Occupational therapy has a pivotal role in the organization of health care, and improves health and quality of life by facilitating participation in meaningful occupations [1, 2, 8, 9]. The steep rise in non-curable chronic health conditions and the aging population (which are typically not curable through traditional medical approaches), have resulted in significant limitations in daily participations [5]. This calls for the involvement of the currently, underdeveloped and also underutilised occupational therapy services [6]. Occupational therapists use activities to impact patients’ physical, sensory, cognitive, psychosocial, and emotional health, through patient self-management, joint-protection, splint-fabrication, adaptive-technology, wheelchair-modification, mindfulness, lifestyle activities and environmental-modification are fundamental to patient population [7–9].

The growth of the health profession contributes to better, newer services and more expanded roles – including women’s healthcare. A basic element driving its profession to advance in its deliveries, is ‘job-autonomy’ – a concept closely related to workers’ motivation, satisfaction and well-being [10], which can translate to better performance and subsequently, effective care for patients [11]. Professional autonomy or, the right to use discretion and judgment within the scope of practice of a profession, or an individual’s freedom to exercise professional judgment in practice activities [12, 13] has been observed as one of the numerous key challenges faced by occupational therapists in an entrenched medical model across Asia. Although some physicians justified ‘job-autonomy’ as fundamentally essential for good patient care and embedded it in the national governance
structures as documented in the 2000 Warsaw Declaration [14], this idea has, ironically not been translated into their practices with other health professions. The World Federation of Occupational Therapy has issued position statement that clearly stipulates the importance of professional autonomy of the Occupational Therapy profession [15]. Paradoxically, although the profession champions independence and empowerment for its clients, it is losing its own autonomy status in less developed countries like Malaysia [16, 17]. Occupational therapists are denied the same level of autonomy and are governed by policy makers who are solely (if not predominantly) represented by medical practitioners. This level of control means that occupational therapists are not able to assert their professional autonomy and may experience repercussions if they do [18]. Since 2009, most Occupational Therapy department have not progress (but in fact, has regressed) and are reorganized from being an autonomous department, and placed under the governance of medical rehabilitation doctors [16, 19]. Historically, such medical dominance took place in the health care system in the USA more than three decades ago [20, 21], where the documented ‘tug-of-war’ for autonomy has been detailed as the struggle between occupational therapy and physical medicine – an occupational injustice attempt to control occupational therapy [21]. Evidence shows that the health profession was coerced into the medical dominance over their affairs with restrictions on their practice [20, 22, 23]. Nevertheless, occupational therapists elsewhere have made significant progress with regards to autonomy of the profession. In Canada, the University of Alberta has pioneered the Faculty of Rehabilitation Medicine which was championed by three autonomous health professions –i.e. the Occupational therapy, Physiotherapy and Speech Therapy [24]. In sharp contrast, Malaysia is encountering severe oppressive trend of medical dominance, with its healthcare budget for rehabilitation channelled into a medical program. The unprecedented rise of rehabilitation doctors in Malaysia possibly to address the shortages of health manpower in rehabilitation, has unanimously led to a serious decline in the job autonomy of occupational therapists [16]. This non-evidence strategy to address shortage of health professionals for rehabilitative services, aggravates a medical governance system that stifles further development of the profession. In short, occupational therapists in developed countries have enjoyed significant advancement, job autonomy and job recognition [25], but not those from developing countries [26, 27].

Healthcare Changes in Malaysia

Globally, improvement in health care has resulted in more people living with chronic conditions for indefinite periods of time. With this change, approaches to manage chronic condition and its symptoms for maintaining patient independence and quality of life over longer periods of time is needed [28, 29]. A shift from the traditional doctor–patient relationship (curative-focused) to a paradigm of, patients working in partnership with health and therapy professionals (independence and function-focused) can only occur if there are sufficient number of health professionals who are autonomous and trained [4, 28]. In the 2018 fiscal year [43], Malaysia was classified as an upper-middle-income economy with a GDP of USD358.582 billion. The Malaysia Economic Transformation Programme identified healthcare as one of its 12 National Key Economic Areas in 2010, and highlighted a priority to ensure training of health personnel to address the behavioural component of lifestyle issues [30, 31]. Yet, health professions like occupational therapy were still neglected, and a reason may well be the low number of leaders in the discipline and poor representation at the policy levels. With a shrinking healthcare budget, the grossly underutilised and underdeveloped therapy services must be expanded, while the exaggerated focus on the expensive medical personnel for curative care model must be for a more balanced and cost-effective workforce [28, 29].

