



“A STUDY TO ASSESS THE EFFECTIVENESS OF COMPUTER ASSISTED TEACHING MODULE ON KNOWLEDGE REGARDING PREVENTION OF URINARY STONES AMONG STUDENTS IN A SELECTED COLLEGE AT KOLAR.”

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ABSTRACT

Renal stone is a painful condition that affects 1-2% of the general population. Kidney stone are aggregates of crystals mixed with a protein matrix that cause obstruction of urine flow in the renal collecting system, ureters, or urethra and result in severe pain, bleeding, or local erosion of kidney tissues. **Objectives:** To assess the knowledge level regarding prevention of urinary stones among students, to evaluate the effectiveness of Computer assisted teaching module (CATM) on knowledge regarding prevention of urinary stones among students, to determine the association between the knowledge scores of students with their selected demographic variables. **Methodology:** The research approach used for the present study was Quantitative Approach and research design was pre experimental with one group pre and posttest research design. The sample of the study chosen by Probability-simple random sampling Technique, which includes 60 students. A Self-administered Structured knowledge Questionnaire was used to collect the data which consists of 8 Socio demographic and 34 knowledge questions. **Results:** The overall result shows that in pre test 100% of students has Inadequate knowledge, and none of them has moderate and adequate knowledge and in post test 68.33% of students has moderate knowledge, 31.66% of students has inadequate knowledge, and none of students has adequate knowledge. The mean of pre test knowledge was 10.25 and standard deviation was 1.643. The post tests mean score was 18.30 and standard deviation was 1.670. **Conclusion:** The study concluded that majority of students has moderate knowledge on prevention of urinary stones. Hence there is a need to explore the knowledge regarding prevention of urinary stones. So computer assisted teaching module is administered to improving the knowledge.

KEY WORDS: Effectiveness, Computer assisted teaching module, Prevention of urinary stones, Students, College.

INTRODUCTION:

The urinary system, also known as the renal system, consists of the kidneys, ureters, bladder, and the urethra. The purpose of the urinary system is to eliminate waste from the body, regulate blood volume and blood pressure, control levels of electrolytes and metabolites, and regulate blood pH. The urinary tract is the body's drainage system for the eventual removal of urine. Dysfunction of the urinary system leads to many urologic disorders, one such disorder is urinary tract stones.¹

Urinary tract stones begin to form in a kidney and may enlarge in a ureter or the bladder. Depending on where a stone is located, it may be called a kidney stone, ureteral stone, or bladder stone. The process of stone formation is called urolithiasis, renal lithiasis, or nephrolithiasis.²

NEED FOR STUDY

Kidney stone affect 10-12% of the population in industrialized countries. The average life time risk of stone formation has been reported in the range of 5-10%. Recurrent stone formation is a common part of the medical care of patients with stone diseases. The etiology of this disorder is multi factorial and is strongly related to dietary lifestyle habits or practices. Increased rates of hypertension, diabetes and obesity which are linked to nephrolithiasis, also contribute to an increase in stone formation.³ Urolithiasis is the third most common urological diseases affecting both male and female. Individual with an incidence rate of 12% in industrialized countries. If not treated recurs in 35% and 50% of patients with calcium oxalate stone.⁴

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of computer assisted teaching module on knowledge regarding prevention of urinary stones among students in a selected college at Kolar.

OBJECTIVES

- To assess the knowledge level regarding prevention of urinary stones among students
- To evaluate the effectiveness of Computer assisted teaching module (CATM) on knowledge regarding prevention of urinary stones among students
- To determine the association between the knowledge scores of students with their selected demographic variables

