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Practicing Therapeutic Recreation in a World of Differences

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Practicing Therapeutic Recreation in a World of Differences

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in the

School of Human Ecology.

By

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ABSTRACT

Therapeutic Recreation (TR) services are available to any individual who wishes to increase quality of life and improve functioning. The profession is based on many conceptual foundations, including quality of life; perceived freedom; intrinsic motivation, self-efficacy, and self-determination; health, wellness, and disability; and recreation and leisure. However, these Western-ideological perspectives may hinder the introduction and practice of TR in countries with other worldviews. This study was designed to explore different worldviews and to evaluate the conceptual foundations of TR with respect to these differences. Findings attempt to identify ways to adapt and shape TR foundations so that it may be understood and practiced internationally.

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Introduction

How can therapeutic recreation (TR) be understood and practiced around the world? This project will address the importance of cultural sensitivity within the TR profession. It will attempt to identify how the world is different, including differences in politics, economics, access to healthcare, poverty, perception of disease and disability, and many other factors. After presenting these differences, the project will attempt to identify connections between these differences and the conceptual foundations of TR. By exploring the differences and understanding how they are connected to the forming of the processes of TR, this question will reveal gaps that exist which prevent TR from being introduced and practiced effectively.

Culture is an abstract concept that influences the way people live, interact, and understand the world. Perceptions, ideas, and values differ greatly from country to country. In this project, the researcher investigates how these differences might be used to introduce and practice TR. Addressing this question is important for the field of TR because it will identify how programs can be adapted, molded, or strengthened to fit the needs of individual clients and various settings from a wide range of cultural backgrounds. Recreational therapists, as well as many other therapy professions, must be able to adapt and understand who their client is, what their goals are, and why they may want to meet certain needs over others. Understanding their culture will allow therapists to comprehend their perceptions of disability and wellness, therapist and client relationships, and family roles (Hunt, 2007). When considering the practice of TR, it is important to accommodate to the needs of the client, taking into account their culture, historical background, and values and beliefs. Bickenbach (2009) notes that therapy professions have a role of culture brokering, which is "the mediation of differences

between the culture of the rehabilitation service system of which they are a part, and the culture of their client" (p. 1117). Sylvester, Voelkl, and Ellis (2001) state that the practice of TR "has not sufficiently incorporated cultural inclusion, or multiculturalism, into its theory and practice" (p. 35). This project will seek to give practical means to provide a mediation for this gap between the culture of the TR practice and the potential recipients of TR services.

Literature Review

According to Stumbo and Peterson (2009), "therapeutic recreation is provided to affect the total leisure behavior (leisure lifestyle) of individuals with disabilities and/or illnesses through increasing perceived freedom and choice, intrinsic motivation, self-efficacy, locus of control, and personal causation" (p. 21). TR has multiple conceptual foundations that form the backbone to the process and practice of the field. Among these foundations are concepts related to the Medical Model, such as health, wellness, disability, illness, and disease. Other foundational concepts include quality of life, leisure, perceived freedom, and intrinsic motivation. A recreational therapist across all populations and facilities will incorporate these concepts in order to design "specific activities that will most benefit clients" (Stumbo & Peterson, 2009, p. 22). Along with these concepts, TR explicitly values inclusion and integration but, as previously stated, hasn't incorporated multiculturalism, or complete cultural inclusion in its systems of practice (Sylvester et al., 2001).

There are clear differences in culture that could affect the practice of TR. These differences exist in many forms, including the cultural view of healthcare, disability, functioning, recreation and leisure, and roles of individuals in treatment (Hunt, 2007). These differences exist because of many factors, such as poverty, education, human

rights, and natural disasters, to name a few (Parnes et al., 2009). For example, the healthcare perspective of Angola varies greatly from the perspective of the West (Matheson, 2009). Also, people of certain countries value different forms of recreation and leisure. It has been found that people in Finland value nature and art and have used it as a form of therapy (Heyne & Monroe, 2015), whereas in South African culture, there is an emphasis in the value of sport and competition, which stands as a barrier to introducing TR (Young, Kriel, & Weybright, 2015).

Another significant issue is that people don't always view the same experiences in the same light, so as professionals we have to be more aware of how to be culturally sensitive while providing TR experiences to a variety of individuals. Doing so will allow therapists to understand their client's values, ideas, and goals in ways that will help them create an appropriate plan for treatment (Hunt, 2007). There are many studies and reports on how to be culturally sensitive within the broader healthcare system, and many state the idea of cultural brokering, or the mediation of two separate cultural views into a cohesive unit that will be beneficial for treatment (Bickenbach, 2009). Others offer models, such as the disability disparity model, to help interpret what the differences are and why they exist (Lewis, 2009). Methods such as these can be used to address and utilize differences when offering treatment. There are also strategies of employing the advancement of attitudes and beliefs, knowledge, and skills of an individual while providing or receiving practice in a predominantly Western field (Peregoy & Dieser, 1997), but there is little research on how the Western-based recreation therapy practice can be adapted to be introduced in a non-Western culture.

Although there is substantial research on cultural differences, cultural competency, and understanding culture for treatment, there is little to no research on how it can be translated for TR to be introduced. The paper will integrate information regarding different world perspectives with the conceptual foundations of TR in order to discover how, if at all possible, TR can be translated across cultural borders. Specifically, the following conceptual foundations related to TR will be discussed: quality of life; intrinsic motivation, self-efficacy, and self-determination; perceived freedom; and health, wellness, and disability; and recreation and leisure.

Quality of Life

Quality of life (QoL), as the name suggests, is the degree to which one's life holds quality. According to the World Health Organization (WHO), quality of life is defined as "individuals' perception of their position in life in the context of the culture and value systems" based on where they live, their values, goals, and standards (World Health Organization, 1997, p. 1). It is a multidimensional concept that measures a number of categories, which include "life satisfaction, well-being, happiness, meaning, and economic indices" (Bagwell, Introduction, para . 1, 2014). Quality of life is determined by many factors, ranging from economic status to health and wellness, from participation in leisure to environmental condition.

Health, for example, has been found to have a significant impact on quality of life. Physical and mental health alike have been found to affect QoL. According to Wu et al. (2015), pain, depression, osteoarthritis, and anxiety and nerves, as well as the presence of comorbidities, have the greatest impact on the loss of Health-Related Quality of Life (HRQoL). It has also been found that individuals with higher levels of obesity will more

than likely have a lower level of HRQoL (Kearns, Ara, Young, & Relton, 2013). Income, education, social class, and subjective social class are also determinants of QoL. Depending on the makeup of a socioeconomic stratum, QoL and HRQoL both may be affected by an individual's standing. In a study done by Kim and Park (2015), QoL scores are greater than HRQoL scores in higher standing income, education, and social class levels, while QoL scores are less than HRQoL in lower standing income, education, and social class levels. They state that a variety of factors may contribute to these findings, including clinical, biological, and sociodemographic factors, as well as value systems and cultural influences (Kim & Park, 2015).

WHO defines quality of life with respect to six domains, and each domain has a variety of factors that contribute to the evaluation and perception of QoL. Table 1 shows the facets and their respective elements.

With regard to TR, services provided can and should be targeted at promoting QoL more so than health. TR "can make the greatest contribution to the essential qualities of human nature and civilization by enhancing the quality of life through meaningful leisure experiences" (Carter & Van Andel, 2011, p. 18). Sylvester (2001) created a model that represents the use of RT to improve functional capacity/potential and health status. The model (Figure 1) poses that when one factor is improved, QoL of an individual may be high regardless of a low status of the other factor.

Intrinsic Motivation, Self-efficacy, Self-determination

Intrinsic motivation, self-efficacy, and self-determination all contribute to a person's level of confidence and perceived control over circumstances. Intrinsic motivation is gained when "an activity is perceived as providing opportunities for the

development of confidence, self-expression, self-development, or self realization" (Stumbo & Peterson, 2009, p. 17). Those who have high levels of intrinsic motivation are moved to act based on an internal drive rather than external factors and benefits. They may also experience better meaning, enjoyment, and personal fulfillment from their leisure experiences. The motivation that they possess may be for an internal benefit, such as to exercise a previously held skill or to challenge one's thinking and learning (Thøgersen-Ntoumani, Shepherd, Ntoumanis, Wagenmakers, & Shaw, 2016).

self-efficacy and self-determination are the belief that an individual has control over personal functioning and circumstance to reach a desired end (Stumbo & Peterson, 2009). An individual's level of efficacy and determination are driven by loci of control, attribution and causality, and competence. An internal locus of control is the belief that the individual holds responsibility over behaviors and outcomes, while an external locus of control is the belief that outside factors, such as luck, chance or other individuals, determine results of situations. Personal causality and attribution is the degree to which one believes he/she can affect an outcome, and competence is the idea and sense of accomplishment.

Self-Determination Theory is the idea that each individual has psychological needs that, when met, determine motivation. The needs include autonomy, competence, and relatedness. Each of these ideas promote the idea of self, in which the individual respectively feels self-dependent, able, and connected with the activity or others through an experience. According to this theory, those who hold intrinsic motivation "are likely to engage in...behaviors on a regular basis" (Cooper, Schuett, & Phillips, 2012, p. 28).

Studies have found that those with greater intrinsic motivation will more likely attend recreation activities, such as a study done evaluating individuals' level of motivation in attending an exercise class. The study found that those with greater intrinsic motivation would attend and adhere to the classes more overall than those with less motivation (Thøgersen-Ntoumani et al., 2016). Another study evaluated motivation factors for college students participating in intramural sports. The factors they identified and evaluated were interest/enjoyment, competence, appearance, fitness, and social categories. The study found that the highest score for motivation was for interest/enjoyment, reflecting the idea of intrinsic motivation in which an individual participates for an internal reward (Cooper, Schuett, & Phillips, 2012).

The ideas of self-determination, intrinsic motivation, and self-efficacy influence more than just participation. Motivation may contribute to one's well-being as well. Higher levels of self-efficacy related to coping have been found to contribute to functional and emotional well-being of women who were undergoing adjuvant endocrine therapy (Shelby et al., 2014). As individuals gain the skills necessary, efficacy and motivation may increase. For example, a self-management program was used to determine how teaching skills and knowledge of multiple sclerosis may increase self-efficacy for patients with the disorder. The study found that those who took part in the self-management program had a significantly higher self-efficacy score than those who did not participate (Maslakpak & Raiesi, 2014). Other activities, including TR interventions, may have rewards that support or influence intrinsic motivation. According to Wolfe (2003), a challenge course activity may provide intrinsic rewards for participation, including increased teamwork and trust (Wolfe, 2003). When it comes to

TR, it is important to determine how interventions, leisure education, and participation in recreation may promote intrinsic motivation, self-efficacy, and self-determination that can be translated into daily life.

Perceived Freedom

Perceived freedom, according to Nuelinger (1981), is a state of mind felt when an individual does something by their own choice and desire. It has been said that leisure is felt most when an individual does something for themselves rather than because of external motivations (Nuelinger, 1981; Stumbo & Peterson, 2009). The assumptions of perceived freedom hold that a person has choice, is free from constraints, has appropriate knowledge, skills, and attitudes, has options, and is free from barriers to participation (Stumbo & Peterson, 2009).

With regard to recreation and leisure, one will most likely experience an optimal level of freedom while engaging in leisure activities that are intrinsically motivating because they are able to experience levels of competence, control, and enjoyment (Poulsen, Ziviani, & Cuskelly, 2006). Without the appropriate knowledge and skills necessary to engage in leisure, an individual may more likely experience greater limitations associated with their participation. It is important to provide opportunities, such as leisure education, to increase perceived freedom and the experience of leisure to allow individuals a high sense of control. In a study done by Ertuzun (2015), perceived freedom was seen to increase in a group that participated in a leisure education program that taught about the skills, resources, and definitions of leisure. The results also showed that understanding of leisure, "skills of friendship, social communication, decision-making and self-determination were enhanced" after the program (p. 2367).

Other barriers may be experienced by individuals engaging in leisure with regards to perceived freedom, including the existence of disability. In a study done by Poulsen, Ziviani, & Cuskelly (2006), children with developmental coordination disorder (DCD), a disorder affecting motor skills, were seen to have lower participation in social-physical activities than those without DCD. The children with DCD were also found to have lower self-appraisals of perceived freedom and life satisfaction compared to those without the disorder, which may be attributed to low participation rates. Factors characteristic of those with DCD that may contribute to these low scores could be depressive symptoms, low self-concept, and anxiety (Poulsen et al., 2006).

Perceived freedom may also be influenced by environment. It has been found that perceived freedom in leisure is consistent within family structures; positive relationships between college students and their parent may support that ideas and perception of leisure are passed from parent to offspring. Siegenthaler and O'Dell (2000) claim that the consistency may also be because the students and parents experience more leisure freedom due to the student transitioning out of the home to their own place of living. Environmental factors, such as socialization, upbringing, and habitation, may contribute to one's level of freedom.

