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Study to assess effect of health teaching on knowledge and practices regarding home management of children with tuberculosis among parents visiting OPD of selected hospitals

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Abstract
Introduction: Prevention is better than cure, is a clichéd age-old adage but it has epitomical significance in rendering a better and healthy society. A lot has been said about Tuberculosis is detection, treatment, etc. but, surprisingly, not much is being done about prevention of tuberculosis infection. Tuberculosis is the single greatest curable actions killer in today's world which is a global problem that requires global solutions. Although the incidence diseases is concentrated in the developing world. In the last decade tuberculosis has re-emerged as a major worldwide public health hazard with increasing incidence among adults and children represent a small percentage of all TB cases, infected children are a reservoir from which many adult cases will arise.
Methods Research Approach
Research Approach: Evaluatory approach. Research design used was single group pre-test-post-test pre-experimental one group pre-test post test design.The conceptual framework based on General System Model was used for the study which is designed by Von Bertalanffy (1968).The setting for this study was the selected areas of the Dr. D.Y. Patil Medical Hospital, Pimpri Chinchwad Municipal Corporation of Pune city. Non probability Purposive Sampling Technique was used for 50samples.
The tool developed which includes,
Section1: The demographic variables.
Section2: Assessment of the knowledge and practices score.
Section3: Evaluate the effectiveness of health teaching on home management of children with Tuberculosis.
Section4: Level of knowledge score of parent's pre and post.
Section5: Association of knowledge and practice score of parents in relation to demographic variables applied to determine the significance of findings.
Tool validity was done and tool found reliable. Study found feasible after pilot study.
Results: Practice pretest score was 36.78 (58.38%). It revealed that the samples had average practices. The mean practice posttest score was 54.10 (85.47%).Its revealed that there has marked improvement in practices level after giving health teaching Knowledge regarding home care management of children with tuberculosis among the parents the mean knowledge level was 7.06 (35.03%).Its reveals that the samples had average knowledge the mean knowledge level 14.64(72.61%). It's revealed that there is marked improvement knowledge level after giving health teaching. pre test the mean of the knowledge score obtained sample was 7.06 and in the post test it rose to 14.64pretest the mean of the practice score obtained sample was 36.78.post test it rose to54.10.practices score sample marked improvement after giving Health teaching section deals with the analysis of data to determine the level of pre test and post test knowledge and practices score of the sample. Association of level of knowledge score is calculated by using Chi-square test.in pre test 64% of the samples had average level of knowledge score,36% had poor level of knowledge score. In post test 72% of the samples had excellent level of knowledge score and 28% had good level of knowledge score. difference between pre test and post test level of knowledge score is found to be statistically significant (χ^2-value= 9.08).In pre test 94% of the samples had average level of practices score, 06% had good level of knowledge score. In post test 98% of the samples had good level of practices score and 02% had average level of knowledge score. The difference between pre test and post test level of knowledge score is found to be statistically significant (χ^2-value= 7.32).
Conclusion: The study was a new learning experience for the investigator. In pre test 64% of the samples had average knowledge score,36% had poor knowledge score.In post test 72% of the samples had excellent knowledge score and 28% had good knowledge score.
The difference between pre test and post test knowledge score is found to be statistically

significant (χ^2-value= 9.08). In pre test 94% of the samples had average practices score, 06% had good knowledge score. In post test 98% of the samples had good practices score and 02% had average knowledge score.

Keywords: Assess, knowledge, practice, effect, home management, tuberculosis, health teaching, children

Introduction

Tuberculosis transmission occurs through droplet nuclei containing Mycobacterium tuberculosis, which are expelled by smear-positive pulmonary TB patients when coughing and sneezing, and remain suspended in the air .Inhalation of such aerosols may lead to infection .After close contact with an infectious case, 30–50% of exposed susceptible contacts acquire latent TB infection. This can be determined by the tuberculin skin testor/and Interferon Gamma Release Assays.After this first infection, active TB may occur immediately .However, for the majority of cases, the initial infection remains clinically silent and microbiologically latent. Approximately 10% of the infected individuals will progress. Robert Koch first identified Mycobacterium tuberculosis as the causative organism of tuberculosis in1882.It was however referred to as Koch's bacillus till Lehmann and Neumann gave the generic name Mycobacterium meaning fungus bacteriumdue to the mould-like growth of the bacillus in liquid medium . Mycobacterium tuberculosis is the etiologic agent of tuberculosis in humans and the closely related Mycobacterium bovine causes disease in cattle and livestock.

Research Design

The research design selected for the study was single group pre-test-post-test pre-experimental one group pre-test post test design.

Research Setting

The present study was conducted in the selected the study was conducted at the Dr. D.Y. Patil Medical Hospital, Pimpri Chinchwad Municipal Corporation of Pune city.

