



## Research Article

# An Experimental Study to Assess the Effectiveness of an Information Booklet on Knowledge Regarding Home Care Management of Post-CABG Patient among Caregivers in Selected Hospitals of Pune City

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## Abstract

**Introduction:** Heart disease is the leading cause of death for both men and women. Heart failure is the most common cause of death among coronary artery bypass graft patients. The number of bypass surgeries is increasing in India. About 60,000 bypass surgeries are done annually in India. Patient and caregiver's education on homecare of post-CABG is an essential component of nursing care aimed at assisting patients in caring for themselves at home, following discharge from hospital as family member plays a vital role in the rehabilitation process.

**Objectives:** The study aims to assess the knowledge regarding home care management of post-CABG patient among caregivers before and after administration of information booklet, to determine the effectiveness of information booklet and to find out the association between pre-test knowledge scores with selected demographic variables.

**Methods and Materials:** A quantitative research approach was adopted with pre-experimental one group pre test- post test design to measure the effectiveness of Information booklet. The study was conducted among 100 caregivers from 3 selected hospitals of Pune city by using non probability purposive sampling technique. Self Structure Questionnaire was used for data collection.

**Results:** The mean value of post-test (23.98) and SD=3.895 is more than mean value of pre-test (mean=14.79 & SD=3.718). In that Wilcoxon 'z' table value is 2 and calculated value (8.69) is more than the tabulated value (at 0.05 levels) which indicate that information booklet is effective in increasing the knowledge level. Since p-value corresponding to demographic variable of educational qualification was 0.002 (less than 0.05), occupation was 0.008 (less than 0.05), so educational qualification and occupation was found to have significant association with the home care management of post-CABG patient.

**Conclusion:** The study showed that information booklet is effective in increasing the knowledge regarding home care management of post-CABG patient among caregivers.

**Keywords:** Coronary Artery Bypass Graft (CABG), Caregivers.

## Introduction

### “Home is where the heart is”

#### Audrey Miller

Home care is a helpful care which is given in the home. It is frequently and precisely referred to as proper care or home health care. It is use to differentiate it from private duty care or custodial care which refers to aid and services provided by personnel who are not nurses, doctors, or other licensed medical staff..<sup>[1]</sup>

It offers a broad variety of services so as to provide in a patient’s residence rather than at a dedicated facility. In injury or illness, home care is normally more rational and appropriate than staying at a hospice or moving to a nursing home. It includes nearly any type of care required, from individual care (such as cleaning, help in getting dress up, light cooking etc) to health care (such as care for chronic ill health provided by a home health assistant).<sup>[2]</sup>

The goals of home care are to help the patients to improve function and live with greater independence; to encourage the client’s optimal level of well-being; and to assist the patient to stay at home, avoiding admission or hospitalization to long-term care institutions. Home care provides high quality, safe care in ways that honor patient autonomy and accommodate the individual characteristics of each patient’s home and family.<sup>[3]</sup>

The most critical targets of home care is to guarantee that not well, matured, and incapacitated patients get high magnificence, individual, and sympathetic care. Home care is intended to bring all in all the necessities offer by customized benefit in the appropriateness of a patient's home. The benefit of home care is that it allows patients to get individual care in the isolation and reduce of their individual homes. For aged home care facilitates them in residual as useful and free as likely, provided that a good deal high logic of safety and self-respect. Receiving care at home helps to lessen inevitable re-hospitalization. Family members regularly provide as the main caregivers to the patient or aged dear

ones. It provides desired support to caregivers; allow them to acquire back to their lives and to take pleasure in more excellence moment among family loved ones. Besides, by means of home care, families that can't fill in as essential parental figures have the advantage of realizing that their friends and family are accepting proficient, caring, and customized mind in the comfort of their own homes.<sup>[4]</sup>

The benefits of home care include:

- Deliver the relieve of care of patient at residence
- Easy to visit friends and family at any time
- Promotes wound healing and protection from infections
- Allows more independence and freedom
- Reduced re-hospitalizations<sup>[4]</sup>

Therefore the study is planned to evaluate the effectiveness of information booklet on post operative care and recovery of patients undergoing cardiac surgery among caregivers.

