

## Quality of Life Achieved by Gender Equality: The Current Situation and Future Direction in Japan

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Presentation summary—Gender equality has not been achieved in Japanese society. As of 2014, Japan ranked 105th out of 142 countries in terms of gender equality, increasing only by one rank from the previous year. The present speech addresses two gender gaps in the Japanese society. The first one relates to the gender gap in work-life balance. With regard to paid work, labor force participation rates show different curves for men and women. Men have trapezoid curve, implying most of them start to work right after graduation and continue until retirement. On the other hand, the women’s curve is M-shaped which indicates that not a few women around age between 25 to 30 years old give up working because of pregnancy and parenting. I’d like to draw your attention to the fact that more than 3,400,000 women in this age-range seek to work. If these potential workers could be employed, the women’s curve would no longer be M-shaped.

On the other hand, men’s under representation is obvious when we shift our vision from paid work to unpaid work. As of 2014, the percentage of fathers who took parental leave did not even reach three percent, and this is exceedingly lower than the 85 percent of mothers. It is noteworthy that around 60 percent of fathers would like to take child care leaves but can’t. Recently, a growing number of harassment cases for caregiving father have been reported in Japan, which has been coined “PATAHARA”, an abbreviation of paternity harassment. Possible causes include traditional gender roles, and the

existence of a supporting ideology, such as “Men should be bread winners and women should be caregivers” and the culture of long working hours ingrained in Japan. The lack of human-resources to cover the absence of the concerned employees also helps explain the phenomenon. It seems to be that persistent traditional stereotypes prevent both women and men from balancing their work and family.

Based on a survey I conducted in 2013, even the youth of today’s generation in Japan have traditional ideas about the work-life interface, with men allocating more time for work and women more time for family responsibilities. Here again, the key factor is traditional gender stereotypes. Removing the traditional mindset about gender roles should be one of the effective solutions for establishing a work-life balance.

Another gender gap I would like to address today is occupational gender division. In contemporary Japan, people “officially” can choose any occupation irrespective of their gender. However, in reality, the occupational world seems to be divided into 3 categories. Occupations such as, system engineers, pilots, and carpenters are male dominated. Nursery teachers, dietitians, and dressmakers are classified as female dominated. Only limited occupations are well gender-balanced including cooks, salesclerks, and chefs. We call this phenomenon occupational gender division.

In exploring the psychological factors involved, I present the results of two studies published in 2013 and 2014 using the concepts of gender ratio, gender stereotype, and self-efficacy. Gender ratio is the

Table 1 Regression from Stereotypes on Self-efficacy( $\beta$ )

	Male dominated		Female dominated		
	Males	Females	Males	Females	
Pilot	.119 <i>ns</i>	.264 ***	Kindergarten teacher	-.214 **	.115 <i>ns</i>
Factory manager	.052 <i>ns</i>	.221 **	Hair stylist	-.054 <i>ns</i>	.051 <i>ns</i>
Professional-golfer	-.058 <i>ns</i>	.152 *	Dietician	-.182 *	.057 <i>ns</i>
Bureau chief	-.036 <i>ns</i>	.173 *	Japanese language teacher	-.028 <i>ns</i>	.105 <i>ns</i>
General affairs section chief	.017 <i>ns</i>	.281 ***	Cabin crew	-.192 *	-.005 <i>ns</i>
Physicist	.133 <i>ns</i>	.162 *	Nurse	-.204 **	-.005 <i>ns</i>
Engineer	.056 <i>ns</i>	.238 ***	Children's nurse	-.110 <i>ns</i>	.102 <i>ns</i>

\*  $p < .05$ , \*\*  $p < .01$

Retrieved from Adachi (2014). Occupational Gender Stereotypes among University Students: Their Relationships with Self-Efficacy and Gender Attitudes, Japanese Association of Industrial/Organizational Psychology Journal, 27 (2), 87-100.

percentage of men and women in a certain occupation. Gender stereotypes are over generalized beliefs about men and women. For instance, men are expected to be independent, decisive, good at math, and supposed to be the breadwinners. On the other hand, women are dependent, talkative, considerate, and responsible for household work. Self-efficacy is defined as a person's perception of one's abilities to successfully perform a designated behavior. In other words, it's also called self-confidence.

