

Spring 2018

Development of Health Rehabilitation in Mainland China: From Traditional Chinese Medicine to Modern Western Rehabilitation Methods

Michelle Moy
SIT Graduate Institute

Follow this and additional works at: https://digitalcollections.sit.edu/isp_collection

 Part of the [Alternative and Complementary Medicine Commons](#), [Asian Studies Commons](#), [Other Medicine and Health Sciences Commons](#), [Other Rehabilitation and Therapy Commons](#), and the [Translational Medical Research Commons](#)

Recommended Citation

Moy, Michelle, "Development of Health Rehabilitation in Mainland China: From Traditional Chinese Medicine to Modern Western Rehabilitation Methods" (2018). *Independent Study Project (ISP) Collection*. 2759.
https://digitalcollections.sit.edu/isp_collection/2759

This Unpublished Paper is brought to you for free and open access by the SIT Study Abroad at SIT Digital Collections. It has been accepted for inclusion in Independent Study Project (ISP) Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.

**Development of Health Rehabilitation in Mainland China: From
Traditional Chinese Medicine to Modern Western Rehabilitation Methods**

Moy, Michelle
Academic Director: Lu, Yuan
Project Advisor: Dr. Zhang, Ying
University of Illinois at Chicago
Rehabilitation Sciences
China, Yunnan, Kunming

Submitted in partial fulfillment of the requirements for China: Health, Environment and Traditional
Chinese Medicine, SIT Study Abroad, Spring 2018

Abstract

The aim of this study is to understand the changes occurring in China, leading to the development of health rehabilitation. This study will portray the shift of traditional Chinese medicine to modern influences of Western rehabilitation, and will also introduce the idea of an integrated model of TCM and Western Rehabilitation.

Observations were held at a TCM hospital, a rehabilitation hospital, as well as a TCM hospital that provided modern rehabilitation services. Two online questionnaire surveys were sent out to rehabilitation health professionals working in mainland China, one of which collected quantitative data while the other collected both qualitative and quantitative data. 10 responses were collected in the quantitative survey while 21 responses were collected through the qualitative and quantitative survey. Two formal interviews were conducted with a massage therapist and TCM rehabilitation physician. Guided assistance and conversations also helped gain a useful background for this study.

In conclusion, majority of respondents expressed that rehabilitation in mainland China is slowly developing, but is improving with the knowledge and influence from other countries and regions. In terms of cost and location, Western rehabilitation is inaccessible. However, traditional Chinese rehabilitation therapy is more affordable and available. The study presented that an integration of both TCM and modern rehabilitation is beneficial and effective.

Key Words: Development, Rehabilitation and Therapy, Traditional Chinese Medicine, Western Rehabilitation, Mainland China

Table of Contents

Abstract	i
List of Figures	iii
Glossary of Terms and Acronyms	iii
Dedication	iv
Acknowledgments	v
Introduction	1
Literature Review	1
Background of TCM rehabilitation methods in Mainland China	1
Start of Modern Rehabilitation in China.....	3
Current status of the rehabilitation system in Mainland China.....	5
Problems regarding rehabilitation development	6
Methodology	8
Data Collections.....	8
<i>Online Questionnaire Survey</i>	8
<i>Participant Observations</i>	9
<i>Guided Assistance</i>	10
<i>Guided Conversations</i>	10
<i>Formal Interviews</i>	10
Ethics	11
Research Limitations	11
Results and Discussion	12
Recommendations for Future development	20
Conclusion	21
References	22
Appendix	25

List of Figures

Figure 1. Occupations of survey respondents

Figure 2. Rehabilitation healthcare in mainland China

Figure 3. Accessibility of rehabilitation health services

Figure 4. Perspectives on an integrated model

Figure 5. Prevalence of TCM and Western Rehabilitation techniques in practice

Figure 6. Do you see/use TCM and Western rehabilitation techniques combined in practice?

Figure 7. Influences that have helped with the development of rehabilitation

Glossary of Terms and Acronyms

WHO = World Health Organization

OT = Occupational Therapy/Occupational Therapist

PT = Physical Therapy/Physical Therapist

DPT = Doctor of Physical Therapy

SLP = Speech Language Pathologist

WFOT = World Federation of Occupational Therapy

HKIOT = Hong Kong Institute of Occupational Therapy

TCM = Traditional Chinese Medicine

TCRT = Traditional Chinese Rehabilitation Therapy

NICU = Neonatal Intensive Care Unit

PICU = Pediatric Intensive Care Unit

UIC = University of Illinois at Chicago

JABSOM = John A. Burns School of Medicine

Tuina = Chinese manipulation

SCI = Spinal Cord Injury

Dedication

I would like to dedicate this independent study to my aunt, Betty Osterhout. Thank you for being my role model and introducing me to occupational therapy when I was 17 years old. You initiated my interest for rehabilitation, and I am incredibly grateful. I hope we can both travel together in the future to help improve the development of rehabilitation in mainland China.

Acknowledgments

First and foremost, I would like to express my gratitude to the entire SIT staff for making the past 4 months in China an unbelievable reality. To my program director, Lu Yuan, thank you for helping me create a clear focus on my study. Jo, thank you for taking the time to translate my surveys. And to Charles, Xiao, Huang, and Luo Laoshi, for your support and guidance throughout this amazing semester.

I would like to express my warmest gratitude to my Project Advisor, Zhang Ying (Daisy). By connecting me with many TCM rehabilitation professionals, as well as taking the time out of your day to assist me with interviews and being my translator, this project would seem impossible without you. As well as guiding me through my writing process, and giving me useful writing tips, I am very thankful.

My sincere thanks goes to all the staff, health professionals, and therapists at Kunming LIH Sky City Rehabilitation Hospital, for sharing your knowledge. To Luo Mi (Romy) and Yaqian Wang, I am grateful for our friendship and all the efforts both of you have put into support me with my project. Thank you Ryan Means for giving advice, reviewing my questionnaire, and connecting me with health professionals. A big thank you to Hung-Yi Wu and his OT team for welcoming me to LIH, especially Hrudya Philip and Pan Xue for allowing me to observe as well as letting me assist during sessions.

Thank you to all the TCM doctors affiliated with Yunnan Provincial Hospital of Traditional Chinese Medicine, Dr. Dong Youkang, Dr. Xu Xiao Ming, Dr. Wu Xiang Nong, and Dr. Duan Lian Hai for giving me an understanding of TCM methods and sharing rehabilitation knowledge through a non-Western perspective. I am truly thankful.

I extend my appreciation to Ge Linna, a massage therapist, for being open to sharing your perspectives on rehabilitation and disability accessibility through an in-person interview.

To everyone whom I met at the International Occupational Therapy Conference that helped give me an understanding of rehabilitation in China, I admire your work and efforts to help improve mainland China's development.

Thank you to all my survey participants who took the time to complete my questionnaire. My data in this study would not have been complete without your efforts, and I appreciate the background you have given me to finish this project.

To all of the University of Illinois at Chicago (UIC) Applied Health Sciences faculty and staff that has helped me grow a passion for rehabilitation these past three years, I am filled with gratitude. My motivations to help improve the development of rehabilitation in mainland China stems from my knowledge learned in UIC's rehabilitation sciences major.

A big thanks to my family and friends who have been an amazing support system throughout my time in China; especially my mother and father for encouraging me to travel and further my studies in a topic I am passionate about.

Introduction

Over time, China's knowledge of health rehabilitation has been evolving. While China is known for their practice of Traditional Chinese Medicine, there has been an increase of modern rehabilitation influences from many other countries since the early 1980's. Although changes are being made, there are still many issues regarding rehabilitation in China which need to be addressed. In terms of access in both location and cost, and proper education for rehabilitation professionals, certain problems must be solved.

The aim of this study is to understand the changes occurring in China, leading to the development of health rehabilitation. As different rehabilitation methods have been used over time, Western influences of modern rehabilitation have been introduced over the past couple of decades. This study will portray the shift of Traditional Chinese Medicine to modern influences of Western rehabilitation, and will also introduce the idea of a blended model of both TCM and Western Rehabilitation.

