Effectiveness of Planned teaching programme on knowledge regarding lifestyle modifications of patients with myocardial infraction among staff nurses of selected hospitals of Indore, M.P.

[1]**Bhupendra Kumar Panchal**, [2]**Dr Jinu K. Rajan**

[1]Ph.D. Scholar, [2]Professor
[1]Department of Nursing, [2]Department of Nursing,
[1]Malwanchal University, Indore, India, [2]Malwanchal University, Indore, India

Abstract

The present study has been undertaken to assess knowledge score regarding lifestyle modifications of patients with myocardial infraction among staff nurses by planned teaching programme in Index hospital, Indore, M.P. The research design adopted for the study was pre- experimental in nature. 52 staff nurses were selected by non-probability convenient sampling technique. The tool for the study was self-structured knowledge questionnaire which consists of two parts-PART- I consisted questions related to Socio-demographic data; PART-II consisted of self -structured knowledge questionnaire to assess the knowledge score regarding lifestyle modifications of patients with myocardial infraction among staff nurses. The data was analyzed by using descriptive and inferential statistical methods. The most significant finding was that 15.4% of staff nurses were having good knowledge regarding lifestyle modifications of patients with myocardial infraction whereas 84.6% had excellent knowledge after post-test.

Keyword- Effectiveness planned teaching programme, knowledge and lifestyle modifications of patients with myocardial infraction.

1.INTRODUCTION

Myocardial infarction, commonly known as a heart attack, is the irreversible necrosis of heart muscle secondary to prolonged ischemia. This usually results from an imbalance in oxygen supply and demand, which is most often caused by plaque rupture with thrombus formation in a coronary vessel, resulting in an acute reduction of blood supply to a portion of the myocardium. Myocardial infarction is considered part of a spectrum referred to as acute coronary syndrome (ACS). The ACS continuum representing ongoing myocardial ischemia or injury consists of unstable angina, non–ST-segment elevation myocardial infarction (NSTEMI), and ST-segment elevation myocardial infarction (STEMI). Patients with ischemic discomfort may or may not have ST-segment or T-wave changes denoted on the electrocardiogram (ECG). ST elevations seen on the ECG reflect active and ongoing transmural myocardial injury. Without immediate reperfusion therapy, most persons with STEMI develop Q waves, reflecting a dead zone of myocardium that has undergone irreversible damage and death. Surviving a heart attack is often a life-changing event. In addition to recovering from any procedures that were performed to stop and treat the heart attack, most patients will also face making sometimes extensive lifestyle changes. These lifestyle changes are designed to target risk factors for heart disease and stop or slow the progress of disease. Patients can include lifestyle modification in exercise, smoking cessation, blood pressure management, diet, medication and management of cholesterol.

2.NEED FOR STUDY

Last year, 70 per cent of heart attack deaths occurred in the 30-60 age group. A total of 19,744 people aged 30 to 60 years died due to heart attacks in 2021. People belonging to the age group of 45 to 60 years were most prone to heart attack deaths, followed by those aged 30 to 45 years. The reasons include lifestyle, increased physical labour, and high stress. In 2020, the total number of deaths from heart attack in people aged 30 to 60 years in India was 19,238. There was an increase of over six per cent in the number of heart attack deaths in this age group, from 2020 to 2021. The number of people aged 18 to 30 years who died from heart attacks in India was 2,541 in 2021, and 2,695 in 2020.

This means that heart attack deaths in this age group decreased by 0.057 per cent from 2020 to 2021. (ABP News, 2022)

3.OBJECTIVE OF THE STUDY

1. To assess the pre-test and post-test Knowledge score regarding lifestyle modifications of patients with myocardial infraction among staff nurses.
2. To assess the effectiveness of planned teaching programme on knowledge regarding lifestyle modifications of patients with myocardial infraction among staff nurses.
3. To find out the association between the pre-test knowledge score regarding lifestyle modifications of patients with myocardial infraction among staff nurses with their selected demographic variables.

4.HYPOTHESES:

RH_0: There will be no significant difference between pretest and post-test knowledge score on lifestyle modifications of patients with myocardial infraction among staff nurses.

RH_1: There will be significant difference between pretest and post-test knowledge score on lifestyle modifications of patients with myocardial infraction among staff nurses.