Population

The population of the present study comprised of parents of 1-16 years' children who have taking treatment in hospitals.

Sample

In the present study the samples are parents who were having child with tuberculosis and were under treatment In Dr. D Y Patil Medical, Hospital and Research Centre Pimpri, Pune City.

Sample size

The Sample size consisted of 50 Parents.

Sample technique

In the present study the sample was collected through Non probability Purposive Sampling Technique.

Criteria for selection of sample

Inclusion Criteria

1. Parents who had a child 1-16 years with pulmonary tuberculosis in selected hospitals.
2. Parents who were willing to participate.
3. Samples who could understand read and write Marathi, Hindi and English.
4. Child who were on DOTS Therapy.

Exclusion Criteria

1. Samples those are not willing to participate.
2. Parents who had attended health teaching program related to home management.

Development of tool

A Structured Questionnaire and Observational Check list was developed for identifying the knowledge and practice regarding home management of children with tuberculosis among parents visiting OPD of selected hospital. In this study the Structured Questionnaire and Practice Self-reporting Observational Check list was worded in a manner that could minimize the risk of response biases. For the selection of the items and preparation of the tool, the following steps were taken. Review of literature scholarly and non-scholarly articles. Opinions and suggestions were taken from experts.

Description of the tool

In this study the tool consisted of:

Section A: Demographic Performa

Section B: This section contains 20 items to identify the knowledge among the people regarding home management of children with tuberculosis among parents visiting OPD in selected hospitals.

Section C: This section consisted of total 22 items which was developed using Self-reporting Observational Check list to identify the practice regarding home management of children with tuberculosis among parents.

Section D: Associate knowledge and practice score of Parents with demographic variables.

Validity

The tools and content were given to15experts.Received with their valuable suggestions & comments on the study tool.To ensure the content validity of the tool it was submitted to 15 experts from different specialties From Preventive and Social Medicine, eight from Community Health Nursing, four from Medical Surgical Nursing, two experts from Preventive and Social Medicine, two from Medicine Department and one Statistics. The experts were selected based on their clinical expertise, experience and interest in the problem being studied. They were requested to give their opinions on the appropriateness and relevance of the items in the tool. Formal written permission was obtained from the Medical Officer, Bhosari Hospital, Jijamata Hospital and Medical Superitendent of Dr. D.Y. Patil Hospital and Research centre, Pimpri Chinchwad Muncipal Corporation, Pune. They were requested to give their opinion on the appropriateness& relevance of items in the tool.

Reliability of the Tools

In this study, the reliability was determined by administering Structured Questionnaire to 5 selected people from the Akurdi Hospital and Nigadi Hospital. The reliability co-efficient was calculated using 'Cronbach's Alpha Method'. The reliability co-efficient was 95 %the items were coded and reliability was calculated .The reliability co-efficient was found to be 0.95 significant.the Reliability co-efficient of practices scale was 0.9. The score it indicates the tool is reliable.

Ethical consideration

- Researcher had obtained approval from appropriate review boards to conduct the study.
- Researcher had taken formal permission from care givers to conduct study.
- Only the samples who had signed the consent form are included in the study.
- Confidentiality of the data is maintained strictly.

Plan for data collection

- Ethical committee clearance
- Permission from the Corporator and Medical Officer of selected hospital.
- Consent from nurses from selected hospital.
- The investigator approached the nurses of selected samples, informed them regarding the objectives of the study and obtained their informed consent after assuring the confidentiality of the data.

The data collection was done among selected sample by using structured questionnaires for knowledge and of attitude scale which was developed using Chi-square test for the assessment of Practice.

Pilot study

A pilot study was conducted by the Investigator to the parents of children who were on DOTS treatment of pulmonary tuberculosis 30th August to 5th September 2016 to test practicability of this tool and to decide on plan for a statistical analysis. Study was conducted on 5people for test retest in same day. 5parents Data was collected through Structured Questionnaire and check list. Pre-test given on 1st dayon 30 august 2016.Health teaching was given the same day, post-test was done on 7th day on 5th September 2015, using the same tool. post-test the data was analyzed with the help of descriptive and inferential statistics. The pilot study showed that the study practical and feasible.

Data analysis and interpretation

For the analysis of demographic variable would be analyzed in terms of frequency and percentage was be calculated. Mean, Median, Mode, Standard deviation, Percentage, Distribution, Frequencies for assess the knowledge. Fisher's Exact Test' would be applied to determine the significance of findings. The findings would be documented in tables, graphs and diagrams.