Health, Wellness, and Disability

The Medical Model has been what historically drove the primary view of health, wellness, and disability within recreation. Within this system, the term health is considered to be the absence of disease, illness, and/or disability. The model defines disease as an organism's processes and mechanisms being unable to adapt to stimuli or stresses, whereas illness is defined as a state of being in which a person's ability to

survive or maintain quality of life is decreased due to an imbalance of resources. A disability is defined as a physical or mental impairment that may limit one's functioning in one or more major areas (Stumbo & Peterson, 2009). The World Health Organization came to define health as a state of complete well-being with regard to the physical, mental, and social domains (Carter & Van Andel, 2011). In RT, the use of this model is greatly incorporated in its holistic approach to treatment; the practice of RT is designed to target the physical, social, cognitive, emotional, spiritual, and leisure domains.

With the evolution of health perspectives and the idea of a holistic state for individuals, wellness has come to involve control of the person as well as a state of being that incorporates many aspects in life. According to Stumbo and Peterson (2009), wellness is the "approach to personal health that emphasizes individual responsibility for well-being through the practice of health promoting lifestyle behaviors" (p. 3). It incorporates the whole being and focuses on a progression to a higher level of functioning.

There are many models that are designed to understand health and wellness. One such model is the International Classification of Functioning (ICF), which "provides a standard language and framework for the description of health and health-related states" (World Health Organization, 2002, p. 2). The goal of this framework is to eliminate the separation of health from an individual if a disability exists; health may be present with or without a disability.

There are many factors that can influence health, including that of family interactions. In a study done investigating self-rated health status, it was found that daughters' self-rated health statuses were significantly related to how their mothers rated

their status of health. Shippee, Rowan, Sivagnanam, and Oakes (2015) state that mothers' limitations in activities of daily living (ADLs) had an adverse effect on daughters' self-rated health. It has also been found that socioeconomic status, education, and occupation may contribute to different levels of self-efficacy and self-control, influencing one's feelings of well-being (Shippee et al., 2015; Mirowsky & Ross, 1998). Other factors, such as high levels of healthy lifestyle behaviors, income, education, and social support may positively increase health statuses (Mirowsky & Ross, 1998). The greater the resources that an individual possesses, the less hardship he/she may have in maintaining their health and well-being.

Recreation and Leisure

Recreation and leisure have been incorporated into the lives of individuals across cultures and throughout history. Commonly interchangeable terms, the two are both focused on providing participants with experiences. The drive and motivation behind each experience is what differentiates the kind of leisure and/or recreation occurring. For example, leisure may be viewed with respect to time, activity, or state of mind. Leisure as time indicates that leisure is understood to be time that is unrestricted by other experiences, such as work, tasks, or obligations. Leisure as activity is viewed as the activities chosen to participate in when one engages in free time. Leisure as a state of mind signifies the participants' internal experience of self, which involves the previously discussed topics of perceived freedom, intrinsic motivation, self-efficacy, and self-determination, among many other internal states (Anderson & Hurd, 2011).

Recreation is similar to leisure. According to Anderson and Hurd (2011), "recreation is an activity that people engage in during their free time, that people enjoy,

and that people recognize as having socially redeeming values" (p. 10). Recreation differs from leisure in that it has a connection with social values and recognition; the activity an individual participates in must be morally acceptable to the public and viewed in some way as valuable. Because of this, recreation may change greatly depending on history and culture (Anderson & Hurd, 2011).

Many factors may contribute to the participation levels of recreation. As previously stated, geographic location may show large differences in the perception of recreation because of the culture of the country, as shown in highly valued art recreation activities in Finland compared to a sports-centered view of recreation in South Africa (Heyne & Monroe, 2015, & Young et al., 2015). Other research suggests that a country's social, political, and economic statuses may help or hinder recreation participation. For example, a two-part study exploring the recreation and leisure participation of employed adults with visual impairments in Nigeria found that 69% of participants who engaged in recreation or leisure participated in sedentary leisure, such as television or radio. Barriers included access through funds, transportation, time, facilities, and equipment. Participants also identified that environmental barriers, discrimination, or lack of training or assistance prevented them in participating in more leisure pursuits (Ajuwon, Wollfe, & Kelly, 2015a). Part two of the study found that participation differed more when comparing gender, economic status, level of disability, education, and age of onset of visual impairment of the participants (Ajuwon, Wollfe, & Kelly, 2015b).

Recreation and leisure are experienced in various ways depending on an individual according to some factors such as health, education, income, and location. Every individual will perceive these two concepts according to their beliefs and social

norms. These viewpoints may shape an individual's understanding of limitations or constraints to leisure. According to Godbey, Crawford, and Shen (2010), the norms are what help influence an individual's beliefs and values. Because these beliefs and values develop internally, it is important to consider the "self" aspect experienced through recreation and leisure in order to examine recreation and leisure constraints across cultures. "…the strength and specific forms of various intra-, inter-, and structural constraints may vary across cultures" (Godbey et al., 2010, p. 122).

Research Questions/Hypotheses

The purpose of this research is to identify any barriers that may hinder the practice of TR that was originally created with values of Western populations in mind. The research will explore and analyze differences that exist across boundaries with respect to the conceptual foundations of the RT practice. Some important topics I will consider in my collection of studies will be related to poverty, health, education, gender, youth, natural disasters/conflict, and human rights (Parnes et al., 2009). These topics will answer one research question: how is the world different? After these differences are identified, they will be considered with respect to health, illness, disability, recreation and leisure, intrinsic motivation, self-efficacy, self-determination, perceived freedom, and quality of life. Through the connections, I hope to find practical ways for the disparate views to be brought together in order to provide an effective treatment plan. This will hopefully answer the second research question: how can these differences be used to introduce and practice TR?

Method

The study was performed through an archival analysis of data, including scholarly articles, textbooks, census data, and governmental reports. Databases used include Galileo Discover, the InterLibrary Loan System, and Google Scholar. The information presented previously describes the conceptual foundations of TR and how they are used in TR settings. Included are studies that show correlations between the foundation and an individual's socioeconomic status, environment, or functioning. The conceptual foundations reviewed included quality of life; intrinsic motivation, self-efficacy, and self-determination; perceived freedom; and health, wellness, and disability; and recreation and leisure. Searches were completed by using keywords such as "culture" and "perception of recreation" to gather information about views of recreation across many borders. The findings provided a foundation of knowledge about the variables that influence people's perception of the conceptual foundations used in TR practice.

Data were collected through archival research incorporating information from different regions of the world. Because the information collected was used to understand the world as a whole, information was collected from as many countries as possible. Data were collected on child labor statistics, dependency ratios, education expenditures, health expenditures, physicians density, percent population below the poverty line, school life expectancy, literacy rates, prevalence of disability, and total paid leave. These data were collected using government reports, such as the Central Intelligence Agency, United Nations, the World Bank, and the World Health Organization.

For each variable and country, the degree to which a factor exists has been measured. The data presents information on ratios, percentages, or quantities related to the prevalence of disability, amount of health care resources, education levels, etc. Each

variable has been integrated into visual diagrams to give a representation of the world and the differences between each region. A software program called Tableau was used. Data collected for each variable was transferred into an Excel Spreadsheet. The table was imported into Tableau, and the researcher was presented with options of visual diagrams to present the information. After the map diagram is selected, the program inputs the data on the map to present numbers. The representation selected to best represent each data set is colored, circular marks that vary in size depending on the number correlating with each country. The diagrams were used to understand which areas may benefit from applying a conceptual foundation, as well as giving a picture into which areas may have more barriers to introducing these concepts.

Results

The purpose of the research is to identify how the world is different and to find connections between these differences and the conceptual foundations of TR. While reviewing the conceptual foundations, which include: Quality of Life (QoL); Intrinsic Motivation, Self-Efficacy, and Self-Determination; Perceived Freedom; Health, Wellness, and disability; and Recreation and Leisure, it was found that each of these foundations are influenced by a number of factors. High social standing, high education levels, and high income are indicators of high QoL, and leisure has been found to improve QoL regardless of any factors. Perceived freedom, intrinsic motivation, self-efficacy, and self-determination have been found to be attributed to a person's knowledge, skills, and attitudes. Their perception of having options and being free from barriers increased these experiences. Additionally, those with higher perceived freedom have been found to have high levels of accessibility and social connectedness. Health,

wellness, and disability are all impacted by socioeconomic status, education, and occupation. Those who have higher quality experiences in these areas seemed to have the perception of better health or well being. Recreation and leisure are impacted by access, such as funds, transportation, and time, as well as by discrimination or lack of education and training.

All of these factors play an important role in a client receiving treatment. If they are unable to experience the conceptual foundations internally, they may not understand the necessity of TR. It is important to know how to translate these components to any person, regardless of location or life experience. The therapist, therefore, has a responsibility to understand the potential clients being served and finding means to adapt the traditional practices into ways to be understood and valued by those receiving treatment. Data have been collected to paint a picture of potential clients on an international scale using common threads found through the factors impacting the conceptual foundations. These factors have been narrowed into ten categories that present areas of strength and challenge for the foundations to be understood: child labor, dependency ratios, education expenditures, health expenditures, physicians' density, percent population below the poverty line, school life expectancy, literacy rates, prevalence of disability, and total paid leave.

Below, data is presented from numerous databases. The data collected were translated into maps to provide a visual representation of how each factor exists in various ways throughout the world. Each country is marked with a circle that visually represents the numerical data for each factor explained. The countries are marked with different colors, and the size of the circles signify how large or small each data point is.

For example, countries with high rates of a factor will have large circles, while those with small rates will be marked with smaller circles. The maps provide a simplified picture of each country and the measure to which a factor is present, and thus do not clearly represent the numerical data used. The raw data collected and translated for each map is provided in the appendix.

Child Labor

The data represented in this portion shows the percentage of children from ages 5 to 14 years old who are engaging in some form of child labor. The Central Intelligence Agency (2016i) defines child labor as "work that deprives children of their childhood, their potential, and their dignity, and that is harmful to physical and mental development." Such labor could expose the children to dangerous environments and behaviors, as well as prohibit them from continuing, attending, or returning to school. Some forms may lead to enslavement, separation from families, and having to rely on self for daily care.

Child Labor

Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows details about Percentage of child labor (ages 5-14).

Dependency Ratios

According to the Central Intelligence Agency, dependency ratios interpret the age structure of a population and the potential of an individual to become economically dependent on another. The map represents the total dependency ratios of each country, which is the combined youth population (ages 0-14) and elderly population (ages 65 and up) per 100 people considered to be of working age (ages 15-64). Countries with higher dependency ratios may face a greater burden to support the youth and elderly in their country, as compared to those with lower dependency ratios (Central Intelligence Agency, 2016i).

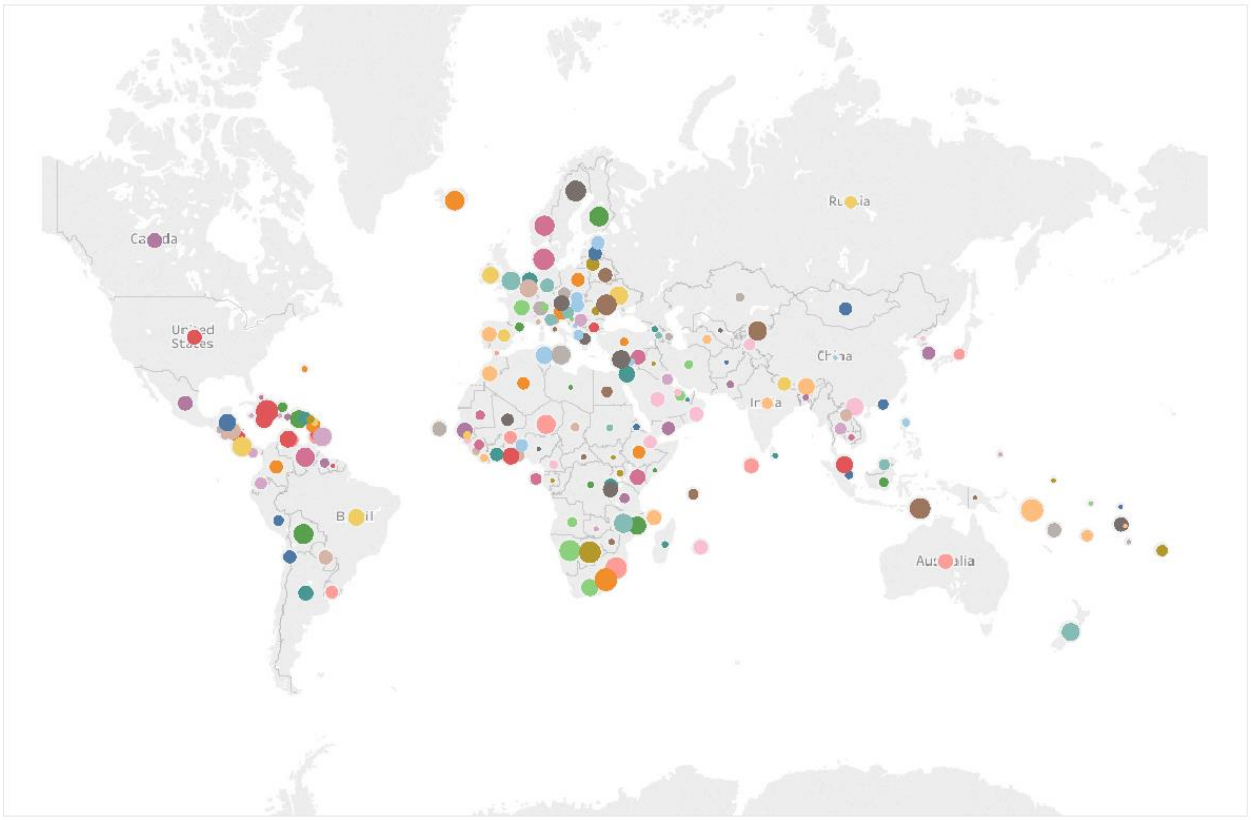
Dependency Ratio

Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Dependency Ratio.