OPERATIONAL DEFINITIONS

- Assess: It refers to the responses given by the Students on structured Questionnaire prepared by the Investigator on prevention of urinary stone
- Effectiveness: It is the outcome of Knowledge score after administration of Computer Assisted Teaching Module.
- Knowledge: It refers to the response obtained by the Students regarding prevention of urinary stones from the Knowledge score as measured by Structured Questionnaire.
- Computer Assisted Teaching Module: In refers to the systematic teaching strategy used with the help of computer information to the students regarding prevention of urinary stones.
- Prevention: It is the measures taken to prevent occurrence of urinary stones.
- Urinary stones: formation of stones in the urinary tract, including kidney ureters, bladder and urethra.
- Students: The individuals pursuing final year degree course (BA, B. Com)

1.6 NULL HYPOTHESIS

- Ho1: There will be no significant difference between pre-test and post-test knowledge scores of students regarding prevention of urinary stones after the administration of computer assisted teaching module.
- Ho2: There will be no significant association between the knowledge levels of students regarding prevention of urinary stones with their selected demographic variables.


1.7 ASSUMPTIONS

- The students will have some knowledge regarding prevention of urinary stones.
- The use of CATM in teaching will be effective in improving their knowledge

CONCEPTUAL FRAMEWORK

The conceptual framework of the present study was based on General system theory was first introduced by Von bertalanffy in 1968. He defines a system as an organized whole unit that produces an effect or product when independent component parts interact with the environment. All living systems are open systems, which promote the exchange of matter, energy and information with other systems like subsystem and environment (supra system). The exchange within the open system and their supra system is continuous. The dynamic balance within and between the system helps to create and maintain internal changes on other parts

A system can be resolved into an aggregation of feedback circuit such as:

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- Input
 - Throughput
 - Output
 - Feedback

