



Study to Assess the Prevalence of Risk Factor of Chronic Kidney Disease among Diabetes Mellitus and Hypertensive Client at Karambakkam

Mrs. Sindhupriya R.¹, Kaleeswari S.², Joylin D.³

¹Department of community health nursing, Saveetha college of nursing, SIMATS, Thandalam, Chennai, Tamilnadu.

^{2,3}Post Basic Bsc Nursing, 2nd Year, Saveetha college of nursing, SIMATS, Thandalam, Chennai, Tamilnadu.

ABSTRACT

Aim: The present study aims to assess the prevalence of risk factor of chronic kidney disease among diabetes mellitus and hypertensive client at karambakkam.

Methods and Materials: A Non-experimental descriptive research design was used for the present study. A total 200 samples were collected using purposive sampling technique. The demographic of diabetes mellitus and level of knowledge of risk factor of chronic kidney diseases was assessed using structured questioner and, followed by that data was gathered and analyzed.

Results: The results the study revealed that there is a significant association with the level of knowledge on risk factor of chronic kidney diseases among diabetes mellitus and hypertensive client at $p < 0.001$.

Conclusion: Thus, the present study concluded that majority of the clients with diabetes mellitus and hypertension had inadequate knowledge and it is recommended that they should be educated on the risk factors of CKD.

KEY WORDS: Chronic Kidney, Diabetes Mellitus, Hypertensive.

INTRODUCTION

Encyclopedically, Chronic Kidney Disease (CKD) is one of the predominant causes of death and disability. In 1990, CKD was the 27th foremost cause of death which rose up and became 18th leading cause of death in 2010 (1). In 2013, around 1 million people loosed their life because of CKD related cause. Despite of being a global concern, this particular disease temblors the life of people specifically in developing countries. (2) A series of census which was conducted in 2015 estimated that, 109.9 million people from high-income countries had CKD, whereas the graphical representation shows 387.5 million higher concern in lower-middle income countries. (3)Chronic kidney disease (CKD) a major public health problem worldwide. The disease can be actuator by optical concern over the pathogenicity. (4)In past two decades, Glomerulonephritis was the one of the dominant causes of kidney disease. Subsequent census also estimated that infections have become a second most important cause for kidney disease, at least in the western world (5). Moreover, current evidence suggests that hypertension and diabetes are the two major causes of kidney disease worldwide .(6)despite of pathogenic progression of kidney disease, CKD patients are at high risk of developing to the end stage renal disease (ESRD) , which becomes a life threatening condition requiring dialysis or kidney transplantation to maintain further life of patient.(7) In 2021, the average annual cost for maintenance of ESRD therapy was between 6000billion worldwide, excluding patients undergoing kidney transplantation, and the predicted number of ESRD patients will reach over 2 million in 2030 (8). The disease engages the world to modern health care system, which diminishes the growth and development of world, particularly in developing countries. (9)In addition, CKD has a ends up with other serious diseases. Recent studies have reported that CKD is as direct effect on cardiovascular disease (CVD) (10). Therefore, kidney dysfunction should be an additional target for intervention and prevention of CVD. In 2003, the American Heart Association (AHA) stated that persons with CKD should be regarded as the highest risk group for subsequent CVD. (11). Thus the current study aims to assess the prevalence of risk factors chronic kidney disease among diabetes clients and hypertensive clients at karambakkam.

MATERIAL AND METHODS

After obtaining and ethical clearance from the institutional ethical committee of saveetha institute of medical and technical science and formal permission letter obtained from the head of the smch, present study was conducted. For the present study non-

