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Health Care Professionals' Knowledge Regarding Sexual Counseling of Post-MI Patients

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Abstract

Aims and Objectives: The aim of the study was to conduct a systematic review of the literature to understand the level of knowledge among Health Care Professionals (HCPs) regarding sexual counseling of post MI patients.

Background: HCP's role in provision of sexual counseling is essential in many chronic diseases; however, its significance increases in instances of Myocardial Infarction (MI).

Methods: A systematic computer search of qualitative and quantitative studies that examined the knowledge of HCPs regarding sexual counseling from 2000-2017 was performed.

Results: Studies (n=22) qualitative and quantitative address the phenomenon of interest i.e. HCP's role in sexual counseling of Post MI patients.

Conclusion: Findings from existing studies revealed that there is a lack of knowledge among HCP's regarding sexual counseling. Therefore, interventional studies are required to improve the level of knowledge.

Clinical Implications: Sexual counseling is a vital role performed by HCP's. It is essential to implement this learnt knowledge into practice as discussing sexuality with patients has always remained a sensitive issue.

Keywords: Health care professional; Sexual counseling; Post myocardial infarction

Introduction

Cardiovascular Disease (CVD) is one of the most prevalent among non- communicable diseases worldwide. According to American Heart Association statistics update [1]. (2015) 17.3 million people die due to cardiac diseases globally. One in every three individual dies due to CVD in America [2]. CVD is the only contributor of high mortality rate among different countries. Under the umbrella of CVD, comes Myocardial Infarction (MI) which is growing at a high rate in our population. In developing countries non- communicable diseases have gradually become the leading cause of high mortality rate. Several important considerations are to be made in the post MI period; for instance, a lot of life style modifications are to be made to prevent recurrence of infarction. One of the areas which often remain neglected by health care providers is to counsel patients about resumption of sexual activity after MI. Patients usually believe on myths and misconceptions and live with

fears that resumption of sexual activity might lead them to another MI. A study conducted on American population found that sexual activity was a contributor to MI in only 0.9% participants [3].

Although the risk of getting MI after sexual activity is quite low but this area needs to be addressed as its negligence affects the patients' overall quality of life. Its significance is also recognized by World Health Organization (2006) by viewing it as a crucial and important part of human life. The purpose of this article was to critically review the literature on health care professionals' knowledge regarding sexual counseling of Post MI patients. No such systematic review appears to have been previously conducted.

Aim

The aim of the study was to conduct a systematic review of the literature to understand the level of knowledge among cardiac health care professionals regarding sexual counseling of post MI patients.

Methods

A systematic and comprehensive literature search was conducted to identify the relevant literature. Various databases were used to search for relevant articles; these were PubMed, CINHAL Plus and Science Direct. The key terms used were "Sexuality AND role of nurses", "Sexuality AND myocardial infarction", "Cardiac nursing AND sexual counseling." Another literature search strategy was manual search of articles, whereby Aga Khan University hospital periodicals were explored for the journals most likely to publish articles related to the research topic. Ancestry approach was also followed and citations from the searched articles were used to track down other research on the similar topic (Table 1).

Published between 2008-2017	Published prior to 2008
Published in English language	Published in language other than English
Primary research article or	Articles other than primary
thesis	research article or thesis

Table 1: Inclusion and exclusion criteria.

- **Summary of the Reviewed Articles**

Study	Aim	Sample	Method	Major findings	Strengths and limitations
Akinci, C, A. (2011).	Determine the comfort levels of nurses and factors affecting their comfort levels during clinical experiences which include sexual topics.	141 nurses who work at the medical or surgical units.	Quantitative, descriptive study	Nurses are uncomfortable in taking care of patients who engaged in sexuality related activities, informing male patients who experience erectile dysfunction during intercourse on sexual life, examining the genital organs of male patients, asking male patients about their sexual life, and answering the questions of male patients about sexuality.	Majority of the nurses in this study were female.
Barnason, S., Steinke, E., and Mosack, V. (2011) USA	Examine the differences between outpatient cardiac rehabilitation (CR) and acute care nurses perceived barriers and clinical practices of providing sexual counseling for myocardial infarction patients.	320 nurses, 81 CR nurses, 239 acute care nurses	Non-experimental descriptive, comparative research design	CR nurses had significantly higher levels of role responsibility ($P < .05$) and implementation of sexual counseling in clinical practice ($P < .0001$).	Findings are not generalizable beyond this sample, Biases due to convenient sampling, fewer CR nurses in comparison to acute care nurses.