Literature Review

Background of TCM rehabilitation methods in Mainland China

As modern medicine and technology advances health throughout the world, China continues to use their ancient techniques of Traditional Chinese Medicine. While being one of the oldest healing systems (Tang, J., Liu, B., & Ma, K, 2018), China has been using Traditional Chinese Medicine (TCM) as a method for health preservation for over 2,000 years (Dean, 2001). Known for its holistic views and focus on natural health care, it follows a distinct philosophy in comparison to Western Medicine, while Western medicine relies heavily on science and new technology. TCM rehabilitation uses techniques of herbal medicine, acupuncture, moxibustion, massage, food therapy, and physical exercise, which are

seen across mainland China (Tang, J., Liu, B., & Ma, K, 2018). Ancient Chinese scholars apply the knowledge of Yin and Yang, and Qi to understand, prevent, and cure diseases (Tang, J., Liu, B., & Ma, K, 2018). Today, TCM is accessible and affordable, and is continuously used by many in mainland China. The quality of life for patients are improved through rehabilitation, and different methods are used to restore health. TCM rehabilitation treats the dysfunction of the body through mental regulation, physical training, proper diet, massage, and acupuncture. “Rehabilitation of TCM is a science to study the basic theories, therapeutic methods and their application under the guidance of TCM theories” (Yanfu, 2003, 1). While traditional Chinese medicine follows philosophies quite different from Western rehabilitation theories, they use completely different techniques.

Acupuncture is a TCM method that is commonly used in everyday rehabilitation. This method uses needles to promote somatopsychic rehabilitation, in which acupoints are properly selected to the course of meridians and collaterals. While many different acupuncture methods exist, filiform needle therapy is the most commonly applied instrument used to regulate visceral functions, qi flow and blood circulation, and pain relief. Diseases such as paralysis, convulsion, headaches, and chronic pain are commonly treated by acupuncture. Other examples of acupuncture consists of electro-acupuncture therapy, hydro-acupuncture therapy, three-edged needle (Yanfu, 2003).

Tuina is another common rehabilitation method in mainland China. Tuina, which is translated to “pinch and pull”, refers to the TCM method of therapeutic massage. This method is not used for relaxation, but is a treatment method used to harmonize yin and yang through the manipulation of qi in acupuncture channels (Hafner, 2016). Tuina uses different methods, such as rolling and the one-finger press. Different manipulation methods are applied to regulate qi and blood for the promotion of somatopsychic health (Yanfu, 2003). Applying

tuina on different acupoints can treat different symptoms and diseases, and has positive effects on the body.

Moxibustion is a drug used along with heat that is frequently used in TCM hospitals. It is very common, and the smell lingers throughout hospitals across mainland China. Moxa is typically ignited and paced on a patient's acupoint. Moxibustion is used to prevent and treat diseases by warming and dredging meridians and collaterals and promotes qi flow and blood circulation. Moxibustion is commonly seen in three different forms, moxa cones, moxa sticks, and moxibustion used with a warming needle (Yanfu, 2003). This method is commonly used in TCM rehabilitation along with acupuncture and tuina.

Start of Modern Rehabilitation in China

Although rehabilitation medicine evolved since the 1940's after World War II, the concept of rehabilitation was not understood in Mainland China until the early 1980's (Wong & Li-Tsang, 2010). Organized by the Ministry of health, information on rehabilitation medicine was collected from the United States, Europe, and Japan to have an understanding on legislation, management, and development. With this knowledge, Mainland China was one step closer to developing a new rehabilitation system. In 1982, Sun Yat-Sen Medical College held the first rehabilitation medicine teaching unit in Guangzhou. The Ministry of Health and the WHO Collaborating Center helped the advancement of rehabilitation in mainland China by organizing the first rehabilitation medicine training course in 1983. However, rehabilitation development started off slow and needed immense work. During 1983-1988, The training programs on rehabilitation held courses that ranged from one month to one year. Starting in 1989, the World Health Organization (WHO) financed a 10-year project focused on developing formal training for rehabilitation doctors in Mainland China. This project was implemented with the help and persuasion from the founder of the Hong Kong Society of Rehabilitation, Harry Fang. Tongji Medical College in Wuhan launched the

first cohort of a 1-year rehabilitation medicine course (Wong & Li-Tsang, 2010, 20). The Hong Kong Society of Rehabilitation (HKSR) was established in 1959, and has helped develop a solid foundation for rehabilitation health in Mainland China (HKSR, 2018).

From 1989-2000, rehabilitation education further developed with the creation of 3-year rehabilitation therapy diploma programs at junior colleges, colleges, and universities. These programs expanded to various parts of China, such as Guangzhou, Shanghai, Hubei and Anhui. The courses helped train future rehabilitation therapists and taught them multiple therapeutic skills. These skills were an integration of physical modalities, exercises, occupational therapy techniques, as well as traditional Chinese medicine techniques such as acupuncture and tuina. As the development of rehabilitation training has advanced, more universities started rehabilitation programs. Sun Yat-Sen University created a 5-year degree course and a 3-year diploma course in rehabilitation therapy (Wong & Li-Tsang, 2010).

By 2001, mainland China had a more formalized rehabilitation training education system. More Universities started creating new programs, especially with the help of other countries. Japan's International University of Health and Welfare helped develop and fund a new 4-year bachelor degree program in rehabilitation therapy that was formed by the Capital Medical University and the China Rehabilitation Research Center (Zhuo, 2004). There was growth in programs this year, as the Nanjing Medical University created a 4-year degree program as well.

In recent years, rehabilitation development has improved immensely in terms of the growth in education and training, as well as the quality of practice. Although there was always a need for rehabilitation implementation in mainland China, there was a much bigger need after the 2008 Wenchuan Earthquake in Sichuan. The Chinese government emphasized the importance of rehabilitation and supported the idea of increased training. The HKSR funded Sichuan University to create a bachelor program for occupational therapy (OT) and

physical therapy (PT) to help treat the injured from the Wenchuan earthquake. Universities across China started 4-year bachelor programs for rehabilitation, but schools started to expand more knowledge by focusing the last 2 years of the program on OT and PT, making rehabilitation more specialized (Wong & Li-Tsang, 2010). Since the introduction of modern rehabilitation, efforts towards education has grown, and continues to expand across mainland China.

Current status of the rehabilitation system in Mainland China

Today, rehabilitation continues to advance in Mainland China. Rehabilitation medicine programs exist at schools in many provinces, but more creating a focus on specialized programs, such as occupational therapy and physical therapy. In comparison to other developed countries, China lacks higher education in specialized fields of rehabilitation. physical therapy programs are at a Doctorate level, while occupational therapy and speech language pathology programs are at both Masters and Doctorate levels in the United States. Most OT, PT, and SLP programs in mainland China are at the Bachelors level. Currently, there are only three OT programs in Mainland China that are accredited by the World Federation of Occupational Therapists (WFOT), Beijing Capital Medical University, Kunming Medical University, and West China Medical School of Sichuan University. In 2011, there were only two SLP training programs available in mainland China, at East China Normal University in Shanghai, and a degree in rehabilitation medicine at Capital University of Medical Sciences in Beijing that includes coursework in speech-language pathology (Meyer, 2011). The very first speech language pathology program was just recently accredited in 2016 with the help of Henry Lew, a professor and chair of University of Hawai‘i at Mānoa’s John A. Burns School of Medicine’s (JABSOM) communication sciences and disorders department (UH News, 2016).

Although advancements of modern rehabilitation continue to grow, traditional Chinese rehabilitation therapy (TCRT) is greatly used in most hospitals across mainland China. Currently, an integration of both TCM and Western approaches are becoming a trend (Zhuo, 2006). TCM hospitals are starting to adopt departments specifically for rehabilitation, as Western rehabilitation therapies are becoming more available. However, the quality of rehabilitation may differ between public TCM hospitals and private Western rehabilitation hospitals in terms of modern rehabilitation. For example, LIH SkyCity Rehabilitation Hospital consists of 5 floors devoted to different specialties of modern rehabilitation, as therapists use high quality equipment. TCM hospitals are starting to adapt modern rehabilitation, for example, the Yunnan Provincial Hospital of Traditional Chinese Medicine – Dianchi Branch. Modern rehabilitation exists on the 6th floor, existing of both OT and PT services, but is very different in comparison to any rehabilitation department at LIH SkyCity Rehabilitation Hospital.

