

Research on the Application of Transitional Psycho-Cardiovascular Nursing for Community Cardiovascular Patients

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Abstract: This paper reviewed the application and importance of transitional psycho-cardiovascular nursing in community cardiovascular patients. By analyzing the current research state of psycho-cardiovascular nursing, the authors pointed out the limitations of the research. Based on the requirements of a tiered diagnosis and treatment system, the need for prevention and control of psycho-cardiovascular disease, and the promotion of patient self-management, the paper proposed the need for transitional psycho-cardiovascular nursing in the community.

Keywords: Psycho-cardiovascular nursing; transitional nursing; cardiovascular disease; integrated health care system

1. Introduction

The prevalence of cardiovascular disease (CVD) in China is on a continuous upward trend, and *China Cardiovascular Health and Disease Report 2023* showed that the number of CVD patients is as high as 330 million, and the number of deaths is about 4,580,000 cases/year, which accounts for the first place of the causes of disease deaths among urban and rural residents. Two out of every five deaths are attributed to CVD. Cardiovascular diseases pose a heavy disease burden [1][2] and have become a major public health problem.

Numerous studies have shown that patients with various types of cardiovascular diseases suffer from psychological problems at the same time [3] [4], and both of them affect each other and aggravate the disease state, that is, psycho-cardiology disease [5]. In 1995, Prof. Daiyi Hu, a famous cardiovascular expert in China, put forward the concept of “psycho-cardiology”, which emphasizes that the diagnosis and treatment of patients with cardiovascular diseases and the psychological problems should be paid attention to at the same time [6]. Since then, physical and mental homoeopathy has gradually attracted widespread attention and progressive development in the field. A study by Lixia Yuan et al. on outpatient and inpatient cardiovascular medicine patients showed that 31.18% of 6643 outpatient and inpatient cardiovascular patients had depressive symptoms, 30.46% had anxiety symptoms, and 72.7% had somatization symptoms [7]. The diagnosis and treatment of psycho-cardiovascular disease often require multidisciplinary participation in long-term interventions. Treatment is necessary, but nursing is more vital. Standardized nursing care is particularly important in the recovery of the condition.

2. Related Concepts

2.1 Psycho-cardiovascular nursing

Psycho-cardiovascular nursing originates from psycho-cardiology, which refers to adhering to the human-centred approach and paying attention to the psychological state of cardiovascular patients in addition to implementing nursing operations for the disease itself. Healthcare workers help patients to improve their poor psychological state and correct their behavioural patterns through comprehensive interventions of psychological care, health guidance and behavioural patterns, so as to achieve early recovery [8] [9].

2.2 Transitional nursing

Transitional nursing is a series of nursing activities aimed at maintaining the health of patients or meeting their health needs, and ensures the coordination and continuity of health services received by patients as they are transferred between different health care settings or between different levels of health care organisations [10] [11]. Transitional nursing model emphasizes the continuation of coherent nursing services after a patient is discharged from hospital, including regular health assessment, disease surveillance, psychological support, health education and lifestyle guidance.

3. Domestic and Overseas Related Research

3.1 Research on psycho-cardiovascular nursing

The authors searched the CNKI database with the keywords “psycho-cardiovascular nursing”, “psycho-cardiovascular nursing model”, “psycho-cardiovascular nursing intervention” and “psycho-cardiovascular nursing management”. It was found that in 2007, Hongjuan Zhang et al. analysed three cases of psycho-cardiovascular nursing measures applied to patients with cardiovascular diseases. The study showed that patients regained confidence in overcoming the disease through medication and psycho-cardiovascular nursing care, and better results were achieved [12]. In the following decade or so, the link between cardiovascular disease and mental illness has gained widespread attention from researchers in terms of the close association between clinical presentation and risk of morbidity, and has gradually developed into a research boom. More than 70 research papers were included annually during 2019-2021. A study of 94 cases of coronary artery disease inpatients conducted by Yali Xu et al. showed that psycho-cardiovascular nursing intervention for coronary artery disease patients can effectively alleviate patients' depression and anxiety and other adverse psychological emotions, which is conducive to the smooth progress of treatment [13]. The study of Jing Wang et al. also found that psychological intervention can effectively improve the compliance behaviour of cardiovascular patients, which helps to achieve better results in treatment and care, and patient satisfaction is also significantly improved [14]. The implementation of psychological nursing interventions for emergency cardiovascular disease patients can also improve the psychological state, cardiac function, and compliance, which is worth promoting [15]. Zhou F et al.'s study also showed that psycho-cardiovascular nursing model can improve the cognitive function, physical function and psychological status of stroke patients, and improve the quality of life of stroke patients [16]. Psycho-cardiovascular nursing model applied to cardiovascular disease nursing can significantly improve the physical and psychological conditions of patients, improve nursing satisfaction, and have a positive effect on promoting the recovery of the disease.

