

Research Assessment Exercise 2020
Impact Case Study

University: The University of Hong Kong (HKU)

Unit of Assessment (UoA): 28 - Social work and social policy

Title of case study: Transforming health and mental health service delivery: the Integrative Body-Mind-Spirit (IBMS) model.

1. Summary of the impact

The World Health Organization defined “health” as a state of physical, mental and social well-being, yet achieving such a goal has been challenging as most health care systems are designed to treat “diseases”, and not to promote well-being of people. The HKU team developed a new Integrative Body-Mind-Spirit (IBMS) intervention, with ground-breaking evidence of bio-psycho-social-spiritual outcomes, to promote holistic wellness for persons confronted by health and mental health challenges. Our research discoveries have been integrated locally and globally into mainstream professional services in cancer care, mental health, chronic disease management and reproductive health. The IBMS research has transformed health and mental health service delivery.

2. Underpinning research

Grounded in Eastern philosophies and Chinese Medicine practices, the IBMS model (henceforth referred to as IBMS) addresses holistic needs by introducing evidence-based body-mind-spiritual intervention across populations [R1]. The HKU IBMS research team under the leadership of Professors Cecilia Chan, Rainbow Ho and Associate Professors S.M. Ng, and Celia Chan, have innovated the model, developed outcome measurements, conducted more than 60 research projects (18 UGC General Research Fund Grants) and produced 191 publications in refereed high impact journals (2000-2019) (list of publications: <https://cloud.socwork.hku.hk:5001/sharing/V4Zri9q5K>). Evidence of research impacts includes: enhancing body-mind-spirit wellness, strength and resilience; improving physiological outcomes of stress (salivary cortisol), inflammatory-markers and anti-aging protective protein (IL6, telomerase, adiponectin). This new paradigm has significantly transformed health care delivery, particularly in cancer, mental health, chronic disease, and reproductive health care.

(i) Holistic cancer care

Our research has demonstrated the importance of holistic cancer care. IBMS promotes deep reflection on accepting vulnerability, self-compassion and rediscovering a sense of purpose in life through cancer [Chapter 12, R1]. 157 non-metastatic breast cancer patients were randomized into IBMS and control groups. The IBMS group demonstrated reduction of perceived stress, anxiety and depression after-intervention [R2]. Our end-of-life interventions enabled patients to realign their life priorities, reduce hospital bed-days, effect reconciliation with family members, and enable them in dying with dignity and peace.

(ii) Mental Health

As the first interdisciplinary research team led by social workers redefining evidence on spirituality and mental health, our randomized controlled trial of persons with insomnia and depression found IBMS could improve sleep, reduce depression and daytime symptoms of insomnia [R3]. Spiritual re-orientation was a significant therapeutic mediator of mood improvement following IBMS. We also developed interventions to deal with “stagnation” syndrome, where mind-body expression is stuck. 126 adults with stagnation syndrome were randomized into IBMS and control groups. The

intervention group showed significant improvements in depression, physical distress, daily functioning, negative affect and salivary cortisol level [R4]. Many of these studies produced evidence of improved subjective well-being and physiological indicators of salivary cortisol and plasma IL-6 by IBMS intervention.

(iii) Chronic disease management

For chronic conditions such as insomnia, chronic fatigue and eczema, holistic interventions can be more effective than medical treatment [Chapters 13,14, R1]. 108 women with chronic fatigue syndrome were randomized into qigong (mind-body exercise) and control groups. Blood samples were collected before and after the intervention to measure plasma adiponectin levels. Results found that qigong group experienced reduction of chronic fatigue and depression symptoms plus an increase in blood adiponectin levels post-intervention. Adiponectin plays a significant role in mediating hippocampal neurogenesis and alleviating depression [R5].

(iv) Reproductive health

IBMS is applied to promote women's health throughout the reproductive cycle. Whilst medically assisted reproduction has become more accessible to couples experiencing infertility, in vitro fertilization (IVF) in vitro fertilization intervention may induce high stress in patients [Chapter 22, R1]. 339 women undergoing their first IVF treatment cycle were randomized into IBMS intervention and control groups. Assessments of total well-being were made on intake, the day ovarian stimulations started, and the day of embryo transfer. The IBMS intervention effectively reduced anxiety, enhanced coping skills, and reconstructed the meaning of child-bearing and family for the participating women [R6].