Problems regarding rehabilitation development

Although rehabilitation development is growing, mainland China still faces many obstacles. With the increase in the aging population and people with disabilities, mainland China can not keep up with the high amount of rehabilitative needs in comparison to the amount of therapists trained in modern rehabilitation. According to Xiao (2017), the aging population will increase up to 255 million by 2020. There are over 85 million disabled people in mainland China, of whom 90% have rehabilitative needs; however, only a little over 10 million can access rehabilitative care. As chronic diseases affect 270 million people in mainland China, 130 million of them have an urgent need for rehabilitation (Li, 2015). The disease spectrum is starting to change over time due to the changes in living style, economy, and culture, while an increasing number of diseases are becoming more difficult to cure (Yanfu, 2003). With these changes, it is crucial for rehabilitation to be accessible. A larger

issue is the awareness of rehabilitation. Most patients in mainland China are not aware of the importance of rehabilitation (Wong & Li-Tsang, 2010). Wong & Li-Tsang (2010) emphasize that more complications will occur the later the time therapy begins. This is very problematic for the aging population and people with disabilities, as rehabilitation plays a huge factor in the recovery process.

Other issues of rehabilitation development stem from the lack of education or low education from rehabilitation professionals. According to Xiao (2017), rehabilitative staff has low education and professional titles. Only 50% of doctors, 34% of therapists, and 30% of nurses obtained medium or higher titles; 50% of doctors, 33% of therapists and nearly 15% of nurses were with bachelor or higher-degree diplomas. Rehabilitation development had a slow start in the 1980's due to the lack of professional educators qualified to provide professional training. Especially for OT, there was a gap between the national and international standards due to the lack of training opportunities in mainland China (Zhuo, 2006). Also, professional expertise in areas of specialized rehabilitation, such as hand rehabilitation, is lacking because most rehabilitation medicine departments specialize in spinal cord injury, cerebral palsy, and hemiplegia and amputation instead. Specifically with hand therapy in mainland China, the hand surgery department and rehabilitation medicine department are separated and follow different administrative procedures (Wong & Li-Tsang, 2010). There is a lack of communication between both departments which can cause strain on the patient and their progress in recovery. This eventually leads to poor interprofessional collaboration between surgeons and rehabilitation doctors and therapists.

Lastly, access to rehabilitative care is poor, especially in comparison between rural and urban areas. There is an uneven distribution between rural and urban areas in mainland China, while quality care is more commonly found in big cities. Rehabilitative care has yet to develop in non-clinical settings, and are not seen in homes, communities, or other social

settings. Due to the lack of rehabilitative care management, affordable and quality care is inaccessible by patients (Xiao, 2017). Because there are low numbers of therapists in mainland China, it will take many decades for rehabilitation to be accessible in all areas of China. Especially for being a country so large in size, development of rehabilitation will start in major cities and from there can branch out to other towns, cities, and rural areas.

Methodology

Data Collections

Online Questionnaire Survey

Two surveys were administered during the month-long study period, one that gathered qualitative data produced through SurveyMonkey, and another through WJX.cn that collected both qualitative and quantitative data. The SurveyMonkey questionnaire was created earlier during my study period, and was predominantly sent out to occupational therapists that attended the 2018 International Occupational Therapy Conference. This questionnaire consisted of 10 questions that provided background knowledge of rehabilitation in mainland China. Although this survey provided useful information, the questions were written response questions, in which the responses were unable to convert into quantitative data. 10 completed questionnaires were received through SurveyMonkey, which were completed by occupational therapists from mainland China, Hong Kong, Malaysia, a nurse, anesthesiologist, and traditional Chinese medicine doctors. This survey was sent to 19 people with different health-related backgrounds, and had a 53% response rate.

Quantitative data was collected through a different online survey platform, WJX.cn. This questionnaire survey was improved by providing 12 multiple choice questions that collected quantitative data, as well as 8 written response questions. Changes were made in comparison to the first survey to provide more accessibility. WJX.cn does not require a

virtual private network (VPN) to access in mainland, China; therefore, more participants can access this survey with ease. As well as providing both English and Mandarin (Chinese) translations, this prevented any misunderstandings on what the questions ask. This survey was sent to 27 people with a 79% response rate of 21 completed surveys. Data provided information regarding mainland China's rehabilitation development, perspectives of accessibility and costs, as well as opinions on an integrated model of traditional Chinese rehabilitation therapy and modern rehabilitation.

Participant Observations

Observations took place at all three hospitals:

- Yunnan Provincial Hospital of Traditional Chinese Medicine (Guanghua branch)
- Yunnan Provincial Hospital of Traditional Chinese Medicine (Dianchi branch)
- LIH SkyCity Rehabilitation Hospital.

Each hospital specialized in using a specific rehabilitation method.

The Guanghua branch of Yunnan Provincial Hospital of Traditional Chinese Medicine mainly used traditional Chinese rehabilitation therapy (TCRT). The rehabilitation department used acupuncture, tuina (Chinese manipulation), and moxibustion focused methods.

The Dianchi branch of the Yunnan Provincial Hospital opened in 2015, and consists of a rehabilitation department that provides TCM rehabilitation therapy as well as modern rehabilitation services.

LIH SkyCity Rehabilitation Hospital opened in 2017 and consists of orthopaedic rehabilitation, pediatric developmental behavior and rehabilitation, American chiropractic medicine, chronic pain management and rehabilitation, neuro-rehabilitation, psychiatric therapy, geriatric rehabilitation, prosthetics and orthotics, as well as traditional Chinese

medicine. Majority of the observations took place in the pediatric rehabilitation department, as well as adult inpatient rehabilitation, and chiropractic medicine.

Guided Assistance

Guided assistance took place at LIH SkyCity Rehabilitation Hospital, in the pediatric rehabilitation department. OT rehabilitation cases were assisted during activities and exercises, while provided with encouragement and motivation. During each case, interventions and treatment goals were discussed regarding each patient.

Guided Conversations

During hospital visits and sessions, conversations regarding rehabilitation in mainland China were discussed frequently. In order to understand the current situation of rehabilitation in mainland China, many questions were asked. A good understanding of both traditional Chinese rehabilitation therapy as well as modern rehabilitation was obtained through daily discussions. At LIH SkyCity Rehabilitation Hospital, the OT team had weekly training meetings to discuss new intervention and treatment methods, which also included an open discussion between the therapists. Because these meetings were discussed in mandarin (Chinese), a translator was provided to ensure comprehension and understanding.

Formal Interviews

Two formal interviews were conducted. Ge Linna, a massage therapist with a visual impairment, was asked the same questions presented from the WJX.cn survey. With the responses to the 20 questions, it led to an open discussion on the perceptions of disability in mainland China, as well as the current status of accessibility to rehabilitative care.

Dr. Xu Xiao Ming, a traditional Chinese medicine rehabilitation physician, was interviewed at Yunnan Provincial Hospital of Traditional Chinese Medicine - Guanghua branch. With the help of my project advisor and translator, Zhang Ying, information was

collected through questions regarding traditional Chinese rehabilitation therapy (TCRT), the use of modern rehabilitation methods with TCRT, and different TCRT methods used to treat different conditions. This enabled an understanding of rehabilitation under a traditional Chinese medicine background.

Ethics

In order to ensure quality and integrity of my research, all the respondents in my study took part voluntarily. To respect the anonymity and confidentiality of my participants, I asked permission before using their name and responses.

Research Limitations

Due to language barriers, there were limitations to the amount of conversations and interviews with non-English speakers. Although there was access to many rehabilitation health professionals in mainland China, there were difficulties to have in-depth conversations. As well as the response rate to the online survey questionnaires, it is difficult for people to take the time to fill out.

