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A study to assess the knowledge of Nabh accreditation standards and quality improvement among intensive care unit staff nurses

[1]Marry Minolin T, [2]Kamali M, [3]Kalabarathi S

[1]Professor & HOD of Child Health Nursing, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India
[2]M.Sc (Nursing) II year, Department of Medical Surgical Nursing, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India
[3]Professor, HOD, Department of Obstetrics and Gynecological Nursing, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India

Abstract

Back Ground: Accreditation is an accurate self-assessment and external peer assessment process for health care organizations performance against established standards, and implemented continuously for improvement. The accreditation standards requirements are designed to support the development of healthcare quality and patients' safety by planning, managing services and measuring improvements.

Purpose: The purpose of current study was to assess the level of existing knowledge regarding NABH standards and quality improvement among the intensive care unit staff nurses and to determine the association between level of knowledge on NABH standards and quality improvement among staff nurses with their selected demographic variables.

Materials and Methods: A Quantitative approach with descriptive research design was adopted for the current study, 60 staff nurses were recruited by using Simple Random sampling technique. A self- structured questionnaire was used to collect the demographic data and the knowledge about the NABH accreditation standards and quality improvement, the data was summarized, processed with descriptive and non- parametric statistics.

Results: The outcome of study results reported that overall Level of Knowledge on NABH standards and quality improvement among Staff Nurses 17(28.3%) were have Moderately adequate knowledge, 43(71.7%) were having Adequate knowledge. that the association between Level of knowledge on NABH standards and quality improvement and demographic variables among Staff Nurses the qualification of staff nurses is statistically significant p= 0.050*.

Conclusion: The end results concluded that, majority of the staff nurses overall Level of Knowledge on NABH standards and quality improvement 17(28.3%) were have moderately adequate knowledge, 43(71.7%) were having Adequate knowledge.

Keywords: Knowledge, NABH accreditation standards and quality improvement, ICU staff nurse

Introduction

A self-evaluation and external peer assessment procedure used by healthcare organizations to accurately measure their level of performance with respect to specified criteria and to implement ways to continuously improve is how accreditation is defined [1]. Accreditation is an accurate self-assessment and external peer assessment process for healthcare organizations' performance against established standards and is implemented continuously for improvement. The accreditation standards requirements are designed to support the development of healthcare quality and patients' safety by planning, managing services, and measuring improvements. Achieving national or international healthcare accreditation is important for providing safe, effective, patient-centered, timely, efficient, and equitable healthcare services to all patients, families, and care providers [2]. The National Accreditation Board for

Hospitals and Health Care Providers (NABH) has now given standards that need to be followed before applying for accreditation. The Indian Medical Association recommends these standards too. The standards might become mandatory for insurance companies for impaneling, and the State Governments might eventually make them mandatory for all healthcare facilities [3]. The Quality Council OF India (QCI) established the National Accreditation Board for Hospitals and Healthcare Providers (NABH) to carry out the accreditation programs for healthcare organizations. A public acknowledgment given to healthcare institutions that meet NABH criteria is called accreditation. The NABH was founded in India in the year 2006. The first edition of its standard, which is updated every three years, is also published this year. The current edition of NABH standards, which was published in December 2015 and comprises 10 chapters with 105 standards and 683 objective elements, is

