

# Quality of Life among the Traffic Police Officers Working in Shyambazar Jurisdiction, Kolkata

Inba Raja Alagesan <sup>1\*</sup>, Sukamal Bisoi <sup>2</sup>

<sup>1</sup>Department of Community Medicine, R.G. Kar Medical College and Hospital, Kolkata – 700004, West Bengal, India • <sup>2</sup>Department of Community Medicine, Deben Mahata Government Medical College & Hospital, Purulia, West Bengal • \*Corresponding Author: Inba Raja Alagesan, Email: inbaraja92@gmail.com

## ABSTRACT

**Background:** As far as the working environment is concerned, traffic police officers are usually exposed to different health problems due to the nature of their work. This study aimed to assess the life quality of traffic police officers working in Shyambazar jurisdiction, Kolkata, India. **Methods:** A cross-sectional study was done by simple random sampling, on 115 traffic police officers, working in Shyambazar jurisdiction at Kolkata, India. The World Health Organization Quality of Life questionnaire (WHOQOL-BREF) was adopted. The four domains of the study were physical health, psychological health, social relationship and environmental health regarding the age and working experiences, and frequency, hours of work, and their mean scores were compared respectively. ANOVA and independent t-test were performed to interpret the results using SPSS software. **Results:** The mean age of the respondents was  $37.5 \pm 6.162$ . The mean of work experience was  $11.2 \pm 5.122$  years. The overall life quality of the traffic police officers was good. The mean difference of work experiences was statistically significant ( $p < 0.05$ ) regarding the working environment. The mean difference in working hours was statistically significant ( $p < 0.05$ ) with respect to physical health. The mean difference of working frequency was statistically significant ( $p < 0.05$ ) concerning the social and environmental health domains. It was noted that environmental health was most affected followed by psychological and physical health. **Conclusion:** Making time for leisure and recreational activities along with regular counseling sessions for traffic police officers helps improve the quality of their life.

**Keywords:** Traffic police; Quality of life; WHOQOL-BREF; Psychological health

## Introduction

Traffic police officers are responsible for maintaining the overall safety of the city roads, as well as the daily easing of the traffic flow. <sup>1</sup> Occupational health is the promotion as well as the maintenance of the highest degree of physical, mental and social well-being of workers in all occupations. Daily management of high volumes of traffic results, not only in physical but also in mental fatigue of the traffic police officers, making

them susceptible to physical as well as mental stress. <sup>2</sup> Health and Safety Executive in the UK (HSE), reported that about 20% of the police officers experienced high or extremely high levels of stress at work. <sup>3</sup>

As a consequence of working in a noisy and polluted environment, many traffic police officers suffer from respiratory problems, high blood pressure and gastric problems due to irregular food habits.

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The stress caused by long working hours, irregular sleeping patterns, poor living conditions, and ill-treatment of the seniors would manifest itself in fatigue, depression, chronic headaches, irritability, appetite or mood swings, low self-esteem, inability to concentrate and impulsive behavior.<sup>4</sup>

WHO defined quality of life (QOL) as: "the individual's perception of his/her position in life in the context of the culture and value system in which he/she lives, and in relation to his/her goals, expectations, standards and concerns".<sup>5</sup> Quality of Life (QOL) is a broad concept including the person's physical health, psychological state, level of independence, social relationships, personal beliefs and relationship to the environment. Since occupation is directly related to health, traffic police officers face multiple occupational hazards affecting the quality of their life.<sup>6</sup>

Regular assessment of the general factors regarding the quality of life can inform the organizations of the welfare of the employees, including job satisfaction, work-related stress, general well-being and the home-work interface. A valid assessment of these key factors provides the opportunity for employers to plan targeted interventions.<sup>1</sup>

Only a few studies have been conducted on the psychological well-being and work-related stress among traffic police officers, indicating that there were significant positive correlations between two variables of psychological well-being and quality of life. This revealed that with the increase in psychological well-being, the quality of life in the entire sample increases as well.<sup>7</sup> However, the previous studies have not focused much on the quality of life among traffic police officers. In this context, the present study was conducted to assess the quality of life among the traffic police officers working in Shyambazar Jurisdiction, Kolkata, India.

