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Study of Knowledge about Hypertension in Young Adult Population of Age Group 20 to 40 Years in an Urban Slum of Mumbai

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ABSTRACT

Context: Hypertension is a growing health problem throughout the World. There is paucity of data on awareness about hypertension, its causes and related complications in general population. Awareness about hypertension in younger population can prevent its development in later age. Thus to prevent & control the problem of hypertension there is a need for increasing knowledge and awareness about hypertension in younger population. Aim of this study is to assess knowledge about hypertension in younger population using a knowledge questionnaire.

Methods: A cross-sectional community based study amongst 450 participants in the age group of 20 to 40 years using systematic sampling technique with a random start. Data was collected using a questionnaire form that was devised relevant to the study. **Conclusion:** Among 450 participants, 264 i.e. 58.7% participants had poor knowledge about hypertension (score < 7) and 186 i.e. 41.3% good knowledge about hypertension (score > 7).

Key words: Knowledge, Hypertension, Young adult, Urban slum

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Introduction:

Hypertension is a growing health problem throughout the World.¹ There is paucity of data on awareness about hypertension, its causes and related complications in general population. Awareness about hypertension in younger population can prevent its development in later age. Thus to prevent & control the problem of hypertension there is a need for increasing knowledge and awareness about hypertension in younger population. Aim of this study is to assess knowledge about hypertension in younger population using a knowledge questionnaire.

Materials and Methods:

Study population: 20 to 40 years adults.

Study Area: Urban slum that is a field practice area of Department of Community medicine of T.N.M.C & B.Y.L Nair Hospital, Maharashtra, India.

Study design: A cross sectional community based study.

Sample size: Sample size was calculated considering the prevalence of hypertension in urban slum to be 47.9%.² By using the formula: $n=4pq/L^2$, Where n =sample size, p =prevalence of hypertension= 47.9%, $q=100-47.9= 52.1$

L =admissible error (10% of p) = $10/100 \times 47.9= 4.79$ Now putting values in the formula: $n = 4 \times 47.9 \times 52.1 / 4.79 \times 4.79 = 9982.36 / 22.9441 = 435.073$

So, calculated minimum sample size was around 435, which were extended to 450.

Sample size: 450

The sample size of 450 was divided among 50 plots equally - $450/50 = 9$, thus total 9 participants of 20 to 40 years (according to the inclusion criteria) were selected from each plot for the study. As there were 180 houses in each plot, 9 participants fulfilling the inclusion criteria were selected by Systematic sampling technique with a random start (In each plot every first house was selected by simple random sampling method). Every 20th house was selected for the study till the sample size of 9 was met from each plot ($180/9 = 20$). When any house was found locked

or inclusion criteria not fulfilled then next house was targeted. Also when more than one sample was found in the same house then all of them were included in the study. And as soon as the target of 9 samples from 1 plot was completed other plot was targeted.

Study duration: from July 2014 to June 2015 i.e. 1 year.

Parameters used for assessment of study objectives: Knowledge assessment about hypertension using a questionnaire based interview on knowledge about basic, risk factors, treatment and prevention & control of hypertension.

Definitions:

• Knowledge about hypertension Questionnaire

- This questionnaire was tested by pilot study on 30 subjects of 20 to 40 years. Appropriate changes were made based on pilot study and the questionnaire was finalized.

14 questions were asked related to hypertension (basic, risk factors, treatment and prevention & control of hypertension) and score was given as

- YES = Mark 1
- NO = Mark 0
- Minimum mark = 0
- Maximum marks=14
- **Knowledge score**
- Poor scorer: 0 to 7
- Good scorer: who scored more than 7

Questionnaire

Knowledge about hypertension:

Basic

- 1) Do you know what hypertension is? (Yes=increased blood pressure) Yes/No
- 2) Do you know what normal blood pressure level is? (Yes=120/80) Yes/No