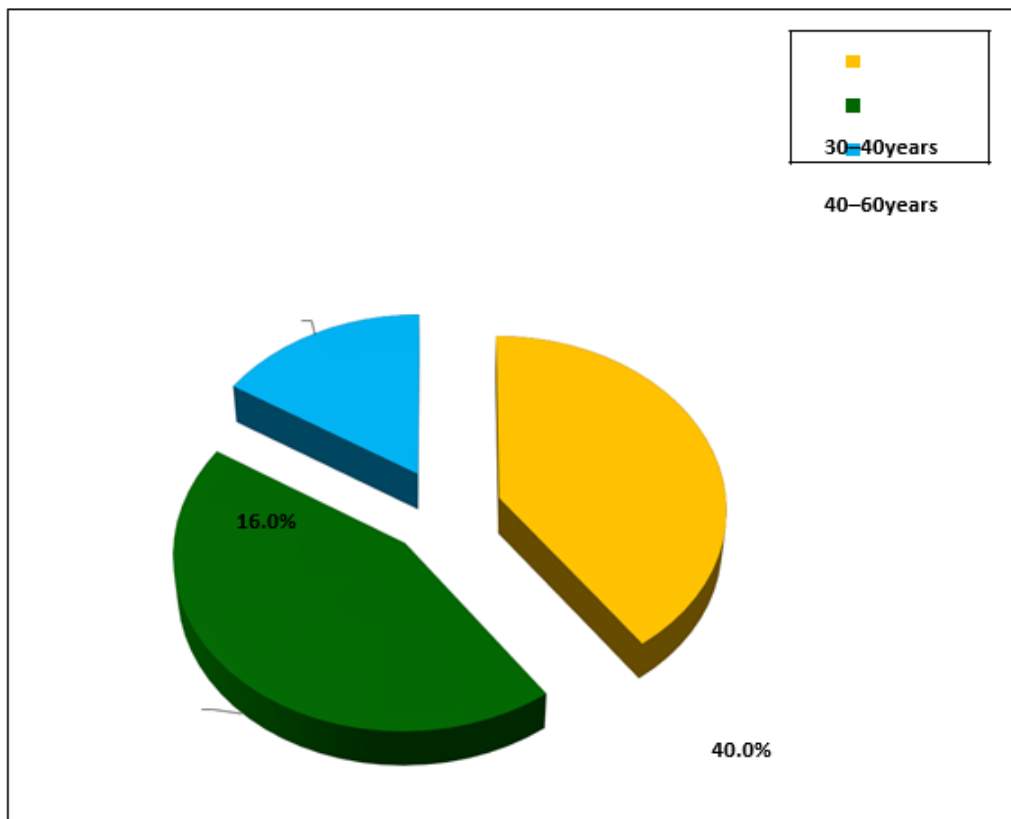


experimental descriptive research design was adopted. The data were collected using a purposive sampling technique from 200 samples.

The inclusion criteria for the study, participants, who are available during the study period and who are cooperative and who understand both Tamil and English and physically stable to perform exercises as per the norms and exclusion criteria for the study are samples who not willing to participate in the study. The purpose of the study was explained by the investigator to each of the study participants and a written informed consent was obtained from them. the demographic and the level of knowledge of risk factor of chronic kidney diseases was collected from the samples using semi structured questionnaire and the data were analyzed by biostatistics. The sample characteristics were described using frequency and percentage ,paired T test and chi - square were used to associate the level of knowledge of risk factor of chronic kidney disease among diabetes mellitus and hypertensive.

RESULTS AND DISCUSSION

SECTION A: DESCRIPTION OF THE DEMOGRAPHIC OF DIABETES MELLITUS AND HYPERTENSIVE CLIENTS



Percentage distribution of age of the diabetes mellitus an hypertensive clients

The result shows that most of the diabetes mellitus and hypertensive clients, 88(44%) were age between 40 – 60 years, 119(59.5%) were male, 90(45%) had higher secondary school education, 155(77.5%) were Hindus, 96(48%) were primary worker, 141(70.5%) had consumed 1 packet of salt in family in a month, 157(78.5%) were both vegetarian and non- vegetarian and 147(53.5%) were using municipal water.

The present study supported by Lucía Eguiguren-Jiménez, et al., (2022) conducted a study to estimate the prevalence of CKD among non-institutionalized adults in Quito between 2019 and 2021, and to examine its associations with various risk factors. For the analysis of prevalence, the Kidney Disease: Improving Global Outcomes guidelines were used, where an estimated glomerular filtration rate (eGFR) of < 60 ml/min/1.73 m² was counted as a presumed case of CKD. The Chronic Kidney Disease