RH_2: There will be significant association between the pre-test score on lifestyle modifications of patients with myocardial infraction among staff nurses with their selected demographic variables.

5.ASSUMPTION

1. Staff nurses may have deficit knowledge regarding lifestyle modifications of patients with myocardial infraction.
2. Planned teaching programme will improve knowledge of staff nurses regarding lifestyle modifications of patients with myocardial infraction.

6.METHODOLOGY:

A quantitative evaluative approach was used and research design pre-experimental one group pre-test post-test research design was used for the study. The samples consisted of 52 staff nurses selected by Non probability purposive sampling technique. The setting for the study was Index hospital, Indore, M.P. Data was collected with the help of demographic variables and administering a self-structured knowledge questionnaire by the investigator before and after planned teaching programme. Post-test was conducted after 7 days of pretest. Data were analysis using descriptive & inferential statistics.

7.ANALYSIS AND INTERPRETATION

SECTION-I Table -1 Frequency and percentage distribution of samples according to their demographic variables.

n = 52

S. No	Demographic Variables	Frequency	Percentage
1 a. b. c. d.	**Age in Years** 21-28 29-36 37-44 ≥45		
2 a. b. c.	**Gender** Male Female Transgender		
3 a. b. c. d.	**Monthly income** 6000-10000/- 11000-15000/- 16000-20000/- ≥ 21000/-		
4 a. b. c. d. e.	**Professional qualification** GNM Post B.Sc. Nursing B.Sc. Nursing M.Sc. Nursing Ph.D. Nursing		

5	Clinical Experience (in months)		
a.	12-36		
b.	37-60		
c.	61-84		
d.	≥85		
6	Previous Knowledge about Lifestyle modifications of patients with myocardial infraction		
a.			
b	Internet		
c	Journal		
d.	Books		
e.	Workshop/Conference		
	In-service education		

SECTION-II- Table- 2.1.1- Frequency and percentage distribution of Pre-test scores of studied subjects:

Category and test Score	Frequency (N=52)	Frequency Percentage (%)
POOR(01-05)	43	82.7
AVERAGE (6-10)	9	17.3
GOOD (11-15)	0	0.0
EXCELLENT (16-20)	0	0.0
TOTAL	52	100.0

The present table 2.1.1 concerned with the existing knowledge regarding lifestyle modifications of patients with myocardial infraction among staff nurses was shown by pre-test score and it is observed that most of the staff nurses 43 (82.7%) were poor (01-05) knowledge and some staff nurses have 9(17.3%) were from average (6-10) category.
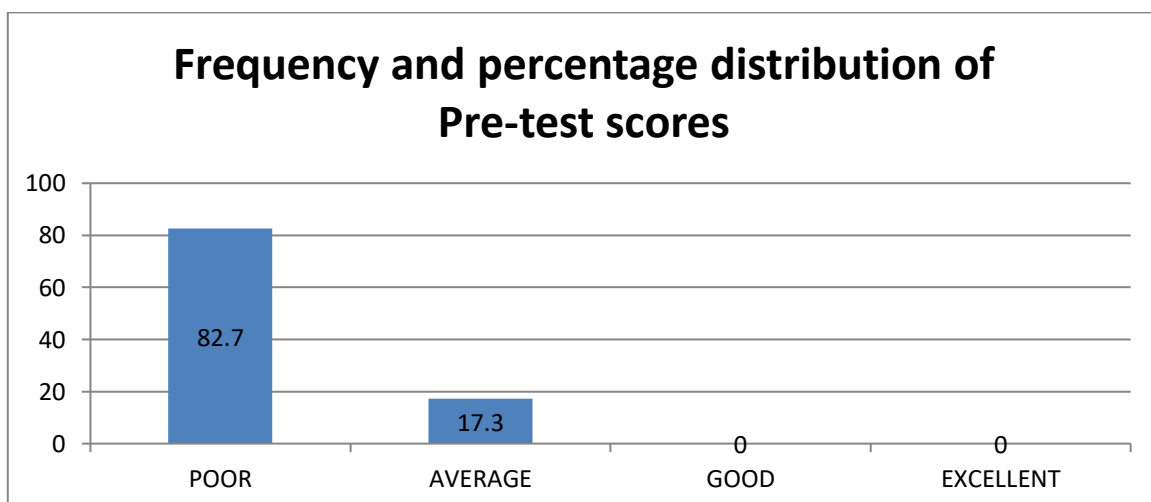