Education expenditures

Education expenditures provide a representation of the public spending on education, shown as a percentage of the gross domestic product (GDP). The data represented shows the amount spent as a portion of the country's GDP (Central Intelligence Agency, 2016i).

Education Expenditure



Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows details about Education Expenditure.

Health expenditures

Health expenditures present the total spending on health in comparison to GDP, provided through percentages. According to the CIA, expenditures on health could include "the application of medical, paramedical, and/or nursing knowledge and technology, the primary purpose of which is to promote, restore, or maintain health" (Central Intelligence Agency, 2016i).

Health Expenditure

Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Health expenditure (% of GDP).

Physicians Density

Physicians density is the average number of physicians present within every 1000 people of the country's population. The CIA defines the physicians as those who "study, diagnose, treat, and prevent illness, disease, injury, and other physical and mental impairments in humans through the application of modern medicine" (Central Intelligence Agency, 2016i). These health care professionals also plan and provide treatment and care for individuals. The CIA also clarifies that less than 2.3 physicians per every 1000 people is insufficient to maintain proper health for the country, according to the World Health Organization.

Physicians Density

Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Physician density.

Percent Population below the Poverty Line

The data represented here is based on information collected through surveys of subgroups. The poverty level varies per country, so each number is an estimate provided and interpreted by based on the set poverty line for each country (Central Intelligence Agency, 2016i).

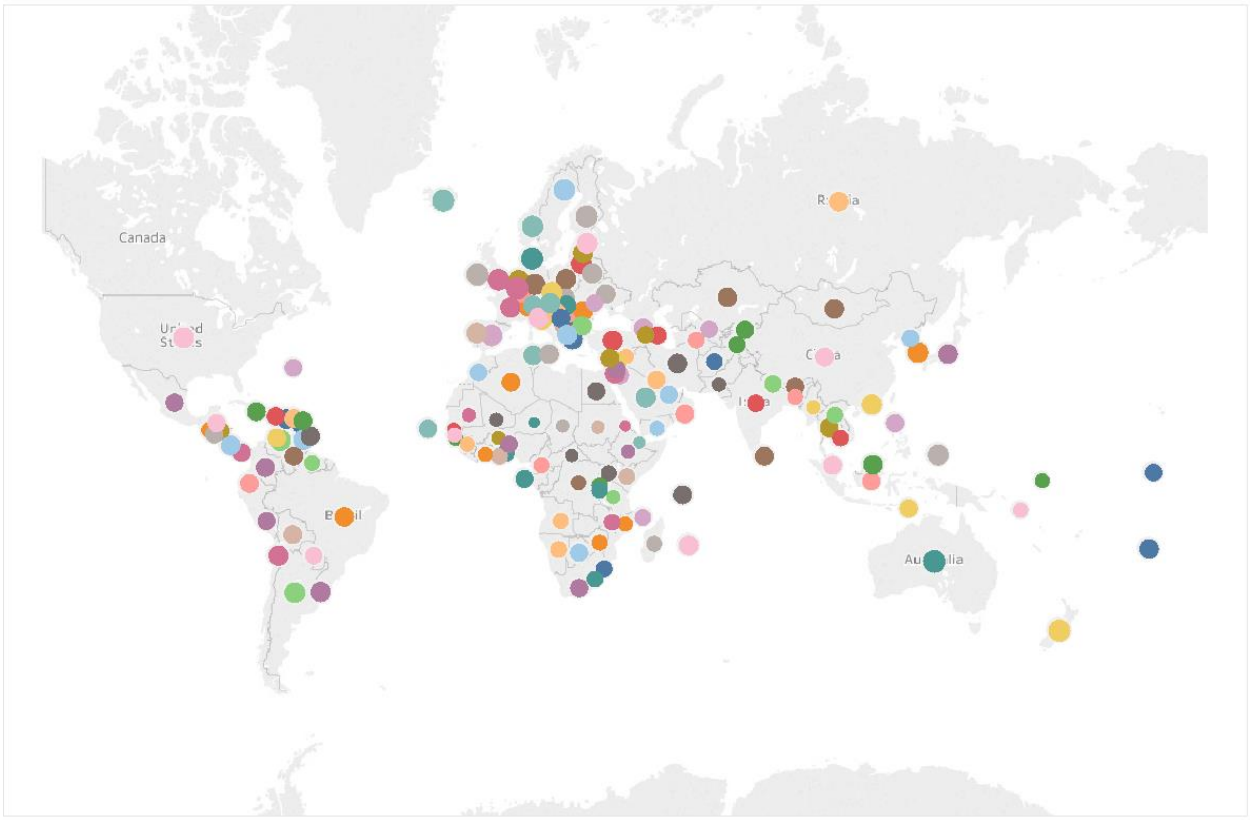
Population below the poverty line

Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Population Below Poverty Line.

School life expectancy

School life expectancy is the total years a child can expect to attend school, from primary education to tertiary education. The numbers represented are the number of years expected assuming that the child will enter into schooling. One important factor included in the data is the number years repeating one or more grades. It is important to interpret the data with consideration that number of years does not signify the quality or depth of education received (Central Intelligence Agency, 2016i).

School life expectancy

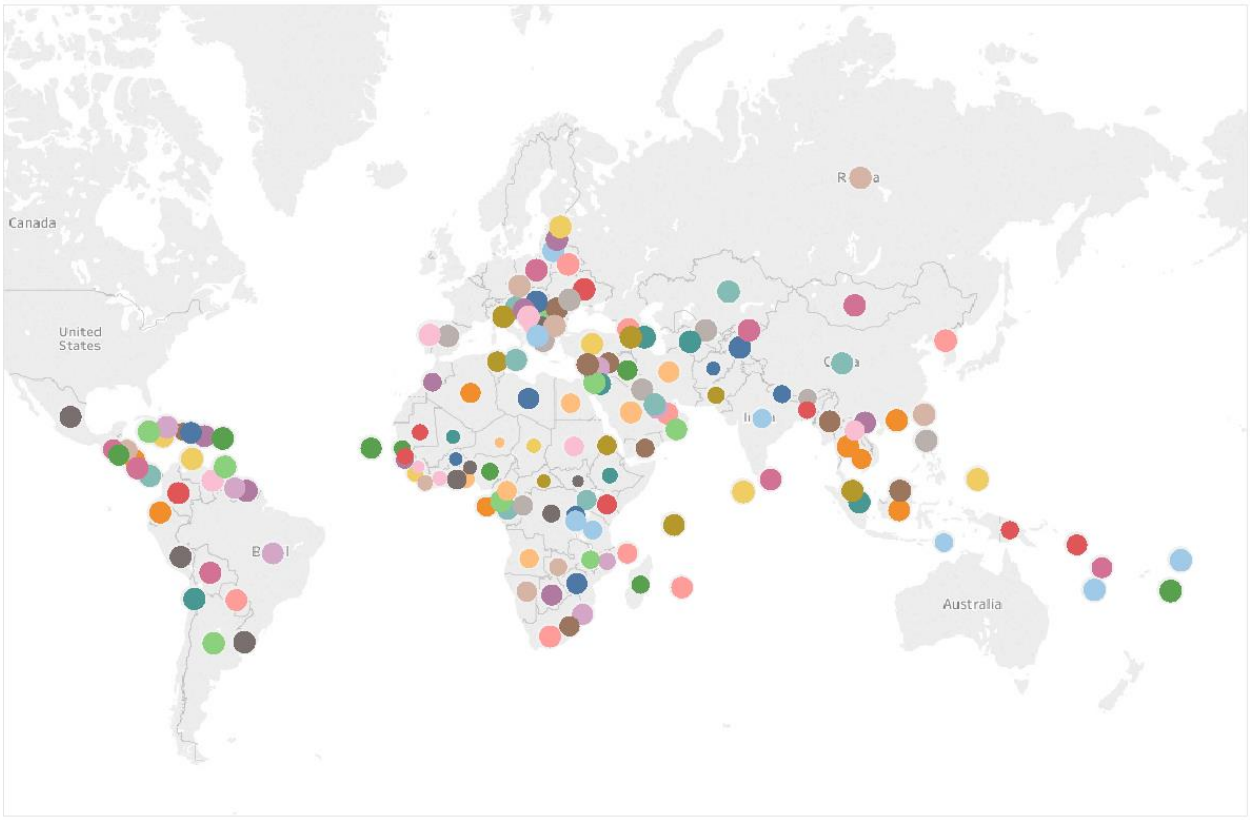


Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of School life expectancy (primary to tertiary).

Literacy Rates

Because there are no universal definitions to literacy, this data is based on "the ability to read and write at a specified age." The information collected is dependent on the standards of each country collecting and reporting the data (Central Intelligence Agency, 2016i).

Literacy Rates

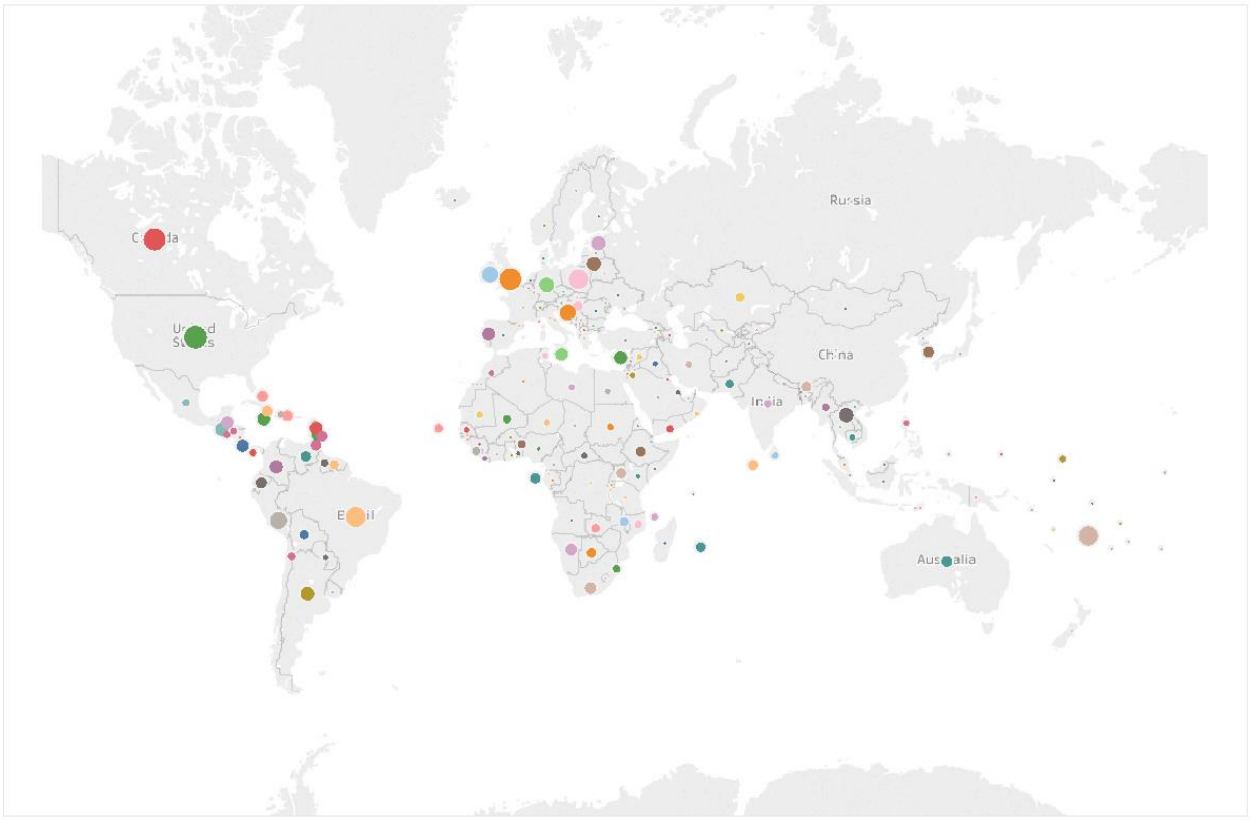


Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Percent Literacy Rate.

