

obtain the perspectives of Filipino PTs about the present state of cancer rehabilitation in the country, particularly: (1) to know if there are existing protocols in cancer care; (2) to identify the role of PTs in rehabilitating patients with cancer and; (3) to determine the preparedness of Filipino PTs in handling these patients.

Methods: A descriptive qualitative study was conducted. Two focus group discussion (FGD) were organized and participated by a total of 13 licensed Filipino Physical Therapists (M:7; F:6) who are currently working in tertiary hospitals in Metro Manila where patients with cancer are referred to physical therapy services. The mean length of clinical experience of the participants is 4 years.

Results: Filipino PTs expressed that cancer rehabilitation in the country is not well established and that there is no current existing protocol being observed in their respective hospitals. This is compounded by the limited number of referrals due to the lack of awareness among oncologists as well as knowledge of general population about what PTs can do for patients with cancer. The participants conveyed that the major role of PTs in cancer rehabilitation is to improve level of function and quality of life. They also expressed that in terms of readiness to handle patients with cancer, there is lack of knowledge in this area which they consider as a specialized area of practice.

Conclusion: Further studies need to be conducted to explore the status of cancer rehabilitation in other areas of the country. Awareness campaign must be done to promote services that PTs can provide specifically for patients with cancer among oncologists and the general population. There is also a need to evaluate the current curriculum used in PT schools to determine the amount of course work devoted in undergraduate or graduate studies about cancer care.

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Rehabilitation goals of the Filipino client from a multi-disciplinary perspective

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Background and purpose: The inception of the World Health Organization's International Classification of Functioning, Health and Disability has greatly influenced how we view health and wellness in the fields of physical and occupational therapy. This paper seeks to understand whether such shift in perspective is already evident in the rehabilitation goals of the Filipino client.

Methods: Fifty-five licensed Filipino physical and occupational therapists were invited to answer an online survey questionnaire that asks them to describe in details the three most common rehabilitation goals of their clients. From these etic accounts, the researchers used WEFT-QDA in organizing the data. WHO's ICF was the main tool used in generating the themes and sub-themes.

Results: There were differences among the various goals encoded and grouped pertaining to the profession of the participants. When further analyzed by using ICF in generating the final themes, it was evident from the data that generally, rehabilitation goals of the Filipino clients were disability specific.

Conclusion: Although the ICF has been around for years and have been introduced to students and professionals, much of its effect is to be felt. Filipino clients still view health outcomes from a physiological basis.

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Effectiveness of using Nintendo Wii in rehabilitation of chronic stroke patients with upper limb hemiparesis

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Background: The runaway success of virtual reality is a novel approach in rehabilitation of chronic stroke patients by improving function through provision of multi-sensory feedback as it becomes part of rehabilitation. The use of Nintendo Wii seems to be evolving into a therapeutic tool as widespread reports claim that it is now being used benefiting patients in rehabilitation centers. However, lack of evidences and standard parameters as to its effectiveness. The objective of the study is to determine the

effectiveness of Nintendo Wii in upper extremity recovery of patients with chronic stroke.

Methods: There were 16 participants in the study ($x = 55.69 \pm 9.88$ yrs; months post-stroke $x = 38.56 \pm 14.51$), 11 males and 5 females were recruited in different rehabilitation centers in Metro Manila using random allocation. Eight out of 16 participants underwent Wii Therapy twice a week for 6 weeks. Fugl Meyer (FMS), Motor Assessment Scale (MAS) and Fast Fourier Transform (FFT) analysis of Wii mote acceleration data were used as an outcome measure.

Results: FMS scores showed significant difference between the control & experimental groups with the latter yielding higher scores particularly in the flexor synergy component of FMS. MAS scores of UE function (pre-tests of both groups = p-value of 0.4295; post-tests of both groups = p-value of 0.1031; $\alpha = 0.05$) of both groups did not reach the significant level, however, the experimental group showed relative improvement as compared to the control group. Preliminary results of FFT analysis showed pronounced magnitude of the dominant frequency and lesser number of residual frequencies in the experimental group compared to control group.

Conclusion: The use of Nintendo Wii as a novel approach provided marked improvement in the UE function of chronic stroke patients demonstrated within a short timeframe (6 weeks). The gain in the motor function is highly attributed to the notion that repetitive used of affected limb along thereby enhancing cortical reorganization. Further studies should be conducted to attain a significant level.