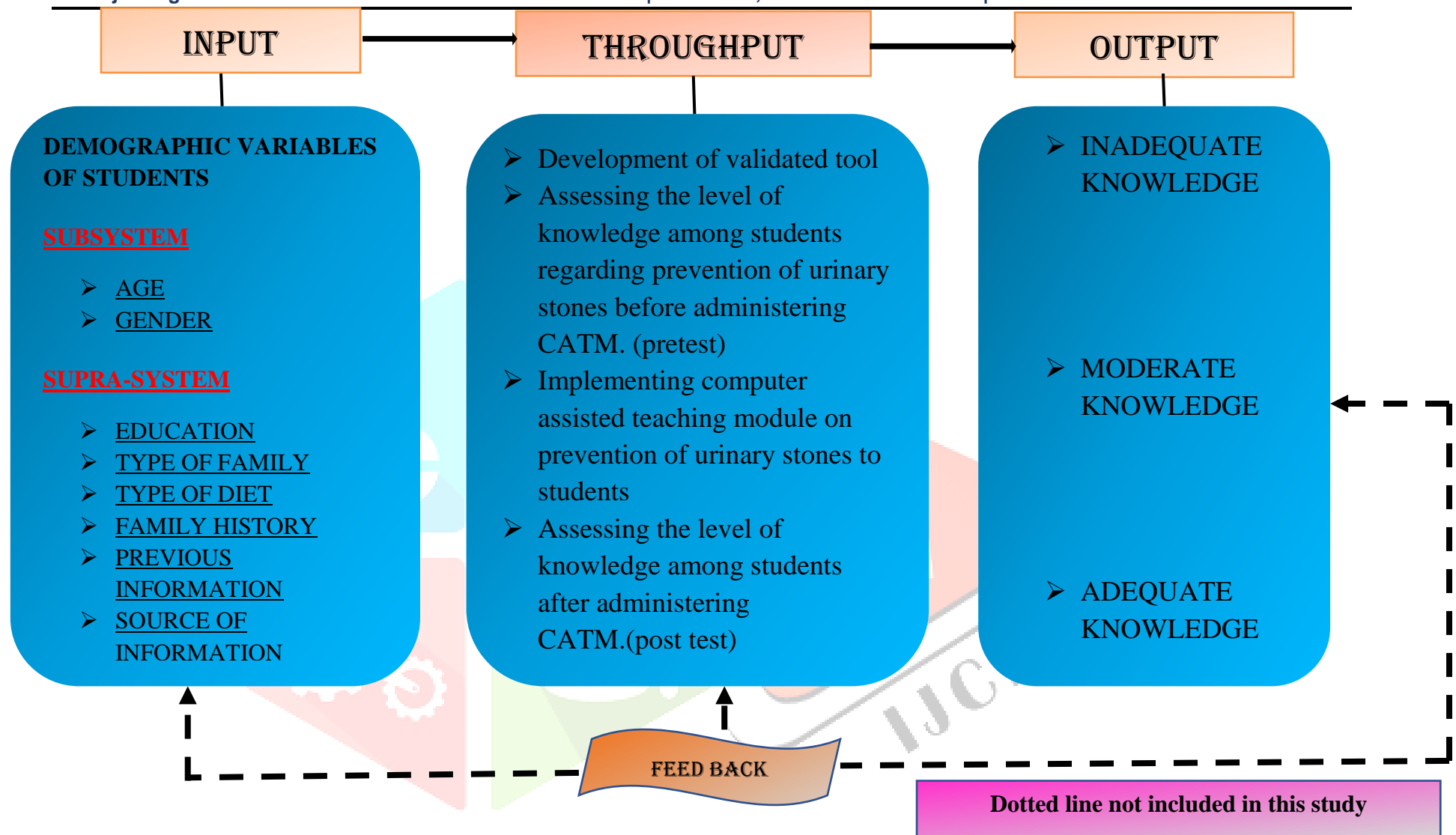


FIG.1 MODIFIED FRAME WORK BASED ON GENERAL SYSTEM MODEL (LUDWIG VON BERTALANFFY'S 1968)

Fig -1: Conceptual Frame Work

METHODOLOGY

RESEARCH APPROACH

To assess the effectiveness of Computer assisted teaching module on knowledge regarding prevention of urinary stones among students, Quantitative research approach was considered to be the most appropriate and adopted.

RESEARCH DESIGN

The research design refers to the researcher's overall plan for obtaining answer to the research questions and it spells out strategies that the researcher adopted to develop information that is accurate, objective and interpretable.²⁸Pre experimental research with one group pre and posttest design has been used to attain the objectives of the present study.

SETTING OF THE STUDY

The study was conducted in selected college, Kolar.

POPULATION

The population in this study includes students.

SAMPLE

The sample includes students who were falling under inclusion criteria.

SAMPLE SIZE

Sample size consists of 60 students.

SAMPLING TECHNIQUE

Probability-simple random sampling technique was adopted to select the samples for the present study based on inclusion criteria.

CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria:-

- Studying in the final year in the degree course (BA, B. Com)
- Male and female with the age group of 20 and above
- Present during the time of the study.
- Know to read and write English
- Married or unmarried

Exclusion criteria:-

- Below the age group of 20
- Absent during the time of the study.

- Not willing to participate in the study
- Does not know to read and write English

TOOL:

The tool was developed with the help of related literature from various textbooks, journals, websites, discussions and guidance from experts.

The tool consists of III sections.

Section-I:- Comprised baseline proforma.

Section-II:- Comprised structured knowledge questionnaire on prevention of urinary stones. Which had very relevant, relevant, need modification, not relevant and remarks of experts.

Scoring key:

