the interaction effect of sport participation on quality of life among prison inmates. This finding also agrees with the earlier observation of Schmid and Jones (1993) that short-term prisoners demonstrate limited behavioural adaptations. This also agrees with earlier position of Cobden and Stewart (1984) that reduced feelings of hopelessness and disciplinary infractions in prison also declined over time. The finding is also in line with the believe of Schmid and Jones (1993) that long-term prisoners have also been shown to immerse themselves in the daily routine of prison life, overcoming their vulnerabilities and present higher quality of life perception when compared with short-term prisoners. The finding further agreed with MacKenzie and Goodstein (1985), who observed that the early period of imprisonment was more stressful.

The finding also revealed that there is a significant interaction effect of expected years of release from prison and sport participation on quality of life among inmates of Ilesa prison. This means that expected years of release of inmates will influence the effect of sport participation on inmates' perception of their quality of life in Ilesa Prison. The finding therefore revealed that there is significant interaction effect of duration of imprisonment (years already spent in prison and expected years of release) and sport participation on quality of life among inmates of Ilesa prison. In other words, effect of sports participation on perceived quality of life (physical health, psychological wellbeing and social wellbeing) among inmates is significantly affected by their duration of their imprisonment. This is in line with the position of Zamble (1992) that long-term

prisoners increased participation in work and other physical activities and reduced casual socialization with other inmates. Cobden and Stewart (1984) and Obadiora (2017) also observed that duration of imprisonment is a predictor of quality of life perception or feelings of hopelessness among inmates.

#### 4.1. Limitations of the Study

The respondents were limited to male inmates within the age of 20 and 35 years for maximum participation. More than 48 percent of inmates below 20 and above 35 years were excluded from the study due to age. The results of the study may not be applicable to female prisoners and male inmates outside the age between 20 and 35 years.

#### 5. Conclusion

The study concludes that duration of imprisonment affects the impact of port participation on quality of life of prison inmates. The corrective programme in prisons should consider years of imprisonment while planning corrective intervention programmes. It is recommended that inmates should be planned for inmates with similar years already spent in prison and their expected year of release.

#### 6. Declarations

The authors declare that he has no competing interests.

#### 7. Acknowledgement

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