## Objectives of the Study

1. To assess the knowledge regarding home care management of post-CABG patient among caregivers before administration of information booklet.
2. To assess the knowledge regarding home care management of post-CABG patient among caregivers after administration of information booklet.
3. To determine the effectiveness of information booklet on knowledge regarding home care management of post-CABG patients among caregivers.
4. To find out the association between pre-test knowledge scores with selected demographic variables.

## Hypothesis

### 1. Hypothesis For Knowledge

H<sub>01</sub>: There is no significant difference on knowledge regarding home care management of post-CABG patient among caregivers after information booklet at 0.05 level of significance.

**2. Hypothesis For Association**

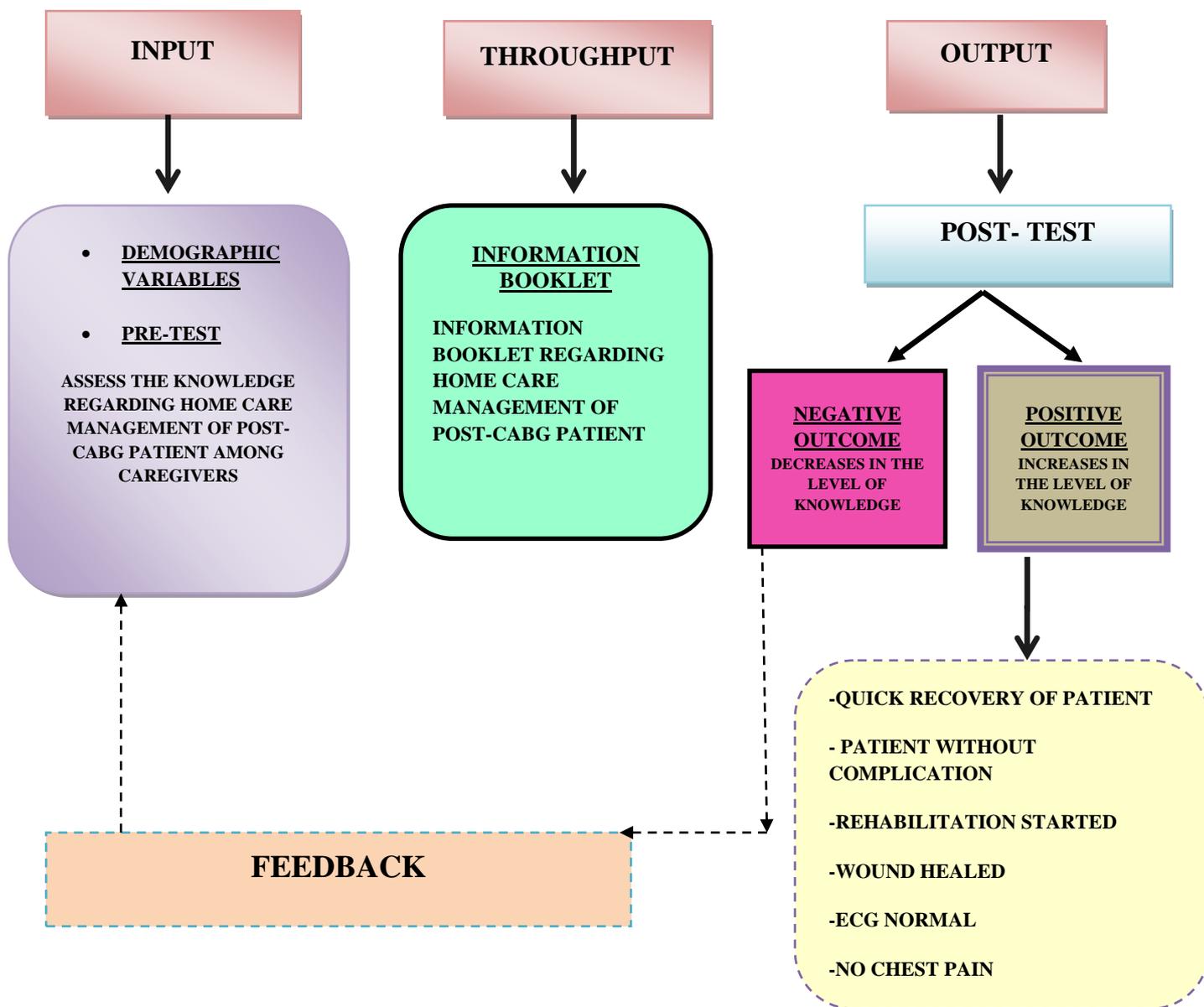
H<sub>02</sub>: There is no significant association between the knowledge regarding home care management of post-CABG patient among caregivers of CABG patient with their selected demographic variables at 0.05 level of significance.