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Acute effects of whole body vibration on leg muscle activity, oxygen consumption and heart rate in individuals with chronic stroke

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Background and purpose: Whole-body vibration (WBV) exercise has been shown to augment muscle activation, increase oxygen consumption (VO_2) and heart rate (HR) in young adults. Whether WBV can increase leg muscle activity, VO_2 and HR in individuals with chronic stroke is unknown. The objective of this study was to determine the influence of WBV intensity on the magnitude of the vastus lateralis (VL) and gastrocnemius (GS) muscle activity, VO_2 and HR during the performance of different leg exercises among individuals with chronic stroke.

Methods: 45 subjects with chronic stroke were tested. Each subject was exposed to three WBV conditions while performing a variety of static/dynamic exercises (e.g., semi squat, deep squat, etc.): (1) no WBV, (2) low WBV intensity [frequency: 20 Hz, amplitude: 0.6mm, peak acceleration: 0.96 gravitational constant (G)], and (3) high WBV intensity (frequency: 30Hz, amplitude: 0.44mm, peak acceleration: 1.61 G). The level of the VL and GS muscle activity on both sides was recorded with surface electromyography (EMG), and expressed as percentage maximal voluntary contraction (% MVC). VO_2 and heart rate were measured with the FitMate™ metabolic system. Two-way repeated measures ANOVA [within-subject factors: (1) WBV intensity (No WBV, Low WBV Intensity, and High WBV Intensity), and (2) body posture/movements] was used to compare the SEMG data, VO_2 and HR across the different conditions. When sphericity assumption was violated, the Greenhouse-Geisser epsilon adjustment was used. Contrast analysis using Bonferroni paired t-test was performed for any overall significant results obtained for EMG, VO_2 and HR.

Results: During the performance of different exercises, exposure to WBV (low WBV intensity and high WBV intensity) had significantly increased EMG activity (large effect size, partial eta-squared = 0.135-0.643, $p < 0.001$) in VL and GS bilaterally, VO_2 (large effect size, partial eta-squared = 0.695, $p < 0.001$) and HR (large effect size, partial eta-squared = 0.409, $p < 0.001$) compared with no WBV. The high intensity protocol did not induce significantly higher EMG amplitude than the low intensity protocol, except in GS on the paretic side. In general, the increases in VO_2 and HR induced by the low intensity protocol were of a similar magnitude to those induced by the high intensity WBV protocol.

Conclusion: This study suggested that leg muscle activity and oxygen consumption were increased significantly by adding low- or high-intensity WBV in all exercises studied. The low- and high-intensity WBV protocols induced similar effects, except in paretic GS. WBV therapy may thus be

a useful method for strengthening lower limb muscles and enhancing aerobic capacity in individuals with chronic stroke but will require further study.

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Study of static yoga, repetitive yoga versus exercise intervention in management of mechanical low BACK pain – A comparative study

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Background and purpose: Mechanical low back pain is a common problem in all age population, precipitating with work related stressors, heavy physical demands, sedentary lifestyle. Yoga is a form exercises used from the ancient days in reducing disabilities caused due to various musculoskeletal problems. In the recent past there has been several modification in the technique of yoga. The objective of this study was to compare the effects of static yoga as mentioned in ancient texts against repetitive yoga and exercise in reducing the disability of mechanical low back pain subjects.

Methods: Total of 150 subjects diagnosed with mechanical low back pain was randomized in to three arms. The static yoga arm (N = 43), repetitive yoga arm (N = 44), and exercise arm (N = 43). The total duration of the study was 8 weeks. Rolland Morris Disability Questionnaire was used to assess the Disability at the beginning of the study and 4th & 8th week.

Results: Static yoga group showed a significant reduction in disability by 56% (p=0.000) when compared to repetitive yoga 42% and exercise 43%.

Conclusion: Static yoga was effective in reducing disability of mechanical low back pain subjects than repetitive yoga and exercise comparitively.

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Chinese manipulation for mechanical neck pain: A systematic review

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Background and purpose: There is no systematic review to synthesize the current evidence of the effects of Chinese manipulation on mechanical neck pain. This study intended to assess if Chinese manipulation improves pain, function/disability and global perceived effect in adults with acute/subacute/chronic neck pain.