Djurović A, et al. (2010). Serbia [4].	To assess knowledge on sexual rehabilitation, inner sense during conversation on sexual rehabilitation and quality of sexual life in patients with myocardial infarction (MI) and bypass surgery (BPS).	40 participants: ten patients, six partners and twenty-four medical staff members.	Prospective non-randomized clinical study	A statistically significant difference among the participants regarding an attitude when sexual activity should be resumed after MI.	Resistance was found from nurses' side in filling out the questionnaire.
Doherty, S., Byrne, M., Murphy, A. W & McGee, H. M. (2010). Ireland	To document current practice and assess the needs of cardiac rehabilitation service providers in Ireland with regard to sexual assessment and management for patients.	60 cardiac rehabilitation staff	A questionnaire was posted to all relevant staff in Ireland working in cardiac rehabilitation department.	Staff reported lack of assessment and counseling protocols, overall lack of confidence, knowledge and training.	Response rate was adequate as wide range of staffs were included.
Gossens, E et al. (2011). Denmark	Investigated the impact of culture on four areas by surveying cardiovascular Nurses' live in Denmark, Norway and two regions of Belgium – Flanders.	819 participants were recruited as they attended cardiovascular nursing congresses in Denmark, Norway and Belgium.	Cross-sectional descriptive study	Danish nurses counseled patients significantly more often, reported feeling more responsibility and confidence and estimated more comfort in patients than Norwegian, Flemish and Walloon nurses.	Biases within cross cultural perspectives.
Ivarsson, B., Fridlund, B., & Sjoberg, T. (2010).	To describe health professionals' attitudes towards sexual information for patients at coronary care units following an MI	HCP's representing 18 Swedish coronary care units	Explorative and qualitative design, based on the qualitative content analysis inspired by Burnard (1996).	Two main categories as difficulty and challenges and future needs have been identified.	Only small numbers of Swedish coronary care units were taken in study.
Ivarsson, B., Fridlund, B., & Sjoberg, T. (2009). Sweden	To obtain knowledge on the information provided by cardiac health care professionals on the subject of sexual function and coexistence after an MI.	121 coronary care units.	Quantitative, descriptive survey method.	Demonstrates that sexual function and the possible consequences for a relationship after an MI received little attention in practice.	-

Jaarsma, T et al. (2010).	To study the practice, responsibility and confidence of cardiac nurses in the sexual Counselling of these patients.	157 cardiovascular nurses.	Descriptive, survey design.	Approximately one in 10 nurses frequently assessed clients' sexual health (11%), frequently taught about the effect of cardiac medications on sexual functioning (7%), frequently answered clients' questions about sexuality (10%) and frequently listened to clients' concerns about sexuality (11%).	Generalizability of the study results.
Morimoto, M. (2011).	To demonstrate whether or not an education session increased the comfort and preparedness of nurses with respect to discussing sexual resumption with patients who had suffered a myocardial infarction.	37 nurses.	Quantitative, descriptive design.	Evaluation of scores Showed that participants did increase their knowledge regarding sexual resumption.	Sample size was too small to be significant. Teaching during the lunch half-hour of telemetry nurses in a 12-hour shift was not an ideal learning environment.
Mosack, V., & Steinke, E. (2009).	Examine trends in sexual concerns of patients with MI and patterns of sexual concerns in early, middle, and later recovery periods.	Archival data collected at 3 intervals between 1995 and 2002.	Qualitative.	Patients with MI are seeking information on resuming sexual activity, and they expect healthcare professionals to provide this Information.	Useful information from other regions and comments from partners of patients with MI is lacking.
Ozdemir, L., & Akhdemir, N. (2008).	To determine nurses' knowledge and practice involving patients' resuming sexual activity following myocardial infarction.	108 cardiac nurses.	Quantitative, descriptive study.	The findings indicated that almost all the nurses (99.4%) did not provide sexual education to post-MI patients due to a lack of knowledge and skill and their perception that sexual issues belong to a patient's private domain.	-
Purabuli, B., Foruzi, A., & Alizadeh, M. (2010).	To analyze the knowledge of nurses about sexual activities and also their attitude about educating this to MI patients and their spouses.	300 nurses of heart wards from hospitals of Kerman University of Medical Sciences.	Analytical, cross sectional study.	The mean total score of knowledge of nurses was 11.26 ± 6.4 and the mean total attitude score was 68±10.9. Studied nurses were acquired 54% of the total score of knowledge and 76% of the total score of attitude. Correlation between the total score of knowledge and attitude showed a significant Positive relationship (p=0.0001; r=0.66).	-