Results and Discussion

The second survey (WJX.cn) includes results from 21 participants. The survey was sent out to many health professionals, all of which had different occupation backgrounds, but work in mainland China. Figure 1 presents the results of the respondent's occupation. The "other" section of Figure 1 is composed of one massage therapist, two chiropractors, and one occupational therapy student.

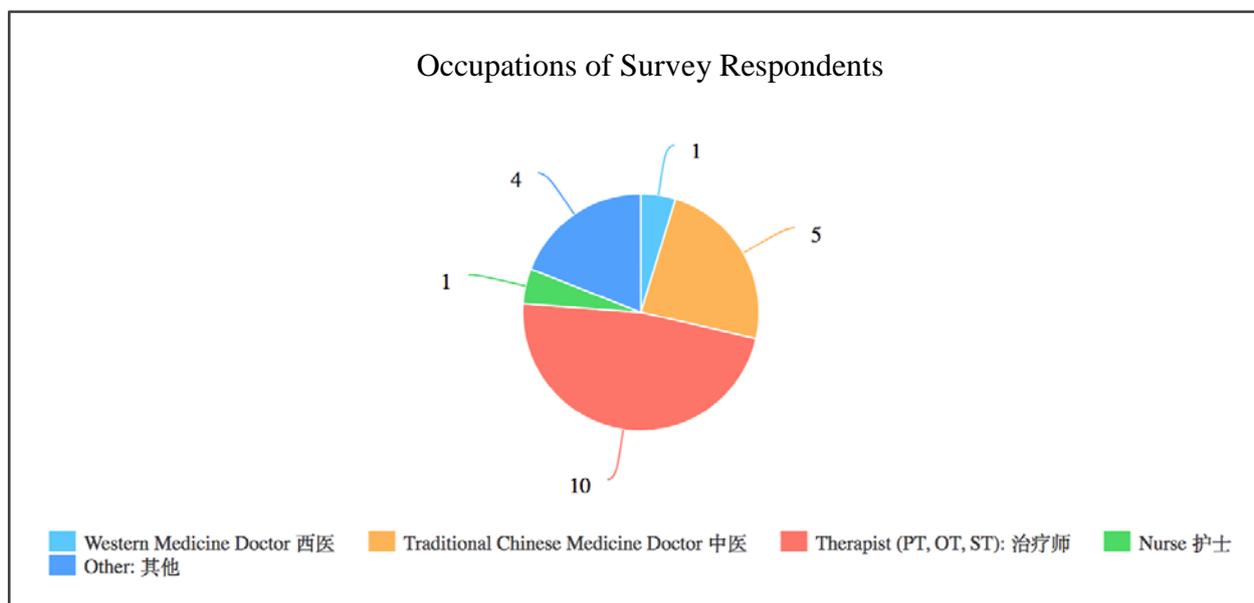


Figure 1. Occupations of Survey Respondents

Through the results from the survey questionnaires, as well as information composed from many articles, the current status of rehabilitation development in mainland China is slowly improving and developing. Although there are still many issues regarding access to Western rehabilitation care, changes are being made to improve rehabilitation in mainland China. In figure 2, results show that majority of respondents (61.9%) believe that rehabilitation healthcare in mainland China is slowly developing and improving while 14.29% believe rehabilitation is very poor and needs improvement. With the merge of both results, more than 75% of the respondents recognize that development of rehabilitation in

China is in need of improvement. Only 14.29% of the respondents believe rehabilitation is stable and good, while 9.52% think that rehabilitation in mainland China is excellent. As these results are different through a range of responses, every respondent has a different perspective.

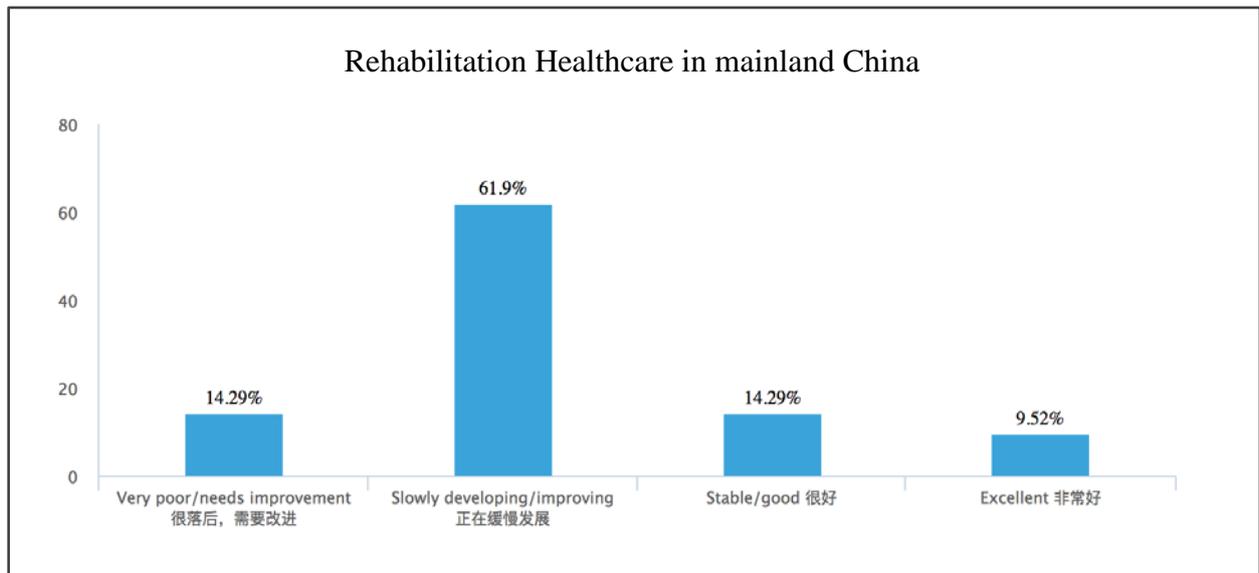


Figure 2. Rehabilitation healthcare in mainland China

In regards to development of rehabilitation education in mainland China, efforts have been made to expand Western rehabilitation programs with specialty programs in PT, OT, and SLP. As mentioned in the literature review section, there have been major improvements throughout the years since the 1980's as more programs develop, but there are still limited numbers of accredited programs. For example, the first speech language pathology (SLP) program was just recently accredited in 2016, and there are currently only three accredited occupational therapy programs in mainland China according to the World Federation of Occupational Therapists (WFOT). Rehabilitation knowledge is progressing, however, it takes time and effort for an entire country to adopt a new healthcare method.

Ever since the introduction of rehabilitation in the 1980's, mainland China has made strides towards implementing modern rehabilitation practice, but still lacks accessibility and quality care in areas across mainland China. There is a huge gap in access between urban and

rural communities which is preventing rehabilitation from becoming well-established in mainland China. Through the qualitative data collected through the WJX.cn survey, respondents have expressed that there is limited knowledge of rehabilitation as well as hospitals that can provide good-quality rehabilitation services. Many disclose the barriers that people with disabilities face, as there are less opportunities to access treatment, as well as less resources and funds. April Clark, a PT, DPT, PCS from Chicago who works in Beijing, expresses that most practices are not up-to-date in terms of evidence based practice, and therapy in settings like NICU, PICU, etc. do not exist or are just starting to develop. Regarding accessibility, a respondent disclosed that in a county of 200,000 residents, there is no Western rehabilitation available. Only traditional Chinese medicine treatment is provided, and use Chinese herbs and acupuncture rather than exercises and stretches in a hospital setting. There are many other places in mainland China that do not provide rehabilitative care, or quality care. Through my observations at hospitals, I have realized that people travel far to receive good-quality rehabilitative services. Most Western rehabilitative services exist in major cities, such as Beijing, Shanghai, and Kunming. For example, parents of a patient would travel five hours every week for their child to receive pediatric therapy in Kunming.