Prevalence of Disability

The following data shows the reported rates of disability in each country. The data was presented by the World Bank, showing the percentage of the population with a disability through census data (World Bank, 2013). Some countries may not have a measurement for disability or may not have reported any rates of disability, so some data points marked zero signify no data received.

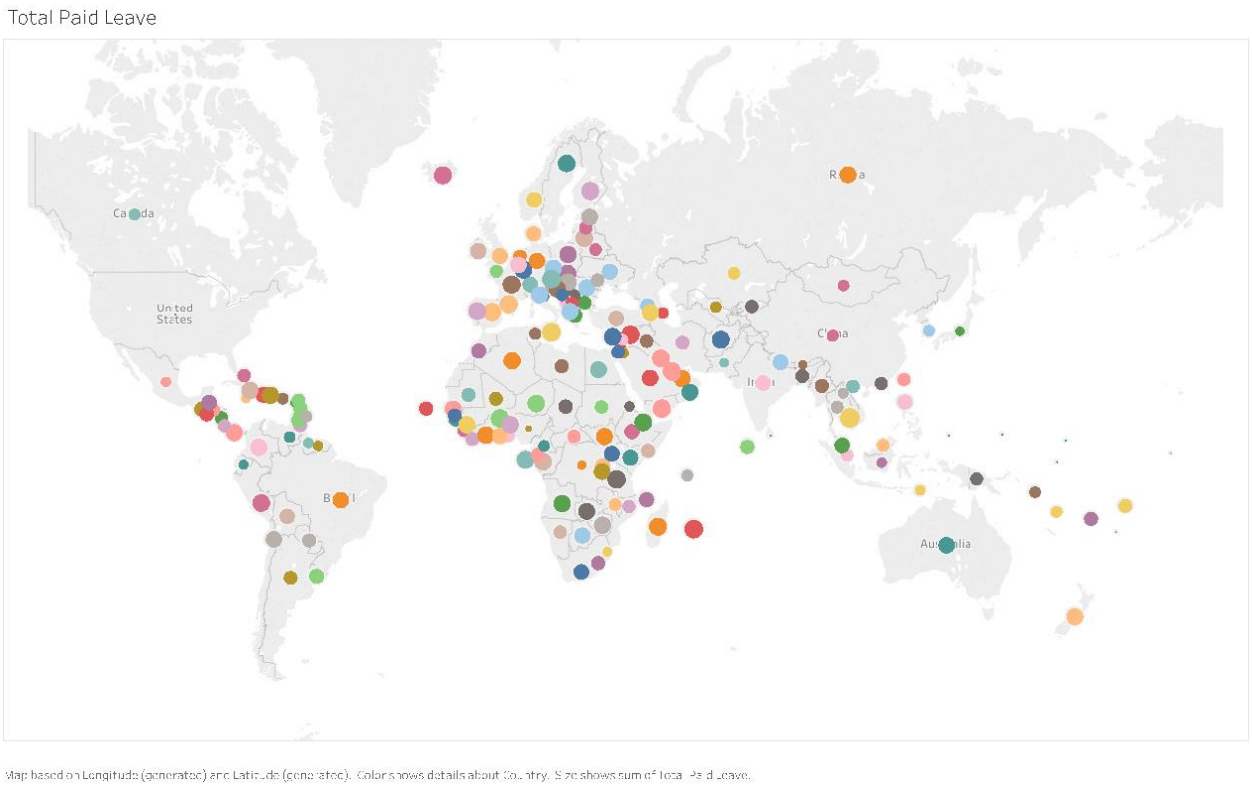
Prevalence of Disability



Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Prevalence of Disability.

Total Paid Leave

Many countries have different policies in regards to paid holiday and vacation days. The data presented shows the number of paid leave, both holiday and vacation days, granted to workers in each country.



Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Total Paid Leave.

Discussion

After collecting the data and reviewing the maps, the researcher drew conclusions about how the factors may influence TR practices. Below are explanations of each factor and how they may be addressed through programs used by a recreational therapist. Each concept is related to specific conceptual foundations and underlying features to treatment design. The factors are explained in the order in which they are presented above.

Child Labor

Child labor may be very limiting to those forced into it. A child may be deprived of an education, leading to a lower array of knowledge, skills, and abilities. As discussed previously, these are important for one to experience some of the foundations, such as perceived freedom and self-efficacy. If they don't possess the knowledge and abilities needed to learn new leisure skills, understand a disability or disease, or learn about the

importance of treatment, they may neglect the care provided through TR. Leisure and recreation are greatly constrained by time as well, so young children who are consumed by work would be limited in engaging in free-time leisure. Child labor may expose a child to hazardous or toxic environments that could cause disease or injury, thus decreasing their health and well-being which may prohibit them from participating in other activities.

For the therapist wanting to use TR in a country with a high child labor rate, s/he may have to consider focusing on providing multiple leisure education programs that fit the needs of the population. It would be important to explain the importance of recreation and leisure, while accommodating to the education level of the children participating in work. Countries with high child labor rates, as shown in the map above, include Latin America, countries along the western coast of Africa, and countries located on the Horn of Africa.

Dependency Ratios

Dependency ratios may reflect the social connectedness within a country. For example, those with higher levels of dependency show that the youth and the elderly greatly depend on the working age. When someone is dependent or becomes dependent on someone else, this may denote a close relationship. Those who have high social connections (i.e. those who are more dependent) may experience greater levels of perceived freedom, health, and well-being. In regards to the data presented, they may have more opportunities to engage in recreation/leisure activities or health care treatment because they are provided for financially, rather than having to provide for themselves. However, barriers may arise for those who are providing for these individuals. They may

have less time or financial resources to engage in their own recreation and leisure pursuits, limiting their levels of perceived freedom.

It is important for the therapist to understand the social connectedness of their clients. Potential clients in countries with high dependency ratios may make decisions based on the approval of their caretakers or immediate families. The therapist will have to understand that the family will play a large role in the planning process of treatment because of the traditions of the country. To introduce TR, the therapist may begin by allowing caretakers and family members to be a part of treatment. Family interventions and community groups could be beneficial. The therapist may later focus treatment more on developing the individual's level of autonomy. Through the activities they participate in, the client may gain more levels of perceived freedom and self-efficacy. Their level of dependence may transform through treatment, therefore translating into their everyday lifestyle. Countries with high levels of dependency rates, and therefore a potential for greater social and family ties, include many places in Africa.

Education expenditures

A country's spending on education may provide a picture into the level and quality of education received by the potential clients. Countries with high levels of education expenditure may have more opportunities for continuing education and therefore may have higher education rates. Countries with lower education levels may lead to potential clients having less knowledge, skills, and abilities to understand recreation activities and the importance of therapy.

A therapist entering a country with high levels of education spending will have to consider the population being served. If they have high levels of education, they may

understand leisure values and the purpose of treatment very easily. On the other hand, they may be progressing in education or their profession, so it will be important for the therapist to continue teaching the values of recreation and leisure. It may be hard to break the "hard work" mentality associated with high levels of education. In other countries, a therapist may be treating clients who haven't had many educational opportunities because of low levels of spending on academics. In these places, a therapist may have the opportunity to teach new skills and abilities through the recreation activities. They could adapt recreational activities to teach them educational skills, such as reading. After a client learns more about their treatment and about recreation in general, they may feel more control over their situation because of their higher understanding. This may increase their perceived freedom and other conceptual foundations. Countries with lower levels of education expenditure include African countries and nations in South Asia.

Health expenditures

Countries that have high levels of health care spending may provide one of two settings for a recreational therapist to introduce our field. The first setting would embrace new forms of treatment because of the extensive knowledge of health and treatment, allowing the recreational therapist the opportunity to create treatment easily in clinical settings. The second environment a therapist may enter into could be one that relies heavily on medical treatment, such as medication. The therapist may have to use evidence based practice to prove that TR is a viable treatment option.

Clients who are from countries with high levels of health expenditure may have many opportunities to receive treatment. They may also undergo proper and accurate diagnosis and care. These clients may understand their condition very well, and this could

lead to higher desires to participate in treatment. Countries a therapist could consider include many European countries. Those with lower health care expenditure may receive less treatment, and they may not have as many opportunities for accurate diagnosis and care. A therapist would have to understand that the goal for TR in these settings could steer toward functional intervention or improving QoL. Those without many opportunities or resources for treatment may increase their functioning for the first time when they participate in TR. However, because certain diagnoses and conditions require clinical treatment to improve, the therapist may focus on using leisure pursuits to improve QoL, understanding that an individual may have high QoL regardless of their condition or health status. Countries where a therapist may have little connection with health care may include countries in western and north Africa, the Middle East, and south Asia.

Physicians Density

The level of physicians available to the population may hinder the recreational therapist's style of treatment. In countries with low levels of physicians, the therapist may have little access to clinical facilities, resources, or professionals. They may have to focus their treatment on recreation and leisure pursuits in greater ways than focusing on functional intervention activities. The potential client groups may not have received proper care or even an accurate diagnosis, so the therapist will have to consider new ways to perform an assessment depending on the presence or lack of medical records or treatment previously provided to the client. Countries with low physician density are found in South America, Africa, south Asia, and the Pacific Islands. Those with high physician density include Europe and the Middle East. In these locations, the therapist

may be able to partner easier with a clinical facility or team. The treatment provided may be more targeted to a diagnosis or condition than in the countries with lower densities.

Percent Population below the Poverty Line

Income level and socioeconomic status may hinder an individual from participating in leisure pursuits. They may not have as many opportunities or resources to utilize in order to participate in a TR program. In addition, it may hinder their access to programs and facilities. Funding, transportation, and geography may hinder a person from gaining new experiences. For the recreational therapist, it is important to provide activities that are accessible to the potential clients. When going into a country with high rates of people below the poverty line, the therapist may focus on community-designed recreation that can be accessed by a majority of the population. The therapist may also work hard at increasing the potential clients' perception of freedom, efficacy, and determination. Because the clients have little resources, they may hesitate to committing to treatment or even participation of recreational activities. They may focus on daily tasks, such as cooking and cleaning, or working to raise money to provide for families. A therapist would help a client feel as though they are worth it and that treatment will be helpful, whether it's to help improve functioning to to improve their overall QoL. Countries with high levels of population below the poverty line include countries in Latin America, Africa, and the Middle East.

School life expectancy

School life expectancy may give a therapist a picture into how long the potential clients have received or will receive education. The amount of time may indicate the level of education received and the level of knowledge, skills, and abilities possessed that

may translate into treatment. These experiences help a client develop a feeling of self-efficacy, self-determination, and perceived freedom because they are aware of their understanding and skills. In addition, their self awareness may increase their level of intrinsic motivation because they are aware of their interests and desires to try new things. Countries with the highest years of schooling and where a therapist can use these strengths are found in Europe.

Countries where students are in school less are found in central Africa and some countries in southeast Asia. In these countries, a therapist may have clients that have more free time than those who have longer schooling. It will be important for the therapist to use leisure education to help clients understand the necessity and value of leisure in everyday life. Such education will be extremely important, especially in countries where there are high levels of child labor. The therapist will have to be cautious of whether child labor exists and design programs accordingly.

Literacy Rates

Literacy rates, like education expenditure and school life expectancy, allow a therapist to understand the potential clients' levels of education and knowledge. For those with low literacy rates, the therapist will have to educate more on the disability, treatment, and leisure. It will be imperative, however, that the therapist does this in a manner that encourages the knowledge the client already has. If the therapist educates the client without allowing them to experience a level of control, they may lose their motivation and positive sense of self. Countries where a therapist may have to focus more on educational issues related to recreation and leisure include countries found in central Africa.

Prevalence of Disability

The therapist must have a good understanding of the client groups s/he could be working with. The data presented may not give a clear picture into the state of disability in a country; for countries with low healthcare spending or physician rates, the reports of disability may not accurately represent the population. The therapist may also go into a country that does not view disability in the same way as the country where they were educated and trained. The therapist must be able to adapt his/her thinking in order to understand how the citizens interpret and view disability or disease.

As the view of health and wellness has been adapting to a holistic view, a new country with different viewpoints will be a great place for the therapist to promote the idea of a "whole-being" health. However, while introducing the field the therapist may have to approach health in one aspect rather than in multiple domains in order to convince people that TR can meet their needs. When the therapist starts promoting health from the perspective the country is used to and respects, s/he may be able to provide evidence of how TR can have a holistic impact on people.

Total Paid Leave

If a country provides opportunities for its citizens to engage in leisure activities, a therapist may have a smooth transition in introducing and practicing TR. S/he will not have barriers to explaining and helping others understand the importance of leisure. In addition, the potential clients would have more opportunities to participate in treatment or transfer the leisure lifestyle they gained through treatment into everyday life. It will be important for the therapist to encourage the clients to continue their new leisure habits in their free time if they are in a country that allows many days of leave. For countries with

low levels of leave, time will be a barrier both the therapist and the client will have to negotiate. It will be important for the therapist to instill levels of autonomy in the client, helping them understand that they have freedom to adapt their schedule and therefore participate in treatment. Intrinsic motivation will be a huge factor for those with little free time; they may want to do other things besides treatment in the very little time they do have, so the therapist will have the responsibility to help develop the clients' desire for treatment.