Risk factors

Knowledge about hypertension

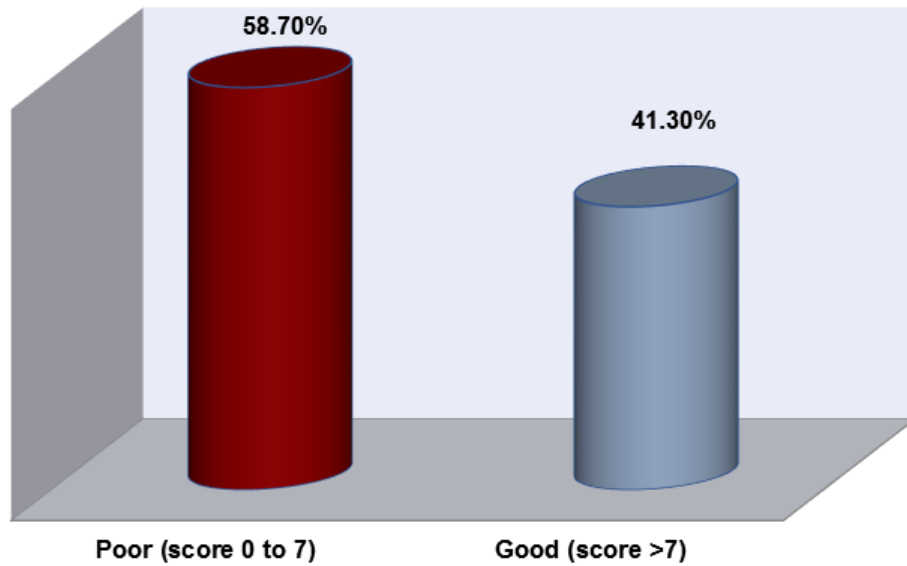


Fig 1 Distribution of Knowledge about hypertension (based on knowledge score obtained by answering the questionnaire) in the study population.

Tables 1: Distribution of Knowledge about hypertension (based on knowledge score obtained by answering the questionnaire) in the study population.

Knowledge	Frequency	Percentage(%)
Poor (0 to 7)	264	58.7
Good (>7)	186	41.3
Total	450	100

- 3) Do you think family history of hypertension increases the risk of hypertension? Yes/No
- 4) Do you think smoking increases the risk of hypertension? Yes/No
- 5) Do you think drinking alcohol increases the risk of hypertension? Yes/No
- 6) Do you think increasing weight increases the risk of hypertension? Yes/No
- 7) Do you think with increasing age risk of hypertension increases? Yes/No
- 8) Do you think stress increases the risk of hypertension? Yes/No
- 9) Do you think high fat diet increases the risk of hypertension? Yes/No

Disease manifestations

- 10) Do you know what are the symptoms of Hypertension? Yes/No
(headache ,dizziness ,palpitations, tiredness)
- 11) Do you know, what are the complications of Hypertension? Yes/No
(stroke ,renal ,visual ,heart problems)

Prevention & treatment

- 12) Do you know how hypertension can be prevented? Yes/No
- 13) Do you know hypertension can be treated? Yes/No
- 14) Do you know that Diet control (salt restriction) and exercise acts as central pillar in management of Hypertension? Yes/No

Scoring of knowledge

- YES = Mark 1 & NO = Mark 0
- Minimum mark = 0 & Maximum marks=14
- Poor scorer: 0 to 7
- Good scorer: who scored more than 7

Results:

In the present study, out 450 study subjects 309(68.7%) were female and 141(31.3%) were male.

It was seen from **Table 1** that as per the definition mentioned in the methodology, out of the 450 participants 264 (58.7%) participants had poor knowledge about hypertension and 186 (41.3%) participants had good knowledge about hypertension.

Discussion:

Among 450 study subjects 309(68.7%) were female and 141(31.3%) were male. Female were more compared to male because the study data was collected between 10 am to 4 pm, when most of the men were outside for work.

According to the definition mentioned in the methodology, out of the 450 participants 264 i.e. 58.7% participants poor knowledge about hypertension and 186 i.e 41.3% good knowledge about hypertension. But in a study it was found that 98% of the participants knew that hypertension is the disease state.³

This difference could be because of different population composition in the slum and also the knowledge questions and scoring method was different in both the studies.

Conclusion: On the basis of questionnaire assessment findings of the study concluded that:

- About half of the participants (58.7%) had poor knowledge about hypertension.
- There is a need to create awareness and impart education about hypertension, its causes, risk factors, treatment and complications to improve the knowledge of the young population about hypertension. This will help in prevention and early diagnosis and treatment of hypertension, so that even the iceberg of hypertension can be addressed.
- High blood pressure can affect old as well as young population. So there should be an on going health promotion and continuous education programme that include both old and young population.

Limitations:

- This is a urban slum based study so results may not be universal.
- This is a cross sectional study, follow up study would give more detailed information.
- Inclusion of sources of obtaining knowledge would be more informative.

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