3.2 Research on transitional nursing

Transitional nursing originated in the U.S.A. In 2002, the transitional nursing model was firstly proposed and implemented in Hong Kong, and since then scholars in China have begun related clinical practice research. A cluster analysis study showed that transitional nursing research in China is developing rapidly. The research hotspots mainly focus on the application of transitional nursing in anxiety, depression, stroke rehabilitation, and elderly patients with chronic diseases.

3.3 Psycho-cardiovascular nursing and transitional nursing

Transitional nursing focuses on the continuity of care provided to patients at different stages of medical care. Psycho-cardiovascular nursing focuses on the dual care of physiology and psychology. When cardiovascular patients are discharged from the hospital and return to the community and family, caregivers often need to continue to provide psychological and physiological care and support for them through telephone follow-up, regular review, psychological support, etc. Psycho-cardiovascular nursing and transitional nursing complement each other, and together provide comprehensive and continuous nursing services for cardiovascular disease patients. Studies have shown that the application of psycho-cardiovascular nursing combined with transitional nursing can improve medication adherence, quality of life, and self-management ability of patients with coronary heart disease, and establish a good state of mind to cope with the disease [17-19].

3.4 Limitations of psycho-cardiovascular nursing study

Throughout the literature in recent years, it is not difficult to find that the current research on psycho-cardiovascular nursing is mostly focused on the cardiology department of general hospitals or specialised hospitals and other medical institutions, and the majority of research objects are inpatients. The main reasons for this are: Firstly, inpatients often have more complex conditions than outpatients, and usually face more urgent medical and psychological needs, requiring more detailed and professional nursing services. Secondly, general hospitals and specialised hospitals usually have access to a large number of cardiovascular patients, and also have abundant medical resources and specialised healthcare personnel, which can provide systematic and professional psycho-cardiovascular nursing services. Furthermore, research on psycho-cardiovascular nursing in healthcare settings can be more effective in evaluating the effectiveness of the care model and optimising the care process and approach.

Although the research and application of psycho-cardiovascular nursing in healthcare institutions, especially in cardiology or specialist hospitals, has made some progress, it also reflects the problem that the coverage of psycho-cardiovascular nursing research is not yet comprehensive enough. Current research focuses on inpatients, with relatively few studies on patients in outpatient, community, and home care settings, limiting the popularity and application of the psycho-cardiovascular nursing model in different care settings. Psycho-cardiovascular nursing often requires the integration of multiple disciplines such as cardiovascular medicine, psychology, and nursing. Currently, this interdisciplinary model of collaboration is not mature enough, affecting the overall development of psycho-cardiovascular nursing. psycho-cardiovascular nursing requires a high level of professionalism from nursing staff, requiring both experience in cardiovascular speciality nursing and the ability to provide psychological care. At present, there is a relative lack of such complex nursing professionals. In addition, the concept of psycho-cardiovascular nursing has not yet been widely disseminated, and the public and some healthcare workers do not have enough knowledge about it, resulting in a lack of awareness of its needs and importance.