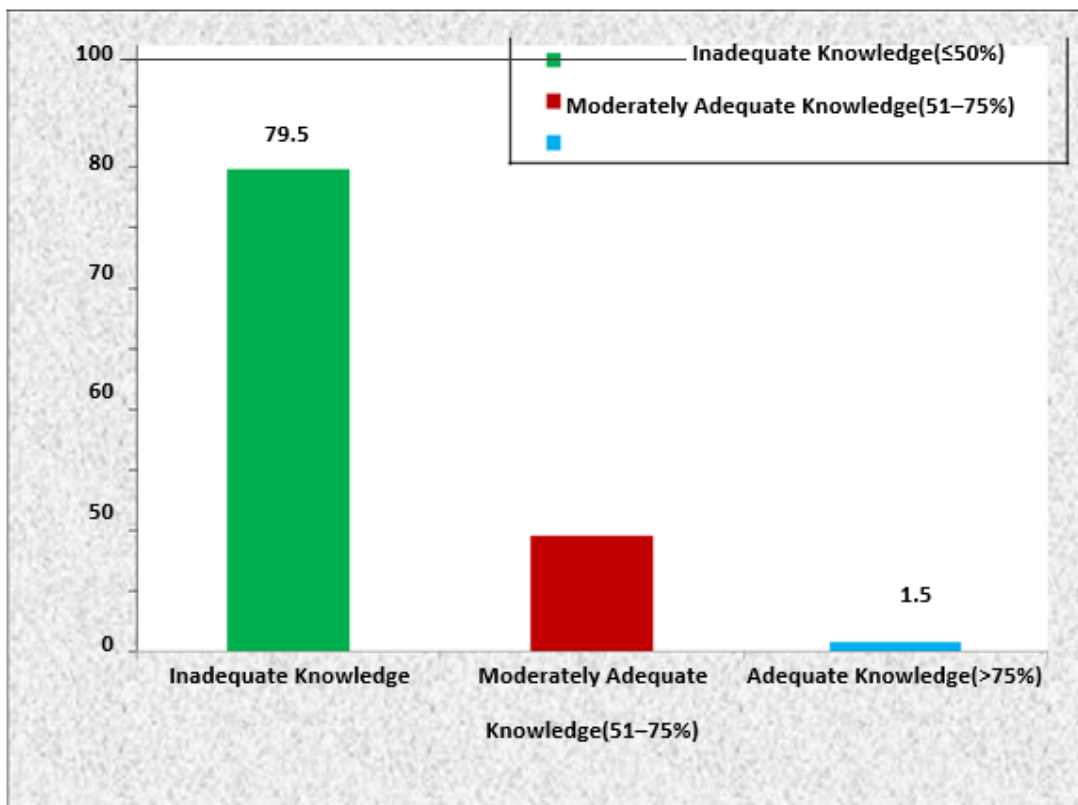


Epidemiology Collaboration (CKD-EPI) equation was used to calculate eGFR. The study concluded that the overall a high prevalence of CKD was found among adults who visited SIME clinics in Quito. Associations between main risk factors and eGFR were found, yet further research is needed to explore CKD in Ecuador and its main cities.

SECTION B: ASSESSMENT OF LEVEL OF KNOWLEDGE ON RISK FACTORS OF CHRONIC KIDNEY DISEASE AMONG DIABETES MELLITUS AND HYPERTENSIVE CLIENTS

Level of Knowledge	Frequency(F)	Percentage(%)
Inadequate Knowledge($\leq 50\%$)	159	79.5
Moderately Adequate Knowledge(51–75%)	38	19.0
Adequate Knowledge($>75\%$)	3	1.5

The above table 2 shows that 159(79.5%) had inadequate knowledge, 38(19%) had moderately adequate knowledge and 3(1.5%) had adequate knowledge on risk factors of chronic Kidney disease among diabetes mellitus and hypertensive clients.



Percentage distribution of level of knowledge on risk factors of chronic kidney disease among diabetes mellitus and hypertensive client

The result shows that the mean score of knowledge was 10.09 ± 2.48 . The minimum score was 6.0 and the maximum score was 20.0 with median score of 9.0



The present study supported by Daniel Asmelash, et al., (2020) conducted a study to factors among hypertensive patients in Gondar town in 2019. The study included hypertensive patients visiting health institutions from February to March 2019. Data was collected using a semi structured questionnaire and individuals who fulfilled our inclusion criteria were selected using a systemic random sampling technique. Out of a total of 442 participants, 434 completed the questionnaire, with a response rate of 98.1%. Of the total, 298 (68.7%) had good knowledge of chronic kidney disease with a mean knowledge score of 8.78 ± 2.80 and 210 (48.4%) had good practice with mean practice score of 6.58 ± 1.61 . The study concluded that more than half of the participants had good knowledge about chronic kidney disease and its risk factors. However, the level of preventive practice among participants