The researcher use Janet W. Kenny’s open system model for conceptual framework in order to assess the effectiveness of information booklet on knowledge regarding home care management of post-CABG patient among caregivers. This helps to make connect between the researcher and the caregivers of post-CABG patient.

**Conceptual Framework**

The study is based on the modified Janet W. Kenny’s open system model, 1999.

**CONCEPTUAL FRAMEWORK BASED ON”J.W KENNY’S OPEN SYSTEM MODEL”**



**Materials and Methods****Research Approach:** Quantitative Approach**Research Design:** One group pre-test post-test design with pre-experimental design.**Variables Under The Study****Dependent Variable:** Knowledge of caregivers regarding home care management of post-CABG patient.**Independent Variable:** Information Booklet regarding home care management of post-CABG patient.**Setting of the Study**

Study samples were selected from the following areas of Pune city:

N.M.Wadia Institute of Cardiology,48 beded,  
Sassoon Hospital,1296 beded,  
Noble Hospital,341 beded,Pune.**Population:** Caregivers of post-CABG patient.**Sample:** Caregivers of post-CABG patient.**Sampling Criteria**

The following criteria are selected to select samples-

**Inclusion Criteria**

1. Both male and female caregivers of patient more than 20 years of age.
2. Caregivers who can read English/ Hindi or Marathi.
3. Caregivers who are present at the time of data collection.
4. Caregivers who are willing to participate in the study.

**Sample Size:** 100 caregivers.**Sampling Technique:** Non-Probability Purposive Sampling Technique.**Data Collection Tool**

1. Self-structured questionnaire use to assess the knowledge regarding home care management of post-CABG patient.
2. Information booklet regarding home care management of post-CABG patient.

**Scoring mode**

Every correct score be agreed a score of 1(one) and incorrect response a score of 0(zero). The

highest scoring possible was 28 and lowest 0 in the knowledge questionnaire. The scoring was categorized as:

Sl.No.	Attribute	Scoring
1.	Poor Knowledge	0-9
2.	Average Knowledge	10-18
3.	Good Knowledge	19-28

**Content Validity**

The data collection tool was sent to 31 experts out of whom 27 were received back with their valuable suggestions and comments on the study tool. The time period of validity was from 7/7/17 to 16/7/17.

**Reliability**

It is done among 10(ten) caregivers on the date 26.7.2017 and 27.7.2017. The 10(ten) caregivers were from N.M. Wadia Institute of Cardiology, Pune.

The reliability co-efficient "r" of the questionnaire was **0.86**, which is more than 0.7; hence the questionnaire was found to be reliable.**Pilot Study**

Pilot study was conducted in N.M.Wadia Institute of Cardiology, Pune from 31-7-2017 to 09-8-2017 to assess the feasibility of the study and to decide the plan for data analysis.

It was conducted smoothly. No problem was faced during the pilot study. The results indicated that study was feasible, practicable and acceptable.