4. The Need for Transitional Psycho-cardiovascular Nursing Among Patients with Cardiovascular Disease in Communities

4.1 Requirements for a tiered diagnostic and treatment system

Under the tiered diagnosis and treatment system, residents first receive initial screening and diagnosis at primary healthcare institutions, and community health service centres are often the starting point of their medical journey. If a patient's condition is more complex, or if the primary health-care facilities and expertise of the primary health-care institution are limited, the patient will be promptly referred to a secondary or tertiary health-care institution for more in-depth and specialised diagnosis and treatment, and for the formulation of a diagnostic and treatment plan. Once their conditions are under control and stabilised, they will return to the community and continue to receive the necessary treatment and care. Community healthcare institutions will provide continuous care and support over a long period of time, such as medication, continuity of care, rehabilitation guidance, health assessment, etc., to ensure that the patients are provided with comprehensive and meticulous health management. The implementation of transitional psycho-cardiovascular nursing at the community level will not only improve the health status of patients with cardiovascular diseases, but also reduce the pressure on secondary and tertiary healthcare institutions and achieve a rational allocation of healthcare resources.

4.2 The need of psycho-cardiovascular disease prevention and control

The management of cardiovascular disease is a long-term process that often accompanies patients throughout their lives. The community is the main battleground for chronic disease management and the focus of cardiovascular disease management. Relying on the psycho-cardiovascular clinic, the community may play a great role in the detection and intervention of psycho-cardiovascular disease. After the diagnosis and treatment plan has been determined by the psycho-cardiovascular clinic or by specialists at a higher level of care, long-term follow-up is indispensable for community transitional care. Services for such patients often require caregivers with knowledge and skills in psychological care. Ongoing monitoring of health status and timely nursing interventions can also help to prevent recurrent cardiovascular events.

4.3 Promotion of patient self-management

Patients with cardiovascular diseases need to adhere to medication for a long time, and this is especially true for patients with psychological problems such as anxiety or depression, and there is a positive correlation between patients' compliance and the efficacy of the disease. Transitional psycho-cardiovascular nursing, through long-term nursing intervention, encourages family support while strengthening health education for patients, and helps them to Build up confidence and treat the disease with optimism. It can teach patients to master self-management skills, adopt positive health behaviours, improve treatment compliance and enhance quality of life [20].

5. A Working Proposal for the Development of Transitional Psycho-cardiovascular Nursing Among Cardiovascular Patients in Communities

5.1 Establishment of an up-and-down transitional psycho-cardiovascular nursing system

In recent years, the state has attached great importance to the development of community health, and issued a series of policy documents to support and enhance the capacity of primary health care services. According to *2023 China Health Care Development Statistics Bulletin*, in 2023, there were 3.99 general practitioners per 10,000 people. In 2023, the proportion of primary diagnosis and treatment volume reached 52% [21]. A large number of patients chose to seek medical treatment at the primary healthcare institutions around them. Cardiovascular disease associated with psychosomatic problems should not be underestimated, early detection and diagnosis in the community can often play a key role in disease prevention and control. There is a large number of patients in the community, and the higher-level medical institutions have professional diagnosis and treatment conditions, specialists and nurses, so mutual cooperation can bring synergistic effects and achieve the optimal allocation of resources and the improvement of the quality of medical services.