The World Health Organization (WHO) estimates that non-communicable diseases accounts for 80 percent of global burden of disease, and it’s the leading cause of death and disabilities in Asia [32]. The associated rise of lifestyle-related chronic diseases (attributed to a complex constellation of social, economic, and behavioral factors) can be better managed with direct, interdisciplinary approach and patient self-management [29], which therapy services can help address with their wide range of therapeutic and preventive services. For both clinical and economic reasons, addressing women’s health with patient self-management is a cost-effective paradigm model across the prevention spectrum (primary, secondary, and tertiary). Establishing a pattern for health early in life, providing strategies for mitigating illness and managing it in later life, and for the wellbeing of the family unit (as women tend to care and cook for the families), and ensuring mental health, occupational health while intervening lifestyle related NCD should be steeped up. Stakeholders must take into consideration the social-political, occupational and economic forces (including a lack of job awareness, autonomy and acknowledgement to the health profession) that has resulted in inequalities between medical vs health
disciplines in high and low income countries. Engaging the therapy professionals should be the way forward for better and cost-effective care management.

Occupational therapy role for the health and wellbeing of women

The sub-specialization in advancing women health is a natural progression for this profession with predominantly female dominated profession. As an example, with breast cancer as the number one cancer for women, therapeutic services are much needed which include the more innovative, patient self-management to educate and empower female patients in their health [34], hand therapy like lymphedema-management and upper-limb function, pelvic and sexual wellbeing health, pre/post natal care and psychosocial health [33–37]. Occupational therapy can contribute to the occupational participation intervention of women in the continuum of cancer care. Enabling engagement in occupational performance of mothers, and adapting their social environment to intervene and address mothers’ occupational needs are linked to physical and mental health [58]. Many other women-related health areas which greatly requires therapeutic health services to improve the quality of life, includes domestic violence, vulnerable mothers [37, 38], and those with sleep disorders, weight-obesity issues [39, 40], and the ever increasing functional issues from the many non-communicable diseases with comorbidities that limits functional abilities in daily living.

Purpose

The aim of this paper is to present an analytical perspective of the current phenomenon and challenges affecting health professional’s job autonomy and, to identify key root-causes that stifled its progress. The paper focus on key services for female population which are grossly underutilized, as an emerging area of targeted healthcare.

Method

A core group of four occupational therapy leaders (with involvement in their country’s professional association, or has participated in the World Federation of Occupational Therapists’ meeting or leading/advocating occupational therapy education in their countries) were specially invited to a focused discussion. They reflected and reviewed the problems hindering the profession’s growth in Malaysia. An analytical approach to the issues were deliberated, and references to their home countries and data from the World Federation of Occupational therapists were gathered to compare and contrast between countries. The four leaders utilized a simple “root-cause analysis” technique [57]. This is a management technique that systematically appraise the problem-at-hand to get to the bottom of the problem or the unexpected event (ie. the dwindling job autonomy of occupational therapists).

The root-cause analyses [57] aim at improving products or processes, via a sequential steps of i) describe the problem (dwindling job autonomy), ii) gathering data associated with the problem (data on therapists in the country and from a world body), iii) identifying potential causes for the problem (concurring on key problem and brainstorming the causes), iv) identifying which causes to be removed/changed in order to prevent problems, v) identify solutions that will be effective in preventing repeat problems, [vi) implement changes and v) observe changes to eliminate the problem]. We will propose recommendation/s from these steps.