Result

Section I: Frequency and percentage distribution of selective Demographic Variables

Distribution of samples according to their age of child depicts that 34% samples were in the age group of 8-12 years, 28% belongs to 4-8 years age. Distribution of samples according to gender of child depicts that 25% of the samples were male and female. Samples to their age depicts 48% of samples were in the age group of 31-40 years, 32% belongs 20-30 years age. Samples to their gender depicts 54% the samples were female46% sample were male. Samples of education shows that highest percentages 44% samples having primary education 34%of samples was secondary education. According to family type of Parents shows that the majority 52% samples were having joint family. 48% sample was having nuclear family. Distribution of samples according to their family income of Parents shows that majority 38% of the samples were belongs 1000-15000 income groups. 36% sample 5001-10000. According to previous knowledge highest percentage 96% of samples having previous knowledge.

Section II: Assessment of knowledge and practices of home management of children with tuberculosis.

The mean knowledge level Pretest was 7.06 (35.03%). Its reveals that the samples had average knowledge. Mean knowledge level post test was 14.64(72.61%). It reveals that there is marked improvement in knowledge level after giving health teaching. The mean practice pretest score was 36.78 (58.38%). Its reveals that the samples had average practices. The mean practice posttest score was 54.10(85.47%).Its reveals that there is marked improvement in practices level after giving health teaching.

Section III: Evaluate effectiveness of health teaching on home management of children with tuberculosis

This section deals comparison of pre-test and post-test means, SD, and mean percentage knowledge scores. Significance of difference of knowledge scores of Parents at 5% level of significance is tested with paired `t` test. Calculated 'p' values are compared with acceptable `p` value, i.e. 0.05.pre test the mean of the knowledge score obtained by the sample7.06 in the post test it rise to 14.64. calculated' value is greater than the table value of 't' at 0.05 level. Pretest the mean of the practice score obtained by the sample 36.78 and in the post test it rise to 54.10. practices score of the sample marked improvement after giving Health teaching. Calculated value is greater than value of 't' at 0.05 level.

Section IV: Level of knowledge score of parent's pre and post test

Pre test 64% of the samples had average level of knowledge score,36% poor level of knowledge score. In post test72%of samples had excellent level of knowledge score 28% had good level of knowledge score. Difference between pre test and post test level of knowledge score is found to statistically significant (***2ϰ***-value= 9.08).

Section V: Association of knowledge and practice score of parents in relation to demographic variable

P-values corresponding to Age (O.65), hence not significant differences are found in various age groups of parents. Gender, (0.32) not significance different are found in various age group of parents. Family type, (0.08) more than 0.05 hence it is not significant. Income (0.36) it not significant. education (0.84)value is not significant, Sources of knowledge (0.71) which is more than 0.05 hence not significant.

Conclusion

The study was a new learning experience for the investigator. In pre test 64% of the samples had average level of knowledge score, 36% had poor level of knowledge score. In post test 72% of the samples had excellent level of knowledge score and 28% had good level of knowledge score. The difference between pre test and post test level of knowledge score is found to be statistically significant ($ϰ^2$-value= 9.08). In pre test 94% of the samples had average level of practices score, 06% had good level of knowledge score. In post test 98% of the samples had good level of practices score and 02% had average level of knowledge

score. The difference between pre test and post test level of knowledge score is found to be statistically significant (χ^2-value= 7.32).

Discussion

It is seen here that as the age increases the knowledge about the stage of practice of Pre test 64% samples had average level of knowledge score, 36% had poor level of knowledge score. In post test72%samples had excellent level of knowledge score and 28% had good level of knowledge score. difference between pre test and post test level of knowledge score is found to be statistically significant (χ^2-value=9.08). pre test 94%samples had average level of practices score,06% had good level of knowledge score. In post test 98% samples had good level of practices score and 02% had average level of knowledge score. Difference between pre test and post test level of knowledge score is found to be statistically significant (χ^2-value= 7.32).

Limitations

- Data collection period was limited to 4 weeks
- The data was collected only through the baseline data and a Questionnaire.
- The study was conducted to only one group of 50 the present study was conducted in the selected the Talera Hospital, Akurdi hospital, Nigadi Government Hospital of Pimpri Chinchwad Municipal Corporation of Pune city. hence generalization was limited to the population under study.
- Internal validity as the Investigator had no control over the events that took place between the test and re-test.

Recommendations

1. A study can be replicated on large samples so there by findings can be generalized.
2. A study may be conducted to evaluate the effectiveness of planned health practice regarding home management of tuberculosis.
3. A study can be done on association between various demographic variables, which were significant on larger samples.
4. Study can be conducted at hospital settings among the people to assess their practice and effort can be done to assess their knowledge and effective practice regarding tuberculosis home management.

Acknowledgement

"Trust is the Lord with all your heart, and lean not on your own understanding,
In all you ways acknowledge Him, And He shall direct your paths".

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