3. References to the research

- R1 Lee, M. Y., Chan, C. H. Y., Chan, C. L. W., Ng, S. M., & Leung, P. P. Y. (2018) (Second Edition). *Integrative Body-Mind-Spirit Social Work: An Empirically Based Approach to Assessment and Treatment*. New York: The Oxford University Press. (First edition in 2009). (Special reference to Part III on evidence-based translation practice Chapter 12, 13, 14, 22)
- R2 Ho, R. T. H., Fong, T. C. T., Lo, P. H. Y., Ho, S. M. Y., Lee, P. W. H., Leung, P. P. Y., Spiegel, D., & Chan, C. L. W. (2016), Randomized controlled trial of supportive-expressive group therapy and body-mind-spirit intervention for Chinese non-metastatic breast cancer patients. *Supportive Care in Cancer*, 24(12), 4929-4937.
- R3 Ji, X. W., Chan, C. H. Y., Lau, B. H. P., Chan, J. S. M., Chan, C. L. W., & Chung K. F. (2017). The interrelationship between sleep and depression: A secondary analysis of a randomized controlled trial on Mind-Body-Spirit intervention. *Sleep Medicine*, 29:41-46.
<http://dx.doi.org/10.1016/j.sleep.2016.08.025>
- R4 Ng, S. M., Leng, L. L., Ho, R. T. H., Zhang, Z. J., Wang, Q. (2018). A brief Body-mind-spirit group therapy for Chinese medicine stagnation syndrome: A Randomized Controlled Trial. *Evidence-based Complementary and Alternative Medicine*. Article ID 8153637, 12 pages.
<https://doi.org/10.1155/2018/8153637>
- R5 Chan, J. S. M., Li, A., Ng, S. M., Ho, R. T. H., Xu, A., Yao, T. J., Wang X. M., So K. F., & Chan, C.L.W. (2017). Adiponectin potentially contributes to the antidepressive effects of Baduanjin Qigong exercise in women with chronic fatigue syndrome-like illness. *Cell Transplantation*, 26(3), 493-501.
- R6 Chan, C. H. Y., Chan, C. L. W., Ng, E. H. Y., Ho, P. C., Chan, T. H. Y., Lee, G. L., & Hui, W. H. C. (2012). Incorporating spirituality in psychosocial group intervention for women undergoing in vitro fertilization: A prospective randomized controlled study. *Psychology and Psychotherapy*, 85(4), 356-373.

4. Details of the impact

By training and educating social workers and healthcare professionals locally and globally, IBMS has been integrated into service delivery systems and generated ongoing research collaborations in Hong Kong, Taiwan, Singapore, USA and India [S1-10]. Thus, large numbers of health care professionals, patients and family members, as well as the general public have benefitted from professionals trained by us, via our collaborating organizations. Patient users', health care professionals' and government official's voices can be found in this 3 minute video: <http://www.socsc.hku.hk/50/project/revolution-spirit-%E2%80%A7-mind-%E2%80%A7-body/>.

IBMS is reaching into American university programs accredited by the Council on Social Work Education (CSWE). The Development Fund in Graduate Social Work Education established an IBMS initiative in 2014. Professor Lee, President of the Group for the Advancement of Doctoral Education in Social Work, testified how IBMS has fostered an "Integrative Social Work Curriculum" under the National Association of Deans and Directors of Social Work and CSWE since 2014 [S2].

(i) Holistic cancer care

Since late 1990s, the Hong Kong Cancer Fund (HKCF) started to adopt IBMS in all of their seven hospital-based Cancer Support Units and five Community Cancer Support Centres, which is now serving more than 30,000 patients and family members annually. "Research results indicated IBMS intervention enhanced positive social support, reduced psychological distress ... In 2015, we extended the intervention research to lung cancer patients and their family members..." (Mrs Sally Lo, HKCF) [S1].

The Hong Kong Jockey Club (HKJC) funded an End-of-Life Community Care (JCECC) Project (HK\$131M) (2016 - 2018) to further develop an IBMS community end-of-life-care model via four community service organizations and two universities. The JCECC reached 9,400 healthcare and social service professionals, 3,700 patients and family members, and more than 350,000 through public education (Mr. Leong Cheung, Executive Director, Charities & Community, HKJC) [S3].

Internationally, IBMS has been adopted by our collaborators in Patient Support Services for the National Cancer Centre, Singapore (2013) [S4]; the National Advanced Care Programme of Singapore (2014) [S5]; and, Taiwan Association of Cancer Patients (2019) [S7].

(ii) Mental Health

IBMS intervention for mental health are delivered through key Hong Kong NGOs such as the Tung Wah Group of Hospitals: "We are truly blessed to receive support from Dr. Ng Siu Man ... for introducing the body-mind-spirit intervention to us... (after being trained, two of our supervisors) continued to empower their staff to implement the body-mind-spirit approach in our community mental health services" (Miss Eppie Wan, Tung Wah Group of Hospitals) [S6]. These units serve more than 20,000 persons with mental health problems annually.