## Methods

A cross-sectional study was done in August and September 2019 at Shyambazar traffic guard

jurisdiction, Kolkata, West Bengal, India (22.60370, 88.37433). This jurisdiction was chosen for maximum convenience regarding collecting data, as it is in the field practice area of R.G Kar Medical College, Department of Community Medicine. This jurisdiction has 3 inspectors, 12 sub-inspectors, 25 sergeants, 80 constables, 85 home guards and 87 civic service volunteers. All 205 government traffic police officers working in this jurisdiction were included in the study. So, the civic servant volunteers and the traffic police officers on sick leave were excluded from the study. In spite of extensive PubMed and another database search, there was no published literature regarding the assessment of life quality among traffic police officers in Kolkata or any other district of West Bengal. However, in a study by Deepti et al. conducted at Lucknow,<sup>7</sup> the mean and standard deviation of the quality of life among traffic police officers was found to be  $96.36 \pm 18.24$ . Accordingly, considering a standard deviation of 18.24, confidence interval of 95%, absolute precision (d) of 3.5, through the formula  $Z^2 \times (SD)^2 / d^2$ , the sample size was calculated to be 104. Considering the 10% attrition, the final sample size was 115. The absolute precision was 3.5, in order to help the researcher to keep the minimum sample size of 100 to 130.

A validated, self-administered English/Bangla (local language) translated WHOQOL-BREF questionnaire<sup>8</sup> was used to assess the quality of life along with their relevant professional details pertaining to the study. The quality of life scale developed by the World Health Organization, also known as WHOQOL-BREF, contains a total of 26 questions where each item is rated on a 5 point Likert scale. The WHOQOL-BREF produces scores pertaining to 4 specific domains namely, physical, psychological, social relationships and the working environment, and a score relating to the overall quality of life and general health. Raw domain scores for the WHOQOL can also be transferred to a 0 -

100 score as per WHOQOL-BREF questionnaire guideline.

After obtaining the ethical clearance [01.08.2019] and the necessary permission from the additional officer-in-charge of the Shyambazar traffic police station, data were collected. The study participants were briefed on the purpose of the study, their consent was taken, and the data were collected by simple random sampling technique to reach the required sample size. The researcher visited the police station on alternate days at around 1 to 3 pm. This time was chosen because there might be morning and evening shift changes. Confidentiality was duly considered.

Data were tabulated in Microsoft Excel (2013). ANOVA and independent t-test were performed using SPSS 20.0 version software. (SPSS, Inc, Chicago, IL, USA).

## Results

The demographic characteristics were depicted in table 1. From the 115 traffic police officers in the study, 41.7% were home guards. The mean age of the respondents was  $37.5 \pm 6.16$ . The majority of the study participants (48.7%) had working experience of 6 - 10 years. The overall mean of the working experiences of the respondents was  $11.2 \pm 5.12$  years. Almost 98.3% of the participants were working 7 days a week, and 40.9% of the traffic police officers were working 11 hours a day. The overall life quality of the traffic police officers was good (44.3%), and 50.4% were satisfied with their health.

The total mean difference of the life quality among traffic police officers was presented in table 2 according to their age group. It can be seen that there was no significant mean difference ( $p > 0.05$ ) regarding the age of traffic police officers in all the 4 domains.

**Table 1.** Distribution of traffic police officers according to demographic variable [N=115]

Serial Number			Number (n)	Percentage (%)
1	Designation	Inspector	2	1.70
		Sub inspector	7	6.10
		Sergeant	14	12.20
		Constable	44	38.30
		Home guard	48	41.70
2	Age (years)	$\leq 30$	17	14.80
		31 - 36	41	35.70
		37 - 42	30	26.10
		$\geq 43$	27	23.50
3	Gender	Male	115	100
4	Working experiences (years)	$\leq 5$	10	8.70
		6 - 10	56	48.70
		11 - 15	27	23.50
		$\leq 16$	22	19.10
5	Working frequency (days/week)	6	2	1.70
		Daily	113	98.30
6	Working duration (hours/day)	10 hours	35	30.40
		11 hours	47	40.90
		12 hours	33	28.70
7	Perception of quality of life	Very poor	5	4.30
		Poor	9	7.80
		Neither poor nor good	47	40.90
		Good	51	44.30
		Very good	3	2.60
8	Perception of health	Very dissatisfied	4	3.50
		Dissatisfied	12	10.40
		Neither dissatisfied nor satisfied	38	33.00
		Satisfied	58	50.40
		Very satisfied	3	2.60

The total mean difference of the life quality among the traffic police officers was presented in table 3 according to the job experiences category. There was a significant mean difference ( $p < 0.05$ ) regarding the job experiences of the officers regarding their environmental health.