Summary

Overall, each region in the world has a variety of factors that contribute to the way people perceive and understand experiences. In particular, the factors will contribute greatly to the way a client may understand and respond to treatment. Understanding the conditions of a region is vital to helping the potential clients gain the greatest experiences possible. The characteristics of each country portrayed through the maps and discussion above show a simplified version of the world, and only begin to paint a small picture of how TR practices may be understood. Although they do not directly give clear direction for practice, they are extremely important to be considered if the field wishes to expand internationally.

Limitations and Future Directions

There are multiple limitations to this research. Because there is limited access to some information, some statistics and numbers may not accurately represent the true status in each country. In addition, the data collected is not original data, but rather interpretations of data. Many of the connections made are based on qualitative research and theory of practice. Also, as a student in the United States of America, the author is

unable to fully comprehend how processes work in other countries. All implications have come from educational classes, which were designed with Western style ideals, and personal experiences with TR and communicating with people.

Future directions would include further research. The implications from this study will be better supported through multiple forms of research, including research specifically on each conceptual foundation individually, raw data collected from multiple countries, and evidence showing the effectiveness of TR being introduced in new ways. Research conducted on specific regions of the world, especially those which vary greatly from Western styles of healthcare, recreation, and treatment, may be particularly effective. Because this study was so broad and open to the whole world, it will hopefully be a launching pad for the field to stretch into new forms of research and adapt to effective practice.

Reflective Critique

While beginning this project, I felt that the thesis would be a daunting task that would be impossible to complete. However, I quickly learned that I'm more adequate than I think; because of the education I've received, I've been able to think at deeper levels. I've gained a foundational knowledge about my field that's led to greater understanding, and it's helped me think deeper for my research. Rather than trying to find concrete information through my project, I've been able to think creatively to find a subject that may change the field once further research is done.

Even beyond finding my topic, I've had to think deeply and in new ways to figure out how to do my research. I'm usually a really structured, ordered thinker, but I've learned that I need to be flexible with my method. I've also had to learn to interpret

information rather than simply collect it. I learned that the research I thought I could do isn't real research; there is a huge difference between a research paper and being a researcher.

I was also very humbled during this experience. There are many forms of technology that I don't know how to use. I have been pushed to expand my knowledge on what to research, how to collect data, what ways are useful for organizing data, and how to draw conclusions. I've also learned that it is okay to ask for help, especially to professors who are eager to share their expertise with us.

On the topic of research, I've seen that there is very little research in our field. It encourages me that my colleagues and I get to experience research before graduating. The skills and knowledge we gain here won't only develop us as professionals, but it will train us to enhance the field through evidence-based practice and thinking how the profession can be advanced.

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Appendix 1: Tables

Table 1. WHO QoL Domains and Facets

Domain	**Facets incorporated within domains**
1. Physical Health	Energy and fatigue Pain and discomfort Sleep and rest
2. Psychological	Bodily image and appearance Negative feelings Positive feelings Self-esteem Thinking, learning, memory, and concentration
3. Level of Independence	Mobility Activities of daily living Dependence on medical substances and medical aids Work capacity
4. Social relationships	Personal relationships Social support Sexual activity
5. Environment	Financial resources Freedom, physical safety and security Health and social care: accessibility and quality

	Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation/leisure Physical environment (pollution/noise/traffic/climate) Transport
6. Spirituality/Religion/Personal beliefs	Religion/Spirituality/Personal beliefs

Table 2. Child Labor (Central Intelligence Agency, 2016a)

Country	Percentage child labor
Afghanistan	25.30%
Albania	12%
Algeria	5%
Angola	24%
Argentina	7%
Armenia	4%
Azerbaijan	7%
Bangladesh	13%
Belarus	5%
Belize	40%
Benin	46%
Bhutan	18%
Bolivia	26.40%
Bosnia and Herzegovina	5%
Botswana	9%

Country	Percentage child labor
Brazil	3%
Burkina Faso	38%
Burundi	19%
Cameroon	31%
Central African Republic	47%
Chad	48%
Chile	3%
Colombia	9%
Congo, Democratic Republic of the	42%
Congo, Republic of the	25%
Costa Rica	5%
Cote d'Ivoire	35%
Djibouti	8%
Ecuador	8%
El Salvador	4%
Ethiopia	53%
Gambia, The	25%
Georgia	18%
Ghana	34%
Guatemala	21%
Guinea-Bissau	57%
Guinea	25%
Guyana	16%
Haiti	21%

Country	Percentage child labor
Honduras	16%
India	12%
Indonesia	7%
Iraq	11%
Jamaica	6%
Kazakhstan	2%
Kyrgyzstan	40.30%
Laos	11%
Liberia	21%
Macedonia	6%
Madagascar	28%
Malawi	26%
Mali	36%
Mauritania	16%
Mexico	5%
Moldova	16%
Mongolia	18%
Montenegro	10%
Morocco	8%
Mozambique	22%
Nepal	34%
Nicaragua	14%
Nigeria	29%
Niger	43%

Country	Percentage child labor
Panama	7%
Paraguay	15%
Peru	34%
Sao Tome and Principe	8%
Senegal	22%
Serbia	4%
Sierra Leone	48%
Somalia	49%
Suriname	6%
Syria	4%
Tajikistan	10%
Tanzania	21%
Thailand	8%
Timor-Leste	4%
Togo	47%
Trinidad and Tobago	1%
Turkey	3%
Uganda	25%
Ukraine	7%
Uruguay	7%
Vietnam	16%
Yemen	23%
Zambia	41%

Table 3. Dependency Ratios (Central Intelligence Agency, 2016b)

Country	Dependency Ratio
Afghanistan	87%
Albania	44.80%
Algeria	52.60%
Angola	99.90%
Antigua and Barbuda	45.70%
Argentina	56.50%
Armenia	41.30%
Aruba	44%
Australia	50.90%
Austria	49.20%
Azerbaijan	38%
Bahamas, The	41.20%
Bahrain	31.40%
Bangladesh	52.50%
Barbados	50.40%
Belarus	43%
Belgium	54.20%
Belize	56.80%
Benin	82%
Bhutan	46.90%
Bolivia	63.70%
Bosnia and Herzegovina	40.70%
Botswana	55.30%
Brazil	44.70%

Country	Dependency Ratio
Brunei	38%
Bulgaria	51.90%
Burkina Faso	92.20%
Burma	49.10%
Burundi	89.70%
Cabo Verde	52%
Cambodia	55.60%
Cameroon	84.30%
Canada	47.30%
Central African Republic	75.20%
Chad	100.70%
Chile	45.20%
China	36.60%
Colombia	45.60%
Comoros	75.60%
Congo, Democratic Republic of the	95.90%
Congo, Republic of the	86.20%
Costa Rica	45.40%
Cote d'Ivoire	83.50%
Croatia	51.10%
Cuba	43.40%
Curacao	51.10%
Cyprus	41.60%
Czechia	49.50%

Country	Dependency Ratio
Denmark	55.90%
Djibouti	58.50%
Dominican Republic	57.80%
Ecuador	55.60%
Egypt	62.30%
El Salvador	54.30%
Equatorial Guinea	72.90%
Eritrea	83.20%
Estonia	53.50%
Ethiopia	81.60%
Fiji	52.80%
Finland	58.30%
France	60.30%
French Polynesia	42.20%
Gabon	73.10%
Gambia, The	94.20%
Gaza Strip	76%
Georgia	45.70%
Germany	51.80%
Ghana	73%
Greece	56.20%
Grenada	50.70%
Guam	52%
Guatemala	70.90%

Country	Dependency Ratio
Guernsey	47%
Guinea-Bissau	78.40%
Guinea	83.80%
Guyana	51.10%
Haiti	62.30%
Honduras	57.80%
Hong Kong	37%
Hungary	47.90%
Iceland	51.60%
India	52.40%
Indonesia	49%
Iran	40.20%
Iraq	78.70%
Ireland	53.70%
Israel	64.10%
Italy	56.50%
Jamaica	48.60%
Japan	64.50%
Jersey	47%
Jordan	64.80%
Kazakhstan	50.30%
Kenya	80.90%
Kiribati	63%
Korea, North	44.30%

Country	Dependency Ratio
Korea, South	37.20%
Kuwait	32.10%
Kyrgyzstan	55.30%
Laos	62.80%
Latvia	52.20%
Lebanon	47.30%
Lesotho	67.30%
Liberia	82.90%
Libya	52.40%
Lithuania	50.10%
Luxembourg	43.70%
Macau	28.20%
Macedonia	41.40%
Madagascar	80.30%
Malawi	94.50%
Malaysia	43.60%
Maldives	47.40%
Mali	100.20%
Malta	50.80%
Mauritania	76.10%
Mauritius	40.60%
Mexico	51.70%
Micronesia, Federated States of	62.40%
Moldova	34.60%

Country	Dependency Ratio
Mongolia	47.60%
Montenegro	47.70%
Morocco	50.10%
Mozambique	94.80%
Namibia	67.30%
Nepal	61.80%
Netherlands	53.30%
New Caledonia	47.90%
New Zealand	54%
Nicaragua	54.10%
Nigeria	87.70%
Niger	113%
Norway	52.20%
Oman	30%
Pakistan	65.30%
Panama	53.40%
Papua New Guinea	67.10%
Paraguay	56.60%
Peru	53.20%
Philippines	57.60%
Poland	43.80%
Portugal	53.50%
Puerto Rico	50%
Qatar	20.10%

Country	Dependency Ratio
Romania	48.90%
Russia	43.10%
Rwanda	78.10%
Saint Lucia	47.30%
Saint Vincent and the Grenadines	46.80%
Samoa	74%
Sao Tome and Principe	84.20%
Saudi Arabia	45.90%
Senegal	87.60%
Serbia	50.10%
Seychelles	43.50%
Sierra Leone	81.90%
Singapore	37.40%
Slovakia	40.80%
Slovenia	48.70%
Solomon Islands	75.10%
Somalia	98.10%
South Africa	52.10%
South Sudan	83.70%
Spain	50.80%
Sri Lanka	51.20%
Sudan	78%
Suriname	50.80%
Swaziland	69.30%

Country	Dependency Ratio
Sweden	59.30%
Switzerland	48.80%
Syria	70%
Tajikistan	60.90%
Tanzania	93.80%
Thailand	39.20%
Timor-Leste	92.30%
Togo	81.80%
Tonga	74.30%
Trinidad and Tobago	43.20%
Tunisia	44.80%
Turkey	49.70%
Turkmenistan	47.90%
Uganda	102.30%
Ukraine	43.30%
United Arab Emirates	17.80%
United Kingdom	55.10%
United States	50.90%
Uruguay	55.90%
Uzbekistan	49.70%
Vanuatu	68.70%
Venezuela	52.40%
Vietnam	42.50%
Virgin Islands	61.20%

Country	Dependency Ratio
West Bank	76%
Western Sahara	40.20%
World	52.30%
Yemen	75.60%
Zambia	95.40%
Zimbabwe	80.40%

Table 4. Education Expenditure (Central Intelligence Agency, 2016c)

Country	Percent Education Expenditure
Afghanistan	NA
Albania	3.54%
Algeria	4.30%
American Samoa	NA
Andorra	3.10%
Angola	3.40%
Anguilla	2.80%
Antigua and Barbuda	2.60%
Argentina	5.30%
Armenia	2.20%
Aruba	6%
Australia	5.30%
Austria	5.60%
Azerbaijan	2.50%
Bahamas, The	NA

Country	Percent Education Expenditure
Bahrain	2.60%
Bangladesh	2%
Barbados	6.70%
Belarus	5%
Belgium	6.40%
Belize	6.20%
Benin	4.40%
Bermuda	1.80%
Bhutan	5.90%
Bolivia	7.30%
Bosnia and Herzegovina	NA
Botswana	9.60%
Brazil	5.90%
British Virgin Islands	4.40%
Brunei	3.80%
Bulgaria	3.50%
Burkina Faso	4.50%
Burundi	5.40%
Cabo Verde	5%
Cambodia	2%
Cameroon	3%
Canada	5.30%
Cayman Islands	NA
Central African Republic	1.20%

Country	Percent Education Expenditure
Chad	2.90%
Chile	4.60%
China	NA
Colombia	4.70%
Comoros	5.10%
Congo, Democratic Republic of the	2.20%
Congo, Republic of the	6.20%
Cook Islands	3.90%
Costa Rica	7%
Cote d'Ivoire	4.70%
Croatia	4.20%
Cuba	12.80%
Curacao	4.90%
Cyprus	6.60%
Czechia	4.30%
Denmark	8.50%
Djibouti	4.50%
Dominican Republic	2.10%
Ecuador	4.20%
Egypt	3.80%
El Salvador	3.40%
Eritrea	2.10%
Estonia	4.70%
Ethiopia	4.50%

