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## KNOWLEDGE ON PREVENTION OF MYOCARDIAL INFARCTION AMONG HYPERTENSIVE PATIENTS IN A HOSPITAL OF BIRATNAGAR, NEPAL

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### **Abstract**

*Myocardial Infarction is an emergent situation characterized by an acute onset of myocardial ischemia that results in myocardial death in lack of prompt definitive interventions. Myocardial Infarction is one of the major complications of hypertension and although it is life-threatening yet it can be prevented. The aim of this study is to assess the level of knowledge on the prevention of Myocardial Infarction among hypertensive patients in a hospital in Biratnagar.*

*A descriptive cross-sectional study was conducted among hypertensive patients in Neuro Cardio and Multispecialty Hospital of Biratnagar. Non-probability purposive sampling method was used to select the sample. Data was collected among 101 hypertensive patients through an interview technique using self-developed, semi-structured interview schedule. Data analysis was done on SPSS version 20.0. Descriptive statistics i.e. frequency, mean and standard deviation, and inferential statistics i.e. chi-square test was used to find the association between dependent and independent variable.*

*The mean age of the respondents in this study was 56.93 while 62.4% of respondents were male whereas 36.6% of respondents were from Brahmin/Chhetri ethnic group and 67.3% followed Hinduism. Likewise, 49.5% of respondents had completed secondary level education. Similarly, 95% of the respondents identified eating low-fat diet as preventive measures moreover, the findings of this study revealed that 47.5% of respondents had moderate knowledge on the prevention of Myocardial Infarction whereas 46.5% had adequate knowledge while 6.0% of respondents had inadequate knowledge. This study showed that the association between the level of knowledge on the prevention of Myocardial Infarction and sex, education, and occupation was statistically significant. This study concluded that in majority of knowledge on the prevention of myocardial infarction was found to be moderate.*

**Keywords:** Knowledge, hypertension, Prevention, Myocardial infarction, Hypertensive patients

### **Introduction**

Myocardial infarction (MI) commonly known as heart attack and coronary occlusion is an emergent situation characterized by an acute onset of myocardial ischemia that results in myocardial death if definitive intervention not done promptly. In myocardial infarction, the area of the myocardium is permanently destroyed typically due to rupture of plaque and subsequent thrombus formation resulting in occlusion of the artery. In myocardial infarction, the infarction develops over minutes to hours other causes of myocardial infarction are vasospasm of the coronary artery, decreased oxygen supply resulting from acute blood loss anaemia and increase demand of oxygen. In the entire situation, there is an imbalance between the demand and supply of oxygen (Smeltzer, Bare, Hinkle & Cheever, 2011).

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Myocardial Infarction results from plaques made of fats and cholesterol. It occurs when a plaque ruptures suddenly and causes a rapid accumulation of clotting factors at the rupture site which leads to a sudden obstruction of blood flow in the coronary artery. The sudden obstruction prevents blood from reaching the heart muscle. The longer the obstruction persists; the greater the amount of heart muscle dies. Risk factors include high blood pressure, smoking, diabetes, lack of exercise, obesity, poor diet, and excessive alcohol intake (Shrestha & Kuria, 2012).

In 2016, non-communicable Disease (NCD) was one of the major causes of death globally which was 71%. The major NCD includes cardiovascular disease which caused 44% of non-communicable death which includes 17.9 million deaths and it was 31% of all global death. While hypertension is a major risk factor for Coronary heart disease, chronic kidney disease and stroke. Although in the majority of cases, causes of raised blood pressure are unknown the global NCD target is a 25% relative reduction in the prevalence of raised blood pressure by 2025 {World Health Organization (WHO), 2018}.

The incidence of myocardial infarction is in decreasing trend in industrialized nations while it is in increasing trend in south Asian countries. By 2030, an estimated 23.6 million people will die from the cardiovascular disease globally if current trends are allowed to continue. The modifiable risk factor represents over 90% of the risk for myocardial infarction (Jayaraj et al., 2018).

The Prevalence of coronary artery disease is alarming worldwide and the number of patients with this disease is expected to increase in Nepal also. A Study done in Eastern Nepal Showed that the prevalence of coronary artery disease was 5.7% (Karki, 2012).