Internationally, National Taiwan University and the Taiwan Mental Health Social Work Society adopted IBMS in their service and training model [S7]. "I discovered an article on the 'Integrative Body-Mind-Spirit' intervention... I was totally intrigued... I adopted IBMS in India ... widely disseminated the practice model, standardizing IBMS ... as a core nursing practice framework... All the nurse students ... are trained in basic concepts and IBMS techniques before they go to their clinical practice experience in various hospitals." (Professor R. Sreevani, Head of Nursing, Dharwad Institute of Mental Health and Neurosciences, India) [S8]. Her Indian team applied IBMS on different population groups such as adolescent girls and persons addicted to alcohol (2016-2019) [S8].

(iii) Chronic Disease Management

Dr. Pamela Leung, Hong Kong Society for Rehabilitation (HKSR) said, “I am truly blessed to have the opportunity to learn from Prof. Cecilia Chan (on her IBMS model) in HKSR... we have extended the application to people with other chronic illnesses such as stroke, chronic pain, children with eczema, and also patients with mental health problems... We have formed a staff team specializing in IBMS intervention and IBMS is now a regular service adopted in our community rehabilitation for persons with chronic illness” [S9]. More than 1.5M users are served by IBMS trained health and social care professionals through their 30 HKSR service units in Hong Kong and China every year. HKSR contributed actively to practice-research in generating evidence on the IBMS model in chronic disease management as well.

(iv) Reproductive health

Our research convinced medical doctors and healthcare professionals of the importance of holistic reproductive health. “The IBMS Intervention has been adopted by our clinic as standard service provision to physically, emotionally and relationally functioning for women during the IVF process... (Dr. Celia Chan) is engaged in regular training for health care professionals working in IVF clinics in order to fulfil the requirements as stipulated by the Reproductive Health Council on the need to provide counseling to couples undergoing Assistive Reproductive Technology... As a medical professional, I am highly impressed and encouraged by the excellent research and clinical innovation of Dr. Chan. She has made a difference to the holistic care in reproductive health” (Professor Ernest Ng, Queen Mary Hospital) [S10].

5. Sources to corroborate the impact

- S1 A letter of appreciation from Mrs. Sally Lo, Founder and Chief Executive, Hong Kong Cancer Fund.
- S2 Testimonial by Professor M.Y. Lee, President of Group for the Advancement of Doctoral Education in Social Work (GADE) on IBMS research and development of Integrative Social Work Curriculum under the National Association of Deans and Directors of Social Work (NADD) and the Council of Social Work Education (CSWE) in the USA.
- S3 Preface by Mr. Leong Cheung, Executive Director, Charities and Community, Hong Kong Jockey Club (Page 6). The Jockey Club End-of-Life Community Care Project (JCECC) (April 2019) Innovation • Impact • The foundation of community-based end-of-life care in Hong Kong. Hong Kong: The University of Hong Kong. (Chapter 9, pp.151-167 described how IBMS is being adopted in end-of-life care by social workers of the Hong Kong Society for Rehabilitation) http://www.socsc.hku.hk/JCECC/case_book/HKU_SS_JCECC_book.pdf
- S4 A letter of appreciation from Dr. Gilbert Fan, Master Medical Social Worker, Department of Psychosocial Oncology, National Cancer Centre, Singapore.
- S5 A letter of appreciation from Dr. Andy Hau Yan Ho, Deputy Director, Palliative Care Centre for Excellence in Research & Education, Nanyang Technological University, Singapore.
- S6 A letter of appreciation from Ms. Eppie Wan, Senior Supervisor, Tung Wah Group of Hospitals Wong Chuk Hang Complex.
- S7 A letter of appreciation from Professor Fei Hsiao, Professor of Department of Nursing, National Taiwan University; and letter of appreciation from Professor H.C. Wu, Consultant of Taiwan Mental Health Social Work Society, and Professor of Department of Social Work, National Taiwan University.
- S8 A letter of appreciation from Professor R. Sreevani, Department of Psychiatric Nursing, Dharwad Institute of Mental Health and Neurosciences, India.
- S9 A letter of appreciation from Dr. Pamela Pui-yu Leung, Chief Executive Officer (CEO), Hong Kong Society for Rehabilitation.
- S10 A letter of appreciation by Professor Ernest Ng, Head of Division of Reproductive Medicine, Queen Mary Hospital, Hong Kong.