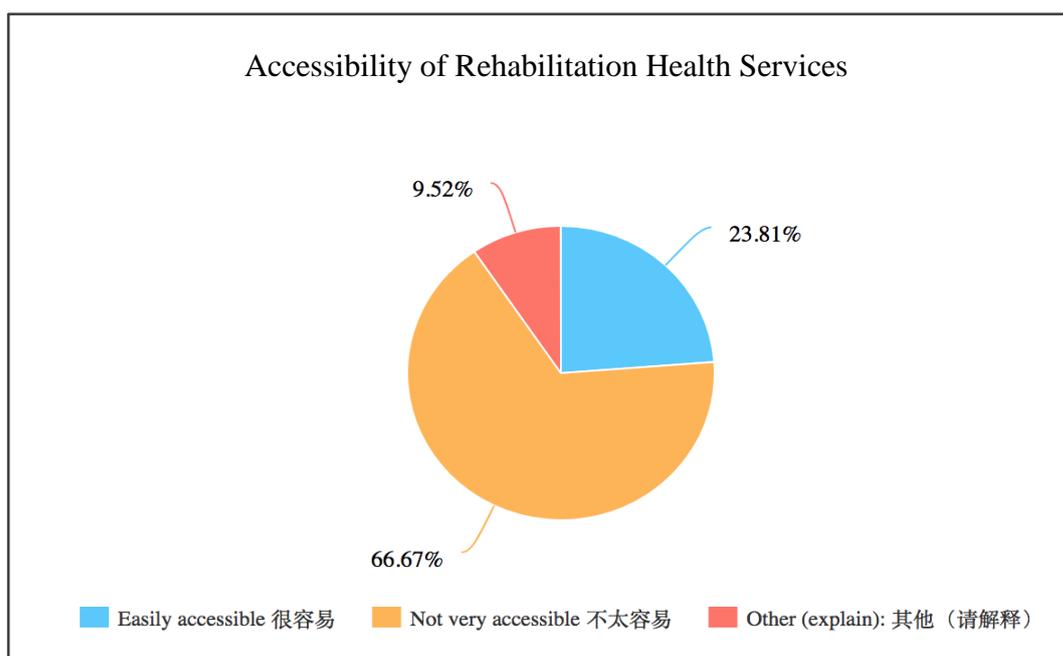


Figure 3. Accessibility of Rehabilitation Health Services

In Figure 3, respondents were asked how accessible rehabilitation healthcare is in mainland China. Majority (66.67%) said that rehabilitation is not accessible, while 23.81% believe it is accessible. The remaining 9.52% that voted “other” explained that it depends on all aspects of people, and that TCM rehabilitation is accessible while being on every corner, however, good quality rehabilitation is rare.

In terms of cost, respondents answered questions on the price differences between TCRT and modern rehabilitation. Although it ranges depending on the service and hospital, TCRT ranges between 30-150 RMB (5-24 USD) depending on insurance. Tuina ranges between 50-100 RMB (8-16 USD) for one session while Acupuncture is about 100 RMB (16 USD). However, depending on the type of treatment, it can reach up to 400 RMB (65 USD). In comparison to modern rehabilitation services, TCRT is much more affordable. Modern rehabilitation is more difficult to find and is more costly in big cities. At private hospitals, one therapy session of OT, PT, or SLP is around 300 RMB (48 USD) in Kunming, but is around 1200 RMB (194 USD) in Beijing, and 2000+ RMB (322 USD+) in Shanghai. Some may say that modern rehabilitation services are available, but only to those who have money and can afford quality care. However, public hospitals that offer modern rehabilitation are more affordable, although they might not have access to certain equipment in comparison to private hospitals.

Data in Figure 4 displays that 20 out of the 21 respondents believe an integration of both TCM and Western rehabilitation is beneficial. In the “other” section, there was only one respondent that was unsure about the question and did not decide between one or the other. There were zero respondents that believe a blended model of TCM and Western rehabilitation is not beneficial. The use of an integrated model can bring together the positive effectiveness from both methods, and can bring outstanding results to patients across mainland China. Dean (2001) acknowledges that Western-based approaches tend to reflect

global healthcare, but an approach of just Western or Eastern health may be too narrow and fail to provide the best quality of care in specific areas. A suggestion of integrating several health care philosophies may create a new and improved method that can be used not only in mainland China, but worldwide. TCM as well as therapeutic methods are starting to gain acceptance in the West, such as homeopathy, osteopathy and naturopathy (Yanfu, 2003). According to Michael Jones, former anatomy and physiology professor at the University of Illinois at Chicago, DPT, and clinical massage therapist, he knew someone in the United States that received cupping to her posterior shoulder region after having an 8 month recovery from a rotator cuff repair. She had dramatic range benefits, and was prescribed with herbal remedies as well. She was so astonished with the results that she quit her job and became a sports TCM specialist. A merge of both Eastern and Western philosophies can provide a framework for global advancement, as well as the development of physiotherapy practice, and professional education and research (Dean, 2001). With an integrated model, TCM philosophies and a Western evidence-based approach can create an advancement in rehabilitation methods.

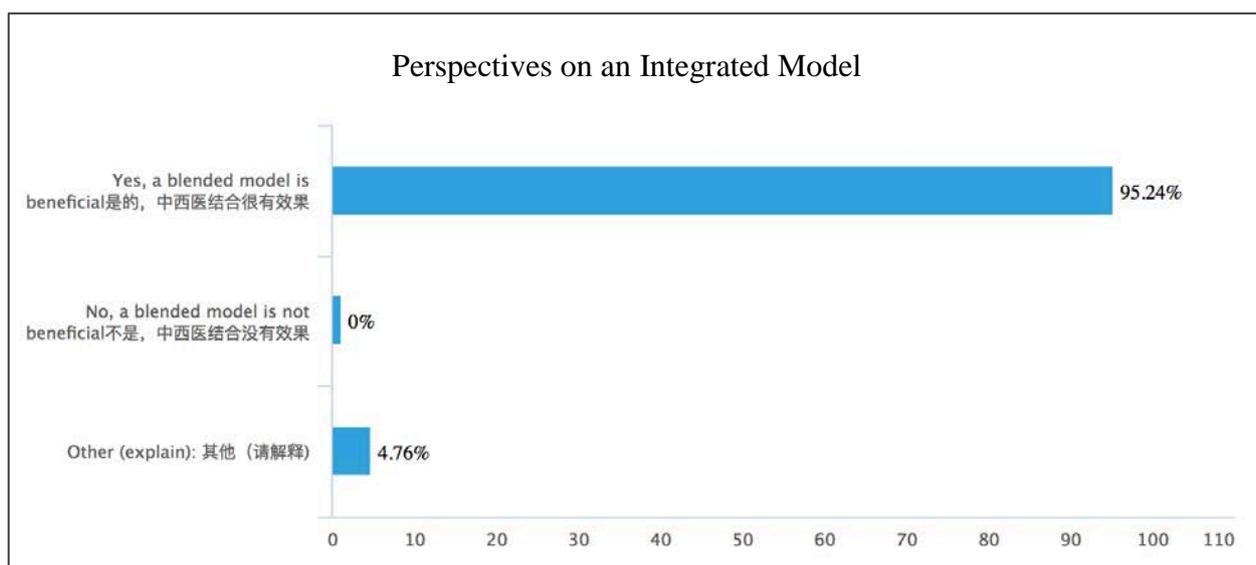


Figure 4. Perspectives on an integrated model

Figure 5 portrays the results asking which rehabilitation method is most effective, between TCM, Western rehabilitation, or both combined. Majority of the respondents (76.19%) believe that both are equally effective. 23.81% of the respondents believe that Western rehabilitation is more effective, while 0% believe that TCM alone is the most effective. These results reveal that using both methods of TCM and Western (modern) rehabilitation will lead to effective results, but some believe that Western (modern) rehabilitation can provide effective, or better results alone. This suggests that mainland China should focus on developing Western (modern) rehabilitation as it is limited and inaccessible in many areas of mainland China.