Hypertension also known as high or raised blood pressure is a condition in which blood pressure is above 140/90 mm of Hg. It is regarded as silent, invisible killer disease which occurs with few symptoms in early stage. It contributes to burden of heart disease, stroke and kidney failure resulting in premature mortality and disability. The prevalence is commonly high in person who has other cardiovascular conditions including heart failure, coronary artery disease and having a history of stroke (WHO, 2013). In United States Cardiovascular disease is listed as underlying cause of death which causes one out of three deaths. In 2016, high blood pressure attributed 9.8 % of death in US and data from 2013-2016 showed that 46% of US adults had hypertension {American Heart Association (AHA), 2019}. In middle and low income countries hypertension is a major cardiovascular problem. As per study done in suburban area of Nepal showed that overall prevalence of hypertension was 28.9% while the prevalence increases with increasing age (Koju et al., 2010). Increased life span, insufficient physical activity, unhealthy diet, obesity etc. are the contributing factors for emerging hypertension as a worldwide public health problem. Hypertensive people have more risk for myocardial infarction, ischemia, hemorrhagic stroke, heart failure etc. As per report it has been found that 69% of individuals who suffered heart attack had blood pressure over 140/90 (Bayrak & Tosun, 2018).

Cardiovascular disease has now been recognized as a major public health issue in Nepal. The study on prevalence of non-communicable disease in Kathmandu in tertiary hospital found that in Nepal, non-communicable disease account for more than 44% of death and 80% of outpatient contact. Nearly one third of the population had hypertension and 40% disease among Outpatients was due to cardiovascular disease (Bhandari et al., 2014).

As per the study result in India, it was found that maximum participants i.e. 84.67% had poor level of knowledge while and only 15.33% had high knowledge level regarding prevention of coronary artery disease (Choudhary et al., 2014).

## Research Methodology

Descriptive cross-sectional research design was used to assess knowledge on prevention of Myocardial Infarction among hypertensive patients. The study was conducted among hypertensive patients attending Physician's Out Patient Department of Neuro Cardio and Multispecialty Hospital located in Jahada road Biratnagar-10. This hospital was started in 2057 B.S and is registered in Company Registration Office, Kathmandu and licensed by Ministry of Health, Government of Nepal. It is a multi-disciplinary hundred bedded hospitals which provides services to the people not only in Province 1 but also in the neighborhood of Northern Bengal and Bihar. This hospital has Neuro surgery (Neuro OT, ICU, Postoperative, Neurosurgery wards), stroke, Cardiac (Cath lab, CCU, Cardiac ward), Orthopedic, Emergency and Surgical inpatient departments. It has ENT, Ophthalmology, Neuro Medicine, Neurosurgery, Medical, Surgical, Cardiac, Dermatology, Radiology, Dental outpatient departments. Population: study populations were hypertensive patients both male and female previously diagnosed with hypertension for at least 6 months and more attending Physician's Out Patient Department of Neuro Cardio and Multispecialty Hospital. According to the hospital records there were 2600 patients who visited Physician's OPD and among them 260 were hypertensive patients who monthly visited medical OPD during the previous month. Sampling Method: sample was selected by non-probability purposive sampling method. Total sample size was 101 hypertensive patients attending Physician's OPD of Neuro Cardio and Multispecialty Hospital willing to participate in research and visited Physician's OPD during data collection period. Sample size will be calculated by following way;

Sample size (n) =  $z^2pq/d^2$  (Cochran, 1977) where,  $z= 1.96$  at 95% significance level,  $z^2 = 1.96^2 = 3.8416$ ;  $p=$  Taking knowledge on prevention of myocardial infarction among hypertensive patients as prevalence = 60.4% = 0.604 (Adhikari & Bhandari, 2017).  $q=1-p = 1-0.604 = 0.396$ ;  $d=$  Allowable error 10% = 10/100 = 0.1. Thus Sample Size = 91.8 including 10% as non-response (= 91.8 + 9.1) = 101.

**Inclusion Criteria:** patients who were diagnosed with hypertension for 6 months and above who were willing to participate, could provide clear information and were available at the time of data collection. Self developed, Semi structured interview schedule was used for face to face interview on the basis of objective of research after extensive review of literature and consulting with the subject experts. Tools were divided into 2 parts which included following: Part I: Socio-demographic information (age, sex, ethnicity, religion, education, occupation, residential area and duration of hypertension). Part II: Knowledge on Myocardial Infarction and its prevention. Knowledge score was calculated by 19 semi-structured questions among them each right answer carried 1 mark. In case of multiple responses each correct response carried 1 mark and the source of information did not carry any marks. There were 2 multiple choices, 10 multiple responses and 7 dichotomous (Yes/No) questions. Total knowledge questions carried 57 marks. The total score was then converted into percentage and was interpreted as follows: above 75% adequate knowledge level, 50-75% moderate knowledge level and below 50% low knowledge level. Content validity of the instrument was maintained by extensive literature review, consulting with research advisor, subject experts and physician expert consultation was done for the validation of the tool. Interview schedule was developed in English and translated in Nepali and again translated into English to validate the language and for grammatical error, Nepali and English teachers were consulted. Pretest was done on 10% (11 hypertensive patients) for corrective purpose in similar setting and this population was not included in data collection. According to the findings of the pretest, interview schedule was modified as per need.