Saunamaki, N., Andersson, M., & Engstrom, M. (2010).	Nurses attitude and beliefs towards discussing sexuality with patients.	100 Swedish nurses	Correlative and comparative design	90% nurses understood that disease and treatment affect sexuality. 80% did not take time to discuss sexual concerns. 60% did not feel confident in their ability to address patients' sexual concerns.	-
Steinke, E., Barnason, S., & Mosack, V. (2011).	To examine the differences between outpatient cardiac rehabilitation (CR) and acute care nurses perceived barriers and clinical practices of providing sexual counseling for myocardial infarction patients.	Total of 320 nurses (81 CR nurses, 239 acute care nurses)	Nonexperimental descriptive, comparative research design.	Findings bring to light the need to address the gap in practice to meet the perceived unmet needs of patients regarding their concerns of sexual functioning while hospitalized and for those patients who may not enroll in CR after hospital discharge.	-
Steinke, E., Mosack,V., Hertzog, J., & Wright, D. (2012) [5].	Examine return to post MI sexual activity and pilot tested a comprehensive tool based on social c ognitive theory.	10 cardiac patients and 3 partners	The intervention in this pretest/ post test experimental study used an informational video, newsletters, and telephone.	At 8 weeks, only 60% had returned to sexual activity, with low QOL and sexual satisfaction for patients and partners.	Although it was an interventional study but the sample size was too small.
Sung and Lin. (2012). Taiwan [6]	Evaluate the effectiveness of the sexual healthcare education on nursing students' knowledge, attitude, and self efficacy related to sexual healthcare.	95 participants in both control and experimental group	Quantitative quasi-experimental design	The results revealed that the students in the experimental group showed significant improvements over those in the control group on knowledge (β=−0.27, P= 0.001), attitude (β=−0.38, P (0.001), and self-efficacy (β=−0.90, P (0.001).	Assessments for interventional group, small sample size, convenient sampling, generalizability.
Vassiliadou, A et al. (2008). [7]	To investigate practices and Greek nurses' knowledge, comfort, ease, responsibility and practical application of sexual counseling among post-infarction patients.	203 nurses who attended Greek cardiology conference.	Quantitative	84.8% nurses agreed that sexual counseling is a part of nursing care. Only 20.7% said that nurses do in fact undertake sexual counseling and although 39.1% said that they carry it out themselves.	-
Yildiz, H., & Dereli, E. (2011). Turkey	Determine the views and attitudes of nurses on sexual Counseling.	103 nurses at university hospital	Quantitative	Findings indicate that a very small portion of nurses see sexual counseling as a part of nursing care and fewer yet feel responsible to Provide such counseling.	1 study setting, findings could not be generalized, ERC approval and content validity and reliability.

Results

Concept of Sexuality in Relation to MI

The concept of sexuality in relation to MI is quite new; it has been explored only since mid-1980s. This has been explained in various studies Crumlish, 2004; [8-10]. Sexual health includes social, emotional, mental and physical wellness in relation to sexuality.

Sexual Counseling is defined as an interactive process to support patients in the adjustments of sexual practice Morimoto, 2011. The reviewed literature has considered sexual counseling as an essential responsibility to be performed by the HCPs, in order to maintain quality of life and well-being of the patients after an acute cardiac event 23 Crumlish, 2004; [11-13] According to Katz (2007) the risk for post MI patients getting another cardiac event due to sexual activity is 20 in a million, which is quite low. Therefore, it is important to aware patients that the risk of getting a recurrent MI because of sexual activity is quite low, so that they may resume sexual activity as per physicians' advice without any fears [14]. Also, sexual counseling must include the effects of cardiac drugs on patients' sexual performance.

Effects of Cardiac Drugs on Sexual Performance

Literature explains the effects of cardiac medications on sexual activity of the patients who consume these medications. Commonly used drugs such as Beta blockers, Angiotensin-Converting Enzyme Inhibitors (ACE-I), calcium channel blockers, diuretics and some statins, may raise sexual concerns [15]. Empirical literature reports that thiazide diuretics and beta blockers cause erectile dysfunction in male patients [16]. Beta-blockers were frequently suggested to be associated with impairment of sexual desire, libido and especially erectile dysfunction. (Baumhakel et al, 2011). [17] reported that nurses in recent years are more knowledgeable about the side effects of cardiac medications on sexual activity of the patients ($P < .0001$); nurses are also reported to be knowledgeable about using medications such as nitroglycerin if chest pain occurs during sexual activity ($p < .0001$).