FIG.-2.1.1- Frequency and percentage distribution of Pre-test scores of studied subjects

Table-2.1.2. - Mean ($\overline{X}$) and standard Deviation (s) of knowledge scores:

Knowledge Pre –test	Mean ($\overline{X}$)	Std Dev (S)
Pre-test score	1.17	0.38

The information regarding mean, percentage of mean and standard deviation of test scores in shown in table 2.1.2 knowledge in mean pre-test score was 1.17±0.38 while in knowledge regarding lifestyle modifications of patients with myocardial infraction among staff nurses in Index hospital, Indore, M.P..
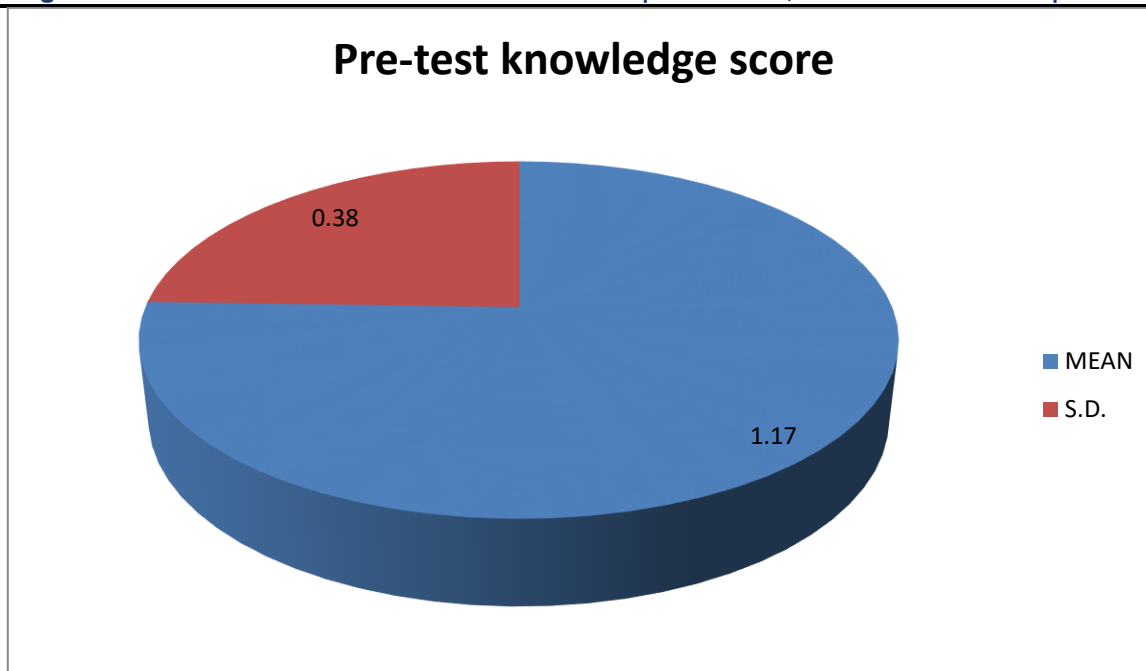
Pre-test knowledge score

FIG.-2.1.1. - **Mean ($\overline{X}$) and standard Deviation (s) of knowledge scores**

Table-2.2.1- Frequency and percentage distribution of Post test scores of studied subjects:

Category and post-test Score	Frequency (N=52)	Frequency Percentage (%)
POOR (01-5)	0	0.0
AVERAGE (6-10)	0	0.0
GOOD (11-15)	8	15.4
EXCELLENT (16-20)	44	84.6
TOTAL	52	100%