the 4th edition. The 10 chapters are divided into sections that focus on patients and chapters that focus on organizations [4]. A constituent board of the Quality Council of India, the National Accreditation Board for Hospitals & Healthcare Providers (NABH) was established to create and manage an accreditation program for healthcare institutions. The board is designed to meet consumers' highly wanted needs and to provide benchmarks for the development of the health industry. The board has complete functional autonomy in its operation while receiving support from all stakeholders, including businesses, consumers and the government. A constituent board of the Quality Council of India (QCI), the National Accreditation Board for Hospitals & Healthcare Providers (NABH) was established to create and manage an accreditation program for healthcare institutions. It was established in 2005 and serves as India's primary accreditation body for hospitals. The National Accreditation Board for Hospitals & Healthcare and the Quality Council of India [5]. The NABH certification procedure for hospitals is a difficult undertaking that must be adopted in order to obtain the best standards of healthcare. Healthcare workers must put forth constant effort and be completely committed to the process. The most precious and crucial resource for every business is its workforce, and the effectiveness of that workforce has a significant impact on whether that organization succeeds or fails [6]. The Quality Council of India's NABH accreditation system was formed in 2006 as a member of that organization (QCI). The first edition of the standards was published in 2006 and since then they have been updated every three years. In using right now is the fifth edition of NABH standards, which was published in August 2020. B M Birla Heart Research Center was the first hospital to receive NABH accreditation; as of this writing, more than 838 hospitals in India have also received NABH certification. In 2009, Gandhinagar General Hospital became the first among public hospital to receive NABH certification. The NABH Standards are divided into ten Chapters, 105 Standards, and 683 Objectives, according to NABH principles from the fourth edition. The 10 chapters of NABH are categorized using standards that are patient and organization centered. Continual enhancement of the quality [7]. The single most significant strategy for raising hospital quality would be accreditation. A national system of hospital accreditation assures that all hospitals-public or private, domestic or foreign perform the required functions in the national healthcare system. Patient safety and high-quality healthcare are outcomes of accreditation [8]. Being a nurse and responsible for providing high-quality patient care to patients, society and the profession inspired the investigator to conduct a study evaluating staff nurses' knowledge of and attitudes toward NABH accreditation in order to learn more and get recommendations for advancing knowledge and practice-related skills. In addition to addressing responsibility, and the need to decrease errors and boost safety in the system, quality assurance should aid to improve effectiveness, efficiency and cost containment. Thus, the goal of NABH accreditation is to continuously enhance the organizational and clinical performance of health services, not just to obtain a certificate or award or to just ensure compliance with the bare minimum of acceptable criteria. Having responsibility as a nurse [9]

NABH) serves as a benchmark in this regard for improving patient safety and health quality care in the international community [10]. So the current study aimed to assess the level of existing knowledge regarding NABH standards and quality improvement among the intensive care unit staff nurses and to determine the association between level of knowledge on NABH standards and quality improvement among staff nurses with their selected demographic variables.

Material and Methods
Study design: A Quantitative approach with a descriptive research design was adopted for the study. Study Setting: This study was conducted in the Intensive Care Unit at Saveetha Medical College and Hospitals after obtaining ethical clearance from the Institutional Ethical Committee (IEC) of Saveetha Medical College and Hospitals (SIMATS) and formal permission from the departmental head of nursing, the main study was conducted.

Study participants: A total of 60 staff nurses working in the Intensive Care Unit who fulfill and meet the inclusion criteria were recruited as study participants. All the ANM, staff nurses, senior staff nurses, nursing in charge with both genders who are willing to participate and can read and write English and Tamil were included in the current study. Nursing supervisors and matrons were excluded as they are involved in administrative activities. The purpose of the study was explained in depth by the investigator to each of the study participants and written informed consent was obtained from them.

Sampling techniques: A total of 60 staff nurses were recruited based on the inclusion criteria by using the Simple Random sampling technique. A self-structured questionnaire method was used to gather the demographic data as well as the existing knowledge regarding patients' rights. The collected data were summarized and tabulated in Microsoft office excel and analyzed using descriptive and inferential statistics.

Results and Discussion
Demographic characteristics
Among 60 study participants, with regards to the age of the nursing personnel, the majority of the nurses the age group majority of the staff nurses 43(71.7%) were 21-25 age in year, 15(25.0%) staff nurses were 26-30 years age in year 1(1.7%) were 31-35 years age in year 1(1.7%) were 36-40 age in the year. The majority of staff nurses qualification is B.Sc. Nursing 43(71.7%), GNM 11(18.3%), P.B.B.Sc. Nursing 4(6.7%), ANM, 2(3.3%). The majority of year of experience is 42(70.0%) were the staff nurses is 1-3 years experience, 15(25.0) were 4-6 years of experiences, 3(5.0) were 7-9 yrs experience. The working area is 60(100%) were intensive care unit. The majority of previous exposure of NABH is 54(90.0%) and not exposure to NABH staff nurses is 6(10.0%).