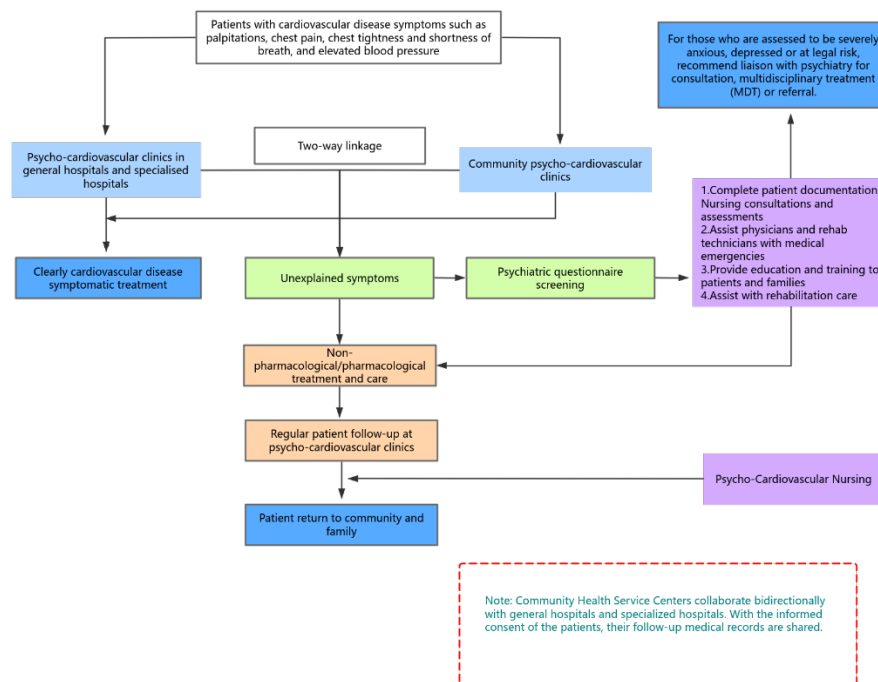


Figure 1: Two-way Linked Transitional Psycho-cardiovascular Nursing Model

Chinese Expert Consensus on Construction Specifications for Psycho-Cardiovascular Nursing Outpatient Clinics [22] states that the establishment of a psycho-cardiovascular outpatient clinic consisting of psycho-cardiovascular specialists, psychotherapists (counsellors), and nurse practitioners, can add psycho-psychological specialists and rehabilitators. The expert consensus clarified the qualifications and job responsibilities of the personnel, such as the nursing staff should have the title of nurse practitioner or above, have working experience in cardiovascular specialist nursing, and have completed a training course of 20 hours and above on professional skills in psycho-cardiology and obtained a training certificate. Nursing staff assists in the documentation of psycho-cardiovascular

patients, nursing consultations and assessments, and assists in the management of various medical emergencies. They need to educate and train the patients and their families, and guide and assist the patients to complete the rehabilitation treatment. It is recommended that psycho-cardiovascular outpatient clinics be established in primary care, and that psycho-cardiovascular outpatient clinics in general hospitals/specialist hospitals be linked in two-way to achieve early screening and standardized therapeutic management of the disease (see Figure 1).

5.2 Establishing community-based transitional psycho-cardiovascular nursing

Timing theory suggests that in the process of patients' disease management and rehabilitation, giving appropriate measures according to different stages can significantly improve the effectiveness of treatment and care [23]. Domestic scholars have successively carried out nursing research based on the timing theory, and the results have shown that in the nursing care of patients with stroke, coronary heart disease, and COPD, the literature has shown that it helps patients to prepare for discharge, improve self-management, and promote the improvement of the quality of life [24-28], in which transitional care plays an important role. Psycho-cardiovascular disease requires a long period of follow-up management, and the adaptation phase of the patient is also in the community. Currently, most general hospitals and specialized hospitals rely on telephone or online questionnaires for the continuation of follow-up for the disease. There is not much opportunity for face-to-face contact with the patient. Currently, most general and specialized hospitals rely on telephone calls or online questionnaires for follow-up of these diseases, with little opportunity for face-to-face contact with patients. Community medical institutions are able to provide continuous and stable care services, which are conducive to the long-term management and rehabilitation of patients with chronic diseases. Therefore, it is recommended that the centre of gravity of psycho-cardiovascular disease transitional care be sunk into community medical institutions. With community caregivers as the main body and professional support from higher-level medical institutions, patients can receive professional psycho-cardiovascular care services at their doorsteps. This will reduce the time and cost of travelling to large hospitals. Community nursing staff can collect and analyse data on the health status of residents, providing a basis for disease prevention and health management. In addition, community nursing staff are quite familiar with the residents, which also helps in the early detection of mental health problems and heart diseases, enabling early intervention and treatment. At the same time, this initiative can enhance health education and disease prevention, raise residents' health awareness and reduce the incidence of diseases.

5.3 Constructing information interconnection and two-way exchange of talents based on medical association

In December 2009, *Ministry of Health's Guidelines on Regulating the Management of Health Records for Urban and Rural Residents* proposed the gradual establishment of unified health records for residents throughout the country. *Fourteenth Five-Year Plan for Health Informatisation for the Whole Population* makes it clear that by 2025, every resident will have a dynamically managed electronic health record. As the State has invested in public health programmes over the years, the content of residents' health records is being continuously improved. It is recommended that this opportunity be taken to further strengthen information technology construction, promote the unified operation and interconnection of information systems within the health-care consortium, and achieve continuous recording of electronic health records and electronic medical records within the county medical communities (urban medical consortiums). Through the 'Internet +' platform and the unified management of the medical consortium, continuity and sharing of medical information can be achieved. New information technologies, such as mobile health applications and remote monitoring systems, can also be used to improve the efficiency of care and patient engagement.

