SUMMARY

Cardiovascular diseases exert a huge burden on individuals and society. An estimated 17.5 million people died from cardiovascular disease in 2005, representing 30% of all global death. Of these deaths, 7.6 million were due to heart attacks . Around 80% of those deaths occurred in low-and middle-income countries. If appropriate action is not taken, by 2015, an estimated 20 million people will die from cardiovascular disease every year, mainly from heart attacks.

Acute myocardial infarction (heart attack) is a life-threatening condition characterized by the formation of localized necrotic areas within the myocardium. Myocardial infarction is one of the most common life threatening diagnoses in hospital admissions. Most of the complications occur during the first few hours while the patients are likely to be in the hospital. Although the mortality rate after admission for myocardial infarction has declined significantly over the last two decades but it still remains high. Survival is markedly influenced by age of the patient, presence of different risk factors and complications that patients develop after myocardial infarction ***(Shabbir et al., 2008).***

The importance of saving time to reduce deaths from AMI has resulted in the development of standards of care from professional societies and governments in many countries ***(British Heart Foundation 2004)***. The National Service framework (NSF) for Coronary Heart Disease sets national standards called clinical pathway for improved prevention and treatment ***(Department of Health (DH), 2000).***

Clinical pathway is an innovative way to simultaneously modify healthcare delivery, uphold standards of care, and reduce healthcare costs. The clinical pathway oversees the patient's condition, progress, and consumption of resources. The goal of this regulation is to produce outcomes that serve the patient and the healthcare system. If all variances are not considered, then the quality of care is hindered, rehospitalization occurs, and the goals of the clinical pathways are not achieved. Therefore, effective use of clinical pathways involves flexible

guidelines, maintains focus on outcomes, enhances efficiency, increases cost-effectiveness, and retains a high quality of patient care ***(Miller, Ryan, & York, 2005).***

The present study aimed to ; 1) design a nursing clinical pathway for newly admitted patients with acute myocardial infarction, 2) implement the designed nursing clinical pathway and) evaluate its impact on patients outcome as indicated by the occurrence of complications, length of stay, compliance to therapeutic regimen, and patient satisfaction among the study sample at Critical Care Department, Benha University Hospitals.

To fulfill the aim of this study the following research hypotheses are formulated:

H1- The total mean knowledge scores of the acute myocardial infarction patients who are exposed to the designed nursing clinical pathway guidelines will be higher than those of the control group.

H2- The total mean practice scores of the acute myocardial infarction patients who are exposed to the designed nursing clinical pathway guidelines will be higher than those of the control group.

H3- The total mean compliance scores of the acute myocardial infarction patients who are exposed to the designed nursing clinical pathway guidelines will be higher than those of the control group.

H4- Patients with acute myocardial infarction who are exposed to nursing clinical pathway guidelines (study group) will have less hospital stay than patients who will receive the routine nursing care only (control group).

H5- The frequency of post acute myocardial infarction complications among study group subjects will be lower than that among control group ones.

Quasi experimental time series research design will be utilized in this study. A convenient sample of 60 adult male and female patients admitted to CCU with acute myocardial infarction will be included in the current study. The sample will

be randomly assigned then divided equally into two homogeneous groups, study and control groups (30 subjects each). Matching will be done according to age, education& gender, co morbidity diseases and diagnosis.

The study was conducted at the Critical Care department , Benha University Hospital, along a period of sixteen months from (August 2007 to December 2008).

The following tools were utilized for data collections; 1) Socio demographic and medical data sheet, 2) Pre-post knowledge questionnaire sheet, 3) Observational checklist, 4) Complication assessment sheet, 5)Compliance assessment sheet, 6) Patient satisfaction survey questionnaires.7) variance tracking assessment sheet.

The study was carried out on two phases: preparatory phase, implementation and evaluation phase. The preparatory phase was concerned with managerial arrangements in addition to construction and preparation of different data collection tools and designing the nursing clinical pathway. The implementation and evaluation phase was concerned with assessment of patient condition by utilizing different study tools and utilization of nursing clinical pathway then evaluating patient's outcomes through presence of any complications, hospital length of stay, extent of compliance, as well as patient satisfaction.

Calculations were made manually. The numbers, percentages, mean & standard deviation, t- test, Chi square test and repeated measures of ANOVA were used to test research hypotheses.

