



A STUDY TO FIND THE ASSOCIATION BETWEEN POST-TEST KNOWLEDGE AND SELECTED SOCIO-DEMOGRAPHIC VARIABLES AMONG HEALTHCARE PROFESSIONALS IN SELECTED PRIVATE HOSPITALS OF KARNATAKA

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ABSTRACT

Non-communicable diseases (NCDs) are a major public health concern and healthcare professionals play an important role in their prevention through health education, early identification, and promotion of healthy practices. The present study was conducted to determine the association between post-test knowledge regarding NCD prevention and selected socio-demographic variables among healthcare professionals in selected private hospitals of Karnataka. A quantitative research approach with a pre-experimental design was adopted. A sample of 100 healthcare professionals was selected using convenient sampling. Data were collected using a structured knowledge questionnaire following the implementation of a structured teaching programme. The Chi-square test was used to determine the association between post-test knowledge and selected socio-demographic variables. The findings revealed statistically significant associations between post-test knowledge and age ($\chi^2 = 11.36$, $p = 0.023$), educational qualification ($\chi^2 = 15.27$, $p = 0.004$), years of professional experience ($\chi^2 = 12.48$, $p = 0.014$), and previous training on NCD prevention ($\chi^2 = 18.94$, $p < 0.001$). No significant association was found with gender, clinical posting, working hours, area of residence, family income, or marital status. The findings highlight the importance of professional experience, educational qualification, and continuing training in strengthening healthcare professionals' knowledge regarding NCD prevention.

Key Words: Structured knowledge questionnaire, Socio-demographic variables, Knowledge, health system.

INTRODUCTION

Globalization is an important determinant of non-communicable disease epidemics since it has direct effects on risks to populations and indirect effects on national economies and health systems. The globalization of the production and marketing campaigns of the tobacco and alcohol industries exemplify the challenges to policymakers and public health practitioners. A full range of policy responses is required from government and non-governmental agencies; unfortunately, the capacity and resources for this response are insufficient, and governments need to respond appropriately. (Beaglehole R, Yach D. 2003)

However, recent data suggest that non-communicable diseases are already the most common cause of death in some parts of rural India. (Fall CH, 2001). This is plausible as, apart from improvements in life expectancy, the greater interconnectedness increasingly allows rural populations to adopt urban lifestyles without migration to urban areas. (Joshi R et al 2006)

A rise in the prevalence of non-communicable disease risk factors in rural areas has important public health implications, since, notwithstanding the rapid urbanization, two-thirds of India's one billion population still lives in rural areas. Coping with the pandemic while suffering from NCDs was a challenge and required someone to be knowledgeable of the diseases and thus access appropriate care. Literature supports that a community with good knowledge of NCDs will take appropriate preventive measures not to get the diseases and those with diseases will take appropriate measures to prevent poor progression (Legesse et al 2022).

The latter has been proved through previous outbreaks in which community level of knowledge and perception were reported to affect activities implemented to prevent the spread of the disease. On the contrary, in many countries, people with adequate knowledge of NCDs is reported to be below 50%. In Asia, the proportion of the population with NCD knowledge ranged from 12.5% in Myanmar to 81.2% in Malaysia with China, Sri Lanka, and Saudi Arabia being below 50%. In Europe, a study from Spain revealed that 46.7% of the population had adequate knowledge of NCDs. Furthermore, health promotion and disease prevention about a certain disease is influenced by the social-demographic characteristics of the population including knowledge which in turn influences action to be taken (Saqib et al 2020)



Noncommunicable diseases are the leading global causes of death, causing more deaths than all others causes combined, and they strike hardest at the world's low and middle income populations. These diseases have reached epidemic proportions, yet they could be significantly reduced, with millions of lives saved and untold suffering avoided, through reduction of their risk factors, early detection and timely treatments. [Global StaTus report on non communicable diseases 2010, WHO)]

It is expected that by 2020 in developing countries, non-communicable diseases will account for 69% of all deaths, with cardiovascular diseases in lead. [Boutayeh A et al 2005] Non Communicable Diseases (NCDs) accounts for significant mortality (nearly 38 million deaths annually) worldwide, out of which majority of these deaths (28 million) occur in low and middle-income countries. Among these NCDs, Cardiovascular diseases (17.5 million) represent commonest cause of deaths followed by cancers (8.2 million), respiratory diseases (4 million) and diabetes (1.5 million) [Mendis S, Davis S, Norrving B. 2015]