The findings from a study conducted in Turkey reported that 76.9% nurses were unaware about the adverse effects of drugs on sexual function, and none of them provided information to their patients regarding side effects of cardiac medications, that they were using [18]. Similarly, Jaarsma et al. (2010) concluded that only 7% patients were ever taught about the effect of cardiac medications on sexual health.

The Risk of MI Triggered by Sexual Activity

Theoretical literature by Katz (2009) revealed that the hazard period of elevated risk for recurrent MI is two hours after sexual activity. It also depends on the energy expenditure which is measured by Metabolic Equivalents (METs). Sexual activity requires energy same as mild to moderate intensity exercises. However, if the patients have fear or anxiety, blood pressure and heart rate may increase, eventually leading to cardiac event. Sexual activity is mostly triggered by increased sympathetic response; high blood pressure, increased heart rate, platelet aggregation and vasodilatation [15]. Sexual activity in most post-MI patients is associated with a low risk of cardiac complications, and coital death among post-MI patients is rare [19]. [20] reported that the risk of MI after sexual activity is approximately 2.5 times more during the two-hour period following sexual activity. However, when the uncomplicated MI risk for society is measured, not all occurrences of post-coital MI should be attributed to sexual activity.

Recommendations for Sexual Counseling by American Heart Association/European Society of Cardiology

Post-MI sexual counseling for patients and partner is essential to help them resuming sexual activity after the cardiac event. HCPs need to balance the sensitivity of the topic with their knowledge, comfort and confidence level. It is recommended by American Heart Association and European society of cardiology to provide staff training related to sexual counseling, taking sexual history and communication techniques to overcome the sensitivity of the issue. The recommendations were mainly focused on patient counseling, age specific sexual specific sexual counseling, partner counseling, gender and sexual counseling. This scientific statement also provides recommendations for sexual assessment and strategies to provide sexual counseling. It also advises about disease specific sexual counseling needs of the patients [21].

The Need for Sexual Counseling

Understanding the need and knowledge for sexual counseling by HCPs is essential to improve their practice of sexual counseling. [22], conducted a study on American nurses and reported that 59% nurses understand that they have a responsibility to discuss patients' sexual concerns; however, they were found to believe that it's only needed in gynecology, post natal and mental health patients. A study conducted in Turkey by [23] complements the above results by concluding that 90.8% nurses understand that providing sexual education to the patients is a part of nurses' responsibility.

In contrary to the above studies, Ivarsson et al. (2011) reported that Swedish nurses thought that it is patients' responsibility to seek information if they have any concerns about resuming sexual activity after an episode of MI. Similarly, Jaarsma et al. (2010) reported that European nurses think that sexual counseling is only needed if patients initiate the discussion about it. Most of the literature suggests that it is HCPs responsibility to address sexual concerns of patients; however, continuing education to reinforce the need of assessment and education for sexual issues is of debatable value in reality.

Knowledge of HCPs Regarding Sexual Counseling

Knowledge about sexual issues, specifically after MI, is one of the important components for HCPs to learn, to be able to address patients' sexual concerns [24]. Research has been conducted in different parts of the world to assess HCPs' knowledge about sexual counseling. Ozdemir and Akhdemir (2008) conducted a study in Turkey; the study found that 99.4% nurses did not provide sexual counseling to their patients due to lack of appropriate knowledge to counsel patients. Similar study reported that 76.9% nurses were unaware about the specific side effects that cardiac drugs can cause on sexuality of patients. Lack of knowledge was striking in this study as only 1% nurses answered 9 out of 15 questions and 23.1% nurses were unable to answer any of the questions, correctly. The tool administered was totally based on knowledge related questions for e.g. what are the warning signs of myocardial infarction during sexual activity.

Moreover, another study conducted in Turkey concluded similar results. In that study, nurses reported that the lack of appropriate knowledge is the main hindrance in providing sexual counseling [18]. Barnasson, Steinke and Mosack (2011) conducted a comparative study in USA with cardiac rehabilitation and acute care nurses. They found that cardiac rehabilitation nurses have more knowledge and are more responsible than acute care nurses in providing sexual counseling ($P<0.05$). This may be because rehabilitation nurses are more frequently involved in patient teaching at the time of discharge.

