

# Application of WHOQOL-BREF in Measuring Quality of Life in Traffic Police

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**Abstract:** We all encounter traffic police almost every day while travelling by road, whether it is day or night, summer or rainy or winter season. The responsibility for managing the chaos and ensuring smooth flow of traffic and pedestrians falls on the traffic police who are stationed at important junctions. Their job is physically demanding as well as mentally challenging. Traffic police are surrounded by significant health threats at their work environment. Quality of life (QOL) helps in Monitoring health of the population & evaluating the effects of health and social policy. Thus we aim to assess QOL of traffic police, the most affected domain among the four domains physical health, social relationship, psychological health and environmental health. Component most affected in different domains. **Methodology:** A community based cross-sectional survey study was conducted among 269 Traffic Police in Navi Mumbai, India. Data on QOL was assessed by WHOQOL-BREF. **Results:** From the data it appears that, Traffic Police has good quality of life and satisfactory health. Environmental domain is affected most. The most affected components in environmental domain are their physical environment and time for leisure activities. **Conclusion:** Modifications in their physical environment may help in improving QOL among Traffic Police population.

**Keywords:** WHOQOL- BREF, Quality of life, Traffic Police

## 1. Introduction

The urban transport scene presents a picture of chaos and confusion bred out of indifference and neglect. The situation is worse in developing countries like ours where the growth in the number of vehicles is almost in a geometrical progression while the requisite infrastructure to cater to this tremendous growth is not developed even in an arithmetical progression. The traffic problem itself is not new. What is new about it is its growing magnitude and significance. India's vehicles and population is concentrated primarily in the cities, efficient city traffic management has become a major challenge for the authorities. It has also made the role of traffic police all the more critical on India's roads. [1] They work almost every day to maintain all this, which obviously put a lot of stress in their life. Besides being exposed to physical health hazards, traffic police are also subject to anxiety and mental stress. [2] Quality of life (QOL) will reflect the health status and well-being of this vulnerable population. QOL is an important outcome in clinical and interventional studies. [3] WHO defines QOL as the "individual's perceptions of their position in life in the context of culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns". This study aimed to evaluate QOL among Traffic Police in Navi Mumbai, India. The WHOQOL-BREF is a shorter version of the original instrument that may be more convenient for use in large research studies or clinical trials. [4] This instrument captures many subjective aspects of QOL. [5, 6, 7] This questionnaire is one of the best known instruments that has been developed for cross cultural comparison of QOL and is available in many languages. [8] This instrument, by focusing on individuals' own views of their well-being, provides new perspective on life. [3]

## 2. Methodology

- **Research approach:** Cross sectional survey
- **Study design:** The data for this study was collected by the interview method with the help of a questionnaire (WHOQOL-BREF).
- **Study setting:** Navi Mumbai
- **Population of study:** Navi Mumbai traffic police
- **Sample size:** 269
- **Inclusion criteria:** Traffic police
- **Exclusion criteria:** Other branch of the police, Police on sick leave.
- **Duration of Study:** 3 months
- **Material used:** WHOQOL-BREF Questionnaire.

## 3. Procedure

All participating subjects provided informed consent after being acquainted with the purpose of study. Questionnaire have been filled by participants and for enhance accuracy, all participants were informed that their responses would remain confidential. A trained person was present to explain how to complete the questionnaire. We used the brief version of the WHO's QOL scale (WHOQOL-BREF) in this study. The questionnaire basically derived from WHOQOL-100. This questionnaire was translated to Marathi and then back to English to assess the liability of the instrument. Pilot test was done before the survey. The WHOQOL-BREF questionnaire contains two items from the overall QOL and General Health and 24 items of satisfaction that divided into four domains: Physical health with 7 items, Psychological health with 6 items, Social relationships with 3 items and Environmental health with 8 items.

Each item is rated on a 5- point Likert scale. Each item of the WHOQOL-BREF is scored from 1 to 5 on response

scale. Raw domain scores for the WHOQOL were transferred to a 4-20 score according to guidelines.<sup>9</sup> Domain scores are scaled in positive direction i.e. higher scores denote higher QOL. The other parameters collected were age, gender, work experience, daily duty hours.

**4. Statistical Analyses**

Descriptive analyses performed including means and standard deviations.

**5. Results**

**Table 1: Age distribution**

Age (in years)	No. of people
20-29	43
30-39	92
40-49	103
50-59	31

**Table 2: Working duration (in hours/day)**

Working duration(hours)	No. of people
5-9	9
10-14	247
15-19	6
20-24	7

**Table 3: Working frequency(days/week)**

Days per week	No. of people
4	2
6	183
7	84

**Table 4: Work experience**

Since how long working (years)	No. of people
0-9	162
10-19	65
20-29	38
30-39	4

**Table 5: Domain score (Out of 100)**

Physical Health Domain	Psychological Health Domain	Social Relationship Domain	Environmental Health Domain
69	69	81	56

**Table 6: Domain 4 - Environmental health**

Component	Average rating
Security	3
Physical environment	2
Financial support	3
Accessibility of Information	4
Leisure Activity	2
Home environment	4
Health care	4
Transport	4

**Table 7: Domain 1-Physical health**

Components	Average
Physical Pain	2
Dependence on Medication	2
Energy	3.5
Mobility/ Activity	4
Sleep	3
Ability for ADL	4
work Capacity	4

**Table 8: Domain 2-Psychological Health**

Components	Average rating
Enjoy life/Positive feeling	3
Considers life meaningful/Personal belief	4
Concentration	4
Body image	4
Satisfied with self/ Self-esteem	4
Negative feeling	2

**Table 9: Domain 3-SocialRelationship**

Components	Average rating
Personal relationship	4
Sex life	4
Social Support	4

**6. Discussion**

Purpose of this study was to evaluate the QOL of Traffic Police in Navi-Mumbai with use of the Marathi version of the WHOQOL-BREF questionnaire. To our knowledge, this is one of the first studies assessing QOL among the Traffic Police in India.