In my study, we examined if a certain occupational field had more males, or people tended to create a masculine image. Similarly, if it had more females, a feminine image, and if it had a smallest gender gap, and whether people created a gender neutral image. It was very clear from the results that most people had the simplest mindset that "more men means masculine, more women means feminine". This implies that occupational fields are clearly segregated by gender in people's minds.

After confirming that gender stereotypes arise from gender ratios, I examined whether those stereotypes affected self-efficacy. Results of regression analyses showed in seven occupations that significant regressions were obtained among women with no regression found among men. Opposite from the male-dominated occupations, no statistically significant regression was found among women. Meanwhile, significant regressions were obtained for men in four out of the seven female-dominated occupations (See Table 1).

The results imply the follows. When a particular occupation has more male workers, people create a perception that this occupation is masculine in nature and suitable only for men. Thus, women are likely to decrease their self-efficacy. Likewise, when a particular occupation has more female workers, people again create an image that the field is feminine in nature and only fits women. Accordingly, men reduce their self-efficacy. This reduced self-efficacy was more apparent in women than in men, which may suggest that women are more likely to create psychological barriers against opposite-gender dominated fields than men are.

Admittedly, this analysis only based on ratios; however, the impact is readily apparent. From the studies mentioned, it was confirmed that people connect gender and occupational images based on male-to-female ratios. There exist automatic recognition processes that evoked "Think pilot think man stereotypes", and conversely we can identify "Think kindergarten teacher think woman stereotypes". As a result, people decrease their self-efficacy for opposite-gender dominated fields just because they think that is not socially "appropriate" for their own gender.

Lastly, I would like to point out the vicious cycle of gender ratio, gender stereotypes, and self-efficacy. For the occupational fields with gender gaps, people automatically create gender stereotypes. People generally develop low self-efficacy for fields with opposite-gender images. When people associate low self-efficacy with a certain field, they

don't consider that field. As a result, the existing gender ratio is reproduced repeatedly. I would like stress that we, researchers and educators, have the potential to break this vicious cycle. Thank you.

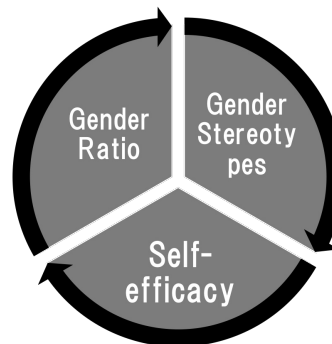


Figure 1 The Vicious Cycle of Gender Ratio, Gender Stereotypes, and Self-efficacy

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## Translation/Interpretation: Bridging cultures within and without

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I did not necessary choose my career, circumstance and exhausting other choices eventually led me this way as I followed the path of least resistance, and yet I find that perhaps I wandered into this profession because it was:

I work as both a translator and an interpreter, but they are often confused by the general public. Translators provide written output, and are usually given enough time to provide a clear, readable rendition of the original in the target language. Interpretation, on the other hand, is provided on the spot. It can be simultaneous, where the interpreter will be speaking at the same time as the source speaker, or consecutive, where the speaker pauses after each phrase to give the interpreter time to speak. Interpretation is generally provided in oral form (sign language or typed interpretations are sometimes provided to those with special needs).

So, how does one become a translator or interpreter? While there are some specialized language programs at universities where an individual can obtain a degree in these fields, the vast majority of usually pursue a traditional major and after discovering a talent or leaning towards this field, may attend training schools that not only provide didactic and practical knowledge, but also provide opportunities to practice as interpreters or translators.

So what makes a person decide on this path? I'm afraid I can only tell you how I came to become a translator/interpreter but perhaps you will be able to extrapolate my experience into general use.

My father was an expatriate, the first wave of Japanese corporate warriors who invaded the US in the mid-sixties, representing their warlord companies who were expanding internationally in the aftermath of WWII. This was a time when, hard as it may be to believe, there were only about 20 Japanese families living in New York city. Rimpachi, or Richard, as he called himself, was 32 when he set foot on the isle of Manhattan, but he would be asked to show his ID just to buy beer at the local supermarket. My mother and I joined him 3 months later. We ate out quite frequently in Chinatown and I realize now that it was because they missed seeing other Asians.