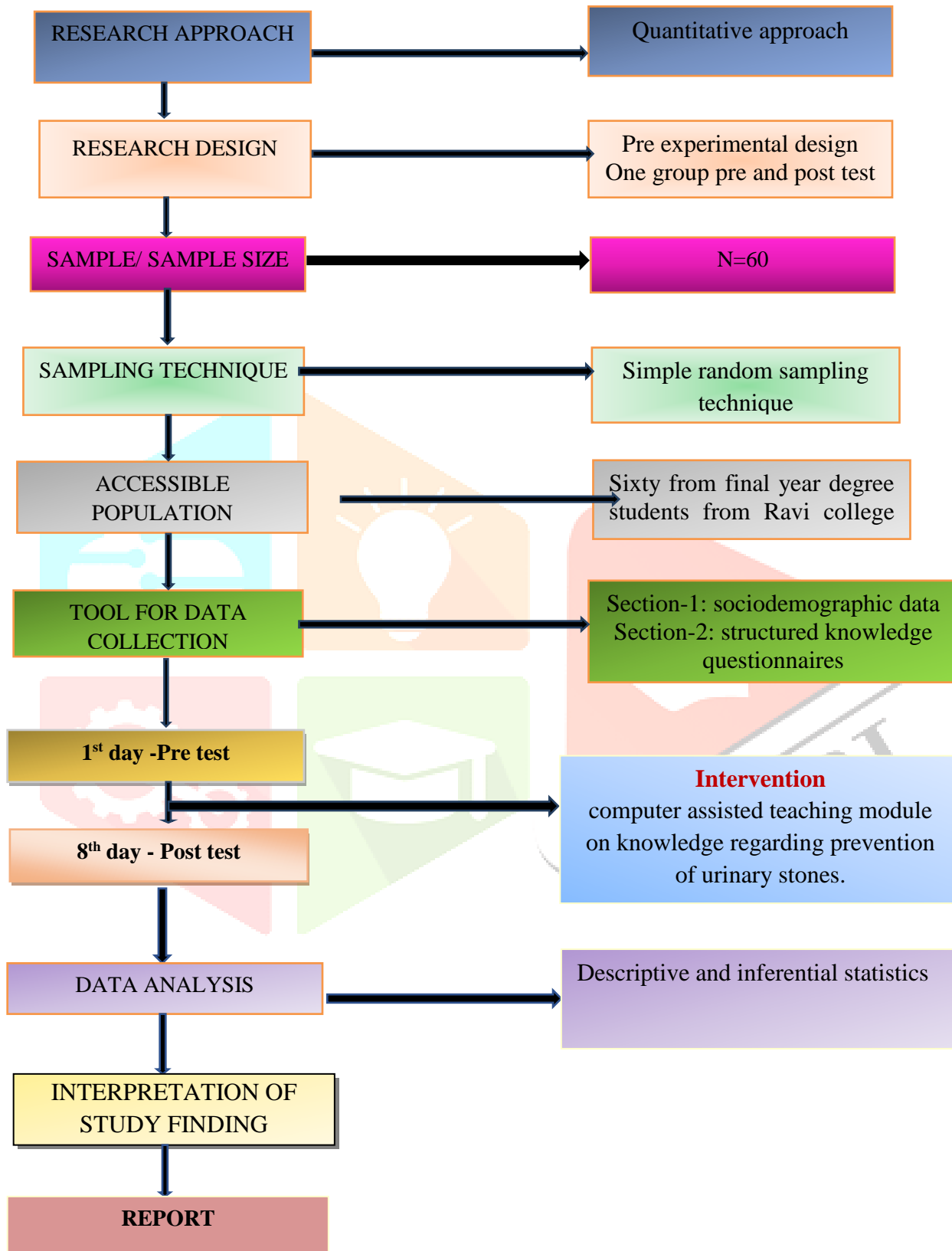
Scoring key is prepared for

Part-I: By coding the demographic variables.

Part-II: score '1' and '0' are awarded to correct and wrong response. Thus, the maximum score is 34.

To interpret the level of knowledge the scores subjected as follows:

Knowledge level	Range
Inadequate	$\leq 50\%$
Moderate adequate	51%-75%
Adequate	$\geq 76\%$

Fig 2: Schematic Representation of Research Design

RESULTS

The Findings of data has been finalized and organized in accordance with the plan for data analysis. These are presented under the following sections.

Section–I: Demographic variable of students.

Section–II: Comparison of pre-test and post-test knowledge regarding prevention of urinary stones among students.

Section–III: Association of the pre and post-test knowledge scores of students with their selected demographic variables.