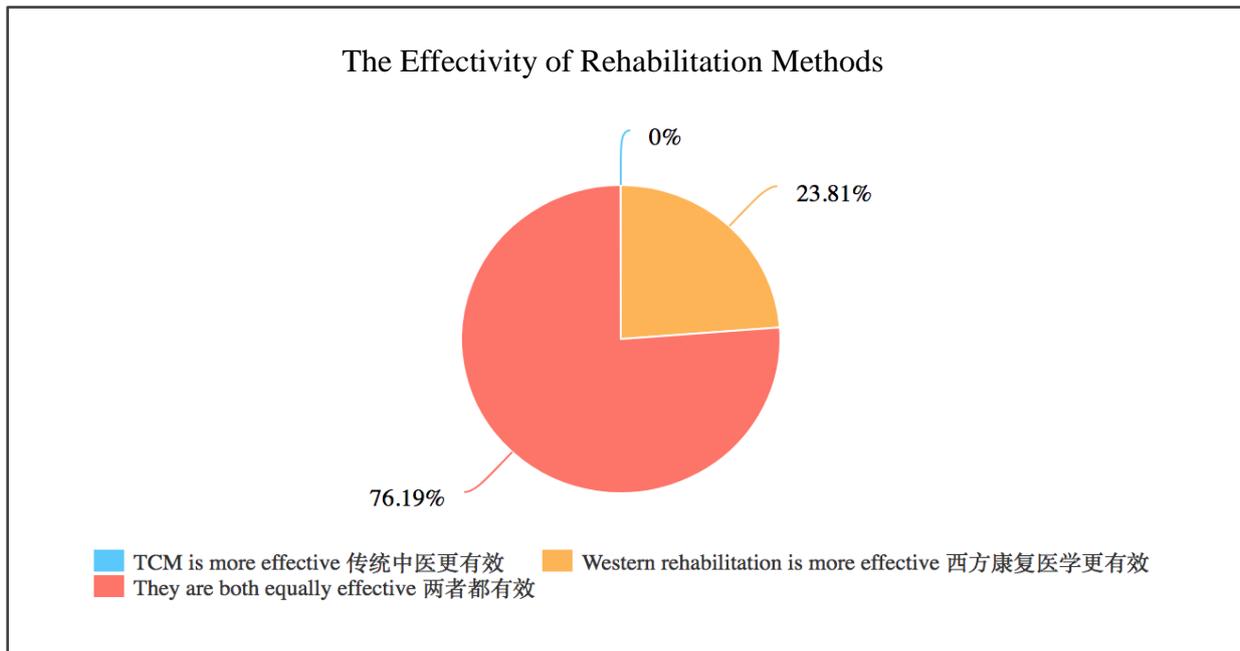


Figure 5. The effectivity of rehabilitation methods

While mentioning the integration of both TCM and Western rehabilitation methods, the survey asked respondents if they use or see TCM and Western rehabilitation techniques combined in practice. In Figure 6, 71.43% of respondents answered yes while 28.57% said no. For the respondents that answered yes, they were asked to explain which methods are used together. According to the responses, cupping can be used in hand therapy while

acupuncture and tuina (Chinese manipulation) is applied during PT and OT. While having guided conversations with OT's at LIH SkyCity Rehabilitation Hospital, some have mentioned that their patients have also sought traditional Chinese medicine and found acupuncture to be helpful.

From perspectives outside of mainland China, Maurice Wan, a mental health OT from Hong Kong, finds health qigong beneficial in rehabilitation practice. Health-promoting qigong is an ancient technique used as a Chinese therapeutic exercise that uses breathing exercises and relaxation techniques (Plunkett, 2013). In Wan's study, *An Evaluation of Two Behavioral Rehabilitation Programs, Qigong Versus Progressive Relaxation, in Improving the Quality of Life in Cardiac Patients*, it is concluded that qigong exercise improved the quality of life for cardiac patients (Hui, Wan, Chan & Yung, 2006). Qigong is an example that can be used in Western rehabilitation practice, which helps support the use of an integrated model.

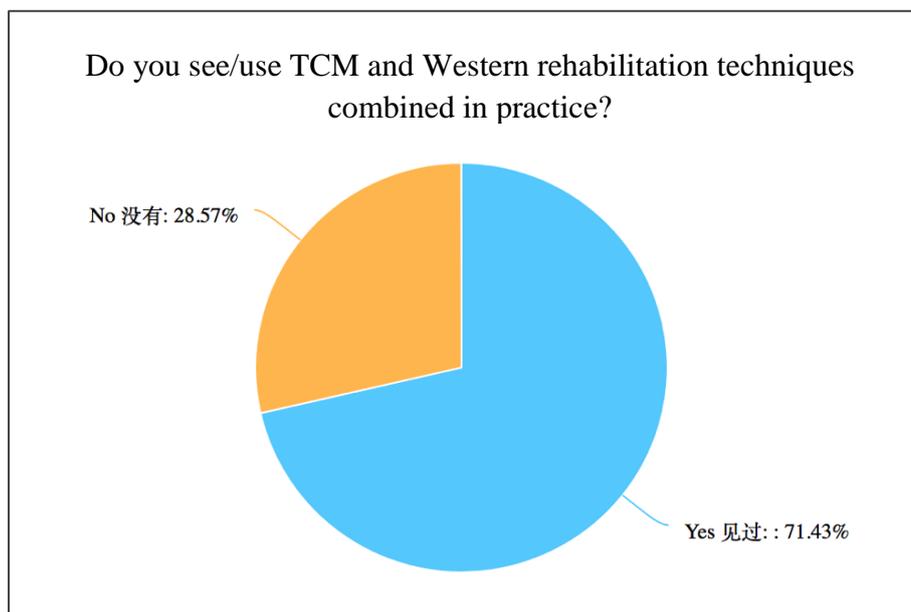


Figure 6. Do you see/use TCM and Western rehabilitation techniques combined in practice?

An integration of both TCM and Western rehabilitation has started to exist in mainland China after rehabilitation education courses were developed. Mentioned in the literature review, rehabilitation therapists took courses that taught an integration of modern rehabilitation along with TCRT techniques of acupuncture and tuina (Chinese manipulation) (Wong & Li-Tsang, 2010, 21). However, rehabilitation medicine programs today tend to focus more on specializing in OT and PT.

With the changes of rehabilitation medicine in mainland China, the progress of development would not exist without the help of other countries and regions. Figure 7 present results of the question “Which countries/regions have helped the development of rehabilitation in Mainland China?” Hong Kong received the highest result with 80.95% of respondents, as the United States second highest with 71.43%, and Taiwan with 66.67% had the third highest results. The country listed in the “other” section of Figure 6 is Russia with 4.76%.