I was four-years-old and started at the local public kindergarten that September. The first day of school, I came home and reported that first thing in the morning,

the children put their hands over their hearts and said some kind of prayer that I didn't know. That night, Richard kept me up until 2AM memorizing the Pledge of Allegiance, and from the next day, I was able to say it just as well as my peers. Although I had been reading and writing Japanese before we left Japan, in a month's time, I'd forgotten it all.

As an only child, and not knowing when we would return to Japan, my parents wanted me to have the best education they could possibly afford. They did their research and I started at Immanuel Lutheran School in Whitestone, New York from first grade. There were very few people of color at this school and perhaps because it was a religious school, I don't recall experiencing any racialism until third grade.

My father was transferred back to Japan in my fifteen summer. I'd been due to start 11th Grade in the fall and planning to pursue a degree in medicine. There had been some painful adolescent years when some people thought it would be fun to bully the Japanese girl, making sure I heard about all the parties and fun times at which I wasn't welcome because of the color of my skin. When I came home in tears, my mother would tell me to be strong because being Japanese was something special, and that I should be proud of my heritage. She would tell me stories of what made Japan great, the values we held dear, how hardworking and noble its people, and I believed her.

Now, I would finally get to see that country for myself beyond the short summer visits to Japan that company policy allowed every three years. It didn't help that I could not read or write Japanese, or that my dream was to pursue a highly demanding career, but I soon discovered that no Japanese high school would let me in because in their eyes, I was illiterate since I could not read or write Japanese at that time. At fifteen, I found myself unaccepted and dead-ended in a country that was supposed to be my own.

In a homogenous society such as Japan, it was impossible for someone with my background to be anything but an outsider. With tutoring and hard work I did eventually pick up enough Japanese to be accepted by a Japanese high school, and later college. It was not medical school, but instead, a college of pharmacy. As graduation neared, my advisor recommended that I find



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source of income to keep body and soul together, you can actually earn your bread and butter in this field. The subject matter is often widely varied and cutting edge since a valuable service provided by specialized language experts is to offer translations of medical papers to be submitted for publication in top international journals, or for presentations at international conferences of medical societies. These assignments provide many opportunities for to expand one's knowledge and expertise in a broad range of specialities, and to stretch out of one's comfort zone. If the field of medicine and pharmacy interests you, but you lack the temperament for pure research, or opportunities as a clinician, then this is the perfect occupation.

The same applies to interpretation, except there is the added benefit of meeting the top scientists and clinicians in their fields, helping corporations that offer new and exciting products and services in medicine communicate with their clients or their international co-workers, or participate in the regulatory aspects of drug development through audits of clinical sites or manufacturing plants. The range is almost endless.

As with literary translation, technical translators also have societies and I am a member of the Japan Association of Translators (JAT) among others where we not only have forums to ask questions when we get stuck or need a second opinion on a difficult matter, be it linguistic, moral, or legal.

For most of my life I have struggled with feelings of never really belonging anywhere. My background makes it obvious why, but being "bi-" or "multi-", having more than one world within, applies to many of us.

Looking at the many ways in which one can be multifaceted, there is multinationalism (having more than one country), multidominational (practicing more than one religion), multiracial (your ancestors), multicultural (this is the broadest category since hardly anyone is monocultural), and multilingual (this can be circumstance or effort but in today's society, people are expected to be versed in more than one tongue).

Having more than one of anything, inevitably leads to conflict between the two or more co-existing aspects.

Going back to children's literature, the themes that come up in tales for children are associated with self-discovery and new vistas. Teen literature is all about fitting in, finding and merging with one's peers or clique and through that process coming to develop a sense of self, and finding yourself. This is especially difficult when

it involves being an outsider in a fairly closed society such as Japan. As these books illustrate, part of our journey through life is discovering who we are and coming to accept it, even if it may not be what you had planned or thought you would be. In my case, although my work in bridging languages was not my first choice as a career, it has been a crucial part of my process towards self-realization.

As I try to resolve differences between languages, cultures, and mores so as to enable and facilitate communication, I am also working to heal rifts within myself.