Table 4 shows the total mean difference of the quality of life among traffic police officers in terms of their working hours. There was a significant mean difference ( $p < 0.05$ ) with regard to the working hours

of the traffic police officers concerning their physical health.

The total mean difference of the life quality among the traffic police officers is shown in table 5 and fig 1 according to their working frequency. There was a significant mean difference ( $p < 0.05$ ) about the working frequency of the traffic police officers regarding their social relationship and environmental health.

**Table 2.** Mean difference of quality of life of traffic police officers according to their age category

Attributes		Physical Health Mean Score (SD)	Psychological Health Mean Score (SD)	Social Relationship Mean Score (SD)	Environment Health Mean Score (SD)
Age category	≤ 30 years	63.01 (12.88)	60.90 (14.04)	72.47 (15.58)	49.22 (19.62)
	31 – 36 years	65.24 (15.17)	58.56 (11.44)	70.46 (17.51)	58.63 (19.78)
	37 – 42 years	62.71 (13.94)	61.93 (11.03)	64.20 (12.24)	55.12 (17.54)
	≥ 43 years	66.67 (8.51)	59.86 (8.09)	69.70 (11.66)	56.44 (11.15)

F ANOVA ; p value

**Table 3.** Mean difference of quality of life of traffic police officers according to their job working experiences category

Attributes		Physical Health Mean Score (SD)	Psychological Health Mean Score (SD)	Social Relationship Mean Score (SD)	Environment Health Mean Score (SD)
Working experience	≤ 5 years	70.70 (7.71)	67.21 (8.31)	75.02 (16.02)	69.50 (6.20)
	6 - 10 years	63.73 (15.58)	58.61 (12.28)	69.04 (16.64)	52.11 (20.93)
	11 - 15 years	64.37 (11.73)	61.22 (8.45)	66.44 (12.65)	55.44 (13.44)
	≥ 16 years	66.09 (9.34)	60.45 (9.80)	68.76 (11.52)	59.32 (11.69)
F ANOVA ; p value		0.865; 0.426	1.811; 0.149	0.810; 0.491	3.351; 0.022*

\* Significance considered  $< 0.05$

**Table 4.** Mean difference of quality of life of traffic police officers according to their working duration (hours/day) category

Attributes		Physical Health Mean Score (SD)	Psychological Health Mean Score (SD)	Social Relationship Mean Score (SD)	Environment Health Mean Score (SD)
Working duration (hours/day)	10 hours	60.89 (13.71)	58.26 (9.74)	65.06 (12.22)	53.24 (14.65)
	11 hours	68.21 (14.91)	60.21 (8.75)	71.32 (14.36)	57.11 (12.25)
	12 hours	64.58 (7.98)	62.30 (10.91)	69.70 (14.74)	56.64 (12.98)
F ANOVA ; p value		3.248; 0.043*	1.171; 0.314	1.879; 0.158	0.536; 0.586

\* Significance considered  $< 0.05$

**Table 5.** Mean difference of quality of life of traffic police officers according to their working frequency (days/week) category

Attributes		Physical Health Mean Score (SD)	Psychological Health Mean Score (SD)	Social Relationship Mean Score (SD)	Environment Health Mean Score (SD)
Working frequency (days/week)	6 days	66.21 (4.24)	56.50 (9.12)	75.02 (3.05)	63.24 (2.06)
	Daily	64.92 (13.27)	60.28 (10.96)	68.84 (14.92)	55.65 (12.25)
Unpaired t ; p value		0.332; 0.783	-0.575; 0.664	4.386; 0.001*	4.416; 0.001*