Jaarsma et al. (2010) conducted a study on European cardiac nurses; they reported that 64% of the nurses perceived themselves as partly knowledgeable about sexual counseling, where as 15% considered them as fully knowledgeable. Stein et al. (2011) conducted a study to understand the pattern of sexual counseling among cardiac nurses in America. They concluded that there is significant improvement in counseling practice from 1994 to 2009. Findings from year 2009 study revealed that the nurses explain patients about resuming sexual activity post MI, and about the warning signs to report ($p < .0001$); while in year 1994 nurses discussed more about appropriate positions for sexual activity ($p < .001$), use of foreplay before sexual activity ($p < .0001$) and avoidance of unfamiliar surroundings ($p < .0001$).

Very few studies have been conducted to assess the level of knowledge of physicians about sexual counseling of post MI patients. A study conducted by [25] on 61 general physicians regarding sexual counseling of patients with coronary artery diseases reported that majority of the general physicians think that they lack appropriate knowledge regarding sexual counseling and they rarely address this issue with their patients.

HCPs' characteristics and their sexual counseling practice

According to Saunamaki et al. (2010), nurses' age plays an important role in addressing such sensitive issues to the patients. They concluded that older nurses felt more confident to address sexual concerns and had more positive attitude towards sexuality. On the other hand, less experienced nurses' knowledge regarding the effects of medications was significantly higher than that of experienced nurses [26]. [27] studied Iranian acute care nurses' knowledge about sexual counseling for MI patients. They found significant positive relationship between the nurses' total scores of knowledge and attitude. In the similar study, nurses' characteristics such as gender, marital status, education, age and work experience did not show a significant association with their level of knowledge.

Barriers for HCPs in Providing Sexual Counseling

Ivarsson et al. (2010) reported that patients' shorter stay in hospital gives limited opportunity for nurses to talk about these issues. While Ozdemir and Akhdemir (2008) found that the Turkish nurses' belief that sexual issues are patients' private domain, is a barrier for them to initiate sexual counseling. Gender discrepancy was also found to be a barrier for sexual counseling in the similar study; the study findings demonstrated that female nurses usually avoid providing sexual counseling even when asked by the patients. They are less willing to communicate on sexual concerns than male nurses.

Purabuli et al. (2010) reported that female nurses are uncomfortable talking about sexual issues to male patients. Yildiz and Dereli (2011) reported that insufficient education and lack of technical knowledge is the main obstacle in providing sexual teaching to cardiac patients. On the other hand, another study concluded that lack of confidence is a barrier to deal with these sensitive issues of sexual counseling [28].

Conceptual Framework

The modified conceptual framework for the study has been derived from the 'Model of Sexual Integrity' by McFarlane and Rubenfeld (1983) and from 'Health Promotion Model by Nola Pender (1982; revised, 1996) (See figure 1 for the modified conceptual framework). The conceptual framework was adopted, based on the literature in the field and in accordance with the basic premise of the study regarding knowledge of sexual counseling. Therefore, the framework illustrates the role of HCPs in maintaining patients' sexual integrity and health promotion, in terms of sexual counseling for post-MI patients.

The illustrated framework delineates the major determinants of sexual integrity, integrated with Pender's health promotion model. The three major determinants of sexual integrity are self-identity, communication, and environment [29]. In the present study, self- identity exhibits the role of HCPs, personal values and beliefs, self interest in dealing with sensitive issues. The study also identified characteristics that affect HCPs level of knowledge i.e.

age, gender, marital status, educational level, and experience as cardiac HCP. Knowledge is the precursor for the determinant, i.e. communication, although it is not necessary that all HCPs who have sexual counseling knowledge will communicate with the patient regarding sexuality. Communication also includes the instructional material that guides patients and HCPs in counseling. Integrated with the health promotion model, health education is an important component of behavior and lifestyle modifications among post-MI patients.

Another important determinant in sexual integrity is an environment that affects HCPs knowledge and comfort level. Environmental factors include barriers such as culture, lack of appropriate information, privacy, lack of time [30] priority setting, lack of initiation and gender difference between patients and HCPs. All these determinants of sexual integrity and health promotion influence HCP's sexual counseling practices, ultimately improving patients' health and post-MI quality of life (Figure 1).