QOL as a measurement can identify groups with physical or mental health problems and provide a guide to intervention and follow up evaluation.<sup>9</sup>

Total 269 traffic police participated in our study. Age group distribution was from 20 to 60 years comprising 265 males and 4 females i.e. almost 99% of the population was male & 1% female.

Majority i.e.103 traffic police were in the age group of 40 to 49 years consisting of 38% of the total traffic police population under survey. (Table 1)

Talking about the duration of work per day that each traffic police is subjected to, is 10-14 hours a day, 247 out of 269 of the traffic police mentioned this that accounts for 92 %.( Table 2) similarly most of the population works for 6 days a week as referred in table 3. Majority of them i.e. 162 people are working in this field from the past 10 years making it well experience population of traffic police.

Coming to the four domains i.e. physical health, psychological health, social relationship and environmental health that forms the crux of our survey it is found that the domain 4(environmental health) is the most affected one obtaining the lowest score of 56/100.This domain is followed by domain 1(physical health) and domain 2(psychological health), both having an equal score of 69 out of a total 100.The least affected domain is domain 3 i.e. the social relationship domain obtaining a highest score of 81/100.(Table 4) Now let us have an exhaustive view of the four respective domains to have a clear understanding of our study. The domain which is most affected i.e. domain 4 (environment health) will be explained first followed by the other domains in the order of their decreasing impact on the quality of life of traffic police.

### 6.1 Environmental health domain

(Table 6) It consists of 8 components which are security, physical environment, financial support, Accessibility of information, leisure activity, home environment, health care and transport. By analyzing the average rating of all these above components provided by 269 traffic police in our survey, we found that **'time for leisure activities'** and **'physical environment'** component obtained the least average rating of 2. This clearly indicates dissatisfaction of the traffic police towards these components. The reason for dissatisfaction of traffic police may be in their long work duration i.e. 10-14 hours per day and also frequency i.e. 6 days per week. Hardly any time remains for leisure. The components such as security and financial support got an average rating of 3 indicating that the traffic police were neither dissatisfied nor satisfied from these two components. The remaining four components i.e. accessibility of information, home environment, healthcare and transport obtained an equal average rating of 4 clearly showing satisfaction of traffic police towards all these four components.

### 6.2 Physical health domain– (Table 7)

The physical domain consists of 7 different components which are physical pain, energy, sleep, ability for ADL, Mobility/activity, Dependence on medication and work capacity. By analyzing the average ratings of all the components provided by the traffic police under our survey in this domain we found that the duration of sleep component has got the rating of 3. This clearly indicates that they are neither satisfied nor dissatisfied with the amount of sleep they get, one of the reasons could be their night shifts (although we don't have a specified number of traffic police who have night shifts and how often they have it). The next component which follows it is energy required for performing the work which has got a rating of 3.5, indicating that they have moderate amount of energy throughout everyday life for various activities. This is pretty obvious because they have standing job for a long duration throughout the working time. The other components rating shows that their job is little affected by any physical pain which got an average rating of 2/5, they require a little medical help to function in their daily life which got an average rating of 2/5, they are satisfied with their working abilities and capacity, last two components got an average rating of 4/5.

### 6.3 Psychological health domain– (Table 8)

This domain consist of 6 different components which are concentration in work, enjoying life, finding life meaningful, body image, satisfaction with self and negative feelings such as blue mood, anxiety, depression. By analyzing the average rating of all these components we found that the traffic police are enjoying their life to a moderate amount getting a rating of 3/5 which may be because they have a stressful and physically demanding job. The analysis of remaining components shows that they find their life meaningful, their concentration is good at work, they mostly accept their body image, they are satisfied with themselves, and all of these components got an average rating of 4/5, despite having

such a stressful job they seldom get negative feelings which is indicated by average rating of 2/5.

### 6.4 Social relationship domain– (Table 9)

By analyzing the average rating of all 3 components in the social health domain we found positive findings which are indicated by the average rating of 4/5 in each component. This clearly shows that they are satisfied with the support they get from their friends at duty, they are able to maintain good personal relationship, and they are satisfied with their sex life too.

Now, let us know how much the traffic police rated their general **quality of life** and how much they were satisfied with their overall **health**. By analyzing both these very important components we found that Traffic Police rated their quality of life as good with an average rating of 4/5 and they are satisfied with their health by giving it an average rating of 4/5.

## 7. Conclusions

From the study we can conclude that, environmental health domain is affected most. The most affected components in this domain are their physical environment and time for leisure activities. The least affected domain is social relationship domain.

## 8. Future Prospects of this Study

Further experimental study can be designed, which will provide appropriate solutions for most affected area like physical environment and time for leisure activities. Inference of this study can be used to implement modifications, for improvement in QOL of Traffic Police. Governmental Policies can be tailored according to need.

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