*Coniunctio* is Latin for an alchemical concept described by Carl Gustav Jung. It refers to the union of opposites. It is the conjunction of two disparate entities to create a third—an entirely new and unique something.

Biologically, it can refer to mating and reproduction. Psychologically, it is taking those two (or more) cultures, or languages, and linking them. A translator is the link that allows two different, and sometimes conflicting beings to connect and lead to a third consciousness where these two are no longer distinct, but rather merged in harmony.

Our jobs, as translators or as interpreters, is to become that link, either active or passive and to be the shared electrons in an alchemical formula that will create a new and more complex entity. Success will depend on the bridge's ability to express not only the words being uttered, but also the feelings, thoughts, and subtleties behind them. How sympathetic two disparate parties can become towards the other's differences rests largely on the shoulders of the linguist. By allowing the soul behind the words to shine through and thus move the other so that each side will be more open to accepting foreign ideas and sensibilities, *that* is how we earn our keep. Done right, it can bring about positive changes for all those involved

Multicultural, multilingual people are particularly adept at this because they are always resolving differences in their own inner worlds.

By acting as a conduit or a bridge between opposites as a profession, the process going on without—i.e., in the outside world— will simultaneously affect one's inner processes, or the psyche of the translator. There will always be irreconcilable differences that co-exist within a person with multiple cultures, but through the process of helping people around them to understand "the other", the rifts within oneself are also healed.

According to Jung, the path to individuation is characterized by the constant conflict of opposites, and resolved through *coniunctio*, we move onward in a

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gradually tightening spiral journey towards the discovery of *Self*. So I tend to think of my work as a form of self-therapy.

### **Acknowledgements**

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## Current topics in cancer research -calcium and cancer-

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### Presentation summary

Calcium ( $\text{Ca}^{2+}$ ) ions play important roles in various cellular processes such as neurotransmission, muscle contraction, hormone secretion, and cell proliferation.  $\text{Ca}^{2+}$  signal control is important in cancer cell proliferation and invasion. Therefore,  $\text{Ca}^{2+}$  regulatory molecules (i.e. ion channels and transporters) are potential therapeutic targets for cancer.<sup>1,2)</sup> Cancer is the leading cause of deaths in developed countries. In this presentation, I would like to introduce the present status of cancer mortality rate and risk factors for cancer mortality such as second-hand smoke. I would also briefly introduce the results of our recent scientific research on  $\text{Ca}^{2+}$ -activated chloride ion ( $\text{Cl}^-$ ) channel in breast cancer.

**Keywords:** cancer; second-hand smoke; calcium; ion channel

### 1. Causes of cancer deaths

In Japan, cancer has been the leading cause of death since 1981 and the mortality rate is about 30 % of total deaths. For males, the proportion of lung, pancreas and colon cancers increased, while the proportion of stomach cancer decreased. The cancer site with highest mortality rate in 2012 was the lung for males, followed by stomach, colon/rectum, liver and pancreas, while in female cases, colon/rectum was followed by lung, stomach, pancreas, and breast cancers.<sup>3)</sup>

Cancer is thought to be caused by a combination of lifestyle, environmental, and genetic factors. Lifestyle factors include 1) smoking, 2) high-fat and low-fiber diet with low intake of fruits and vegetables, 3) lack of exercise, 4) unprotected exposure to ultraviolet (UV) irradiation, and 5) obesity. Environmental factors include 1) second-hand smoke or 'passive smoking', 2) air pollution, 3) industrial pollution, and 4) chemical exposure.

### 2. Risk of second-hand smoke in lung cancer

Tobacco smoking is the leading cause of small cell lung cancer, and most lung cancer deaths are caused by smoking and second-hand smoke. Exposures to diesel exhaust and asbestos also cause lung cancer. The risk for lung cancer is much higher among asbestos-exposed smokers. Second-hand smoke is particularly harmful for children, and apart from lung cancer, it causes other serious diseases such as heart disease, stroke and lung disease.<sup>4)</sup> The mortality rate by second-hand smoke is much higher than that by high level exposures to diesel exhaust and asbestos.