**Ethical Consideration:** Ethical principle was maintained throughout the study. Approval for research study was taken from Research Management Committee of Biratnagar Nursing Campus.

After that written permission for the approval of data collection was taken from administrative department of Biratnagar Nursing Campus. Permission was taken from Administrative department of concerned hospital i.e. Neuro Cardio and Multispecialty Hospital for conducting study. Both written and verbal consent was taken from each respondent after explaining the purpose of the study. Privacy of the information of all respondents was maintained by taking interview in a closed space. Confidentiality of all the respondents was maintained throughout the research study. The information was used in research purpose only and was not disclosed. Respondents participated voluntarily without forcing them to involve in the study. They were given freedom to discontinue their participation at any point during the data collection period. Clarification about the study was given at any time before, during and after study.

The data was collected from 2 June, 2019 to 16 June 2019 among patients diagnosed with hypertension for 6 months and above. Researcher collected data herself by using pre-designed, pre-tested, semi-structured interview schedule. The respondents were explained about the nature and purpose of the study. Informed consent was taken before taking interview and 20-25 minutes was taken with each individual for interview. Data were checked for completeness and editing was done on the same day of data collection. Collected data was checked daily for its completeness and was organized properly. All the data was kept in order for editing and coding. Data processing was done by using Computer Statistical Package for the Social Science (SPSS). Descriptive analysis i.e. frequency, percentage, mean and standard deviation were used to assess the knowledge on prevention of Myocardial Infarction among hypertensive patients. Inferential analysis i.e. chi-square was used to find the association between dependent and independent variables. P- Value of  $<0.05$  was considered to indicate statistical significance at level of significance of 5%. The findings were presented on the relevant tabulated form.

## Result

Table 1 shows that among 101 respondents, 26.7% respondents were from 40-59 years and 50-59 years age group and 5% were 80 years above. Average mean age of the respondents was 56.93 and standard deviation 12.66. Regarding sex, more than half of the respondents (62.4%) were male. In religion, 36.6% respondents were Brahmin /Chhetri while 2.0% were dalit. Similarly, 67.3% followed Hinduism while 2% followed Christianity. Likewise, 49.5% of respondents completed their secondary level education while 3.0% of respondents had completed master's level education. Similarly, one third (33.7%) respondents were homemaker while 3% of the respondents were laborers and were abroad. Among the respondents, 73.3% were from urban area while remaining 26.7% were from rural area. Similarly, 78.2% were diagnosed with hypertension for less than 10 years. Table 2 represents more than half of the respondents (50.5%) answered Myocardial Infarction as decrease or stopping blood flow to a part of heart. In concern to source of information 64.4% stated television as a source of information while 8.9% of the respondents stated health worker as a source of information. Similarly, majority of respondents (82.2%) answered Myocardial Infarction is controllable and 36.6% stated it as irreversible condition. Table 3 illustrated that majority of respondents (92.1%) stated fatty food consumption as a risk factor while 49.5% stated heredity as a risk factor.

Similarly, 86.1% answered risk low in normal weighed and 83.2% stated that diabetes increases risk of MI. Likewise, majority (81.2%) responded chest pain as a major symptom and 33.7% responded that pain radiates to left arm, shoulder and jaw. Table 4 reflects that almost all (96%) stated low cholesterol diet as preventive measures and 95% answered low fatty diet as their dietary pattern. Similarly, almost all of the respondents (98%) answered physical exercise is needed while majority (89.9%) stated walking is needed. Similarly, more than half (60.6%) respondents stated exercise