Section–I:

Majority of the students with respect to age 42 (70%) were in the age group of 20 years, 33 (55.5 %) were females, 32 (53.3 %) were studying B.com, 42 (70%) of students belong to nuclear family, 44 (73.3%) of students were Non-vegetarians, 53 (88.3%) of students have no family history of urinary stones, 43 (71.7%) of students had previous knowledge, 23 (38.3%) students had received information on prevention of urinary stones from electronic media.

Section–II:

Table: 14 Frequency and Percentage Distribution of pre-test and post test knowledge level of students

Sl no	KNOWLEDGE LEVEL	PRE-TEST		POST TEST	
		Frequency	Percent	Frequency	Percent
1	Inadequate knowledge	60	100%	19	31.66%
2	Moderate knowledge	0	0.0	41	68.33%
3	Adequate knowledge	0	0.0	0	0.0%
	Total	60	100	60	100

Table 14: From the above table it is evident that majority (100%) of students had Inadequate knowledge, and none of them had moderate and adequate knowledge on prevention of urinary stones in pretest, where as in posttest 68.33% had moderate knowledge and 31.66% had inadequate knowledge on prevention of urinary stones.

Section-III:

Association of the pre and posttest knowledge level of students with the selected demographical variables

It is evident that the obtained χ^2 value is less than table value at 0.05 level of significance. Therefore, selected demographic variable of students was not significantly associated with pre- test and post test knowledge score of students. Hence the Null hypothesis H_1 is rejected and H_2 is accepted.

CONCLUSION

The present study was conducted to assess the effectiveness of Computer assisted teaching module on knowledge regarding prevention of urinary stones among students in a selected college at Kolar the obtained t value 26.907 is greater than the table value therefore, "t" value is found to be significant, There has been significant improvement in the level of knowledge of students on prevention of urinary stones, which indicates that the Computer assisted teaching module was effective.

IMPLICATIONS

The findings of the study have implications in various areas of nursing practice, nursing education, nursing administration and nursing research.

NURSING EDUCATION:

- The present study emphasis an enhancement of knowledge towards the prevention of urinary stones.
- the nurse as an educator should focus on utilization of health education
- Nursing education should emphasize more on preparing prospective nurses to impart health information and assist the community in developing their self-care potentials. This can be best done by equipping the nursing curriculum with the knowledge regarding dissemination of health information used in various methods of education technology. The computer assisted teaching module prepared and examined by this study for its effectiveness in improving the knowledge of students with urinary stones and its prevention is the proof by itself. As the effectiveness of the CATM is well established, this may be used in students

NURSING PRACTICE:

- The teaching helps to improve the knowledge of students and the present study has revealed that teaching programme can be an effective method to improve the knowledge towards the prevention of urinary stones among students
- The nurse plays an important role in imparting knowledge and helping students to be aware about the prevention of urinary stones.
- The present study has several implications for nursing practice. CATM on prevention of urinary stones is a practical strategy to make the students aware of the disease and to reduce of the occurrence of disease and help them to take self-responsibility for their own health.

NURSING RESEARCH:

- The essence of research is to build a body of knowledge in nursing.
- The findings of the present study serve as a basis for the professional and the students to conduct further studies.
- There is a great scope for nurses to conduct research in this area to find the effectiveness of various strategies to educate the students and the public at large. Research should be done on preparation on innovative method of teaching, better practice of nursing care and development of good and effective teaching material.

NURSING ADMINISTRATION:

- Nurse as an administrator plays an important role in educating the professionals and in policy making such as counseling, referral services and mass health education.
- The special implication of nursing administration is that they should pay attention to all college students and to see whether they are provided with enough health education about the prevention of urinary stones, being an nurse administrator, one can arrange in-service education and special training programmes, regarding prevention of urinary stones

LIMITATIONS

- Study was conducted in specific geographic area imposes limits on generalization
- The findings could be generalized only to the population which fulfilled the criteria in the study.

RECOMMENDATIONS

On the basis of the study that had been conducted, certain suggestions are given for future studies.

- A similar study can be done large population
- A similar study may be conducted in different group.
- A similar study may be conducted in different setting

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