### 3. 'Calcium': a double-edged sword in cell growth and death, and therapeutic strategies for cancer

Ion channels [mainly sodium ( $\text{Na}^+$ ), potassium ( $\text{K}^+$ ), calcium ( $\text{Ca}^{2+}$ ), and chloride ( $\text{Cl}^-$ ) ion channels] directly and indirectly control  $\text{Ca}^{2+}$  influx into intracellular region, and contribute to a variety of cancer processes, such as proliferation, apoptosis, migration and invasion, via regulation of the resting membrane potential and  $\text{Ca}^{2+}$  signaling. Pharmacological inhibition of ion channels is an attractive target to suppress cancer cell proliferation and prevent cancer cell metastasis. In general, oscillatory  $\text{Ca}^{2+}$  elevation inside of the cells positively regulates cell proliferation and migration, whereas sustained  $\text{Ca}^{2+}$  elevation at high levels promotes cell death via 'apoptosis'. In early stage cancers, direct and indirect  $\text{Ca}^{2+}$  transport 'inhibitors' are potential drugs for cancer therapy because they terminate  $\text{Ca}^{2+}$  oscillation. On the other hand, in late stage and recurrent cancers,  $\text{Ca}^{2+}$  transport 'activators' can be potential drugs for cancer therapy because they can enhance apoptotic cell death through large and sustained  $\text{Ca}^{2+}$  rise.

### 4. Recent study on cancer in our laboratory

$\text{Ca}^{2+}$ -activated  $\text{Cl}^-$  channel TMEM16A (also known as ANO1) is activated by intracellular  $\text{Ca}^{2+}$ , and plays an important role in driving the amplification of 11q13 in many types of human cancer. TMEM16A is responsible for facilitating cell growth and metastasis in TMEM16A-positive breast cancer cells. Recently, we found a significant decrease in TMEM16A expression by histone deacetylase (HDAC) inhibitors in a HER2-positive breast cancer cell line.<sup>5)</sup> Taken together, TMEM16A is epigenetically regulated by HDAC inhibition and in malignancies with a frequent gene amplification of TMEM16A, and HDAC inhibition exerts the suppressive effects on cancer cell viability through TMEM16A downregulation.

### Conflict of interest

No conflicts of interest, financial or otherwise are declared by the author.

### Biographical notes

Susumu Ohya has started ion channel research in the Department of Molecular and Cellular Pharmacology, Graduated School of Pharmaceutical Sciences, Nagoya City University, Japan. Since 2012, he has been the professor of Department of Pharmacology, Kyoto pharmaceutical University, Japan. Currently, he is working on the physiological and pathophysiological significance of  $\text{Ca}^{2+}$ ,  $\text{K}^+$ ,  $\text{Cl}^-$  channels in cancer cell growth, apoptosis, migration, and invasion. Apart from of Academic Society for Quality of Life, he is on an editorial board member of Biological and Pharmaceutical Bulletin of Japanese Pharmaceutical Society.

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# An Introduction to Music Therapy Journeys in the United States I

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## What is Music Therapy?

Music therapy is an evidence-based therapeutic approach of utilizing music to improve physical and/or mental health of clients. The purpose of music therapy is achieving non-musical goals (e.g. improving cognitive ability, increasing social skills, maintaining physical functions, etc) by musical interventions. This makes music therapy substantially different from music recreation, which has no purpose other than enjoying music and musical activities.

In the United States, music therapist is usually duly recognized as a member of a clinical team and expected to work in cooperation with other medical professionals. In general, music therapists are required to access clients' medical records and attend clinical teams in order to conduct appropriate and effective therapeutic interventions.

Quite a few people seem to have the idea that music therapy is merely listening to soft, gentle and soothing music to release stress. However, music therapy is much more than that. Music therapy is utilized for various populations including psychiatric patients, mentally and/or physically challenged persons, elderly persons, patients with brain disorders, and even premature babies and their mothers. Music and musical instruments used in music therapy sessions can also be quite diverse. Basically, any types of music and musical instruments may be used in music therapy session as long as they are appropriate for clients in terms of age, preference and most importantly, therapeutic goals.