Country	Percent Education Expenditure
Fiji	3.90%
Finland	7.20%
France	5.50%
Gabon	NA
Gambia, The	2.80%
Georgia	2%
Germany	4.90%
Ghana	6%
Gibraltar	NA
Greece	4.10%
Guatemala	2.80%
Guinea-Bissau	2.40%
Guinea	3.50%
Guyana	3.20%
Haiti	NA
Holy See (Vatican City)	NA
Honduras	5.90%
Hong Kong	3.60%
Hungary	4.60%
Iceland	7%
India	3.80%
Indonesia	3.30%
Iran	3%
Iraq	NA

Country	Percent Education Expenditure
Ireland	5.80%
Israel	5.90%
Italy	4.10%
Jamaica	6%
Japan	3.80%
Jordan	NA
Kazakhstan	3.10%
Kenya	5.50%
Korea, North	NA
Korea, South	4.60%
Kuwait	3.80%
Kyrgyzstan	6.80%
Laos	4.20%
Latvia	4.90%
Lebanon	2.60%
Lesotho	13%
Liberia	2.80%
Libya	NA
Liechtenstein	2.60%
Lithuania	4.80%
Macau	2.10%
Madagascar	2.10%
Malawi	6.90%
Malaysia	6.10%

Country	Percent Education Expenditure
Maldives	5.20%
Mali	4.30%
Malta	6.80%
Mauritania	3.30%
Mauritius	5%
Mexico	5.20%
Micronesia, Federated States of	NA
Moldova	7.50%
Monaco	1%
Mongolia	4.60%
Montenegro	NA
Montserrat	5.10%
Morocco	5.30%
Mozambique	6.50%
Namibia	8.30%
Nauru	NA
Nepal	4.70%
Netherlands	5.60%
New Zealand	6.40%
Nicaragua	4.50%
Nigeria	NA
Niger	6.80%
Niue	NA
Norway	7.40%

Country	Percent Education Expenditure
Oman	5%
Pakistan	2.50%
Panama	3.30%
Papua New Guinea	NA
Paraguay	5%
Peru	3.70%
Philippines	2.70%
Poland	4.80%
Portugal	5.10%
Puerto Rico	6.40%
Qatar	3.50%
Romania	2.90%
Russia	4.20%
Rwanda	5%
Saint Kitts and Nevis	4.20%
Saint Lucia	4.80%
Saint Vincent and the Grenadines	5.10%
Samoa	5.10%
San Marino	2.40%
Sao Tome and Principe	3.90%
Saudi Arabia	5.10%
Senegal	5.60%
Serbia	4.40%
Seychelles	3.60%

Country	Percent Education Expenditure
Sierra Leone	2.80%
Singapore	2.90%
Slovakia	4.10%
Slovenia	5.70%
Solomon Islands	10%
Somalia	NA
South Africa	6.10%
South Sudan	0.80%
Spain	4.30%
Sri Lanka	1.60%
Sudan	2.20%
Suriname	NA
Swaziland	8.60%
Sweden	7.70%
Switzerland	5.10%
Syria	5.10%
Tajikistan	4%
Tanzania	3.50%
Thailand	4.10%
Timor-Leste	7.70%
Togo	4.80%
Tokelau	NA
Tunisia	6.20%
Turkey	2.90%

Country	Percent Education Expenditure
Turkmenistan	3%
Turks and Caicos Islands	3.30%
Tuvalu	NA
Uganda	2.20%
Ukraine	6.70%
United Arab Emirates	NA
United Kingdom	6.70%
United States	5.20%
Uruguay	4.40%
Uzbekistan	NA
Vanuatu	4.90%
Venezuela	6.90%
Vietnam	6.30%
Yemen	4.60%
Zambia	1.10%
Zimbabwe	2%

Table 5. Health Expenditure (Central Intelligence Agency, 2016d)

Country	Health expenditure (% of GDP)
Afghanistan	5.30%
Albania	5.90%

Country	Health expenditure (% of GDP)
Algeria	7.20%
Andorra	8.10%
Angola	3.30%
Antigua and Barbuda	5.50%
Argentina	4.80%
Armenia	4.50%
Australia	9.40%
Austria	11.20%
Azerbaijan	6%
Bahamas, The	7.70%
Bahrain	5%
Bangladesh	2.80%
Barbados	7.50%
Belarus	5.70%
Belgium	10.60%
Belize	5.80%
Benin	4.60%
Bhutan	3.60%
Bolivia	6.30%
Bosnia and Herzegovina	9.60%
Botswana	5.40%
Brazil	8.30%
Brunei	2.60%
Bulgaria	8.40%

Country	Health expenditure (% of GDP)
Burkina Faso	5%
Burma	2.30%
Burundi	7.50%
Cabo Verde	4.80%
Cambodia	5.70%
Cameroon	4.10%
Canada	10.40%
Central African Republic	4.20%
Chad	3.60%
Chile	7.80%
China	5.50%
Colombia	7.20%
Comoros	6.70%
Congo, Democratic Republic of the	4.30%
Congo, Republic of the	5.20%
Cook Islands	3.40%
Costa Rica	9.30%
Cote d'Ivoire	5.70%
Croatia	7.80%
Cuba	11.10%
Cyprus	7.40%
Czechia	7.40%
Denmark	10.80%
Djibouti	10.60%

Country	Health expenditure (% of GDP)
Dominica	5.50%
Dominican Republic	4.40%
Ecuador	9.20%
Egypt	5.60%
El Salvador	6.80%
Equatorial Guinea	3.80%
Eritrea	3.30%
Estonia	6.40%
Ethiopia	4.90%
Fiji	4.50%
Finland	9.70%
France	11.50%
Gabon	3.40%
Gambia, The	7.30%
Georgia	7.40%
Germany	11.30%
Ghana	3.60%
Greece	8.10%
Grenada	6.10%
Guatemala	6.20%
Guinea-Bissau	5.60%
Guinea	5.60%
Guyana	5.20%
Haiti	7.60%

Country	Health expenditure (% of GDP)
Honduras	8.70%
Hungary	7.40%
Iceland	8.90%
India	4.70%
Indonesia	2.80%
Iran	6.90%
Iraq	5.50%
Ireland	7.80%
Israel	7.80%
Italy	9.20%
Jamaica	5.40%
Japan	10.20%
Jordan	7.50%
Kazakhstan	4.40%
Kenya	5.70%
Kiribati	10.20%
Korea, South	7.40%
Kuwait	3%
Kyrgyzstan	6.50%
Laos	1.90%
Latvia	5.90%
Lebanon	6.40%
Lesotho	10.60%
Liberia	10%

Country	Health expenditure (% of GDP)
Libya	5%
Lithuania	6.60%
Luxembourg	6.60%
Macedonia	6.50%
Madagascar	3%
Malawi	11.40%
Malaysia	4.20%
Maldives	13.70%
Mali	6.90%
Malta	9.70%
Marshall Islands	17.10%
Mauritania	3.80%
Mauritius	4.80%
Mexico	6.30%
Micronesia, Federated States of	13.70%
Moldova	10.30%
Monaco	4.30%
Mongolia	4.70%
Montenegro	6.40%
Morocco	5.90%
Mozambique	7%
Namibia	8.90%
Nauru	3.30%
Nepal	5.80%

Country	Health expenditure (% of GDP)
Netherlands	10.90%
New Zealand	11%
Nicaragua	9%
Nigeria	3.70%
Niger	5.80%
Niue	7.40%
Norway	9.70%
Oman	3.60%
Pakistan	2.60%
Palau	9%
Panama	8%
Papua New Guinea	4.30%
Paraguay	9.80%
Peru	5.50%
Philippines	4.70%
Poland	6.40%
Portugal	9.50%
Qatar	2.20%
Romania	5.60%
Russia	7.10%
Rwanda	7.50%
Saint Kitts and Nevis	5.10%
Saint Lucia	6.70%
Saint Vincent and the Grenadines	8.60%

Country	Health expenditure (% of GDP)
Samoa	7.20%
San Marino	6.10%
Sao Tome and Principe	8.40%
Saudi Arabia	4.70%
Senegal	4.70%
Serbia	10.40%
Seychelles	3.40%
Sierra Leone	11.10%
Singapore	4.90%
Slovakia	8.10%
Slovenia	9.20%
Solomon Islands	5.10%
South Africa	8.80%
South Sudan	2.70%
Spain	9%
Sri Lanka	3.50%
Sudan	8.40%
Suriname	5.70%
Swaziland	9.30%
Sweden	11.90%
Switzerland	11.70%
Syria	3.30%
Tajikistan	6.90%
Tanzania	5.60%

Country	Health expenditure (% of GDP)
Thailand	6.50%
Timor-Leste	1.50%
Togo	5.20%
Tonga	5.20%
Trinidad and Tobago	5.90%
Tunisia	7%
Turkey	5.40%
Turkmenistan	2.10%
Tuvalu	16.50%
Uganda	7.20%
Ukraine	7.10%
United Arab Emirates	3.60%
United Kingdom	9.10%
United States	17.10%
Uruguay	8.60%
Uzbekistan	5.80%
Vanuatu	5%
Venezuela	5.30%
Vietnam	7.10%
Yemen	5.60%
Zambia	5%
Zimbabwe	6.40%

Table 6. Physicians Density (World Bank, 2016)

Country	Physician density
Afghanistan	0.27
Albania	1.15
Algeria	1.21
Andorra	4
Angola	0.17
Argentina	3.86
Armenia	2.7
Australia	3.27
Austria	4.83
Azerbaijan	3.4
Bahamas, The	2.82
Bahrain	0.92
Bangladesh	0.36
Barbados	1.81
Belarus	3.93
Belgium	3.78
Belize	0.83
Benin	0.06
Bhutan	0.26
Bolivia	0.47
Bosnia and Herzegovina	1.93
Botswana	0.4
Brazil	1.89
Brunei	1.44

Country	Physician density
Bulgaria	3.87
Burkina Faso	0.05
Burma	0.61
Cabo Verde	0.31
Cambodia	0.17
Cameroon	0.08
Canada	2.07
Central African Republic	0.05
Chad	0.04
Chile	1.02
China	1.49
Colombia	1.47
Congo, Republic of the	0.1
Cook Islands	1.33
Costa Rica	1.11
Cote d'Ivoire	0.14
Croatia	2.84
Cuba	6.72
Cyprus	2.33
Czechia	3.71
Denmark	3.49
Djibouti	0.23
Dominican Republic	1.49
Ecuador	1.72

Country	Physician density
Egypt	2.83
El Salvador	1.6
Estonia	3.24
Ethiopia	0.03
Fiji	0.43
Finland	2.91
France	3.19
Gambia, The	0.11
Gaza Strip	2.1
Georgia	4.27
Germany	3.89
Ghana	0.1
Greenland	1.67
Grenada	0.66
Guatemala	0.93
Guinea-Bissau	0.1
Guinea	0.1
Guyana	0.21
Honduras	0.37
Hungary	3.1
Iceland	3.48
India	0.7
Indonesia	0.2
Iran	0.89

Country	Physician density
Iraq	0.61
Ireland	2.67
Israel	3.34
Italy	3.76
Jamaica	0.41
Japan	2.3
Jordan	2.56
Kazakhstan	3.62
Kenya	0.2
Kiribati	0.38
Korea, South	2.14
Kuwait	1.79
Kyrgyzstan	1.97
Laos	0.18
Latvia	3.58
Lebanon	3.2
Liberia	0.01
Libya	1.9
Lithuania	4.12
Luxembourg	2.9
Macedonia	2.62
Madagascar	0.16
Malawi	0.02
Malaysia	1.2

Country	Physician density
Maldives	1.42
Mali	0.08
Malta	3.49
Marshall Islands	0.44
Mauritania	0.13
Mauritius	1.62
Mexico	2.1
Micronesia, Federated States of	0.18
Moldova	2.98
Monaco	7.17
Mongolia	2.84
Montenegro	2.11
Morocco	0.62
Mozambique	0.04
Namibia	0.37
Nauru	0.71
New Zealand	2.74
Nicaragua	0.9
Nigeria	0.41
Niger	0.02
Niue	3
Norway	4.28
Oman	2.43
Pakistan	0.83

Country	Physician density
Palau	1.38
Panama	1.65
Papua New Guinea	0.06
Paraguay	1.23
Peru	1.13
Poland	2.22
Portugal	4.1
Qatar	7.74
Romania	2.45
Russia	4.31
Rwanda	0.06
Saint Lucia	0.11
Samoa	0.45
San Marino	5.1
Saudi Arabia	2.49
Senegal	0.06
Serbia	2.11
Seychelles	1.07
Sierra Leone	0.02
Singapore	1.95
Slovakia	3.32
Slovenia	2.54
Solomon Islands	0.22
Somalia	0.04