\* Significance considered  $< 0.05$

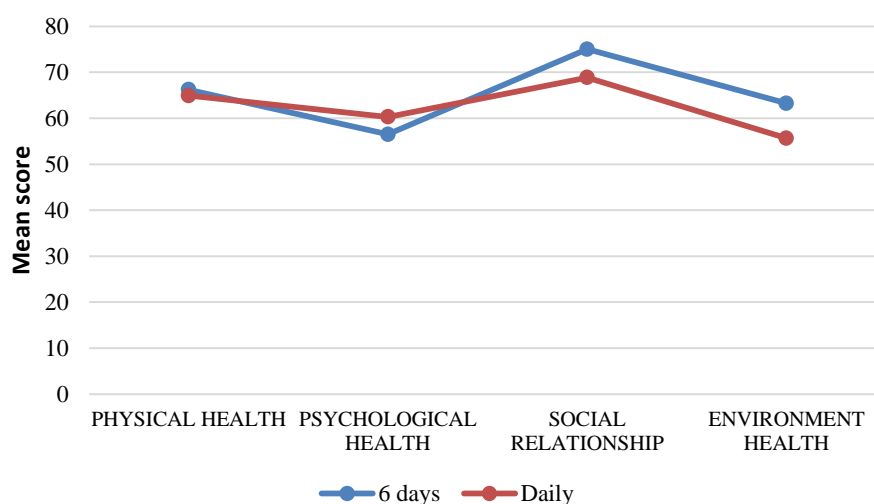


Figure 1. Line diagram showing mean score difference across 4 domains of QOL with their working frequency

## Discussion

This study aimed to assess the quality of life among the traffic police officers. Findings revealed that the overall the quality of life among the traffic police officers was good and they were satisfied with their health. The findings of the study by Phadke et al.<sup>9</sup> at Navi Mumbai was similar, indicating that traffic police officers had a good life quality and satisfactory health.

The traffic police officers above 37, had better physical health ( $\mu = 66.67$ ) and psychological health ( $\mu = 61.93$ ), due to their positive attitude, as by aging, they learned to find balance between day to day activities, sleep, rest, physical activities and concentration. The social relationship ( $\mu = 72.47$ ) and environmental health ( $\mu = 58.63$ ) seemed better in traffic police officers below 36, which was due to the good interpersonal relationships and the support they receive in society and at home.

The traffic police officers with job experiences of less than 5 years had better physical ( $\mu = 70.70$ ), psychological ( $\mu = 67.21$ ), social ( $\mu = 75.02$ ) and environmental health ( $\mu = 69.50$ ) which was due to their young enthusiastic nature towards working and serving people. In a study conducted at Lucknow,<sup>10</sup> physical and psychological health was better among

the officers with more than 20 years of experience, whereas social and environmental health was better among officers with less than 20 years of experience.

Traffic police officers working 11 hours per day were found to have better physical health ( $\mu = 68.21$ ), social relationship ( $\mu = 71.32$ ) and environmental health ( $\mu = 57.11$ ) which shows that even one hour of less work could impact the time they could spend time with their family.

It was also found that, physical health ( $\mu = 66.21$ ), social relationship ( $\mu = 72.02$ ) and environmental health ( $\mu = 63.24$ ) were better in traffic police officers working 6 days a week. The one day off helps them build good personal relationships, gives them opportunities to acquire new skills and also have time for some leisure activities.

Overall, from all categories among the traffic police officers, environmental health was found to be most affected followed by the psychological health and physical health. This finding was similar to the study conducted at Navi Mumbai<sup>9</sup>. It was found that the environmental domain was the most affected, and the social relationship was the least affected.

Planning for regular recreational activities with family to explore the officers' talents at work place,

addressing the public social responsibilities to obey traffic rules, and thus, reducing the environmental burden of the police officers working tirelessly, finding solutions to handle financial problems and assigning mandatory regular counselling sessions to deal with their problems could help improve the affected domains and the overall quality of life.

The only limitation was difficulty in understanding the local language which was dealt with through the help of an interpreter. In future, this study can be done in other traffic guard jurisdictions of all the districts of West Bengal for better comparative results. Furthermore, the qualitative aspects can be explored along with the psychological well-being of the traffic police officers.

### Conclusion

The overall the quality of life among the traffic police officers was good and they were satisfied with their health. Regular counselling sessions and recreational activities helps in improving their quality of life.

### Conflict of Interest

The authors declared no conflict of interest.

### Acknowledgment

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### Authors Contribution

Conceptualization, Methodology, Software, Validation, Investigation, Formal analysis, resources, Data curation, writing – original draft preparation done by first and corresponding author Dr Inba Raja Alagesan. Visualization, Supervision and Reviewing done by second author Dr Sukamal Bisoi.

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