



5<sup>th</sup> International Conference and Expo on

# ***Novel Physiotherapies***

March 19-20, 2018 | Berlin, Germany

## Scientific Tracks & Abstracts Day 1

Novel Physiotherapies 2018

# Sessions:

Day 1 March 19, 2018

**Physical Therapy | Advancements in Physiotherapeutic Treatments | Neurological Rehabilitation | Sports & Physiotherapy | Women's Health & Palliative**

**Session Chair**

**Vladimir Dodtievich Bitsoyev**

Academy of Medical and Technical Sciences, Russia

**Session Co-Chair**

**Ghazal Kamran**

Al Ain Hospital, UAE

## Session Introduction

**Title: Effectiveness of home-based cardiac rehabilitation program**

**Mohammad Takroni**, King Faisal Specialty Hospital and Research Center, KSA

**Title: Assessment of the Q-angle in basketball players**

**Rumiana Tasheva**, National Sports Academy, Bulgaria

**Title: Effectiveness of supervised exercise based cardiac rehabilitation versus unsupervised exercise training following coronary artery bypass graft surgery**

**Natarajan Venkatesh**, Sri Ramachandra University, India

**Title: Clinical outcomes of self-administrated, well-structured home-based rehabilitation after ACL reconstruction**

**Shahzada Junaid Amin**, University of Hail, Saudi Arabia

**Title: Physical benefits of prayers; strengthen your faith and fitness**

**Ghazal Kamran**, Al Ain Hospital, UAE

**Title: Ageing with spinal cord injuries and preventing complications**

**Tarik Zetica**, RehaFit MHMC Kuwait

**Title: Biomechanical analysis of sit-to-walk movement in parkinson's patients**

**Moataz M. El Semary**, Cairo University, Egypt

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## Effectiveness of home-based cardiac rehabilitation programme using an individualised exercise (physiotools-r)

**Mohammed Takroni**

Cardiopulmonary Rehab Specialist, King Faisal Speciality Hospital and research Centre.

**Background:** The Kingdom of Saudi Arabia (KSA) is facing a significant increase in the mortality rate from cardiovascular diseases (CVDs) and the prevalence rate of coronary heart disease (CHD) which is the commonest cause of death from CVDS in KSA. These epidemiological rates in the KSA are predicted to increase due to increased exposure to CVD risk factors. The National Institute for Clinical Excellence (NICE) and the American association of cardiovascular and pulmonary rehabilitation (AACVPR) reported that participation in Phase III cardiac rehabilitation (CR) programmes is associated with a reduction in both morbidity and mortality rate of CHD for patients following Percutaneous Coronary intervention (PCI) or coronary artery bypass surgery (CABG). Currently there is no phase III provision of CR for CHD patients in KSA.

**Aim:** To evaluate the effectiveness of home-based cardiac rehabilitation (Home CR) programme using an individualized exercise (Physiotools-R) compared to phase III Hospital-based cardiac rehabilitation (Hospital CR) programme and standard care of Home instructions on exercise capacity, psychological, physiological, body composition and quality of life of CHD patients post CABG surgery.

**Methods:** Seventy-three eligible participants were recruited from the King Faisal Heart Institute (KFHI), Riyadh, Saudi Arabia. All participants had previously been diagnosed with CHD and were 6-8 weeks post CABG surgery. Participants were randomly assigned to one of three groups; Hospital CR group (n=25), Home CR group (n=24) and control group (n=24). Participants in each group were measured at three stages: at baseline (stage one), post 8 weeks of cardiac rehabilitation intervention (stage two), and then repeated again after 4 weeks of observation follow up (stage three). The incremental shuttle walk test (ISWT), Metabolic equivalent tasks (METs), hospital anxiety and depression scale (HADS-A and HADS-D), the SF-36 questionnaire in addition to body composition; body mass index (BMI) and waist hip ratio (WHR) were selected as the outcome measures

**Intervention:** Hospital CR programmes of group based aerobic circuit training and a similar structured individualised exercise programme using Physiotools-R were selected for both intervention groups for a total of 8 weeks 3 time/week, 2 hours per session in addition to 4 weeks observation follow up. The control group followed standard care which comprised of Home instruction about self-walking and post operation precautions.