Findings on key issues

Most developed countries have made good progress to address shortages of occupational therapy manpower in the last few decades. In Canada, great progress is seen in the University of Alberta who have consolidated their three key healthcare professionals into a Faculty of Rehabilitation Medicine [24]. In Malaysia, progress is slow and a strategic root-analyses of this area, help us to pinpoint fundamental root-cause issues in this female-populated profession, link to low job autonomy. The root-cause technique enumerated two internal and one external root causes in line with the erosion of professional autonomy. An emerging key theme was, a debilitating low job autonomy in the health professions when compared to healthcare scenario in Canada, USA, UK and Australia.

Two Internal Root Cause

The two internal issues were- i) ‘low numbers (low quantity)’ of occupational therapists in Malaysia, and ii) ‘low-qualification/low-University level education provision’ at university-based institution. Both these root factors are identified as contributors to the erosion of professional autonomy. Majority of the therapists in Malaysia are still educated under the old British apprenticeship model of training by the Ministry of health. In contrast, all developed countries have good progress in addressing these two issues by improving training at degree levels, and providing access to University programs in Universities under the Ministry of Education.
(versus ministry of Health).

One External Root Cause

Malaysia have an additional strong external root-cause of ‘medical governance’ – which contributes to the erosion of job autonomy and most decision makings were made by a hierarchical medical discipline. This external root cause is contributed by a strange policy that utilizes the dwindling health budget to produce more rehabilitation doctors (instead of addressing a lack of therapy workforce for the nation).

Discussion

A contributing external factor is a prevailing medical hegemony phenomenon, unique to the occupational therapy professions who are predominantly female and are newer discipline to the healthcare scenario in Malaysia [16, 18, 21, 42]. As it’s a phenomenon not common in developed countries, the leaders came up with a final theme of “triple whammy” to capture the magnitude of the root-cause problem and they reflected iteratively on how it has contributed to stifles the progress in Malaysia. The four educational leaders concurred on these root causes, and agreed that they were interrelated, and together they posed a strong structural barrier to the therapists’ autonomy within its rather traditional health-care governance. These three ‘internal and external root causes’ are deliberated below.

i) Internal root cause of Low manpower (low number) of occupational therapists in Malaysia

Malaysia has an exceedingly low 1,395 occupational therapists (for over 32 million population), compared with 16,000 occupational therapists in Australia (a population of 25 million) and 33,383 occupational therapists in United Kingdom (for 65 million population) [41]. This figure translates to a ratio of one Malaysian occupational therapist to 17,777 people, compared to 1: 556 for medical practitioners and 1:305 for nurses in Malaysia [19]. Occupational therapists therefore have a tremendous challenge in being able to provide the necessary interventions to improve the occupational participation and quality of life for Malaysians. With less than 2000 occupational therapists, they are servicing primarily public hospital (see Table 1), and are grossly under-represented in many services as well as in non-traditional key service areas such as women care, community health services. This inability to expand their services will have a detrimental effect on holistic cost-effective patient outcomes.

In short, there is a serious, debilitating lack of university-level educational programs of international standing which must be addressed urgently. In contrast, Japan has 160 schools offering Occupational Therapy programs. A sample of programs (Table 3) in at least 5 other countries showed progress in number of schools (quantity) and ii) availability of postgraduate program (quality). University education is important in the professional education of occupational therapists [45]. The

| No | area               | No of therapists in 2008 (25 million population) | No of therapists in 2014 (30 million population) |
|----|--------------------|-------------------------------------------------|--------------------------------------------------|
| 1  | Public hospitals   | 387 76%                                         | 1050 75.2%                                      |
| 2  | Private settings   | 40 8%                                          | 250 17.9%                                       |
| 3  | Educational settings | 80 16%                         | 95 6.9%                                          |
|    | TOTAL              | 507 100%                                       | 1395 100%                                       |

income economy does not compare well to other countries in terms of number of registered occupational therapists [43, 44]. Figure 1 presents an overall diagram of the census of occupational therapists in the world with USA leading as the number one country with the highest number of occupational therapists. The Malaysian health care system highlights doctors and nurses, and often missed out many of its long neglected healthcare disciplines (Fig. 2)

Eating the other omelette

ii) Internal root cause of Low access to university-based occupational therapy education in Malaysia