The total number of participants screened according to the inclusion criteria was 60 and were allocated into the experimental group (n=30) and control group (n=30). The

demographic and clinical variables were expressed as frequency and percentage. Out of 30 samples in the experimental group, 13(43.3%) were aged between 55-60 yeas, 19(63.3%) were male, 23(76.7%) were Hindus, 11(36.6%) had primary education, 16(53.3%) were moderate worker, 20(66.7%) had 4-5 members in their family at home, 17(56.7%) had a monthly income of <Rs.10,000, 30(100%) were non-vegetarian, 17(56.7%) used to take non-vegetarian diet once in a week, 24(80%) had not performed any type of exercise, 23(76.7%) had not performed any exercise, 16(53.3%) used curry leaves in their food for good growth in the hair, 19(63.3%) had a BMI in the range of 25.0-29.9, 19(63.3%) had the family history of DM and the illness for 4-5 years, 18(60%) were under treatment for 4-5 years, 20(66.7%) were regularly taking diabetic medications, 30(100%) were taking allopathic type of treatment, 15(50%) often check their blood glucose level once in 3 months and 30(100%) had not faced any complications of diabetes.

Effectiveness of curry leaves powder on reducing blood glucose and lipid profile among the Patients with Type II diabetes with mild elevated lipid profile in the experimental group

The table-1 elicits that the obtained "t" values for the Fasting blood glucose is 7.409, for Post prandial glucose is 8.595, for Total Cholesterol is 7.811, for HDL is 5.432, for LDL is 3.599 and for Triglyceride is 18.285, findings implies that there is a significant difference between pre-test and post-test in blood sugar level and lipid profile before and after intervention.

The mean difference score for fasting blood glucose is 5.86, for postprandial blood glucose is 9.20, for Total cholesterol is 7.63, for LDL is 7.63, and for triglyceride is 9.33 respectively from pre intervention to post intervention depicts the effectiveness of the intervention as the mean score decreased and for HDL mean score is 3.13 was found to be statistically significant at $p<0.001$ level which clearly shows that there was significant increase in the level of HDL after the administration of curry leaf powder among Experimental Group.

Table 1: Effectiveness of curry leaves powder on reducing blood glucose and lipid profile among the Patients with Type II diabetes with mild elevated lipid profile in the experimental group N = 30

Variables	Pre-test Mean ± S.D (mg/dl)	Post test Mean ± S.D (mg/dl)	Mean Difference Score	Paired "t" Test and p-value	Percentage of reduction %
FBS	102.43±9.13	96.57±8.39*	5.86	t = 7.409 p = 0.0001 S*	5.72%
PPBS	144.03±10.55	134.83±10.57*	9.20	t = 8.595 p = 0.0001 S*	6.39%
Total Cholesterol	207.23±17.97	199.60±18.68*	7.63	t = 7.811 p = 0.0001 S*	3.68%
HDL	43.87±6.68	47.0±6.09*	3.13	t = 5.432 p =0.001 S*	7.13%
LDL	119.90±25.01	112.27±19.04*	7.63	t = 3.599 p = 0.0001	6.36%
Triglyceride	103.20±26.29	93.87±25.35*	9.33	t =18.285 p = 0.0001 S*	9.04%

*Significant at $p<0.05$

Comparison of post-test level of blood glucose and lipid profile between the experimental and control group

The table-2 elicits that the obtained "t" values for the Fasting blood glucose is 2.648, for Post prandial glucose is 3.436, for Total Cholesterol is 2.063, for HDL is 3.264, for LDL is 2.023 and for Triglyceride is 2.119, findings implies that there is a significant difference between two group in post-test in the blood glucose and lipid profile after intervention to Experimental group.