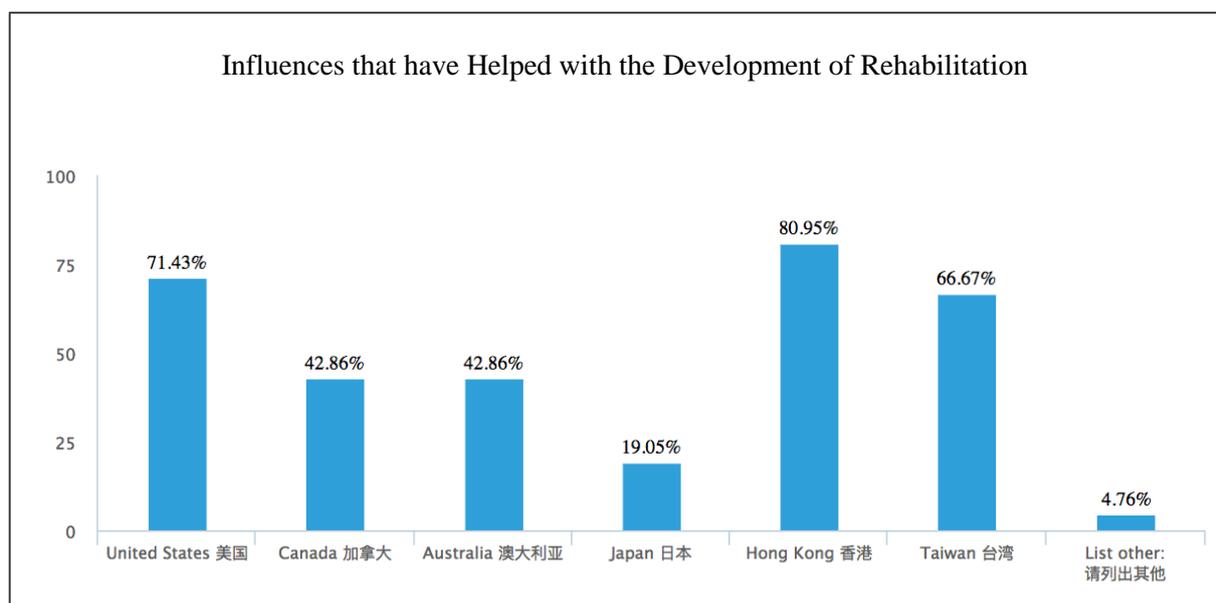


Figure 7. Influences that have helped with the development of rehabilitation

New rehabilitation methods and knowledge are constantly shared over time. At LIH SkyCity Rehabilitation Hospital, meetings are held for OT's, PT's, and SLP's. For example, the OT team was trained on the EASI Ocular Motor and Praxis assessment and interventions for children with autism. The advancement in rehabilitation knowledge shared at conferences has also been a big factor in mainland China that promotes rehabilitation. According to the Hong Kong Institute of Occupational Therapy (HKIOT), Hong Kong developed rehabilitation in the 1970's, earlier than mainland China. Hong Kong has been practicing rehabilitative medicine longer and has helped mainland China achieve great development. Since 1997, Hong Kong has sent rehabilitation therapists to mainland China for seminars and training. The HKIOT also hosts the International Occupational Therapy Conference which is held in mainland China every 2-4 years. This conference unites occupational therapists from all of the world to share knowledge. This year, the keynote and session speakers were from Australia, Canada, United States, Taiwan, Hong Kong, and mainland China. Other countries that were involved in this year's conference were the United Kingdom, the Philippines, and Malaysia. Knowledge on OT education, cognitive rehabilitation, mental health, neuro rehabilitation, geriatric rehabilitation, hand rehabilitation, SCI rehabilitation, pediatric rehabilitation, new service models, as well as many more related topics were presented. Conferences as well as seminars are a great way to share new knowledge, and has immensely improved mainland China's knowledge on rehabilitation practice. Hopefully with the continuation of training and shared methods from other countries, mainland China can progress by providing the best care for patients.

Recommendations for Future development

Ideas of integrating both TCM and Western rehabilitation have been seen throughout China, but there is no clear integrated model. According to Dean (2001), merging Eastern and Western philosophies can provide a framework for the global advancement and development

of physiotherapy practice, professional education, and research. With this idea, there is a hope for more TCM rehabilitation physicians to adopt Western rehabilitation methods in their practice. As well as introducing TCRT to other countries, certain therapies can benefit with the addition of acupuncture and tuina.

As well as promoting Western rehabilitation to patients at hospitals, the increasing awareness on rehabilitation is a driving force to better services (Wong & Li-Tsang, 2010). Hopefully with more exposure of PT, OT, and SLP in mainland China, the younger generation will be aware of these practices, to influence future rehabilitation professionals.

Hopefully with the growth of rehabilitation, PT, OT, and SLP education programs can further develop into Masters and Doctorate programs in mainland China to meet the international standards of rehabilitative medicine.

Conclusion

Mainland China has made progress towards rehabilitation development over the past 40 years with the help from international influences. However, the development of rehabilitation is slow and requires changes in order to advance. Although modern rehabilitation has been growing, traditional Chinese rehabilitation therapy continues to be popular for its affordability and accessibility. The problems of rehabilitation development are addressed as the lack of training for professionals, unawareness of the importance of rehabilitation by patients, as well as the lack of accessibility to rehabilitative care for patients. This study suggests that an integration of both TCM and Western rehabilitation is beneficial and will lead to effective results.

References

- Acupuncture: In Depth. (2017, February 21). Retrieved from <https://nccih.nih.gov/health/acupuncture/introduction>
- Asakawa, T., Zong, L., Wang, L., Xia, Y., & Namba, H. (2017). Unmet challenges for rehabilitation after stroke in China. *The Lancet*, 390(10090), 121-122. doi:10.1016/s0140-6736(17)31584-2
- Bhatia, D., Bejarano, T., & Novo, M. (2013). Current interventions in the management of knee osteoarthritis. *Journal of Pharmacy and Bioallied Sciences*, 5(1), 30. doi:10.4103/0975-7406.106561
- Dean, E. (2001). Neo-Confucianism and Physiotherapy: The Mind-Body-Spirit Connection. *Hong Kong Physiotherapy Journal*, 19(1), 3-8. doi:10.1016/s1013-7025(09)70017-x
- Dunning, K. N. (2009). Physical Therapy in China: Entwining Cultural Practices. *Rehab Management*. Retrieved from rehabpub.com/2009/10/physical-therapy-in-china-entwining-cultural-practices/.
- Hafner, C. (2016). Tui na. Retrieved from <https://www.takingcharge.csh.umn.edu/explore-healing-practices/therapeutic-massage-tui-na>
- HKSR Introduction. (2018, April 23). Retrieved from <http://www.rehabsociety.org.hk/about-us/hksr-introduction/>
- Hong, Z. D. (2006). Present Situation and Future Development of Occupational Therapy in China. *Hong Kong Journal of Occupational Therapy*, 16(1), 23-25. doi:10.1016/s1569-1861(09)70036-1
- Hong Kong Institute of Occupational Therapy. (2017). Retrieved from http://www.hkiot.org/intro_background.htm

- Huang, J., et. Al, (2015). The effect of a therapeutic regimen of Traditional Chinese Medicine rehabilitation for post-stroke cognitive impairment: Study protocol for a randomized controlled trial. *Trials*,16(1). doi:10.1186/s13063-015-0795-x
- Hui, P. N., Wan, M., Chan, W. K., & Yung, P. M. (2006). An Evaluation of Two Behavioral Rehabilitation Programs,QigongVersus Progressive Relaxation, in Improving the Quality of Life in Cardiac Patients. *The Journal of Alternative and Complementary Medicine*,12(4), 373-378. doi:10.1089/acm.2006.12.373
- Li, J. (2015). The Status and Prospects of Rehabilitation in China. *The Japanese Journal of Rehabilitation Medicine*,52(6), 315-319. doi:10.2490/jjrmc.52.315
- Liu, N., Wang, J., & Li, Z. (2012). Remote Rehabilitation Development Status in China—To Eliminate the Disabled People's Space Obstacles. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*,6(1), 27-30. Retrieved from scholar.waset.org/1999.10/6393.
- Nanjing Medical University. (n.d.). Retrieved from <http://english.njmu.edu.cn/8022/list.htm>
- News, U. (2017, October 16). UH helps China establish nation's first accredited speech-hearing program. Retrieved from <https://www.hawaii.edu/news/2016/09/27/uh-helps-china-establish-nations-first-accredited-speech-hearing-program/>
- Plunkett, M. (n.d.). PRTCM. Retrieved from <http://www.prtcmm.org/treatmentmethods.php>
- Plunkett, M. (n.d.). PRTCM. Retrieved from <http://www.prtcmm.org/medicalqigong.php>
- Shi, Y., & Howe, T. (2016). A Survey of Occupational Therapy Practice in Beijing, China. *Occupational Therapy International*, 23(2), 186-195. doi:10.1002/oti.1423
- Tang, J., Liu, B., & Ma, K. (2018, October 17). Traditional Chinese Medicine. Retrieved from <https://www-sciencedirect-com.proxy.cc.uic.edu/science/article/pii/S0140673608613549>
- Teo, S., & Li, S. (2015). Physiotherapy training in the context of traditional Chinese medicine. A case study. *Physiotherapy*,101. doi:10.1016/j.physio.2015.03.1480