Country	Physician density
South Africa	0.78
Spain	4.95
Sri Lanka	0.68
Sudan	0.28
Swaziland	0.17
Sweden	3.93
Switzerland	4.05
Syria	1.46
Tajikistan	1.92
Tanzania	0.03
Thailand	0.39
Timor-Leste	0.07
Togo	0.05
Tonga	0.56
Trinidad and Tobago	1.18
Tunisia	1.22
Turkey	1.71
Tuvalu	1.09
Uganda	0.12
Ukraine	3.54
United Arab Emirates	2.53
United Kingdom	2.81
United States	2.45
Uruguay	3.74

Country	Physician density
Uzbekistan	2.53
Vanuatu	0.12
Vietnam	1.19
West Bank	1.3
Yemen	0.2
Zambia	0.17
Zimbabwe	0.08

Table 7. Percent Population Below the Poverty Line (Central Intelligence Agency, 2016g)

Country	Population Below Poverty Line
Afghanistan	35.80%
Albania	14.30%
Algeria	23%
American Samoa	NA%
Andorra	NA%
Angola	40.50%
Anguilla	23%
Antigua and Barbuda	NA%
Argentina	30%
Armenia	32%
Aruba	NA%
Australia	NA%

Country	Population Below Poverty Line
Austria	4%
Azerbaijan	6%
Bahamas, The	9.30%
Bahrain	NA%
Bangladesh	31.50%
Barbados	NA%
Belarus	6.30%
Belgium	15.10%
Belize	41%
Benin	37.40%
Bermuda	11%
Bhutan	12%
Bolivia	45%
Bosnia and Herzegovina	17.20%
Botswana	30.30%
Brazil	21.40%
British Virgin Islands	NA%
Brunei	NA%
Bulgaria	21.80%
Burkina Faso	46.70%
Burma	32.70%

Country	Population Below Poverty Line
Burundi	68%
Cabo Verde	30%
Cambodia	17.70%
Cameroon	48%
Canada	9.40%
Cayman Islands	NA%
Central African Republic	NA%
Chad	46.70%
Chile	14.4% (2013)
China	6.10%
Colombia	27.80%
Comoros	44.80%
Congo, Democratic Republic of the	63%
Congo, Republic of the	46.50%
Cook Islands	NA%
Costa Rica	24.80%
Cote d'Ivoire	42%
Croatia	19.50%
Cuba	NA%
Cyprus	NA%
Czechia	8.60%

Country	Population Below Poverty Line
Denmark	13.40%
Djibouti	23%
Dominica	29%
Dominican Republic	41.10%
Ecuador	25.60%
Egypt	25.20%
El Salvador	36.50%
Equatorial Guinea	NA%
Eritrea	50%
Estonia	21.60%
Ethiopia	29.60%
European Union	9.80%
Falkland Islands (Islas Malvinas)	NA%
Faroe Islands	NA%
Fiji	31%
Finland	NA%
France	8.10%
French Polynesia	19.70%
Gabon	NA%
Gambia, The	48.40%
Gaza Strip	30%

Country	Population Below Poverty Line
Georgia	9.20%
Germany	15.50%
Ghana	24.20%
Gibraltar	NA%
Greece	36%
Greenland	9.20%
Grenada	38%
Guam	23%
Guatemala	59.30%
Guernsey	NA%
Guinea-Bissau	67%
Guinea	47%
Guyana	35%
Haiti	58.50%
Holy See (Vatican City)	NA%
Honduras	60%
Hong Kong	19.60%
Hungary	14.90%
Iceland	NA%
note: 332,100 families	
India	29.80%

Country	Population Below Poverty Line
Indonesia	11.30%
Iran	18.70%
Iraq	25%
Ireland	8.20%
Isle of Man	NA%
Israel	22%
Italy	29.90%
Jamaica	16.50%
Japan	16.10%
Jersey	NA%
Jordan	14.20%
Kazakhstan	5.30%
Kenya	43.40%
Kiribati	NA%
Korea, North	NA%
Korea, South	14.60%
Kosovo	30%
Kuwait	NA%
Kyrgyzstan	33.70%
Laos	22%
Latvia	NA%

Country	Population Below Poverty Line
Lebanon	28.60%
Lesotho	57.10%
Liberia	63.80%
Libya	NA%
Liechtenstein	NA%
Lithuania	4%
Luxembourg	NA%
Macau	NA%
Macedonia	30.40%
Madagascar	75.30%
Malawi	52.40%
Malaysia	3.80%
Maldives	16%
Mali	36.10%
Malta	15.90%
Marshall Islands	NA%
Mauritania	40%
Mauritius	8%
Mexico	52.30%
Micronesia, Federated States of	26.70%
Moldova	20.80%

Country	Population Below Poverty Line
Monaco	NA%
Mongolia	21.60%
Montenegro	8.60%
Montserrat	NA%
Morocco	15%
Mozambique	52%
Namibia	28.70%
Nauru	NA%
Nepal	25.20%
Netherlands	9.10%
New Caledonia	NA%
New Zealand	NA%
Nicaragua	29.60%
Nigeria	70%
Niger	63%
Niue	NA%
Northern Mariana Islands	NA%
Norway	NA%
Oman	NA%
Pakistan	22.30%
Palau	NA%

Country	Population Below Poverty Line
Panama	26%
Papua New Guinea	37%
Paraguay	34.70%
Peru	25.80%
Philippines	25.20%
Poland	17.30%
Portugal	18.70%
Puerto Rico	NA%
Qatar	NA%
Romania	22.40%
Russia	11.20%
Rwanda	39.10%
Saint Helena, Ascension, and Tristan da Cunha	NA%
Saint Kitts and Nevis	NA%
Saint Lucia	NA%
Saint Pierre and Miquelon	NA%
Saint Vincent and the Grenadines	NA%
Samoa	NA%
San Marino	NA%
Sao Tome and Principe	66.20%
Saudi Arabia	NA%

Country	Population Below Poverty Line
Senegal	46.70%
Serbia	9.20%
Seychelles	NA%
Sierra Leone	70.20%
Singapore	NA%
Slovakia	12.60%
Slovenia	13.50%
Solomon Islands	NA%
Somalia	NA%
South Africa	35.90%
South Sudan	50.60%
Spain	21.10%
Sri Lanka	8.90%
Sudan	46.50%
Suriname	70%
Swaziland	69%
Sweden	14%
Switzerland	7.60%
Syria	82.50%
Taiwan	1.50%
Tajikistan	35.60%

Country	Population Below Poverty Line
Tanzania	67.90%
Thailand	12.60%
Timor-Leste	37%
Togo	32%
Tokelau	NA%
Tonga	24%
Trinidad and Tobago	17%
Tunisia	15.50%
Turkey	16.90%
Turkmenistan	0.20%
Turks and Caicos Islands	NA%
Tuvalu	26.30%
Uganda	19.70%
Ukraine	24.10%
United Arab Emirates	19.50%
United Kingdom	15%
United States	15.10%
Uruguay	18.60%
Uzbekistan	17%
Vanuatu	NA%
Venezuela	32.10%

Country	Population Below Poverty Line
Vietnam	11.30%
Virgin Islands	28.90%
Wallis and Futuna	NA%
West Bank	18%
Western Sahara	NA%
Yemen	54%
Zambia	60.50%
Zimbabwe	72.30%

Table 8. School Life Expectancy (Central Intelligence Agency, 2016h)

Country	School life expectancy (primary to tertiary, in years)
Afghanistan	11
Albania	16
Algeria	14
Angola	10
Antigua and Barbuda	14
Argentina	17
Armenia	12
Aruba	14
Australia	20
Austria	16
Azerbaijan	13

Country	School life expectancy (primary to tertiary, in years)
Bangladesh	10
Barbados	15
Belarus	16
Belgium	20
Belize	13
Benin	12
Bermuda	12
Bhutan	13
Bolivia	14
Bosnia and Herzegovina	14
Botswana	13
Brazil	15
British Virgin Islands	14
Brunei	15
Bulgaria	15
Burkina Faso	8
Burma	8
Burundi	11
Cabo Verde	13
Cambodia	11
Cameroon	10
Central African Republic	7
Chad	7

Country	School life expectancy (primary to tertiary, in years)
Chile	16
China	14
Colombia	14
Comoros	11
Congo, Democratic Republic of the	9
Congo, Republic of the	11
Cook Islands	15
Costa Rica	15
Cote d'Ivoire	9
Croatia	15
Cuba	14
Curacao	18
Cyprus	14
Czechia	17
Denmark	19
Djibouti	6
Dominican Republic	13
Ecuador	14
Egypt	13
El Salvador	13
Eritrea	5
Estonia	17
Ethiopia	8

Country	School life expectancy (primary to tertiary, in years)
Finland	19
France	16
Gambia, The	9
Gaza Strip	13
Georgia	15
Germany	17
Ghana	11
Greece	17
Grenada	16
Guatemala	11
Guinea-Bissau	9
Guinea	9
Guyana	10
Honduras	11
Hong Kong	16
Hungary	16
Iceland	19
India	12
Indonesia	13
Iran	15
Ireland	19
Israel	16
Italy	16

Country	School life expectancy (primary to tertiary, in years)
Japan	15
Jordan	13
Kazakhstan	15
Kenya	11
Kiribati	12
Korea, North	12
Korea, South	17
Kuwait	13
Kyrgyzstan	13
Laos	11
Latvia	16
Lebanon	12
Lesotho	11
Liechtenstein	15
Lithuania	17
Luxembourg	14
Macedonia	13
Madagascar	10
Malawi	11
Malaysia	14
Mali	8
Malta	15
Mauritania	8

Country	School life expectancy (primary to tertiary, in years)
Mauritius	15
Mexico	13
Moldova	12
Mongolia	15
Montenegro	15
Montserrat	15
Morocco	12
Mozambique	9
Namibia	11
Nauru	9
Nepal	12
Netherlands	18
New Zealand	19
Niger	5
Norway	18
Oman	14
Pakistan	8
Palau	17
Panama	13
Paraguay	12
Peru	13
Philippines	13
Poland	16

Country	School life expectancy (primary to tertiary, in years)
Portugal	17
Puerto Rico	15
Qatar	13
Romania	15
Russia	15
Rwanda	11
Saint Kitts and Nevis	14
Saint Lucia	13
San Marino	15
Sao Tome and Principe	13
Saudi Arabia	16
Senegal	8
Serbia	14
Seychelles	14
Slovakia	15
Slovenia	17
Solomon Islands	9
South Africa	13
Spain	18
Sri Lanka	14
Sudan	7
Swaziland	11
Sweden	18

Country	School life expectancy (primary to tertiary, in years)
Switzerland	16
Syria	9
Tajikistan	11
Tanzania	8
Thailand	14
Timor-Leste	13
Togo	12
Tunisia	15
Turkey	16
Turkmenistan	11
Uganda	10
Ukraine	15
United Kingdom	18
United States	17
Uruguay	16
Uzbekistan	12
Venezuela	14
West Bank	13
World	12
Yemen	9
Zimbabwe	10

Table 9. Literacy Rates (Central Intelligence Agency, 2016e)

Country	Percent Literacy Rates
Afghanistan	38.2
Albania	97.6
Algeria	80.2
Angola	71.1
Antigua and Barbuda	99
Argentina	98.1
Armenia	99.7
Aruba	97.5
Azerbaijan	99.8
Bahrain	95.7
Bangladesh	61.5
Belarus	99.7
Benin	38.4
Bhutan	64.9
Bolivia	95.7
Bosnia and Herzegovina	98.5
Botswana	88.5
Brazil	92.6
Brunei	96
Bulgaria	98.4

Country	Percent Literacy Rates
Burkina Faso	36
Burundi	85.6
Cambodia	77.2
Cameroon	75
Cape Verde	87.6
Cayman Islands	98.9
Central African Republic	36.8
Chad	40.2
Chile	97.5
China	96.4
Colombia	94.7
Comoros	77.8
Congo (Democratic Republic)	63.8
Congo (Republic)	79.3
Costa Rica	97.8
Côte d'Ivoire (Ivory Coast)	43.1
Croatia	99.3
Cuba	99.8
Cyprus	99.1
Czech Republic	99

Country	Percent Literacy Rates
Dominican Republic	91.8
East Timor	67.5
Ecuador	94.5
Egypt	73.8
El Salvador	88
Equatorial Guinea	95.3
Eritrea	73.8
Estonia	99.8
Ethiopia	49.1
Gabon	83.2
Gambia	55.5
Georgia	99.8
Ghana	76.6
Greece	97.7
Guatemala	81.5
Guinea	30.4
Guinea-Bissau	59.9
Guyana	88.5
Haiti	60.7
Honduras	88.5

Country	Percent Literacy Rates
Hungary	99.1
India	71.2
Indonesia	93.9
Iran	86.8
Iraq	79.7
Israel	97.8
Italy	99.2
Jamaica	88.7
Jordan	95.4
Kazakhstan	99.8
Kenya	78
Korea (North)	100
Kosovo	91.9
Kuwait	96.3
Kyrgyzstan	99.5
Laos	79.9
Latvia	99.9
Lebanon	93.9
Lesotho	79.4
Liberia	47.6