Method: This is a systematic review. The following databases were searched from their beginning to 20th July 2011: CAJ Full-text Database (Chinese), Wanfang Database (Chinese), Cochrane Database (English) and Medline (English). Keywords included 'manual therapy/bone setting/Chinese manipulation', 'neck/cervical pain', 'cervical vertebrae', 'cervical spondylosis/radiculopathy' and 'randomized controlled trial/review'. Two independent reviewers selected studies, extracted data, and assessed risk of bias for each included study by using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach. Randomized controlled trials (RCT) or quasi-RCT on the effects of Chinese manipulation in treating adult patients with neck pain were selected. Mean differences (MD) with 95% confidence intervals (CI) were calculated.

Results: Four studies (610 participants) were included in this review. There was very low quality evidence suggesting that, compared to cervical traction in sitting, Chinese manipulation produced more immediate post-intervention pain relief (mean difference: -1.06; 95% CI: -1.37 ~ -0.75; p<0.00) and improvement of global signs and symptoms (mean difference: -3.81; 95% CI: -4.71 ~ -2.91; p<0.00). Very low quality evidence showed that Chinese manipulation alone was superior to Chinese traditional massage in immediate post-intervention pain relief (mean difference: -2.02; 95% CI: -2.78 ~ -1.26; p<0.00).

Conclusion: There was limited evidence showing Chinese manipulation could produce short-term improvement for neck pain.

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Cha-cha-cha as a dance-based therapy for balance among geriatrics in Co Su Gian center for the elderly in Nha Buhangin, Davao city

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Background: "Cha-cha-cha", a category of ballroom dancing, is one of the most preferred forms of exercise among the elderly. Being recommended as dance treatment for weight shifting activities, it requires foot works, hand gestures, postural control, flexibility and coordination. This study explored the beneficial effects of dancing Cha-cha-cha specifically in improving balance among the elderly, thereby decreasing tendency to falls and improve the ability to perform different functional activities.

Methods: This is an experimental single group pre-test-post-test design. Purposive sampling was used to recruit participants. Well-elderly participants aged 60-75 years old, particularly those functioning near normal, performed the dance therapy Cha-cha-cha for 30 minutes without breaks excluding warm up and cool down periods for 10 minutes, 5 times a week for 3 weeks. Compliance was determined through close monitoring of participants. Balance assessment was done using the Berg Balance Scale and only the differences between baseline and post-intervention were determined using paired sample T-test.

Results: There were fifteen (15) participants, 53% female and 47% male. The mean balance score at baseline was 43.47±1.68 while post-intervention was 50.60±1.42. The increase in balance scores was found to be statistically significant (p-value=0.000).

Conclusion: The dance therapy Cha-cha-cha may improve balance and decrease the tendency of falls among elderly. Though there is a need to do further studies to compare Cha-cha-cha with other exercise interventions for improving balance, this activity may be used by physical therapists to provide a potentially more enjoyable experience for the elderly and time saving intervention to patients with balance problems.

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Factors associated with the level of physical activity of university students

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Background: Regular physical activity causes lasting health benefits and reduces the risk for certain diseases. As physical activity is critical during the pre-adulthood period in ensuring a healthy lifestyle, this study aimed to identify the factors associated with the level of physical activity among undergraduate students. Information from this study could enrich a relatively underexplored practice area of physical therapy in the Philippines, that is, health promotion in youth.

Methods: This study is a secondary analysis of data from a previous cross-sectional survey of 489 undergraduate students enrolled in the different colleges of the University of the Philippines Manila. Descriptive statistical analysis was performed to determine the respondent characteristics and multiple logistic regression analysis was used to determine the effect of age, gender, year level, college, enrollment in physical education course, and membership in sports-related organization on physical activity level.

Results: Respondents spent a mean time of 111.50 minutes per day on physical activities and 535.72 minutes per day being sedentary. Of the factors considered, only membership in sports-related organization correlated significantly with level of physical activity (OR = 3.47; 95% CI = 1.31 – 9.20) while no factor showed an association with sedentary behavior.

Conclusion: University students are physically active but spend most of their day sedentary. This exposes them to health risks. Involvement in a sports-related organization is the only factor associated with physical activity level, indicating the value of promoting participation in at least one sports-related organization. Further studies are necessary to investigate other personal, socio-cultural and environmental predictors of physical activity.

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Quantifying exercise intensity of Nintendo® WiiTM sports: Boxing and tennis in healthy sedentary individuals aged 18 – 25

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