In Malaysia, educational programs for Occupational Therapy is predominantly under the Ministry of Health, which is still offering the outdated diploma-status programs–equivalent to certificate in the USA. Only two higher education institutions (the National University of Malaysia, and the University Technology Mara) offer bachelor degree programs [16, 44]. A premier university in Malaysia, The University of Malaya does not offers discipline-specific program for occupational therapy, despite having an academician fully qualified in the field. It offers generic (Master/PhD Medical science) research-based postgraduate program, but the intake is greatly limited by the low numbers of potential applicants with the needed bachelor degree level qualification. Compounding the issue in the country, one of its University (UiTM) enforced race-based policy that accepts only Malay ethnic students. Therefore, the numbers of occupational therapists are grossly undersupplied. Table 1 showed the census of therapists in the country, and Table 2 showed the ratio of occupational therapists in relation to the general population.

In short, there is a serious, debilitating lack of university-level educational programs of international standing which must be addressed urgently. In contrast, Japan has 160 schools offering Occupational Therapy programs. A sample of programs (Table 3) in at least 5 other countries showed progress in number of schools (quantity) and ii) availability of postgraduate program (quality). University education is important in the professional education of occupational therapists [45]. The
Fig. 1. The number of practicing occupational therapists in the world. Source: https://www.apeto.com/assets/vision-internacional-de-los-recursos-humanos-to-2016.pdf

Fig. 2. Schematic Overview of the Malaysia Health System; Source: Hussein RH (2016).
World Federation of Occupational therapists or WFOT provides information about WFOT-approved Occupational Therapy programs from its member countries, to meet the Occupational Therapy needs for the respective countries in the world [41].

With a projected growth rate of 27 percent (between 2014 and 2024), occupational therapy is one of the fastest growing career fields in the United States [46, 47]. In the USA and Canada, a Masters level has now become the entry level qualification for licensing [48]. Table 4 showed the characteristics of occupational therapists in a very large hospital in central Kuala Lumpur. There were 175 health professionals (speech, physio and occupational) and 85 of them are occupational therapists. Of these 85 mostly female occupational therapists, and mostly diploma holders but only five percent are pursuing postgraduate studies. More than 56 percent of the current therapists surveyed are in service for less than three years indicating that the profession is still young in comparison with other health disciplines, and has many potentials to be developed.

As with many countries, the Malaysian occupational therapy population is uniquely female dominated, and research should also be initiated if gender issue could be a contributing root-cause among its prevailing male dominated decision makers in Asia. Thus, unlike their mainly postgraduate-qualified western counterpart countries, almost two third of the small number of therapists in Malaysia are diploma holders. The training of health professionals under Ministry of Health (an initiative during the British Colonial rule) should be moved into Universities. The Malaysian government has been extremely slow to acknowledge and advance the therapy professions.

### iii) External root cause on medical dominance eroding the professional autonomy

Occupational therapists, are educated to deliver patient-centered care, emphasizing evidence-based practice, quality improvement approaches, and informatics [49]. In developed countries, occupational therapy is an autonomous profession [24, 50]. The autonomy of the profession is characterised by the level of responsibility the therapists have for the care of their patients, the level of accountability in the profession (through registration boards /professional bodies of associations/the public), having a university level preparation for practice, having a sound theory base with specialised skills for practice, having control over the quality of their own work, and working within their own code of ethics [51]. Direct collaborative and interdisciplinary health team shares power equally and members are empowered to make their own informed evidence-based decisions in partnership [52]. With better University educated health professionals, the redundant medical supervision and hegemony can be removed for cost-effective access to rehabilitation services and for effective outcomes to be achieved [11, 21, 42]. There is good evidence that many countries have proven the cost-effectiveness of occupational therapist led services, with good outcomes [52–54]. However, the medical-model governance in Malaysia seems to erode autonomy and hindered progress of these health disciplines, and where, healthcare budget are redirected to produce rehabilitation when the country’s needs for therapy personnel are long neglected. Such occupational injustice is seen as a violation on basic occupational right towards inclusive participation in everyday occu-
pations for all persons (profession) in our society [55], whereby the therapists’ rights and responsibilities to independently plan and advance their services in autonomous manner are violated. Piece (2009) alerts that such situation can lead to occupational-deprivation (i.e denied opportunities and resources to engage in therapy provision), oppression (i.e. disempowered/marginalised by the oppressive rehabilitation doctors), job dissatisfaction and demoralisation in the workplace [56]. Consequently, this affect not only the profession, but their services to patient care and the financial economic health outcomes of the nation.

