

Research Progress of Modern Technology in Home Nursing of Premature Infants

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Abstract: With the development of the Internet and mobile technology, the way the public accesses health information is changing rapidly. Premature infants need more scientific knowledge and skills in home care due to their own development problems and diseases. This paper summarizes the research progress of modern technology in family nursing of premature infants at home and abroad, aiming to provide reference for the development of an all-round, multidisciplinary and personalized modern technology approach that focuses on meeting the needs of caregivers, effectively improving nursing skills, and improving the health status and quality of life of premature infants in the later stage.

Keywords: Modern Technology; Premature Infants; Home Care; Summary

Introduction

With the arrival of 5G information technology, it has become normal for people to make full use of emerging technologies such as big data technology, Internet technology, Internet of Things technology and artificial intelligence technology to popularize medical health knowledge^[1]. Modern technology refers to a series of efficient, intelligent and convenient tools, equipment, systems and methods developed in contemporary society based on scientific knowledge, engineering technology and information technology, combined with innovative thinking and practical experience^[2]. Modern technological tools for medical and health applications are changing rapidly according to the needs of public health. Premature infants may suffer from many diseases and growth and development problems due to their own organ dysfunction. Scientific, standardized and effective family care can improve the long-term survival rate of premature infants and reduce the readmission rate of premature infants^[3]. Premature babies are a huge challenge for family caregivers, who need to face the learning and application of nursing skills, difficulties in daily care and other issues^[4]. In the context of the rapid development of information technology and the uneven distribution of medical resources, people are willing to seek professional modern technology to obtain medical related health knowledge, improve the family care ability of caregivers, reduce family burden, and promote the sustainable development of family health management. This study reviewed the research progress of modern technology in premature infants at home and abroad.

1. Application status of modern technology in premature infants abroad

Telemedicine is the earliest modern technology applied in the medical industry abroad. It builds a bridge of communication between medical staff, patients and their families through advanced medical equipment and face-to-face forms such as voice call and video^[5]. More than 50% of hospitals in the United States are using telemedicine applications for extended care of various populations^[6]. The development of mobile health applications has also skyrocketed. The smart terminal mobile medical program in the pediatric field is mainly a small program or APP in the Apple and Android systems Facebook, Babble Apple iOS, Baby Growth Tracker Android, IFDC Android, My Premie App Apple iOS, my Children, s Android, My Neonatal Journal Apple iOS, NICU Companion Apple iOS, Pebbles of Hope Apple iOS, Peek-aboo ICU Premie Android, Premature Birth Android, Quantum Caring for Parents (QCP) - NICU Apple iOS Et al.^[5]. For people living in remote areas, Facebook is the most popular way to obtain nursing knowledge^[7]. 88% of parents surveyed in health Information media would use a newborn care app^[8]. In a NICU parent study, 81% of parents of premature babies said they were willing to use smartphones to access information about their baby's home care, significantly more than books^[9].

2. Advantages and disadvantages of the application of modern technology in premature infants abroad

Telemedicine makes it more convenient for patients to see a doctor and consult, and breaks the limitation of time and space. People can consult medical and health workers through voice, text and video, saving a lot of valuable medical resources^[10]. However, the high cost of telemedicine equipment, the need for technical support, economic conditions and cultural differences among users hinder the widespread popularity of telemedicine. Young parents are more likely to use mobile apps to seek information on infant health^[5]. According to the survey on parents' use of social networking sites, 79.1% of parents replied that the current Internet sites could not fully meet the needs of parents of premature babies to acquire knowledge^[11]. These modern technology methods output a large amount of professional knowledge, at the same time, also put forward higher requirements for these procedures and healthcare personnel, on the one hand, the timeliness and accuracy of health information provided to be further confirmed, on the other hand, healthcare personnel have strong professional knowledge and communication skills to avoid unnecessary conflicts between doctors and patients.

3. Application status of modern technology in premature infants in China

In order to contribute to the development of a healthy China, the national Health Plan of the 14th Five-Year Plan proposes to strengthen the guidance for the early development of infants and young children in families, and provide support for family parenting guidance services and organizations. Encourage the use of information technology, the development of more intelligent, convenient and interconnected modern technology to promote health science and medical knowledge, improve the ability of family care, and do a good job of disease monitoring, early warning assessment and emergency treatment. Build an authoritative, unified and interconnected national health information platform, improve the core database of national health information, and promote unified access and data sharing by medical and health institutions at all levels^[12]. Han Lijun^[13]'s investigation and research showed that 80% of the caregivers obtained nursing knowledge of premature infants mainly through the Internet, TV, professional books, newspapers and magazines and other media. At present, the modern technology applied in the field of pediatric diagnosis and treatment, medical care, health education and extended care, including premature infants, includes professional medical APP, telemedicine system, Internet + nursing service, we chat platform and mini programs, QQ platform, and various micro media, etc.

4. Advantages and disadvantages of the application of modern technology in premature infants in China

Smart phones are the most widely used electronic devices in the world, and we chat plays a dominant role in social media in China, which has powerful functions. There are studies on establishing continuous nursing services for premature babies through we chat platform to provide family caregivers with targeted parenting knowledge and nursing skills [14-15]. Apps related to extended care, such as "cloud follow-up", "317 Care", pregnant and infant health management mobile APP, Internet + care, etc., have improved the user's sense of experience, and the education of disease knowledge has also been recognized. But basically there are limitations in the scope of sharing, information can not be exchanged, each has reservations, and the medical resources serving the public are also uneven. For example, it is limited to some areas, a hospital, a single disease, the elderly, the infirm, the disabled and pregnant such special groups.

5. Summary

To sum up, both at home and abroad have fully integrated modern technology with the medical field, and launched various platforms, mini programs, apps, etc. to serve all kinds of people with medical needs, especially in the continuous care of chronic diseases. At present, the micro-media era is also developing vigorously, providing a new platform for medical health education. Foreign countries have developed rapidly in the field of remote home care, which is also the modern technology that preterm caregivers need when facing family care. Most preterm caregivers need professional platforms to give baby nutrition and feeding guidance, growth and development monitoring, disease prevention and emergency treatment, vaccination, medication guidance, parent-child interaction and other aspects of professional knowledge.

However, most modern technologies in the country have limitations, and the relevant procedures are not enough to meet the needs of caregivers. In the future, we will actively seek to meet the needs of caregivers as the center, all-round, multi-disciplinary, personalized customized modern technology.

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