**Results**

**Section I: Frequency and Percentage Distribution of Demographic Variables**

**Table-1:** Frequency and percentage distribution of demographic variables

**n=100**

SL NO.	PARAMETER		NO OF CASES	PERCENTAGE (%)
1	Age (Yrs)	20 – 30	42	42
		31 – 40	32	32
		41 – 50	15	15
		51 – 60	6	6
		>60	5	5
2	Gender	Male	55	55
		Female	45	45
3	Marital status	Single	34	34
		Married	66	66
4	Religion	Hindu	94	94
		Christian	2	2
		Muslim	2	2
		Others	2	2
5	Educational qualification	Primary	4	4
		Secondary	14	14
		Higher secondary	36	36
		Graduate & above	46	46
6	Occupation	Private service	30	30
		Government service	13	13
		Self employee	48	48
		Others	9	9
7	Monthly income (Rs)	<30000	68	68
		30001 – 50000	17	17
		50001 – 70000	11	11
		70001 – 90000	0	0
		>90000	4	4
8	Relationship with the patients	Husband	9	9
		Wife	16	16
		Son/ Daughter	46	46
		Brother/Sister	24	24
		Son-in-law	2	2
		Daughter-in-law	3	3
9	Type of family	Nuclear	18	18
		Joint	82	82

**Table-1A:** Frequency and percentage distribution of Demographic variables

**n=100**

SL NO.	PARAMETER		NO OF CASES	PERCENTAGE (%)
1	Do You Have Any Previous Knowledge Regarding Home Care Of Post-CABG Patient?	Yes	35	35
		No	65	65
	If yes, then from which source (n=35)	Newspaper	2	
		Television	12	
		Internet	19	
		Radio	2	
		Others	10	
2	Has Anyone Of Your Family Member Undergone Any Major Surgery Before?	Yes	7	7
		No	93	93
	If yes, then what kind of surgery (n=7)	Laprotomy	1	
		Cholilithiasis	1	
		Ear	2	
		Cellulitis	1	
		Eye	1	
		CABG	1	
3	Has Anyone In Your Family Undergone CABG Before?	Yes	2	2
		No	98	98
4	Do You Know What Care Has To Be Taken Of Post-Operative CABG Patient At Home?	Yes	14	14
		No	86	86

**Section-II** Distribution of the subjects according to the level of pre-existing knowledge of caregivers regarding home care management of post-CABG patient

Knowledge of 100 caregivers was assessed using self-structured questionnaire analyzed by using descriptive statistics

**Table 2:** Assess the pre test knowledge score in study group

n=100			
Sl. No.	Knowledge Score	Pre Test	Percentage (%)
1	0 – 9 (Poor)	4	4
2	10 – 18 (Average)	<b>78</b>	<b>78</b>
3	19 – 28 (Good)	18	18
	Total	100	100

**Section-III** Distribution of the subjects according to the level of post-existing knowledge of caregivers regarding home care management of post-CABG patient

Knowledge of 100 caregivers was assessed using self-structured questionnaire analyzed by using descriptive statistics

**Table 3:** Assess the post test knowledge score in study group

n=100			
Sl. No.	Knowledge Score	Post Test	Percentage (%)
1	0 – 9 (Poor)	0	0
2	10 – 18 (Average)	11	11
3	19 – 28 (Good)	<b>89</b>	<b>89</b>
	Total	100	100

**Section-IV** Determine effectiveness of information booklet by using pre-test and post-test score

**Table 4:** Comparison of pre and post test knowledge score in study group

Parameter	Pre test		Post test		Wilcoxon z- value	p value
	Mean	SD	Mean	SD		
Knowledge score	14.79	3.718	23.98	3.895	8.69	<0.0001

Table 4 shows value to determine the effectiveness of information booklet regarding home care management of post-CABG patient among caregivers. The mean value of post-test (23.98) is more than mean value of pre-test (14.79). In that Wilcoxon ‘z’ table value is 2 and calculated value (8.69) is more than the tabulated

value (at 0.05 levels). So, it is concluded that there is a significant difference between the pre-test score and post-test score regarding home care management of post-CABG patient as (P<0.0001). This means that information booklet is significantly effective.