- F. (2018, May 23). Traditional Chinese Medicine. Retrieved from <https://www.chinahighlights.com/travelguide/culture/traditionalmedichine.htm>
- Wang, Q. (2014). Stroke Rehabilitation in China Today. *International Journal of Physical Medicine & Rehabilitation*,*S3*(01). doi:10.4172/2329-9096.s3-005
- Wong, S. K., & Li-Tsang, C. W. (2010). Development of Hand Rehabilitation in Mainland China. *Hong Kong Journal of Occupational Therapy*,*20*(1), 19-24. doi:10.1016/s1569-1861(10)70054-1
- Xiao, Y., Zhao, K., Ma, Z., Li, X., & Qiu, Y. (2017). Integrated medical rehabilitation delivery in China. *Chronic Diseases and Translational Medicine*,*3*(2), 75-81. doi:10.1016/j.cdtm.2017.02.003
- Xiao, Y., Zhao, K., Ma, Z., Li, X., & Qiu, Y. (2017). Integrated medical rehabilitation delivery in China. *Chronic Diseases and Translational Medicine*,*3*(2), 75-81. doi:10.1016/j.cdtm.2017.02.003
- Yanfu, Z. (2003). *Life cultivation and rehabilitation of Traditional Chinese medicine*. Shanghai: Shanghai University of Traditional Chinese Medicine.
- Zhang, H., & Shen, Q. (2014). The Current Situation of Rehabilitation Medical Service System in China: Problems and Challenges. *Business and Management Research*,*3*(2). doi:10.5430/bmr.v3n2p42
- Zhuo, D. (1991). Rehabilitation in China. *The Western Journal of Medicine*,*633*-633.

Appendix

SurveyMonkey questionnaire

1. Full Name and email:

全名： 电子邮件地址：

2. Occupation (what work do you do and where)?

职业：

3. Length of time staying in China/Date(year)?

在中国居住的时间/日期：

4. How would you describe healthcare in China?

您怎么形容中国的医疗保健？

5. Regarding rehabilitation, what is China's approach/techniques?

关于康复治疗，中国有些什么办法和技术？

6. How much is therapy (Occupational, Physical, Speech, etc.) used in China's

healthcare setting? Do you see it often?

在中国的医疗保健中，OT, PT, SLP 等疗法用得有多频繁？你经常能看到这些疗法吗？

7. Describe major differences between Western and Eastern rehabilitation or healthcare in general?

在康复与医疗保健方面，中西方有什么大的不同点？

8. What kind of health model does China relate most to? (example - medical model, social model?) Describe if possible.

中国的健康模式属于哪一种模式？（比如从医疗模式，社会模式来说）

9. How accessible is healthcare in China? (In terms of cost and location)

在中国，人们接受医疗有多容易？（从价格和与医院的远近来看）

10. Is there a negative stigma for people with disabilities in China? Explain how you think Chinese people perceive people with disabilities.

在中国，残障会被看作是一种污点吗？您觉得中国人怎么看残障人士？

WJX.cn Survey Questions

Rehabilitation Development in Mainland China 中国大陆康复治疗发展现状

1. Full Name: 全名: [填空题]

2. Email: 邮箱: [填空题]

3. Occupation: 职业 [单选题] *

Western Medicine Doctor 西医

Traditional Chinese Medicine Doctor 中医

Therapist (PT, OT, ST): 治疗师

Nurse 护士

Other: 其他 _____

4. How many years working/worked in Mainland China? 你在中国工作了几年 [填空题] *

5. How would you describe rehabilitation healthcare in Mainland China? 您怎么形容中国的医疗保健? [单选题] *

Very poor/needs improvement 很落后，需要改进

Slowly developing/improving 正在缓慢发展

Stable/good 很好

Excellent 非常好

Other (explanation): 其他 (请解释) _____

6. Regarding rehabilitation, what is Mainland China's approach/techniques? 关于康复治疗，中国大陆有些什么办法和技术？ [单选题] *

- Traditional Chinese Medicine (Massage, Acupuncture, etc.) 传统中医康复疗法（推拿，针灸等）
- Western Rehabilitation (PT, OT, ST) 西医康复疗法
- Both TCM and Western 中西医结合
- Other (Explain): 其他（请解释） _____

7. How much is therapy (Occupational, Physical, Speech, etc.) used in Mainland China's healthcare setting? Do you see it often? 在中国大陆的医疗保健中，OT, PT, ST 等疗法用得有多频繁？你经常能看到这些疗法吗？ [单选题] *

- Never 从没见过
- Rarely 非常少
- Occasionally 偶尔
- Frequently 一般
- Always 经常

8. Describe major differences between Western and Traditional Chinese Medicine rehabilitation? 在康复与医疗保健方面，中西方有什么大的不同点 [填空题] *

9. How accessible is rehabilitation healthcare in Mainland China? (In terms of cost and location) 在中国大陆，人们接受康复医疗有多容易？(从价格和与医院的远近来看) [单选题] *

- Easily accessible 很容易
- Not very accessible 不太容易
- Other (explain): 其他（请解释） _____

10. Do you see/use Traditional Chinese Medicine and Western rehabilitation techniques combined in practice? If yes, please describe. 你见过中西医结合的康复技术吗？如果见过，请举例。 [单选题] *

○Yes 见过: _____

○No 没有

11. What barriers do people with disabilities face in Mainland China? (in terms of access to rehabilitation services) 中国大陆的残疾人面临着哪些障碍? (获得康复服务方面) [填空题] *

12. Explain how you think Chinese people perceive people with disabilities. 您觉得中国人怎么看残障人士? [单选题] *

○People with disabilities are seen as regular people 残障人士也被看作是正常人

○People with disabilities are a burden or pitied 残障人士对社会和家庭是一种负担

○Other (explanation): 其他 (请解释) _____

13. Do you believe a combination of both TCM and Western rehabilitation is beneficial?

Please explain. 你觉得中西医结合康复效果有用吗? 请您详细说明一下。 [单选题] *

○Yes, a blended model is beneficial 是的, 中西医结合很有效果

○No, a blended model is not beneficial 不是, 中西医结合没有效果

○Other (explain): 其他 (请解释) _____

14. For TCM and Western rehabilitation, is one more effective than the other or are they

equally effective? Please explain. 您认为西医康复和中医康复同样有效, 还是西医康复和中医康复当中, 其中一个比另一个更有效? 请您说明一下。 [单选题] *

○TCM is more effective 传统中医更有效 _____

○Western rehabilitation is more effective 西方康复医学更有效 _____

○They are both equally effective 两者都有效 _____

15. What rehabilitation method is most popular in Mainland China? 哪种康复疗法在中国最常见? [单选题] *

○Traditional Chinese Medicine (massage, acupuncture, etc.) 中医康复疗法 (推拿, 针灸等)

○Western rehabilitation methods (PT, OT, ST) 西方康复疗法

○Blend of both Western and TCM rehabilitation 中西医结合

○Other: (explanation) 其他: (解释) _____

16. What is being done to help the development of rehabilitation in Mainland China? 为了提高与改进中国的康复医疗，都做了什么样的努力? [填空题] *

17. How much is the cost of one session for TCM rehabilitation treatment? 中医康复治疗，每一次治疗大概多少钱? [填空题] *

18. How much is the cost of one session for Western rehabilitation? 西医康复治疗，每一次治疗大概多少钱? [填空题] *

19. What do you think needs to be implemented to improve rehabilitation in Mainland China? 你觉得为了改进中国大陆的康复现状，需要做些什么 [填空题] *

20. Before Western rehabilitation techniques were introduced, what did rehabilitation in Mainland China look like? 在西方康复治疗进入中国之前，中国大陆的康复医疗是怎样的? [填空题] *

21. Which countries/regions have helped the development of rehabilitation in Mainland China? (select all that apply). 哪个国家与地区曾帮助中国的康复医学发展? [多选题] *

United States 美国

Canada 加拿大

Australia 澳大利亚

Japan 日本

Hong Kong 香港

Taiwan 台湾

List other: 请列出其他 _____

22. In Mainland China, the younger generation prefers Western rehabilitation while the elder generation prefers Traditional Chinese Medicine rehabilitation.在大陆地区，年轻人更倾向于西方康复，而老一辈更倾向于传统康复。[单选题] *

Strongly disagree 非常不同意

Disagree 不同意

Agree 同意

Strongly agree 非常同意

Other (explanation) 其他（请解释）：_____