is needed for at least 30 minutes a day for 5 days. Likewise, majority (83.2%) of the respondents answered sharing feelings as a measure to reduce stress while 75.2% answered meditation as a measure to reduce stress. Table 5 represents that almost all (98%) stated that it is necessary to monitor blood pressure. Likewise, majority of the respondents (85.1%) stated physical examination as a diagnostic measure while 22.8% identified coronary angiography as a diagnostic measure for Myocardial Infarction. Similarly, almost all (99%) responded medication as a treatment measure. Likewise, 96% respondents answered that complications occur if Myocardial Infarction is not treated. Table 6 depicts level of knowledge where 47.5% respondents had moderate knowledge on prevention of Myocardial Infarction whereas 46.5% had adequate knowledge while 6.0% respondents had inadequate knowledge respectively. Table 7 represents that level of knowledge has association with sex ( $p = 0.002$ ), education ( $p = 0.000$ ) and occupation ( $p = 0.000$ ) which is less than 0.05 and there was no association with other socio demographic variables. In ethnicity others includes Dalit, Madheshi, and Muslim while in religion others includes Buddhism, Kiratism, Christianity and Islam. In education primary includes informal education and primary level and Secondary includes secondary level, bachelor level and master's level. In occupation service includes service, abroad, retired and daily wages while non-service includes home maker and agriculture.

**TABLE 1: Socio-demographic Characteristics of Respondents**

n=101

Variables	Frequency (f)	Percentage (%)
<b>Age (In Completed years)</b>		
30-39	8	7.9
40-49	21	20.8
50-59	27	26.7
60-69	27	26.7
70-79	13	12.9
≥ 80	5	5.0
<b>Mean ± SD 56.93 ± 12.66</b>		
<b>Sex</b>		
Male	63	62.4
Female	38	37.6
<b>Ethnicity</b>		
Dalit	2	2.0
Janajati	36	35.6
Madheshi	18	17.8
Muslim	8	7.9
Bramhin /Chhetri	37	36.6
<b>Religion</b>		
Hinduism	68	67.3
Kiratism	14	13.9
Buddhism	9	8.9
Islam	8	7.9
Christianity	2	2.0
<b>Education</b>		
Illiterate	16	15.8

Informal education	13	12.8
Primary level	14	13.9
Secondary level	50	49.5
Bachelors level	5	5.0
Masters level	3	3.0
<b>Occupation</b>		
Homemaker	34	33.7
Agriculture	26	25.7
Service	17	16.8
Business	14	13.5
Retired	4	4.0
Labour	3	3.0
Abroad	3	3.0
<b>Residential Area</b>		
Urban	74	73.3
Rural	27	26.7
<b>Duration of Hypertension (In years)</b>		
< 10		
≥ 10	22	21.8

Table 2: Knowledge on Myocardial Infarction

n=101

Variables	Frequency (f)	Percentage (%)
<b>Meaning of Myocardial Infarction</b>		
Decrease or stopping blood flow to a part of heart	51	50.5
Excessive blood flow to a part of heart	45	44.5
Normal blood flow to a part of heart	4	4.0
Backflow of blood to a part of heart	1	1.0
<b>Source of Information*</b>		
Television	65	64.4
Radio	56	55.4
Newspaper	30	29.7
Internet	21	20.8
Friends	18	17.8
Health Workers	9	8.9
<b>Nature of disease*</b>		
Controllable	83	82.2
Curable	66	65.3
Recurrent	55	54.5
Irreversible	37	36.6

\*Multiple response questions: each response is considered as 100%

**Table 3 Knowledge on Risk Factors and Sign and Symptoms of Myocardial Infarction****n=101**

Variables	Frequency (f)	Percentage (%)
<b>Risk Factors of Myocardial infarction*</b>		
Fatty food consumption	93	92.1
High blood pressure	86	85.1
Smoking	85	84.2
Alcohol	83	82.2
High Cholesterol	80	79.2
Stress	77	76.2
Obesity	76	75.2
Lack of exercise	69	68.3
Increasing age	60	59.4
Hereditary	50	49.5
<b>Diabetes increases risk of Myocardial Infarction</b>		
Yes	84	83.2
No	17	16.8
<b>Risk low in normal weight</b>		
Yes	87	86.1
No	14	13.9
<b>Sign and symptoms*</b>		
Chest pain	82	81.2
Fainting	80	79.2
Dizziness	75	74.3
Shortness of breathe	73	72.3
Cold sweating	67	66.3
Nausea and vomiting	45	44.6
Asymptomatic	39	38.6
Pain radiating to left arm, shoulder and jaw	34	33.7

*\*Multiple response questions: each response is considered as 100%.*

**Table 4: Knowledge on Prevention of Myocardial Infarction****n=101**

Variables	Frequency (f)	Percentage (%)
<b>Preventive measures*</b>		
Eating low cholesterol diet	97	96.0