The mean difference score for fasting blood glucose is 5.93,

for postprandial blood glucose is 10.27, for Total cholesterol is 9.90, for LDL is 11.23, and for triglyceride is 14.03 respectively among two groups, from this the post intervention depicts the effectiveness of the intervention as the mean score decreased and for HDL mean score is 4.83 was found to be statistically significant at p<0.001 level which clearly shows that there was significant increase in the level of HDL after the administration of curry leaf powder among experimental group.

Table 2: Comparison of post-test level of blood glucose and lipid profile among type2 diabetic clients in experimental group and control group N =30+30

Variables	Experimental group Post-test Mean ± S.D (mg/dl)	Control group Post-test Mean ± S.D (mg/dl)	Mean Difference Score	Un Paired "t" Test and p-value
FBS	96.57±8.39	102.50±8.96	5.93	t = 2.648 p = 0.010 S*
PPBS	134.83±10.57	145.10±12.49	10.27s	t = 3.436 p = 0.0001 S*
Total Cholesterol	199.60±18.68	209.50±18.49	9.90	t =2.063 p = 0.044 S*

HDL	47.0±6.09	42.17±5.36	4.83	t = 3.264 p =0.002 S*
LDL	112.27±19.04	123.50±23.72	11.23	t = 2.023 p = 0.048
Triglyceride	93.87±25.35	107.90±25.96	14.03	t =2.119 p = 0.038 S*

*Significant at *p*<0.05.
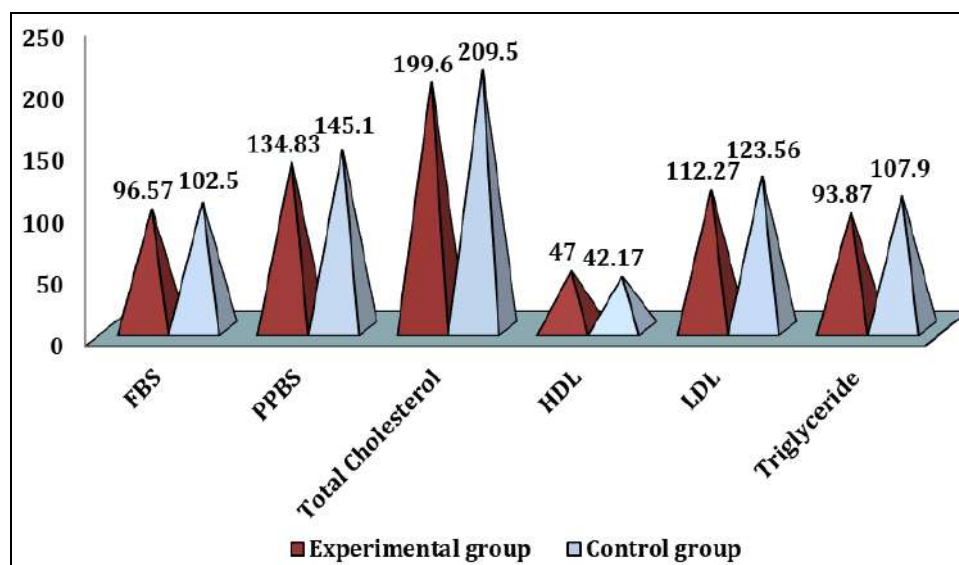
Fig 1: Comparison of post-test level of blood glucose and lipid profile among type 2 diabetes mellitus clients in experimental group and control group