SECTION C: ASSOCIATION OF LEVEL OF KNOWLEDGE ON RISK FACTORS OF CHRONIC KIDNEY DISEASE WITH SELECTED DEMOGRAPHIC AND CLINICAL VARIABLES

n=200

Nutritional pattern of the family		$\chi^2=20.496$
Vegetarian	17	d.f=4p=0
Non-vegetarian	26	.0001
Vegetarian–Non-vegetarian	157	S****
Which water used for drinking?		$\chi^2=0.073$
Municipal water	147	d.f=2p=0
Raw water	53	.964N.S
Well water	-	

***p<0.001,S–Significant,N.S–NotSignificant

The result shows that the demographic variable nutritional pattern of the family ($\chi^2=20.496$, $p=0.0001$) had shown statistically significant association with level of knowledge on risk factors of chronic kidney disease among diabetes mellitus and hypertensive clients at $p<0.001$ level and the other demographic variables had not shown statistically significant association with level of knowledge on risk factors of chronic kidney disease among diabetes mellitus and hypertensive clients.

CONCLUSION

From the results of the present study shows significant improvement for researcher.

ACKNOWLEDGEMENT

Authors would like to appreciate participants for their cooperation to complete the study successfully.

REFERENCES

1. Barsoum RS. Chronic kidney disease in the developing world. N Engl J Med. 2006;354:997–999. doi: 10.1056/NEJMp058318.



2. Haroun MK, Jaar BG, Hoffman SC, Comstock GW, Klag MJ, Coresh J. Risk factors for chronic kidney disease: a prospective study of 23,534 men and women in Washington County, Maryland. *J Am Soc Nephrol.* 2003;14:2934–2941. doi: 10.1097/01.ASN.0000095249.99803.85.
3. Perneger TV, Brancati FL, Whelton PK, Klag MJ. End-stage renal disease attributable to diabetes mellitus. *Ann Intern Med.* 1994;121:912–918.
4. Lysaght MJ. Maintenance dialysis population dynamics: current trends and long-term implications. *J Am Soc Nephrol.* 2002;13:S37–S40.
5. Snively CS, Gutierrez C. Chronic kidney disease: prevention and treatment of common complications. *Am Fam Physician.* 2004;70:1921–1928.
6. Mann JF, Gerstein HC, Pogue J, Bosch J, Yusuf S. Renal insufficiency as a predictor of cardiovascular outcomes and the impact of ramipril: the HOPE randomized trial. *Ann Intern Med.* 2001;134:629–636.
7. de Zeeuw D, Hillege HL, de Jong PE. The kidney, a cardiovascular risk marker, and a new target for therapy. *Kidney Int Suppl.* 2005;98:S25–S29. doi: 10.1111/j.1523-1755.2005.09805.x.
8. Sarnak MJ, Levey AS, Schoolwerth AC, Coresh J, Culleton B, Hamm LL, McCullough PA, Kasiske BL, Kelepouris E, Klag MJ, Parfrey P, Pfeffer M, Raij L, Spinosa DJ, Wilson PW. Kidney disease as a risk factor for development of cardiovascular disease: a statement from the American Heart Association Councils on Kidney in Cardiovascular Disease, High Blood Pressure Research, Clinical Cardiology, and Epidemiology and Prevention. *Circulation.* 2003;108:2154–2169. doi: 10.1161/01.CIR.0000095676.90936.80.
9. Locatelli F, Vecchio LD, Pozzoni P. The importance of early detection of chronic kidney disease. *Nephrol Dial Transplant.* 2002;17:2–7.
10. Asmelash, D., Chane, E., Desalegn, G., Assefa, S., & Fasil, A. (2020). Knowledge and practices towards prevention and early detection of chronic kidney disease and associated factors among hypertensive patients in Gondar town, north west Ethiopia. *International journal of hypertension*, 2020.
11. Kebede, K. M., Abateneh, D. D., Teferi, M. B., & Asres, A. (2022). Chronic kidney disease and associated factors among adult population in Southwest Ethiopia. *PloS one*, 17(3), e0264611.

Cite this Article: Mrs. Sindhupriya R., Kaleeswari S., Joylin D. (2023). Study to Assess the Prevalence of Risk Factor of Chronic Kidney Disease among Diabetes Mellitus and Hypertensive Client at Karambakkam. International Journal of Current Science Research and Review, 6(10), 6886-6890