## Music Therapy in psychiatric settings in the United States

In psychiatric settings in the United States, various music therapy interventions have been actively utilized for patients depending on their symptoms and functional levels. The followings are just a few examples; for lower-functioning patients with schizophrenia symptoms, relatively simple musical activities such as singing, percussion playing, music/rhythmic games, and easy song writing may be effective to disengage them from their hallucinations and make them concentrate on what is actually happening "here and now". For higher-functioning patients with personality disorders, a wider

variety of musical activities including voice and instrumental lessons, choir, instrumental ensembles (e.g. hand bell, recorder, percussion, etc), drum circle, song writing, and lyric analysis may be used. Through these musical activities, they may learn to get rid of their inappropriate behaviors and thought patterns, and, instead, acquire healthy behaviors and mindsets.

Music therapy has been utilized and often proved effective for psychiatric patients whose symptoms are difficult to be treated with medication and may require a long-term treatment and/or hospitalization. Music therapy, especially for psychiatric patients, may not work as instantly as medication. It may take certain amount of time until you see its effect. In addition, the results may vary depending on each patient's symptoms and other individual traits. However, with numerous research findings and the author's own working experience as a music therapist in psychiatric facilities in the United States, it can be said that music therapy makes a positive difference in an enormous number of cases that would lead to patients' improvement and recovery.

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## A Journey to Music Therapy in the United States II

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### Music Therapy in Hospice and Palliative Care

The hospice movement in the United States has been over 50 years since its first introduction during 1960s. According to the report by National Hospice and Palliative Care Organization (NHPCO), in 2013 approximately 1.5 to 1.6 million patients received services from hospice and the number has increased over the past several decades. Hospice care is a compassionate approach to care whose goal is to help people with serious illness live life fully, maintain their dignity and keep control over their lives. It focuses on quality rather than length of life. Unlike palliative care which can be offered at any time on the trajectory of chronic illness regardless of life expectancy, hospice care is provided for terminally ill patients who may have six months or less to live. Hospice care provides illness flows its natural course; patient does not receive any further aggressive or curative treatment for his/her underlying disease.

Hospice care treats the whole person, not just the disease. Hospice care services are provided by a team of health care professionals consisting of physicians, nurse practitioners, nurses, social workers, chaplains, certified home health aides, volunteers, pharmacists, and therapists by relieving pain and addressing physical, social, psychological, and spiritual needs of the patient. Hospice services provided in the United States are given where the patient stays, which can be the patient's home, hospice inpatient units, hospitals, skilled nursing homes, assisted living facility/adult homes, and group homes.

Music Therapists as a part of the interdisciplinary team play a significant role. Music therapy helps to engage, calm and comfort patients at the end of life as well as their family. Music therapists in hospice work with a broad range of populations with many times of illness including cancer, dementia, heart disease, lung disease, debility unified, stroke, End Stage Renal Disease (ESRD), liver disease, Amyotrophic Lateral Sclerosis (ALS), HIV/AIDS. Any member of the interdisciplinary team can refer a patient for a music therapy evaluation. Also, family member or patient him/herself can make a referral to music therapy service. Possible clinical reasons for the referral for patients in

needs of music therapy can include pain/discomfort, anxiety, terminal restlessness, communication barriers, impaired quality of life, isolation, family and caregiver support, spiritual support, and delirium. Upon the referral, music therapists conduct an initial evaluation to determine the content and frequency of the service based on various facts including the patient's individual needs, interests, preferences, his/her cultural background, spiritual beliefs, and energy level. Patients can benefit from engaging in music therapy interventions such as singing, simple music listening, guided imagery, song writing, performing music on an instrument, improvising music spontaneously using voice or instruments, or both, compositing music, and music relaxation.

Music can provide a focal point for patients, which focus on music rather than focusing on their status or pain. Music therapy can reduce physical symptoms such pain, agitation, and shortness of breath as well as psychological symptoms including depression, fear, isolation, disorientation, confusion, loss of control, and loss of independence. It also supports spiritual beliefs and practices of patient and his/her family. Music can also create an atmosphere to permit discussion around dying/death issues. It can inspire life review/reminiscence which can help focusing on assets and positive experiences for patients and their families. Additionally, music therapy can also benefit families/caregivers of patients by providing a break from a care, decreasing fatigue, increasing quality of life, providing emotional support, and providing opportunities for meaningful interactions among family members and/or between patient and families.