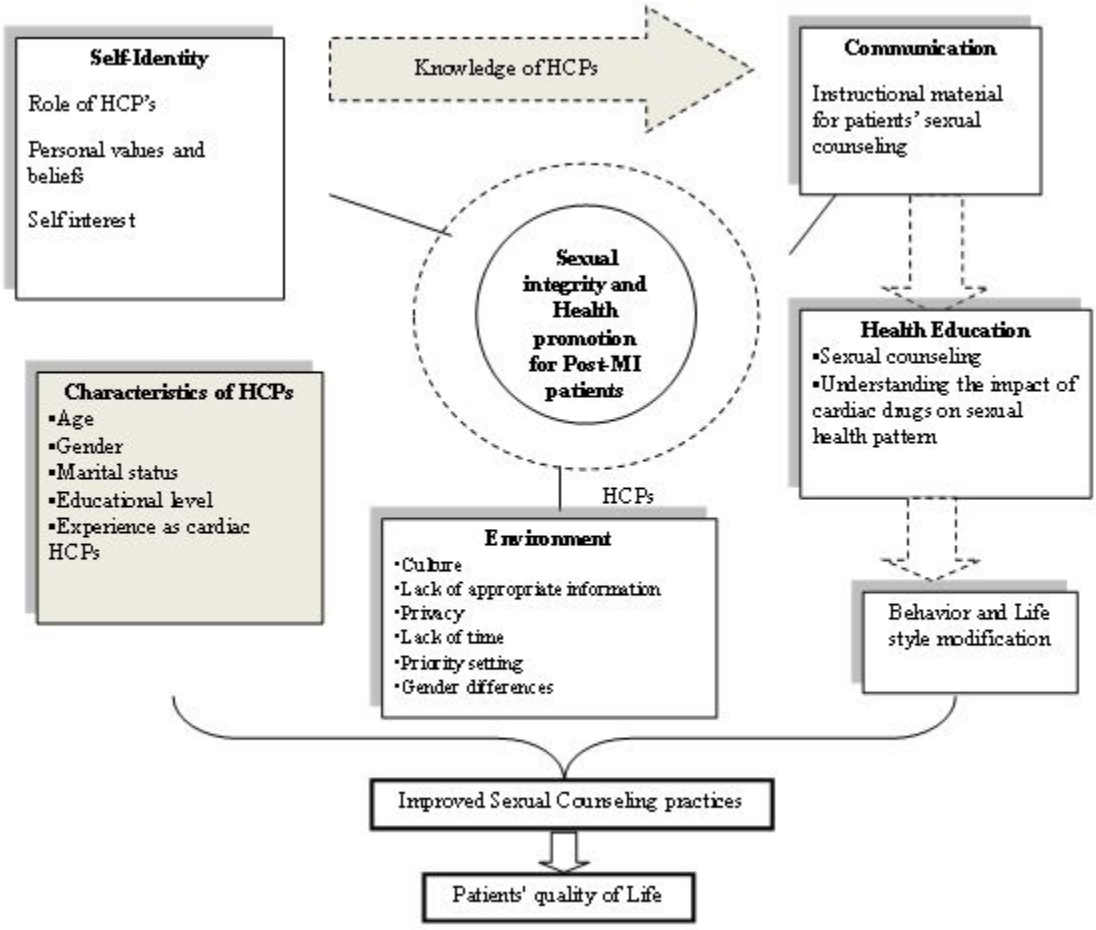

Figure 1: Modified conceptual framework of the study. Adapted from "The Model of Sexual Integrity" by McFarlane and Rubenfeld, 1983 and from 'Health Promotion Model by Nola Pender (1982; revised, 1996).

Conclusion

Post-MI sexual counseling is vital in improving patients' quality of life. After an in-depth literature review, it was found that very limited research has been done on the knowledge of HCPs in sexual counseling for post-MI patients, globally. Resumption of sexual activity after MI, effects of cardiac drugs on sexual performance, risk of MI triggered by sexual activity, knowledge of HCPs about post-MI sexual counseling, and barriers in the provision of sexual counseling are important aspects of knowledge among HCPs regarding post-MI sexual counseling. To the researcher's knowledge, this has not been studied in the Pakistani context; therefore, it is essential to study this in our context. The conceptual framework developed from reviewed literature has served as a conceptual basis for the present study.

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