**Section-V**

**Table 5:** Association of Pre test knowledge score of caregivers regarding homecare management of post-CABG patient with selected demographic variables by using Fisher’s exact test.

n=100						
Sl. No.	Demographic Variables		Pre-Test Knowledge Score			P-Value
			GOOD (19-28)	AVERAGE (10-18)	POOR (0-9)	
1.	Age	20 – 30	8	30	3	0.107
		31 – 40	7	25	1	
		41 – 50	2	12	0	
		51 – 60	0	7	0	
		>60	1	4	0	
2.	Gender	Male	6	45	4	0.074
		Female	10	35	0	

3.	Marital Status	Single	8	24	2	0.857
		Married	10	54	2	
		Divorcee	0	0	0	
		Widow	0	0	0	
4.	Religion	Hindu	17	73	4	0.542
		Christian	0	2	0	
		Muslim	0	2	0	
		Others	1	1	0	
5.	Educational Qualification	Primary	0	4	0	0.002* (s)
		Secondary	1	11	2	
		Higher Secondary	2	32	2	
		Graduate And Above	15	31	0	
		Illiterate	0	0	0	
6.	Occupation	Private	7	21	2	0.008* (S)
		Government	2	10	1	
		Self-Employee	9	38	1	
		Others	0	9	0	
7.	Monthly Income (In Rupees)	<30,000	9	57	2	0.656
		30,001-50000	5	10	2	
		50,001-70,000	4	7	0	
		70,001-90,000	0	0	0	
		>90,001	0	4	0	
8.	Type Of Family	Nuclear	1	16	1	0.301
		Joint	17	62	3	
		Extended	0	0	0	
9.	Relationship With Patient	Husband	2	7	0	0.719
		Wife	2	14	0	
		Son	7	35	4	
		Daughter	6	18	0	
		Grand-Daughter	0	2	0	
		Daughter-In-Law	1	2	0	
10.	Any Previous Knowledge Regarding Home Care Of Post-Cabg Patient	Yes	9	24	2	0.237
		No	9	54	2	
11.	Anyone Of Your Family Member Undergone Any Major Surgery Before	Yes	0	5	1	0.199
		No	18	72	3	
12.	Anyone In Your Family Undergone Cabg Before	Yes	0	1	1	0.109
		No	18	77	3	
13.	Care To Be Taken Of Post- Operative Cabg Patient At Home	Yes	4	8	2	0.035
		No	14	70	2	

S= Significant, NS=Not Significant

The above table shows the association of Pre test knowledge score of caregivers regarding homecare management of post-CABG patient with selected demographic variables using Fisher's exact test. Since p-value corresponding to demographic variable of educational qualification was 0.002 (less than 0.05), occupation was 0.008 (less than 0.05), so educational qualification and occupation was found to have significant association with the home care management of post-CABG patient.

### Discussion

In the present study, it was observed that most of the caregivers in pre-test were having 78(78%) average knowledge score, 18(18%) were having

good knowledge and only 4(4%) were having poor knowledge score regarding home care management of post-CABG patient among caregivers. And in post-test, majority 89(89%) of the caregivers had good, 11(11%) had average knowledge regarding home care management of post-CABG patient among caregivers.

A similar study which is conducted by Siby and Karadkar on percutaneous transluminal coronary angioplasty (PTCA): Attention on imperative facet at Navi Mumbai among 50 post-PTCA patients. The findings showed that in post test 10% of the patients had excellent level of knowledge, 58% of them had very good, 30 % of the patients had good knowledge, 02% of the patients had average knowledge score. Thus, it

was concluded that self instructional module (SIM) on post PTCA home care among patients was found to be effective. It can be concluded that the SIM help the patients to develop their understanding about post PTCA home care. [5]