The main findings of this study were :

The majority of both study and control groups were respectively male (73.3% & 70%,), married (83.3% & 80%, respectively), illiterate (50 % & 50%), their age above 50 years old (53.3 % & 46.7 %). As regard to occupation, it was found more than one third (33.3%) of both groups were retired. Their family size

(76.7% & 56.7%) ranged between 4 and 6 members with a mean number of (6 ± 1.1 & 7 ± 2).

In relation to medical history, the majority of both groups respectively have a medical history of diabetes mellitus (50% & 53.3 %), hypertension (36.7 %& 43.3%,), Ischemic heart disease (36.7 % & 43.3 %).

The first hypothesis can be supported, it was found that, an unsatisfactory knowledge level among 100 % of both study and control group subjects pre-nursing clinical pathway implementation. However , immediately post nursing clinical pathway implementation less than half (46.7 %) of the study group subjects compared to (100 %)of control ones got an unsatisfactory knowledge level with an increment to (80%) of study group compared to (100%) of control ones. A significant statistical differences was put into evidence between the two groups at p- value = 0.001).

The second hypothesis can be supported, it was found that, an unsatisfactory practice level among 100 % of both study and control group subjects pre- nursing clinical pathway implementation. However , immediately post nursing clinical pathway implementation less than half (43.3 %) of the study group subjects compared to (100 %)of control ones got an unsatisfactory practice level with an increment to (83.3%) of study group compared to (100%) of control ones. A significant statistical differences was put into evidence between the two groups at p- value = 0.001).

The third hypothesis can be supported, it was found that, an unsatisfactory compliance level among (83 % & 86.7%, respectively) of both study and control group subjects pre- nursing clinical pathway implementation. However , immediately post nursing clinical pathway implementation (6.7 %) of the study group subjects compared to (80 %)of control ones got an unsatisfactory compliance level with an increment to (20 %, 33.3 %) of the study group subjects compared to (90% , 93.3%) of control ones by the end of the first and third month

post nursing clinical pathway implementation. A significant statistical differences was put into evidence between the two groups at p- value = 0.001).

The fourth hypothesis can be supported, the study finding revealed that the majority (93. 3%) of study group subjects compared to (26.7%) of the control group subjects stayed between five to seven days. A high significant statistical difference were found between the two groups with the following t & p values 18.044, p = 0.001.

The fifth hypothesis can be supported, it was found that (46.6%, 26.7 %, 20%) of the study group subjects developed complications all through the study periods as compared to (70%, 56.6%,46.6%) of the control ones. A significant statistical differences was put into evidence between the two groups with x2 = 7.84 at p- value = 0.001).

Regarding patient's satisfaction, nearly three quarters (70% & 76.7%,respectively) of both study and control group subjects were having unsatisfactory scores before nursing clinical pathway implementation. However , immediately post nursing clinical pathway implementation, less than one fourth (16.7%) of the study group subjects compared to (66.7%) of the control group subjects got an unsatisfactory level .A significant statistical differences was put into evidence between the two groups with x2 = 17.20 at p- value = 0.001).

As regards to variance analysis, it was found that, (16.6%, 16.6%, 10%,16.6%,16.6%) of the study group subjects compared to (10%,10%,6.7%,3.3%,13.3%) of control group ones were having positive variances related to patient, physician, hospital , nursing and hospital discharge. Also, (30%,26.6% , 56.6%,13.3%,43.3%) of the study group subjects compared to (56.6%,36.6%,50%,43.3%,53.3%) of control group ones were having negative variances related to patient, physician, hospital , nursing and hospital discharge. A significant statistical differences was put into evidence between the two groups except related to hospital and hospital discharge variances.

Regarding to co relational and additional findings, it was found that, male, single, employee with a university education of the study group subjects obtained a high knowledge, practice and compliance mean scores as compared to the control group ones through the three assessment periods. A high significant statistical differences was found at $p = 0.001$.

Age is positively correlated with knowledge, practice, compliance, and satisfaction among all assessment periods after nursing clinical pathway guidelines implementation with p–values < 0.001.

Moreover, the results revealed that income is negatively correlated with knowledge, practice, compliance and satisfaction scores of study group subjects all through the different assessment periods after nursing clinical pathway guidelines implementation with p – values of > 0.05 .