Psychological care is highly specialised, focusing on the use of psychological assessment tools and humanistic care. At present, there is a need to further improve the professional capacity of psychological care in the community, as not much has been done. It is recommended that the training of relevant professionals be strengthened within the medical association, and that professional skills be upgraded through regular further training in higher-level hospitals. Nursing staff of psychological specialties in higher-level medical institutions are also encouraged to participate in community family doctor services as technical instructors or professional consultants, and to regularly go down to the community to provide academic teaching or guidance on community psycho-cardiovascular nursing. Social forces can also be mobilized to participate in community transitional psycho-cardiovascular nursing. Through the joint efforts of medical, social, and patients and families, we can provide long-term nursing support to help

patients recover soon.

6. Conclusion

In summary, transitional psycho-cardiovascular nursing, as an effective community-based cardiovascular disease patient management strategy, has its application prospects at the community level. Physical and psychological interventions for patients through the tiered linkage of medical institutions can improve patients' self-management ability and quality of life, reduce the risk of disease recurrence, reduce the burden of cardiovascular disease, and lay an important foundation for the construction and sharing of a healthy China.

References

- [1] Mingbo Liu, Zengwu Wang, Jing Fan, et.al. Interpretation of key points of China Cardiovascular Health and Disease Report 2023 [J]. *Chinese Journal of Cardiovascular Review*, 22 (07), pp.577-593, 2024.
- [2] The Writing Committee of the National Center For Cardiovascular Diseases. Summary of China Cardiovascular Health and Disease Report 2023 [J]. *Chinese Circulation Journal*, 39 (07), pp.625-660, 2024.
- [3] Erjian Zhang, Fuli Tian, Bin Zhang. A survey study of anxiety and depression symptoms in patients with cardiovascular disease [J]. *Chinese Journal of Evidence-Based Cardiovascular Medicine*, 05 (04), pp.405-407, 2013.
- [4] Zhenxiao Sun, Huaxue Liu, Linying Jiao, et.al. A study of anxiety and depression symptoms and related factors in patients with cardiovascular disease [J]. *Journal of Psychiatry*, 31 (01), pp.23-26, 2018.
- [5] Shuyan Chen, Taihong Zhao, Ke Xu. How psycho-cardiology is evolving - from theoretical research to intelligent diagnosis and treatment [J]. *Chinese General Practice*, 27 (19), pp.2388-2394, 2024.
- [6] Dayi Hu. From "psycho-cardiology" to "the five prescriptions" [J]. *Chinese Journal of Cardiology*, 49 (11), pp.02, 2021.
- [7] Lixia Yuan, Rongjing Ding, Yanping Qin, et.al. A survey on the current status of common anxiety, depression and somatisation symptoms among patients in cardiovascular specialist hospitals [J]. *Journal of Southeast University(Medical Science Edition)*, 39 (05), pp.608-614, 2020.
- [8] Ping Xia, Liqun Tang. psycho-cardiovascular nursing for coronary heart disease patients [J]. *Today Nurse*, 08, pp.65-66, 2009.
- [9] Jing Pang. Progress in the study of psycho-cardiovascular nursing interventions applied to cardiovascular diseases [J]. *Journal of Nurses Training*, 03 (23), pp.2155-2157, 2013.
- [10] Meili Xu, Shen Wang. Development status and countermeasures of transitional nursing at home and abroad [J]. *Nursing Journal of Chinese People's Liberation Army*, 19, pp.28-30&33, 2014.
- [11] Qiaoyan Ying, Kepei Xu, Guiying Liu, et.al. Conceptual analysis of transitional nursing in China [J]. *Journal of Nursing Science*, 05 (04), pp.82-85, 2020.
- [12] Hongjuan Zhang, Yanfen Guo. A case study of psycho-cardiovascular nursing used in several cardiac patients [J]. *Chinese Medical Record*, 08 (09), pp.43-48, 2007.
- [13] Yali Xu, Hongge Zhang. The application of psycho-cardiovascular nursing in the care of patients with coronary artery disease [J]. *Modern Diagnosis and Treatment*, 25 (14), pp.3348-3349, 2014.
- [14] Jing Wang, Yunyuan Bu. Impact of psycho-cardiovascular nursing model on cardiovascular patients' compliance behaviour [J]. *Electronic Journal of Practical Clinical Nursing*, 04 (29), pp.108-109, 2018.
- [15] Tao Liu. The role of psychological care interventions in the emergency treatment of patients with cardiovascular disease [J]. *Cardiovascular Disease Journal Of integrated traditional Chinese and Western Medicine*, 10 (25), pp110-112, 2022.
- [16] Zhou F, Tao X, Wang L, et al. Effects of "two-heart" nursing mode on the psychological state and quality of life of stroke patients [J]. *BMC Neurol*, 23 (01), pp.397, 2023.
- [17] Fei Yu, Xiaoyun Ke, Yanlin Shen, et.al. Continuity of care in the psycho-cardiology model in patients with coronary artery disease [J]. *Journal of Qilu Nursing*, 28 (03), pp.43-46, 2022.
- [18] Yan Xu. Application of transitional psycho-cardiovascular nursing in patients with coronary artery disease combined with psychological disorders [J]. *China Higher Medical Education*, 10, pp.143-144, 2019.
- [19] Xiaoqing Dong, Qin Fang. Transitional psycho-cardiovascular nursing in patients with coronary heart disease combined with psychological disorders [J]. *Electronic Journal of Practical Clinical*