The present table 2.2.1 concerned with the existing knowledge regarding lifestyle modifications of patients with myocardial infraction among staff nurses was shown by post test score and it is observed that most of the staff nurses 44 (84.6%) were **excellent (**16-20) knowledge and other staff nurses have 8 (15.4%) category which are **average** (11-15) posttest knowledge score in the present study.
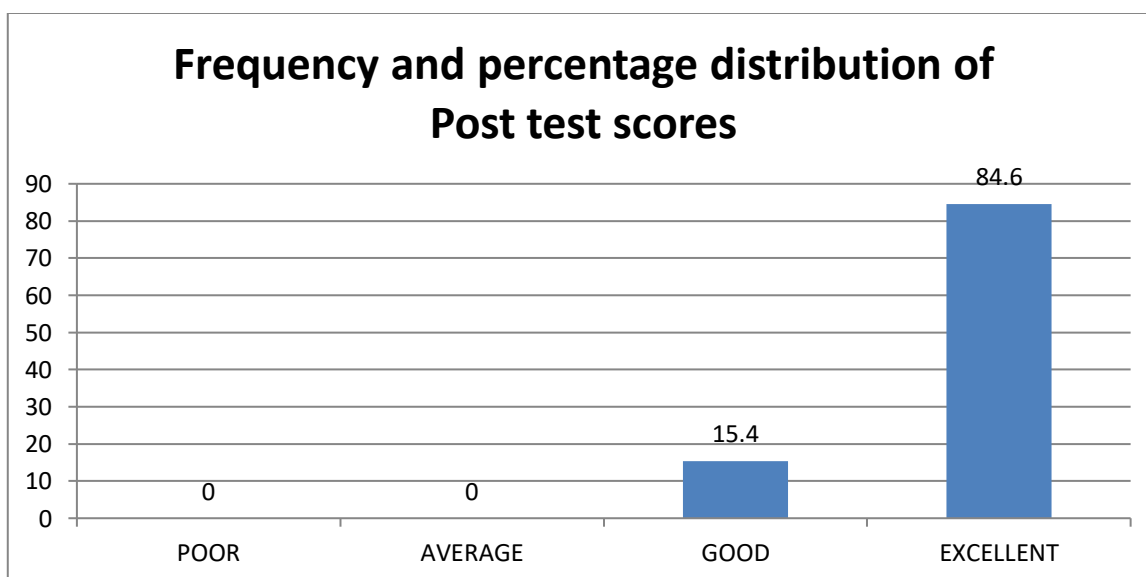

FIG.-2.2.1- **Frequency and percentage distribution of Post test scores of studied subjects**

Table-2.2.2. - Mean ($\overline{X}$) and standard Deviation (s) of knowledge scores:

Knowledge Test	Mean ($\overline{X}$)	Std Dev (S)
Post-test score	3.84	0.36

The information regarding mean, percentage of mean and standard deviation of post test scores in shown in table 2.2.2 knowledge in mean post test score was 3.84±0.36 while in knowledge regarding lifestyle modifications of patients with myocardial infraction among staff nurses in Index hospital, Indore, M.P.

Hence, it is confirmed from the tables of section-II that there is a significant difference in mean of test scores which partially fulfill the second objective of the present study.
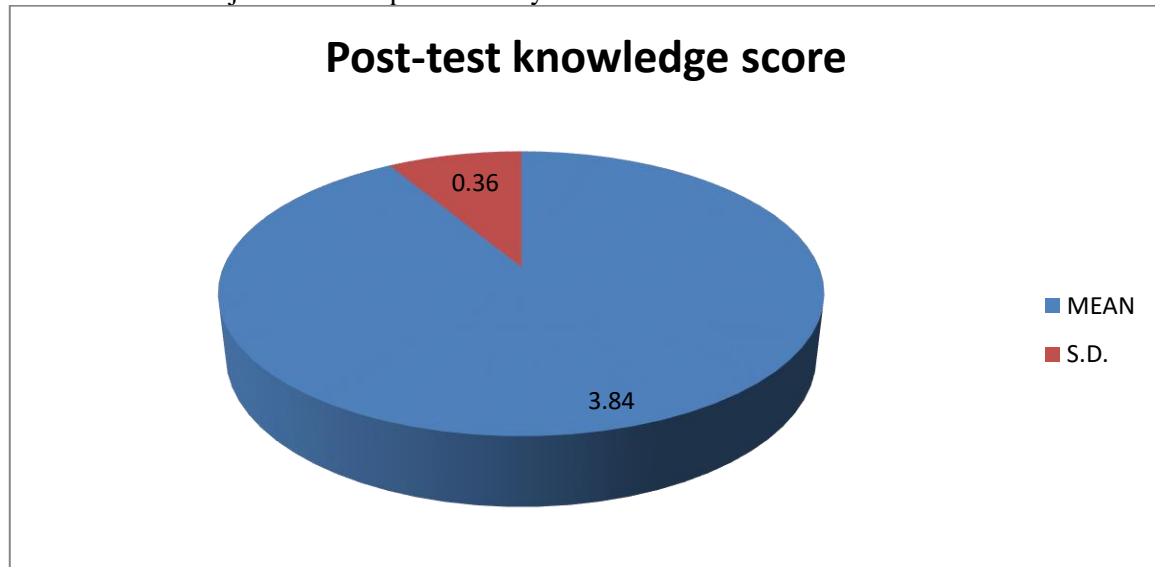
FIG.-2.2.2. - Mean ($\overline{X}$) and standard Deviation (s) of knowledge scores:

TABLE 2.2.3: Effectiveness of planned teaching programme by calculating Mean, SD, Mean Difference and 't' Value of Pre-test and Post-test knowledge.

Knowledge Score of Staff nurses	Mean ($\overline{X}$)	S. D. (s)	Std. Error of Mean	D. F.	t-value	Significance
Pre-test	1.17	0.38	0.07	51	-37.54	P<0.0001*
Post-test	3.84	0.36				

When the mean and SD of pre-test and post-test were compared and 't' test was applied. It can be clearly seen that the 't' value was -37.54 and p value was 0.0001 which clearly show that planned teaching programme was very effective in increasing the knowledge of staff nurses.

SECTION-III Association of knowledge scores between test and selected demographic variables:

Table- 3.1 Association of age with pre-test scores:

Age (in years)	Test scores				Total
	POOR (1-5)	AVERAGE (6-10)	GOOD (11-15)	EXCELLENT (16-20)	
21-28	16	2	0	0	18
29-36	12	4	0	0	16
37-44	15	3	0	0	18
≥45	0	0	0	0	0
Total	43	9	0	0	52
	X=1.15 p>0.05(Insignificant)				

The association of age test scores is shown in present table 3.1. The probability value for Chi-Square test is 1.15 for 2 degrees of freedom which indicated a insignificant valve (p>0.05). Hence, it is identified that there is a insignificant association between age and test scores. Moreover, it is reflected that age isn't influenced with the present problem.

Table- 3.2 Association of gender with pre-test scores:

Gender	Test scores				Total
	POOR (1-5)	AVERAGE (6-10)	GOOD (11-15)	EXCELLENT (16-20)	
Male	18	4	0	0	22
Female	25	5	0	0	30
Transgender	0	0	0	0	0
Total	43	9	0	0	52
	X=0.02 p>0.05 (Insignificant)				

The association of gender and test scores is shown in present table 3.2. The probability value for Chi-Square test is 0.02 for 1 degrees of freedom which indicated a insignificant value (p>0.05). Hence, it is identified that there is a insignificant association between gender and test scores.

Table-3.3. Association of monthly income with pre-test scores:

Monthly Income	Test scores				Total
	POOR (1-5)	AVERAGE (6-10)	GOOD (11-15)	EXCELLENT (16-20)	
6000-10000/-	4	1	0	0	5
11000-15000	35	6	0	0	41
16000-20000	4	2	0	0	6
≥ 21000/-	0	0	0	0	0
Total	43	9	0	0	52
	X=1.30 p>0.05 (Insignificant)				

The association of monthly income test scores is shown in present table 3.3. The probability value for Chi-Square test is 1.30 for 2 degrees of freedom which indicated insignificant valve (p>0.05). Hence, it is identified that there is a insignificant association between monthly income and test scores. Moreover, it is reflected that monthly income isn't influenced with the present problem.

Table- 3.4 Association of Professional qualification with pre-test scores:

Professional Qualification	Test scores				Total
CLASS	POOR (1-5)	AVERAGE (6-10)	GOOD (11-15)	EXCELLENT (16-20)	
GNM	16	2	0	0	18
Post B.Sc. Nursing	10	1	0	0	11
B.Sc. Nursing	17	6	0	0	23
M.Sc. Nursing	0	0	0	0	0
Ph.D. Nursing	0	0	0	0	0
Total	43	9	0	0	52
	X=2.24 p>0.05 (Insignificant)				

The association of Professional qualification test scores is shown in present table 3.4. The probability value for Chi-Square test is 2.24 for 2 degrees of freedom which indicated Professional qualification and test scores. Moreover, it is reflected that Professional qualification isn't influenced with the present problem.