A similar study which is conducted by Ranjana Verma on effect of information booklet about home care management Shortened hospitalizations following cardiac surgery at Delhi on 60 post operative cardiac patients. In her study, majority of the subjects i.e. 48.3% are in the 60-69 years, 51.6% in Hindu, 75% male and 88.3% were married. Majority (58.3%) had education up to secondary level, 30% of them were retired. According to duration of illness majority (58.3%) of subjects were having duration of more than 2 years. Significant association ( $t=14.69$ ;  $df=29$ ; table value= 2.04) was found between post test knowledge (22.3) and pre test knowledge score (12.9) in experimental group which indicate that information booklet is effective in increasing the knowledge level. [6]

In present study, researcher applied Wilcoxon z-test to find out the effectiveness of information booklet regarding home care management of post-CABG patient among caregivers. The mean value of post-test (23.98) is more than mean value of pre-test (14.79). In that Wilcoxon 'z' table value is 2 and calculated value (8.69) is more than the tabulated value (at 0.05 levels). So, it is concluded that there is a significant difference between the pre-test score and post-test score regarding home care management of post-CABG patient as ( $P<0.0001$ ). This proved that information booklet was found to be significantly useful in improving the knowledge of home care management of post-CABG patient.

A study conducted by Neelima Choure at Indore on the effectiveness of self instructional module on cardiac rehabilitation were analyzed in terms of frequency and percentage. . In her study, the mean pre-test score was  $8.27 \pm 4.40$ , after administration of the self-instructional module i.e. in post-test; it is increased to  $23.18 \pm 3.69$ . Subsequently the adjustment in score was

measurably noteworthy ( $P< 0.0001$ ) which demonstrate that the SIM was instrumental in expanding learning of post-myocardial localized necrosis recovery. [7]

In present study, association of home care management of post-CABG patient among caregivers with selected demographic variables was calculated by using Fisher's exact test. Calculated p-value of educational qualification is 0.002 which is less than 0.05 and occupation is 0.008 which is less than 0.05, so demographic variables such as educational qualification and occupation was found to have significant association with the home care management of post-CABG patient among caregivers.

Binu Xavier conducted a quasi experimental study on concerning about the emergency managing of client with MI. In his study, he used chi-square values to find out the associations. It shows that there was no significant association between knowledge scores of the staff nurses in the post test while comparing to their age, gender, professional qualification, years of experience, department of work and in-service education program. [8]

### Conclusion

Giving education related to homecare management of post- CABG is effective as homecare is leading provider of quality after surgery. Homecare represents a very essential component of the continuum of care. During hospital stay, nurses are the responsible for the care of the patient. Nurses take steps at the right time to make sure to stay in good health. Nurses hold up caregivers to shares view and information. Also nurses teach about the care (such as wound dressing, exercises, diet, medication etc.) at the time of discharge which has to be followed at home. So that the caregivers will gain confident in handling and providing care of post- CABG patient at home.

**References**

1. Wikipedia.org/wiki/Home care
2. National Association for Homecare & hospice care.what-is-homecare.2016
3. Carol Hall Ellenbecker. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. 2008 Apr.
4. Havenhomehealth.com/Benefits-of-Home-Health-Care.htm.2014
5. Siby Abraham Titus and Gargee Karadkar. Percutaneous transluminal coronary angioplasty (PTCA): Attention on imperative facet. Indian Journal of Nursing Sciences. International Peer Reviewed Journal. Vol 2 (3), 82-86, 2017
6. Ranjana Verma International Journal of Nursing Research and Practice EISSN 2350-1324; Vol. 3 No. 2 (2016) July — December, Effect of information booklet about home care management of post operative cardiac patient
7. Neelima Choure. Effectiveness of self instructional module on cardiac rehabilitation. International Journal of Nursing Sciences. Volume 2, Issue 3, September 2015, Pages 317-323
8. Binu Xavier. Effectiveness of Self Instructional Module regarding Emergency Management of patient with Myocardial Infarction on Knowledge among Staff Nurses. IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 2, Issue 6 (Nov. – Dec. 2013), PP 14-19 [www.iosrjournals.org](http://www.iosrjournals.org).