REVIEW OF LITERATURE

Bijumone, S., & A., C. G. (2024). Knowledge and lifestyle practices associated with non-communicable diseases risk factors among undergraduate students, Thiruvananthapuram, India: a mixed method study. *Results*: Forty-four percent (n=200) of participants' fathers were laborers or semi-skilled workers. Only 42.8% (n=208) of students had body mass index (BMI) within the normal range. Nearly three-fifths of students (58%, n=282) had poor knowledge of NCDs and the proportion of students with knowledge of balanced breakfast was 11% (n=53). Regarding lifestyle practices, daily fruit intake was low (10%, n=45) and participants consuming vegetables daily was less than 40% (n=191). Lack of infrastructure supporting physical activities and healthy food choices at home and outside are some reasons mentioned by participants for a sedentary lifestyle and unhealthy dietary practices. Parental involvement played an important role in practicing healthy dietary practices and performing physical activity for leisure.

A Community-based Non-Communicable Disease Prevention Intervention among Urban Slum population in Surat City. (2024). Results: Out of the total participants 83 (31.32%) were classified as high risk (CBAC>4) for Non-Communicable Diseases. The mean age of participants was 43.79 ± 9.36 years. One-tenth 25 (9.4%) of participants were on treatment. Those classified as high risk were significantly associated with age ($p<0.05$), education ($p=0.03$), and occupation ($p<0.01$). Predictors for Non-Communicable Diseases identified were smoking (aOR=4.7, $p=0.003$), alcohol (aOR= 2.3, $p<0.001$), higher Body Mass Index (aOR= 3.8, $p=0.03$), and higher waist size (aOR= 4.3, $p<0.001$). The sensitivity, Specificity of the tool, and Area under the Curve were found to be 73.3%, 75.8%, and 0.72 respectively.

Mahajan M, Naik N, Jain K, Patira N, Prasad S, Mogri S, Muwonge R, Lucas E, Faruq F, Sankaranarayanan R, Iyer S, Basu P, 2019 conducted a study on Study of Knowledge, Attitudes, and Practices Toward Risk Factors and Early Detection of Non-Communicable Diseases Among Rural Women in India. RESULT: Low awareness among women about tobacco as a risk factor; hypertension, diabetes, and cancer as major health threats; and the importance of their early detection. Only 4.8% of women reported having ever consumed tobacco, and many others consumed smokeless tobacco without knowing that the preparations contained tobacco. Only 27.3% and 11.5% of women had any knowledge about breast and cervical cancer, respectively, and only a few could describe at least one common symptom of either cancer. Self-reported diagnosis of hypertension and diabetes was significantly lower than the reported national prevalence. Only 0.9% and 1.3% of women reported having had a breast examination or gynecologic checkup, respectively, in the past 5 years. Low female empowerment and misconceptions were major barriers

RESEARCH METHODOLOGY

The research approach adopted for this study will be quantitative approach. The research design adopted for this study will be pre-experimental. The study will be conducted at selected hospitals of Karnataka. In the study accessible population consists of adults. The sample of the study consists of adults in selected hospitals. The sample size was 100 adults. The sampling technique adopted in the present study was convenient sampling technique

**DATA ANALYSIS AND INTERPRETATION**

To find the association between post-test knowledge and selected socio-demographic variables among healthcare professionals in selected private hospitals of Karnataka.

Null Hypothesis (H_0)

There is no significant association between post-test knowledge level and selected socio-demographic variables of healthcare professionals.

Research Hypothesis (H_1)

There is a significant association between post-test knowledge level and selected socio-demographic variables of healthcare professionals.

Table 1

Association Between Post-test Knowledge Level and Selected Socio-Demographic Variables Using Chi-square Test (N = 100)

Sl. No.	Socio-demographic Variable	χ^2 Value	df	p-value	Inference
1	Age	11.36	4	0.023*	Significant
2	Gender	1.82	2	0.402	Not Significant
3	Educational Qualification	15.27	4	0.004*	Significant
4	Years of Professional Experience	12.48	4	0.014*	Significant
5	Area of Clinical Posting	6.18	4	0.186	Not Significant
6	Daily Working Hours	5.29	4	0.258	Not Significant
7	Previous Training on NCD Prevention	18.94	4	<0.001*	Significant
8	Area of Residence	3.64	4	0.457	Not Significant
9	Monthly Family Income	9.42	4	0.052	Not Significant
10	Marital Status	2.91	4	0.573	Not Significant

Level of Significance: $p < 0.05$

*Significant

Description of the Table

Table 1 presents the association between post-test knowledge level and selected socio-demographic variables among healthcare professionals. The Chi-square test revealed statistically significant associations between post-test knowledge level and age ($\chi^2 = 11.36$, $p = 0.023$), educational qualification ($\chi^2 = 15.27$, $p = 0.004$), years of professional experience ($\chi^2 = 12.48$, $p = 0.014$), and previous training on prevention of non-communicable diseases ($\chi^2 = 18.94$, $p < 0.001$). No statistically significant association was observed between post-test knowledge level and gender, area of clinical posting, daily working hours, area of residence, monthly family income, or marital status ($p > 0.05$).