Discussion

The current study analysed that alternate therapy for reducing blood glucose and lipid profile was effective and proved the hypothesis of significant reduction in blood glucose and lipid profile after administration of curry leaves powder in experimental group, on comparing the pre and post-test blood glucose and lipid profile in relation to curry leaves powder among Type II Diabetic Patients in experimental group, the obtained "t" values for the Fasting blood glucose is 7.409,for Post prandial glucose is 8.595, for Total Cholesterol is 7.811, for HDL is 5.432, for LDL is 3.599 and for Triglyceride is 18.285, findings implies that there is a significant difference between pre-test and post-test in blood glucose and lipid profile before and after intervention. The mean difference was found to be statistically significant at *p*<0.001 level which clearly shows that there was significant effect after the administration of curry leaf powder among Experimental Group. The study was also supported by Jadhav, Kunal & Dhudum, Basavant. (2019) revealed that the p value was > 0.05, stated that there was significant difference in the average fasting and post Prandial BSL at 5% level of significance. Effect of curry leaves powder was seen after administrating to client it reduced blood sugar level after specific time span. Curry leaves powder is helpful for the diabetic clients to reduce blood sugar level without any side effects. The present study was supported by PV LINCY (2019). The obtained't' value for blood sugar level was 13.16 for the experimental group. Blood sugar levels measured in type 2 diabetes patients were greater than the table value according to the obtained "t" value. When type 2 diabetic clients received curry leaf powder, their blood sugar levels were markedly lower than those of the non-reciprocating consumers. Similar study

conducted by Molly J *et al*., (2022) on effect of curry leaves powder and slicing cucumber fruit on hyperlipidemia in the menopausal women. The treatment groups for curry leaf powder and cucumber, as well as TC, LDL-C, and TAG, saw significant reductions (p 0.05). Only the curry leaf powder treatment group's HDL-C level (46.19.2 mg/dl) increased considerably (p 0.05). (Average 12 percent). Although the mean TC, LDL-C and TAG readings in the control group were higher, the difference was not statistically significant. When the effectiveness of the test chemicals at the tested doses was compared, the HDL-C level in the curry leaf treatment group was statistically greater (p=0.09). In menopausal women with hyperlipidemia, curry leaves and cucumber were beneficial in raising HDL-C and lowering LDL-C and TAG levels, suggesting a possible neutraceutical function in the treatment of CVD. The present study the mean score of experimental and control group was compared by unpaired t test and found to be significant difference in blood glucose and lipid profile between experimental and control group. The mean difference score for fasting blood glucose is 5.93, for postprandial blood glucose is 10.27, for Total cholesterol is 9.90, for LDL is 11.23 and for triglyceride is 14.03 respectively among two groups, from this the post intervention depicts the effectiveness of the intervention as the mean score decreased and for HDL mean score is 4.83 was found to be statistically significant at *p*<0.001 level which clearly shows that there was significant increase in the level of HDL after the administration of curry leaf powder among experimental group. Similar study was supported by K.N Gomathi (2016), on comparing the pre and post blood glucose level among Type II Diabetic Patients in the experimental group and control group had

mean differences that, respectively, were 10.44% and 0.76%. According to the results, there is a substantial difference between the experimental group's pre-and post-prandial blood sugar levels. After 14 days of receiving 10 grammes of curry leaf powder, the experimental group's blood sugar levels significantly decreased, according to the study's findings. Similar study was supported by Joseph Ranjith, *et al*., (2015) on effect of curry leaves in the control of blood sugar among diabetic clients. Researcher has taken 43 Diabetic client and curry leaves powder 2.5gm morning and night daily was administered to the experiment group. There was a consistent decrease in mean blood sugar level from day 1(249.045) to day 15 (219.95) to day 30 (197.05) in the Interventional group. Whereas in control group the mean blood sugar remained almost same level on day 1(214.68), day 15(213.86) and day 30(210).

The present study limited to assess the blood glucose and lipid profile hence further study can be conducted to assess the hemoglobin level. Many study have explored that curry leaves is the richest source of iron by administration the curry leaves it increase the haemoglobin level.

Conclusion
Based on the findings of the current study, it was evident that working units had shown there was significant association with level of knowledge regarding patient's rights among nursing personnel's as $p<0.05$ level, As studies on patient rights play a significant role in the development of health care, patient rights and education Unit trainings for all nurses should have a greater impact, and a change in knowledge, attitude and behavior should be pursued. Health care workers and patients' families should be taught about their rights, as well as the need of creating a patient rights culture.

Conflict of interest
Authors declare no conflict of interest.

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