Country	Percent Literacy Rates
Libya	91
Lithuania	99.8
Macau	96.2
Macedonia	97.8
Madagascar	64.7
Malawi	65.8
Malaysia	94.6
Maldives	99.3
Mali	38.7
Malta	94.4
Mauritania	52.1
Mauritius	90.6
Mexico	95.1
Moldova	99.4
Mongolia	98.4
Montenegro	98.7
Morocco	68.5
Mozambique	58.8
Myanmar (Burma)	93.1
Namibia	81.9

Country	Percent Literacy Rates
Nepal	63.9
New Caledonia	96.9
Nicaragua	82.8
Niger	19.1
Nigeria	59.6
Oman	91.1
Pakistan	57.9
Palau	99.5
Palestinian Territories	96.5
Panama	95
Papua New Guinea	64.2
Paraguay	93.9
Peru	94.5
Philippines	96.3
Poland	99.8
Portugal	95.7
Puerto Rico	93.3
Qatar	97.3
Romania	98.8
Russia	99.7

Country	Percent Literacy Rates
Rwanda	70.5
Samoa	99
São Tomé and Príncipe	74.9
Saudi Arabia	94.7
Senegal	57.7
Serbia	98.1
Seychelles	91.8
Sierra Leone	48.1
Singapore	96.8
Slovenia	99.7
Solomon Islands	84.1
South Africa	94.3
South Sudan	27
Spain	98.1
Sri Lanka	92.6
Sudan	75.9
Suriname	95.6
Swaziland	87.5
Syria	86.4
Taiwan	98.5

Country	Percent Literacy Rates
Tajikistan	99.8
Tanzania	70.6
Thailand	96.7
Togo	66.5
Tonga	99.4
Trinidad and Tobago	99
Tunisia	81.8
Turkey	95
Turkmenistan	99.7
Uganda	78.4
Ukraine	99.8
United Arab Emirates	93.8
Uruguay	98.5
Uzbekistan	99.6
Vanuatu	85.2
Venezuela	96.3
Vietnam	94.5
World	86.1
Yemen	70.1
Zambia	63.4

Country	Percent Literacy Rates
Zimbabwe	86.5

Table 10. Prevalence of Disability

Country	Prevalence of Disability (percent)
Afghanistan	
Albania	
Algeria	
Andorra	
Angola	
Antigua and Barbuda	
Argentina	7.1
Armenia	
Australia	4.4
Austria	
Azerbaijan	
Bahamas	4.3
Bahrain	0.8
Bangladesh	
Barbados	4.6
Belarus	
Belgium	

Country	Prevalence of Disability (percent)
Belize	5.9
Benin	2.5
Bhutan	3.4
Bolivia (Plurinational State of)	3.1
Bosnia and Herzegovina	
Botswana	3.5
Brazil	14.9
Brunei Darussalam	
Bulgaria	
Burkina Faso	
Burundi	
Cambodia	1.4
Cameroon	
Canada	18.5
Cape Verde	2.6
Central African Republic	1.5
Chad	
Chile	2.2
China	
Colombia	6.4
Comoros	1.7

Country	Prevalence of Disability (percent)
Congo	1.1
Cook Islands	
Costa Rica	5.4
Côte d'Ivoire	
Croatia	9.7
Cuba	4.2
Cyprus	6.4
Czech Republic	
Democratic People's Republic of Korea	
Democratic Republic of the Congo	
Denmark	
Djibouti	
Dominica	6.1
Dominican Republic	4.2
Ecuador	4.6
Egypt	1.2
El Salvador	1.8
Equatorial Guinea	
Eritrea	
Estonia	7.5
Ethiopia	3.8

Country	Prevalence of Disability (percent)
Fiji	13.9
Finland	
France	
Gabon	
Gambia	
Georgia	
Germany	8.4
Ghana	
Greece	
Grenada	
Guatemala	6.2
Guinea	
Guinea-Bissau	
Guyana	2.2
Haiti	1.5
Honduras	1.8
Hungary	3.1
Iceland	
India	2.1
Indonesia	
Iran (Islamic Republic of)	1.5

Country	Prevalence of Disability (percent)
Iraq	0.9
Ireland	9.3
Israel	
Italy	
Jamaica	6.2
Japan	
Jordan	1.2
Kazakhstan	3.0
Kenya	0.7
Kiribati	
Kuwait	
Kyrgyzstan	
Lao People’s Democratic Republic	8.0
Latvia	
Lebanon	
Lesotho	
Liberia	0.8
Libyan Arab Jamahiriya	1.5
Lithuania	7.5
Luxembourg	
Madagascar	

Country	Prevalence of Disability (percent)
Malawi	2.9
Malaysia	
Maldives	3.4
Mali	2.7
Malta	5.9
Marshall Islands	1.6
Mauritania	1.5
Mauritius	3.5
Mexico	1.8
Micronesia (Federated States of)	
Monaco	
Mongolia	
Montenegro	
Morocco	1.1
Mozambique	1.9
Myanmar	2.0
Namibia	5.0
Nauru	
Nepal	0.5
Netherlands	
New Zealand	

Country	Prevalence of Disability (percent)
Nicaragua	
Niger	1.3
Nigeria	0.5
Niue	
Norway	
Oman	0.5
Pakistan	2.5
Palau	
Panama	1.8
Papua New Guinea	
Paraguay	1.1
Peru	10.9
Philippines	1.2
Poland	14.3
Portugal	6.2
Qatar	0.2
Republic of Korea	4.6
Republic of Moldova	
Romania	
Russian Federation	
Rwanda	

Country	Prevalence of Disability (percent)
Saint Kitts and Nevis	
Saint Lucia	5.1
Saint Vincent and the Grenadines	4.6
Samoa	
San Marino	
Sao Tome and Principe	4.0
Saudi Arabia	
Senegal	1.1
Serbia	
Seychelles	
Sierra Leone	2.4
Singapore	
Slovakia	
Slovenia	
Solomon Islands	
Somalia	
South Africa	5.0
Spain	
Sri Lanka	1.6
Sudan	1.6
Suriname	2.8

Country	Prevalence of Disability (percent)
Swaziland	2.2
Sweden	
Switzerland	
Syrian Arab Republic	1.0
Tajikistan	
Thailand	
The former Yugoslav Republic of Macedonia	
Timor Leste	
Togo	0.6
Tonga	
Trinidad and Tobago	4.2
Tunisia	1.2
Turkey	
Turkmenistan	
Tuvalu	
Uganda	3.5
Ukraine	
United Arab Emirates	
United Kingdom of Great Britain and Northern Ireland	17.6
United Republic of Tanzania	
United States of America	19.3

Country	Prevalence of Disability (percent)
Uruguay	
Uzbekistan	
Vanuatu	
Venezuela (Bolivarian Republic of)	4.2
Viet Nam	
Yemen	1.9
Zambia	2.7
Zimbabwe	

Table 11. Total Paid Leave

Country	Total Paid Leave
Afghanistan	35
Albania	32
Algeria	33
Andorra	36
Angola	33
Antigua and Barbuda	21
Argentina	21
Armenia	32
Australia	30
Austria	38

Country	Total Paid Leave
Azerbaijan	15
The Bahamas	20
Bahrain	37
Bangladesh	21
Barbados	15
Belarus	18
Belgium	30
Belize	27
Benin	33
Bhutan	9
Bolivia	26
Bosnia and Herzegovina	18
Botswana	29
Brazil	30
Brunei Darussalam	18
Bulgaria	20
Burkina Faso	37
Burundi	30
Cape Verde	22
Cambodia	42

Country	Total Paid Leave
Cameroon	15
Canada	16
Central African Republic	20
Chad	23
Chile	30
China	16
Colombia	33
Comoros	25
Democratic Republic of Congo	10
Republic of Congo	22
Costa Rica	19
Croatia	33
Cuba	33
Cyprus	34
Czech Republic	33
Denmark	25
Djibouti	35
Dominica	22
Dominican Republic	33
Ecuador	11

Country	Total Paid Leave
Egypt	31
El Salvador	24
Equatorial Guinea	22
Eritrea	12
Estonia	31
Ethiopia	25
European Union	20
Fiji	22
Finland	36
France	36
Gabon	34
Gambia	21
Georgia	24
Germany	29
Ghana	28
Greece	24
Grenada	23
Guatemala	25
Guinea	33
Guinea Bissau	22

Country	Total Paid Leave
Guyana	12
Haiti	27
Honduras	19
Hong Kong	19
Hungary	33
Iceland	36
India	27
Indonesia	12
Iran	22
Iraq	20
Ireland	29
Israel	20
Italy	32
Ivory Coast	34
Jamaica	10
Japan	10
Jersey	19
Jordan	14
Kazakhstan	18
Kenya	28

Country	Total Paid Leave
Kiribati	0
South Korea	15
Kosovo	20
Kuwait	35
Kyrgyzstan	20
Laos	13
Latvia	20
Lebanon	15
Lesotho	22
Liberia	21
Libya	22
Lithuania	34
Luxembourg	35
Macedonia	20
Madagascar	35
Malawi	18
Malaysia	26
Maldives	22
Mali	22
Malta	38

Country	Total Paid Leave
Marshall Islands	0
Mauritania	22
Mauritius	38
Mexico	12
Micronesia	0
Moldova	20
Mongolia	15
Montenegro	21
Morocco	25
Mozambique	19
Myanmar	22
Namibia	20
Nauru	0
Nepal	28
Netherlands	20
New Zealand	31
Nicaragua	20
Niger	34
Nigeria	5
Norway	27

Country	Total Paid Leave
Oman	31
Pakistan	10
Palau	0
Panama	32
Papua New Guinea	19
Paraguay	22
Peru	34
Philippines	26
Poland	33
Portugal	35
Puerto Rico	15
Qatar	25
Romania	33
Russia	32
Rwanda	26
Samoa	21
Saint Kitts and Nevis	12
Saint Lucia	27
Saint Vincent and the Grenadines	16
San Marino	10

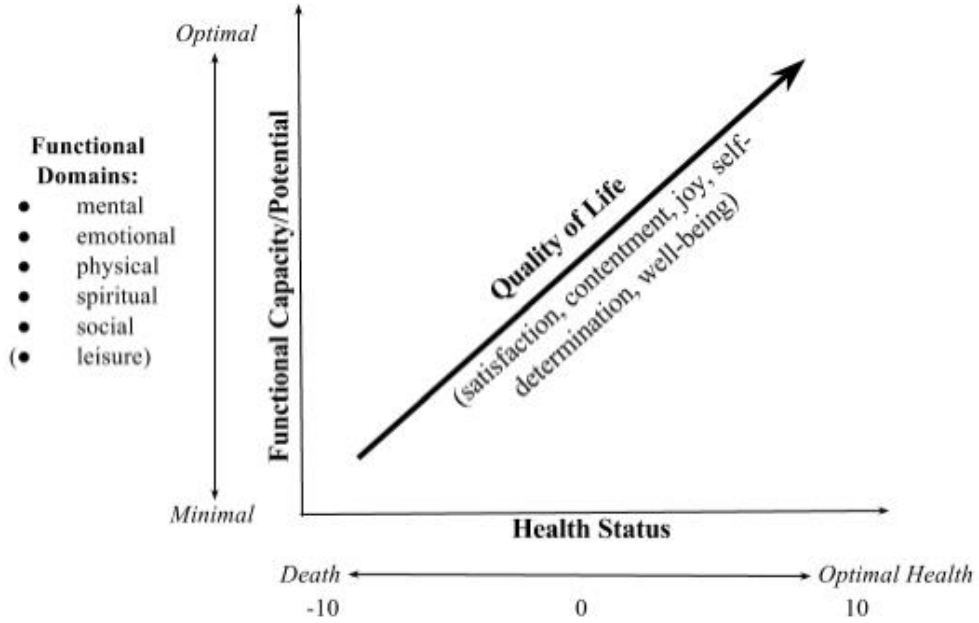
Country	Total Paid Leave
Sao Tome and Principe	34
Saudi Arabia	30
Senegal	32
Serbia	31
Seychelles	15
Sierra Leone	18
Singapore	18
Slovakia	35
Slovenia	20
Solomon Islands	15
Somalia	22
South Africa	27
South Sudan	32
Spain	36
Sri Lanka	0
Sudan	20
Suriname	12
Swaziland	10
Sweden	34
Switzerland	27

Country	Total Paid Leave
Syria	37
Taiwan	19
Tanzania	37
Thailand	18
East Timor	12
Togo	22
Tonga	0
Trinidad and Tobago	24
Tunisia	16
Turkey	26.5
Uganda	28
Ukraine	29
United Arab Emirates	32
United Kingdom	28
United States	0
Uruguay	25
Uzbekistan	15
Vanuatu	15
Venezuela	15
Vietnam	20

Country	Total Paid Leave
West Bank and Gaza	12
Yemen	37
Zambia	31
Zimbabwe	33

Appendix 2: Figures

Figure 1. Therapeutic Recreation Outcome Model



Therapeutic Recreation Outcome Model