Nursing, 05 (14), pp.05-07, 2020.

[20] Hongyun Feng, Fan Liu, Yuanyuan Zhao, et.al. *The value of transitional psycho-cardiovascular nursing in patients with chronic heart failure with type 2 diabetes mellitus [J]. Modern Journal of Integrated Traditional Chinese and Western Medicine*, 29 (17), pp.1901-1904, 2020.

[21] "Promoting high-quality development of urban and rural community medical and health service systems during the 14th Five-Year Plan period_ Interpretation of policies_China.gov.cn [EB/OL]. [online] Available:] https://www.gov.cn/xinwen/2022-02/09/content_5672796.htm,2024-08-24.

[22] Chinese Medical Association of Psychosomatic Medicine, Specialised Committee on Cardiovascular Disease Prevention and Rehabilitation, Chinese Society of Rehabilitation Medicine, Rongjing Ding, et.al. *Chinese expert consensus on the construction norms of psycho-cardiovascular outpatient clinics [J]. Chinese General Practice*, 27 (03), pp.253-261, 2024.

[23] Cameron J I, Gignac M A. "Timing It Right": a conceptual framework for addressing the support needs of family caregivers to stroke survivors from the hospital to the home [J]. *Patient Educ Couns*, 70 (03), pp.305-314, 2008.

[24] Meiru Wu, Yongmei Deng, Yitong Chen, et.al. *A study of discharge planning based on timing theory in the readiness of stroke patients for hospital discharge [J]. Prevention and Treatment of Cardio-Cerebral-Vascular Disease*, 23 (04), pp.43-46, 2023.

[25] Xiaoli Wang, Yulan Wu, Haiyan Yun. *Effects of nursing intervention based on timing theory on state of mind and self-management ability of coronary heart disease patients [J]. Psychological Monthly*, 19 (05), pp.191-193, 2024.

[26] Baoxia Ding, Jun Han, Yajing Zhang. *Effects of phase I cardiac rehabilitation exercise combined with transitional care intervention based on timing theory on cardiac function recovery and home self-management ability of post-PCI patients with acute myocardial infarction [J]. Clinical Research and Practice*, 09 (15), pp.145-148, 2024.

[27] Ge Song, Yinghui Chu, Yu Zhang, et.al. *Impact of an integrated nursing intervention based on timing theory on patients after PCI for acute myocardial infarction [J]. Journal of Qilu Nursing*, 30 (04), pp.160-162, 2024.

[28] Songmei Chen, Weiwei Zhang, Xuemei Yang, et.al. *Study on the rehabilitation effect of respiratory rehabilitation training guided by timing theory on elderly COPD patients [J]. Hainan Medical Journal*, 31 (10), pp.1248-1251, 2020.