Blood pressure regulation	95	94.1
Regular check up	92	91.1
Quitting smoking	89	88.1
Avoiding stress	83	82.3
Avoiding alcohol	81	80.2
Regular exercise	65	64.4
Maintaining weight	63	62.4
<b>Dietary Pattern*</b>		
Less fatty diet	96	95.0
More fruits and vegetables	91	90.1
Low salt diet	77	76.2
High fiber diet	63	62.4
Red meat	36	35.6
Junk and sweet foods	18	17.8
<b>Physical exercise</b>		
Yes	99	98.0
No	2	2.0
<b>Type of exercise*( n= 99)</b>		
Walking	89	89.9
Jogging	87	87.9
Yoga	54	54.5
Cycling	48	48.5
<b>Minimum days and duration of exercise (n= 99)</b>		
At least 30 minutes a day for 5 days	60	60.6
At least 30 minutes a day for 4 days	23	23.2
At least 30 minutes a day for 2 days	16	16.2
<b>Measures to reduce stress*</b>		
Sharing feelings	84	83.2
Spending time with family	80	79.2
Exercise	76	75.2
Meditation		75.2

*\*Multiple response questions: each response is considered as 100%.*

**Table 5: Knowledge on Diagnosis, Treatment and Complication of Myocardial Infarction n=101**

Variables	Frequency (f)	Percentage (%)
<b>Necessary to check blood pressure</b>		
Yes	99	98.0
No	2	2.0
<b>Diagnosis of Myocardial Infarction*</b>		
Physical examination	86	85.1
Blood test	83	82.2
Assessing sign and symptoms	69	68.3



Electrocardiogram	60	59.4
Echocardiography	40	39.6
Coronary angiography	23	22.8
<b>Treatment measures*</b>		
Medication	100	99.0
Surgery	54	53.5
<b>Complication occurs if MI not treated</b>		
Yes	97	96.0
No	4	4.0

\*Multiple response questions: each response is considered as 100%.

**Table 6: Level of knowledge on Prevention of Myocardial Infarction**

**n=101**

Knowledge level	Frequency (f)	Percentage (%)
Adequate level	47	46.5
Moderate level	48	47.5
Inadequate level	6	6.0

**TABLE 7: Association between Level of Knowledge and Selected Demographic Variables**

**n=101**

Variables	Level of Knowledge			p-value ( $\chi^2$ )
	Inadequate f (%)	Moderate f (%)	Adequate f (%)	
<b>Age</b>				
<55	2 (2.0)	18 (17.8)	28 (27.7)	0.076
≥ 55	4 (4.0)	30 (29.7)	19 (18.8)	
<b>Sex</b>				
Male	1 (1.0)	25(24.8)	37 (36.6)	<b>0.002*</b>
Female	5 (5.0)	23 (22.8)	10 (9.9)	
<b>Ethnicity</b>				
Brahmin/ Chhetri	1 (1.0)	17 (16.8)	19 (18.8)	0.233
Janajati	1 (1.0)	17 (16.8)	18(17.8)	
Others <sup>a</sup>	4 (4.0)	14 (13.9)	10 (9.9)	
<b>Religion</b>				
Hinduism	3 (3.0)	33 (32.7)	32 (31.7)	0.646
Others <sup>b</sup>	3 (3.0)	15(14.9)	15 (14.9)	
<b>Education</b>				
Illiterate	5 (5.0)	10 (9.9)	1 (1.0)	<b>0.000*</b>
Primary <sup>c</sup>	0 (0.0)	23(22.8 )	4 (4.0)	

Secondary <sup>d</sup>	1 (1.0)	15 (14.9)	42 (41.6)	
<b>Occupation</b>				
Service <sup>e</sup>	0 (0.0)	5 (5.0)	22 (21.8)	<b>0.000*</b>
Non service <sup>f</sup>	5 (5.0)	38(37.6)	17 (16.8)	
Business	1 (1.0)	5 (5.0)	8 (7.9)	
<b>Residential area</b>				
Urban	5 (5.0)	34 (33.7)	35 (34.7)	0.783
Rural	1 (1.0)	14 (13.9)	12(11.9)	

*\*p value Significant i.e. <0.05,  $\chi^2$ =association using chi- square; Others<sup>a</sup>includes Dalit, Madheshi, Muslim; Others<sup>b</sup> includes Buddhism, Kiratism, Christianity and Islam*