The ‘triple whammy’ burden

Internationally, the healthcare changes that have contributed to the rise and advancement of Occupational Therapy profession are i) the alignment of the Occupational Therapy professional core philosophy with the recommendations of the World Health Organisation suggesting its important role for health- social care, ii) an aging population, iii) rising cancer incidences and iv) increased non-communicable chronic diseases, and v) the renewed significance of the value of occupation-based interventions in daily life to improve health and wellbeing of the population. However, this landscape shift has not exerted much changes to the development of occupational therapy in Malaysia. In fact, we acknowledged a serious lack of progress of the profession in Malaysia. The three key root causes, which we categorized as the ‘triple whammy burden’ seems to project the magnitude of the root-cause problem, that has ‘strangled’ the growth of occupational therapy in Malaysia. Addressing the two internal root causes individually may be difficult, if the external root cause (on medical governance) is not collectively tackled. Stakeholders including the Ministry of Higher Education, Ministry of Health, Ministry of women and social welfare and the local professional body, as well as its associated international body would need to meticulously reorganised the organisational chart of the rehabilitation medicine services. The model of rehabilitation medicine in University of Alberta should be used as a goal for management. Implementing and observing changes needed include providing University degree program for therapy, ensuring the Public service department acknowledge and give due recognition, rewards and promotion to therapy professionals including professorship at par with western counterparts.

Conclusion

Using Malaysia as a case study, a root-cause analyses with four international health educators have identified three root-causes related to its professional autonomy of occupational therapy profession. The magnitude of the root-cause problem with its thematic ‘triple whammy burden’ label, justify the huge challenges that hinders its growth in Malaysia. The value of occupation-based interventions in daily life to improve health has been recognized in the social landscape changes that include rising aging, cancer, non-communicable chronic diseases, and in specialised area of women health issues. Occupational therapy services are particularly well-positioned to address the needs of the person, the activities and occupations which people engage in to fulfil their roles functionally and independently. The current medical-model under which occupational therapy works in Malaysia greatly reduced its role to better serve the needs of diverse population including women care. Sole medical doctors and curative care is no longer the answer to an increasing non-communicable diseases across the globe, innovative patient self-management in direct partnership with better trained health professionals to improve their independence in daily activities and for better quality of life is needed.

Recommendations

A manifesto for improving therapy services as front liners, to address the rising chronic diseases is needed. The medical dominance and occupational injustices over therapy services must be stopped, to make way for professional growth. An Asian-EU dialogue with more research to highlight effective therapeutic deliveries in today’s shrinking healthcare organisation is needed, to address the bulk of chronic disease conditions, prevent illness, and promote wellness. International profession-related bodies can provide the evidence-based outcome findings to support practices, clinically and economically.

In terms of education, the model of autonomous governance of Occupational therapy clinical and educational services (such as in USA, Canada, UK, Australia) can be used as a guide for Malaysia. The American Council on OT Education, autonomously sets the standards for the academic curricula and accredited the occupational therapy degree to be conferred to their graduates, while an independent national examination for certification (i.e. upon graduation from an accredited program) provides the check and balance to safe practice in the field of occupational therapy. Every state has licensure, and, a final determiner is what the payers will pay for therapist’s key significant services. Malaysia needs to emulate and incorporate these self-governance model which has been build-up over the years. More university-based education for better healthcare deliveries must be
put in place, starting at its premier university. Occupational therapy as a science-based health discipline, aims to i) make valuable contribution for reducing disabilities that affects the health and well-being of people, ii) positively influence health, welfare, education and vocation, and iii) positively influence the development of excellence within the profession, locally and internationally. Job autonomy must be recognised to enable direct cost-effective healthcare services in Malaysia.

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