**Results:** The results showed that the ISWT distance clinically improved post 8 weeks of CR intervention in both intervention groups compared to baseline. Hospital group increased by 71m, Home group by 66m  $p < 0.001$ , but the control group statistically improved by 3m  $p < 0.001$ . However, post 4 weeks of observation follow up the ISWT distance of the hospital group decreased by 26m, but continued to improve in the home group by 22m  $p < 0.001$ . However, no significant change was reported in the control group 2m,  $P > 0.05$ . Similarly, all outcome measures: METs scores, HADS-A and HADS-D, the physical (PCS) and mental (MCS) components of the SF-36 showed statistically significant improvement post CR intervention  $p < 0.001$ , however, this improvement was significantly decrease post follow up in Hospital group  $p < 0.001$ , however, it continued to improve in home group  $p < 0.001$ . Though, there was no significant change in the control group  $p > 0.05$ .

**Conclusion:** The results of the present study demonstrate that home-based CR is as effective as hospital based CR programme

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post 8 weeks of intervention. However, these results changed post 4 weeks from the intervention. The present study findings are consistent with previous studies results (Moholdt et al 2012; Hung et al., 2012; Manhas et al 2013), undertaken in different continents and cultures to Saudi Arabia. The findings of this study should confirm that home structured exercise has similar effect as hospital Phase III CR in improving functional capacity, physiological, psychological status, body composition and quality of life of CHD participants post CABG procedure. Thus applying home CR programme for patients in remote area will reduce the re-hospitalisation rate and will contribute in improving the quality of life of those patients. In addition it may that it will increase compliance and be more cost effective for both the patient and hospital.

## **Biography**

Muhammad Takroni is an Cardiopulmonary Rehab Specialist and Inpatient supervisor, Physiotherapy Dept of King Faisal specialty hospital and research center. His main interest are new innovation in the field of physiotherapy and rehabilitation.

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## Assessment of the Q-angle in basketball players

Tasheva Rumiana and Mitrev Georgi

National Sports Academy "Vassil Levsky"- Sofia, Bulgaria Physical Therapy Department

**Introduction:** The Q-angle is presented as an etiological factor for valgus stress in knee. Increasing the Q-angle leads to excessive lateral pulling of the patella and patellofemoral dysfunctions [1, 2, 3, 4]. Different starting positions for Q-angle measurement are tracked by Smith [5].

**The purpose** of this study was to measure the Q-angle in basketball players and to track the changes in its values after physiotherapy. **Participants and Methods:** During the period 2013 - 2016 were tested 65 healthy active basketball players from Basketball Club "Rilski sportist" – Samokov and National Bulgarian Basketball Team. The athletes were divided into 3 groups: 22 players in the first Control Group (CG) with average 20, 9 years; Working group 1 (1WG) with average 21, 7 years; 21 players in Working Group 2 (WG2) with average 15, 6 years. Q - angle was measured from a supine and standing positions. Physiotherapy with prevention targeting was applied at WG1 and WG2. **Results:** According to the comparative analysis the negative differences of the right leg in supine and of the left lower limb in standing (-0,3; -0,2) were statistically significant at the t-criterion over the critical ( $t = 2,32$  ;  $t = 2.16$ ) and a guarantee probability  $P(t) > 95\%$ . For the 1WG, the difference  $d=0,4^\circ$  ( $t=2,61$ ,  $P(t) = 98\%$ ) for the left lower limb in supine and the difference  $d=0,9^\circ$  ( $t= 3,36$ ,  $P(t) = 99\%$ ) in standing were statistically significant. Similar results were seen in adolescents' basketball players. **Conclusions:** The results of the 1WG and 2WG at the final measurement are at the  $12^\circ$  limit for men, which proves that the use of physiotherapy for prevention has a positive effect on reducing and control the Q-angle in healthy basketball players.

**Key words:** basketball, Q-angle, physiotherapy

### Recent publications

1. Biedert R, Warnke K (2001) Correlation between the Q angle and the patella position: a clinical and axial computed tomography evaluation. Archives of Orthopaedic and Trauma Surgery Journal, Springer-Verlag, vol. 121, p. 346–349.
2. Emami M, et al (2007) Q-angle: an invaluable parameter for evaluation of anterior knee pain. Archive of Iranian Medicine, vol. 10, p. 24–26.
3. Palastanga N, Soames R (2012) Anatomy and human movement-sixth edition. Churchill Livingstone, Elsevier, p. 18-19, 225-268.
4. Tasheva R (2005) Kinesitherapeutic behavior after bone-patellar tendon-bone arthroscopic reconstruction of the anterior cruciate ligament in athletes. Dissertation, National Sports Academy, Sofia, p. 7-12.
5. Smith T, Hunt N, Donell S (2008) The reliability and validity of the Q-angle: a systematic review. Knee Surgery Sports Traumatology Arthroscopy, Springer-Verlag vol. 16, p.1068-1079.