*Primary <sup>e</sup> includes informal education and primary level; Secondary<sup>d</sup> includes secondary level, bachelor level and master's level; Service <sup>e</sup> includes service, abroad, retired and daily wages; Non service includes home maker and agriculture.*

## Discussion

In this study demographic finding revealed that among 101 respondents mean age was 56.93 which is similar to the findings of a descriptive cross sectional study conducted in Turkey among 234 participants which showed that the mean age of respondents was 55.58. Similarly, in this study 33.7% respondents were homemaker which is similar to the same study in which 45.7% were housewife (Bayrak & Tosun, 2018). This study revealed that 62.4% of the respondents were Male which is similar to the study finding of Sahid Gangalal National Heart Centre in which 56.3% participants were male. Similarly, in this study 84.2% of the respondents were literate and 15.8% were illiterate which is similar to the same study in which 86% of participants were literate and 13% were illiterate. The findings may be similar due to similarity in education level of respondents (Adhikari & Bhandari, 2017). Similarly, the finding of this study depicts that majority of respondents (67.3%) followed Hinduism and 73.3% were from urban area which is similar to the study conducted in Kathmandu, Nepal in which 79.2% of participants followed Hinduism and 79.2% were from urban setting. Similarly in this study 36.6% of the participants were Brahmin/ Chhetri which is similar to the same study in which 46.5% of the participants were Brahmin/ Chhetri (Dahal & Karki, 2017).

In the study conducted on knowledge and practice regarding prevention among participants in Sahid Gangalal National Heart Centre where 38.6% identified myocardial infarction as controllable which differs from the result of this study which reveals that 82.2% respondents identified myocardial infarction as controllable condition. The difference in study findings may be due to difference in study population i.e. their study population was visitors (Dahal & Karki, 2017). In terms of risk factors of myocardial infarction 79.2% respondents in this study stated high cholesterol as a risk of myocardial infarction which is supported by the study conducted on the title Determination of nursing activities for prevention of heart attack and stroke which showed 67.9% stated high cholesterol as a risk factor for heart attack (Bayrak & Tosun, 2018). Similarly, in this study 91.1% stated that regular check-up for hypertension helps to prevent myocardial infarction which is supported by study finding in Turkey in which 89.3% stated the same response which was done among 234 hypertensive patients on title Determination of Nursing activities for prevention of heart attack and stroke (Bayrak & Tosun, 2018). In term of sign and symptoms, in this study 81.2% stated chest pain as a major symptom of myocardial infarction which is similar to the study done among participants

in England on title Public knowledge on symptoms of Myocardial Infarction where 75% stated chest pain as a major symptom followed by arm pain or numbness (Whitaker et al., 2012). In this study, 95% stated less fatty diet as a preventive foods followed by more fruits and vegetables which is supported by a study conducted in title knowledge and practice regarding prevention of myocardial infarction among participants of Sahid Gangalal National Heart Centre in which 94.1% stated low fatty diet and more fruits and vegetables as a preventive food (Dahal & Karki, 2017). Similarly, in this study 98% stated that it is necessary to check blood pressure which supports the study done in Gangalal National Heart Centre in Kathmandu, Nepal where 100% stated that it is necessary to check blood pressure (Dahal & Karki, 2017). The findings of this study revealed that 47.5% of the respondents had moderate knowledge level which is similar to the study conducted in Kathmandu, Nepal in which 62.4% respondents had moderate knowledge on prevention of myocardial infarction. The findings may be similar due to the similarity in the setting i.e. hospital and in both studies most of the respondents had education of secondary level and above (Dahal & Karki, 2017).

This study revealed that level of knowledge is statistically associated with sex ( $p=0.002$ ). The level of knowledge is also associated with education of the respondents ( $p=0.000$ ) which corresponds with the study conducted on title Knowledge and Practice on Prevention of Myocardial Infarction among Hypertensive patients in Kathmandu Nepal. There is no significant association with age, ethnicity, religion and residential area which is similar to the same study (Adhikari & Bhandari, 2017). The current study showed that the level of knowledge is statistically associated with occupation of the respondents ( $p=0.000$ ) which corresponds with the study conducted in Sahid Gangalal National Heart Centre in Kathmandu, Nepal (Dahal & Karki, 2017).

## Conclusion

The finding of this study concludes that about half of the hypertensive patients had moderate knowledge on prevention of Myocardial Infarction and furthermore there was association of level of knowledge with sex, education and occupation.

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