Table-3.5. Association of Clinical experience with pre-test scores:

Clinical Experience (in months)	Test scores				Total
	POOR (1-5)	AVERAGE (6-10)	GOOD (11-15)	EXCELLENT (16-20)	
12-36	23	5	0	0	28
37-60	17	3	0	0	20
61-84	3	1	0	0	4
≥ 85	0	0	0	0	0
Total	43	9	0	0	52
	X=0.24 p>0.05 (Insignificant)				

The association of clinical experience test scores is shown in present table 3.5. The probability value for Chi-Square test is 0.24 for 2 degrees of freedom which indicated insignificant valve (p>0.05). Hence, it is identified that there is insignificant association between clinical experience and test scores. Moreover, it is reflected that clinical experience isn't influenced with the present problem.

Table- 3.6 Association of previous knowledge with pre-test scores:

Previous knowledge	Test scores				Total
CLASS	POOR (1-5)	AVERAGE (6-10)	GOOD (11-15)	EXCELLENT (16-20)	
Internet	9	2	0	0	11
Journal	0	0	0	0	0
Books	30	6	0	0	36
Workshop/ Conference	0	0	0	0	0
In-service education	4	1	0	0	5
Total	43	9	0	0	52
	X=0.04 p>0.05 (Insignificant)				

The association of previous knowledge test scores is shown in present table 3.6. The probability value for Chi-Square test is 0.04 for 2 degrees of freedom which indicated previous knowledge and test scores. Moreover, it is reflected that previous knowledge isn't influenced with the present problem.

8.RESULTS

The result of this study indicates that there was a significant increase in the post-test knowledge scores compared to pre-test scores of lifestyle modifications of patients with myocardial infraction. The mean percentage knowledge score was observed 1.17 ± 0.38 in the pre-test and after implementation of planned teaching programme post-test mean percentage was observed with 3.84 ± 0.36.

9.CONCLUSION

Thus, after the analysis and interpretation of data we can conclude that the hypothesis RH1 that, there will be significance difference between the pre-test knowledge score with post-test knowledge score at the $(P<0.05)$ is being accepted.

Furthermore, planned teaching programme regarding lifestyle modifications of patients with myocardial infraction among staff nurses may consider as an effective tool when there is a need in lacking, bridging and modifying the knowledge.

10.LIMITATIONS-

- The study was limited to Index hospital, Indore, M.P.
- The study was limited to 52 samples.

11.REFERENCE-

1. Smith SC Jr, Benjamin EJ, Bonow RO, Braun LT, Creager MA, Franklin BA, Gibbons RJ, Grundy SM, Hiratzka LF, Jones DW, et al. AHA/ACCF Secondary Prevention and Risk Reduction Therapy for Patients with Coronary and other Atherosclerotic Vascular Disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. Circulation. 2011;124:2458–73.

2. O'Gara PT, Kushner FG, Ascheim DD, Casey DE Jr, Chung MK, de Lemos JA, Ettinger SM, Fang JC, Fesmire FM, Franklin BA, et al. 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;127:e362–425.

3. Mukherjee D, Fang J, Chetcuti S, Moscucci M, Kline-Rogers E, Eagle KA. Impact of combination evidence-based medical therapy on mortality in patients with acute coronary syndromes. Circulation. 2004;109:745–9.

4. Clark AM, Hartling L, Vandermeer B, McAlister FA. Meta-analysis: secondary prevention programs for patients with coronary artery disease. Ann Intern Med. 2005;143:659–72.

5. Shrank WH, Patrick AR, Brookhart MA. Healthy user and related biases in observational studies of preventive interventions: a primer for physicians. J Gen Intern Med. 2011;26:546–50.

6. Silverman SL, Gold DT. Healthy users, healthy adherers, and healthy behaviors? J Bone Miner Res. 2011;26:681–2.

7. Di Bartolomeo S, Marino M, Guastaroba P, Valent F, De Palma R. Self-controlled case-series study to verify the effect of adherence to Beta-blockers in secondary prevention of myocardial infarction. J Am Heart Assoc. 2015;4:e001575.

8. Lavikainen P, Helin-Salmivaara A, Eerola M, Fang G, Hartikainen J, Huupponen R, Korhonen MJ. Statin adherence and risk of acute cardiovascular events among women: a cohort study accounting for time-dependent confounding affected by previous adherence. BMJ Open. 2016;6:e011306.