Interpretation of Individual Chi-square Results

Age: A statistically significant association was observed between age and post-test knowledge level ($\chi^2 = 11.36$, $p = 0.023$). This finding suggests that healthcare professionals belonging to different age groups demonstrated varying levels of knowledge following the structured teaching programme, indicating that age may influence knowledge acquisition and retention.

Gender: No statistically significant association was found between gender and post-test knowledge level ($\chi^2 = 1.82$, $p = 0.402$). This indicates that male and female healthcare professionals exhibited comparable levels of knowledge after the intervention.

Educational Qualification: Educational qualification showed a statistically significant association with post-test knowledge level ($\chi^2 = 15.27$, $p = 0.004$). Participants with higher educational qualifications tended to demonstrate better knowledge regarding the prevention of non-communicable diseases.

Years of Professional Experience: Years of professional experience were significantly associated with post-test knowledge level ($\chi^2 = 12.48$, $p = 0.014$). Healthcare professionals with greater clinical experience demonstrated higher knowledge levels following the structured teaching programme.

Area of Clinical Posting: No statistically significant association was observed between area of clinical posting and post-test knowledge level ($\chi^2 = 6.18$, $p = 0.186$). This finding indicates that the department in which participants were posted did not significantly influence their knowledge outcomes.

Daily Working Hours: Daily working hours did not show a statistically significant association with post-test



knowledge level ($\chi^2 = 5.29$, $p = 0.258$). The duration of daily work was not found to influence participants' knowledge regarding prevention of non-communicable diseases.

Previous Training on Prevention of Non-Communicable Diseases: A highly significant association was observed between previous training on non-communicable disease prevention and post-test knowledge level ($\chi^2 = 18.94$, $p < 0.001$). Participants who had received previous training demonstrated better knowledge than those who had not, highlighting the importance of continuing professional education.

Area of Residence: Area of residence was not significantly associated with post-test knowledge level ($\chi^2 = 3.64$, $p = 0.457$). This suggests that rural, semi-urban, and urban residence did not influence participants' knowledge after the educational intervention.

Monthly Family Income: Although participants with different income levels showed some variation in knowledge, the association was not statistically significant ($\chi^2 = 9.42$, $p = 0.052$). Therefore, monthly family income was not considered an important determinant of post-test knowledge.

Marital Status: No statistically significant association was found between marital status and post-test knowledge level ($\chi^2 = 2.91$, $p = 0.573$). This indicates that marital status did not influence the effectiveness of the structured teaching programme on participants' knowledge.

DISCUSSION

The objective of the study was to determine the association between post-test knowledge and selected socio-demographic variables. The present study demonstrated statistically significant associations between post-test knowledge and age ($\chi^2 = 11.36$, $p = 0.023$), educational qualification ($\chi^2 = 15.27$, $p = 0.004$), years of professional experience ($\chi^2 = 12.48$, $p = 0.014$), and previous training on non-communicable disease prevention ($\chi^2 = 18.94$, $p < 0.001$). Conversely, gender, area of clinical posting, daily working hours, area of residence, monthly family income, and marital status did not demonstrate statistically significant associations. These findings are comparable with those reported by Joshi et al. (2019), who investigated healthcare professionals' preparedness for non-communicable disease prevention and observed that educational attainment, previous professional training, and clinical experience significantly influenced knowledge and competency related to preventive care, whereas personal demographic variables such as gender and residential background showed limited influence. The authors concluded that professional characteristics contribute more substantially to knowledge acquisition than personal socio-demographic factors. The findings of the present study support this conclusion and reinforce the importance of continuing professional education, experience, and structured training in improving healthcare professionals' knowledge regarding the prevention of non-communicable diseases.

CONCLUSION

The study concluded that post-test knowledge regarding prevention of non-communicable diseases was significantly associated with age, educational qualification, professional experience, and previous training on NCD prevention. However, gender, clinical posting, working hours, area of residence, family income, and marital status were not significantly associated with knowledge levels. These findings emphasize the need for regular continuing education and structured training programmes to strengthen healthcare professionals' knowledge and competency in NCD prevention.

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