### Biography

Rumiana Tasheva is Assoc. Prof. of Physical Therapy at the National Sports Academy (NSA). The Chairperson of the Bulgarian Organization for Sports Physiotherapy, which she founded in 2000. The core group member and a researcher in the European Sports Physiotherapy For All project. PhD thesis with the subject "Physiotherapy after Arthroscopic Reconstruction of the Anterior Cruciate Ligament". Educated in 23 courses with national and international lecturers. Clinical experience in orthopedic, traumatology and neurological diseases since 33 years. During the period 1984-1993 the regional coordinator for treatment and prevention of spinal, chest and foot deformities. Over 40 publications in the field of physiotherapy.

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## Effectiveness of supervised exercise based cardiac rehabilitation versus unsupervised exercise training following coronary artery bypass graft surgery

**N Venkatesh**

SRI RAMACHANDRA UNIVERSITY, INDIA

**Background:** Cardiac Rehabilitation (CR) is a multidisciplinary program that includes patient's education on the importance of exercises and reduction of risk factors by combined measures of medical, surgical, nutritional, exercises, lifestyle modification and psycho-social adaptations. Cardiac rehabilitation includes primary and secondary prevention that includes essential component of graded exercise training with growing demand on individualized training methods to enhance the benefits like reducing morbidity, mortality, risk factors and enable them to have near normal quality of life. In spite of the benefits in supervised training and limitations such as adherence, recent trends of evidence based practice and younger age of surgical candidacy entrusts to explore the benefits of simple and structured supervised exercise training in Indian settings. Hence this study was taken up to prescribe Supervised Exercise Training during Phase II Cardiac Rehabilitation of post Coronary artery bypass graft Surgery (CABG) patients.

**Objectives Of The Study:** To find out the effectiveness of supervised exercise based Cardiac Rehabilitation over unsupervised conventional home program with exercise training on functional capacity, Quality of Life, Physiological determinants of Cardio-Respiratory function, Physical determinants of Cardio-Respiratory function. Also to determine the safety and feasibility of outpatient exercise training program and the adherence to Phase II Cardiac rehabilitation (Exercise training).

**Methodology:** A Randomized Control Study: All the patients who underwent Coronary artery bypass grafting (CABG) (n-114) at the super specialty center were screened for inclusion in this study. Before discharge, all the patients in both the group were given routine care with counseling to continue self-monitored exercise. After meeting the inclusion criteria, candidates were randomized into study group (intervention of 12 weeks supervised exercise based Cardiac Rehabilitation) and Control groups having conventional home based self-monitored exercise training. The subjects in study group attended individualized training sessions, under supervision as per 'AACVPR' (American Association of Cardio Vascular and Pulmonary Rehabilitation), 'AHA' (American Heart Association) and 'ACSM' (American College of Sports Medicine) protocol for 12 weeks. The control group received counseling to continue self-monitored exercise at home as practiced conventionally. The functional capacity was tested by Six Minute Walk Test (SMWT) for patients in both groups in accordance to ATS (American Thoracic Society) protocol at the time of discharge and after 12 weeks follow up. Quality of life, using WHO QOL BREF questioner, Physiological and Physical determinants that influenced on outcome and barriers for participation in the study were noted.

**Conclusions:** Patients, who attended the supervised exercise program study group, had a significant improvement in their functional capacity in comparison to control group having conventional home based self-monitored program. Physical, Physiological parameters, quality of life improved and in Physiological determinants' like Heart rate, Ejection Fraction and Systolic Blood Pressure had influence on the outcome. The barriers to Phase II CR were problems in commutation, family support and psychological.

**Key words:** Cardiac Rehabilitation, Phase II, Supervised Exercise Training, Functional Capacity, Coronary Artery Bypass Grafting.

### Biography

I am Natarajan Venkatesh (N. VENKATESH) working as Professor in Faculty of Physiotherapy, in Sri Ramachandra University, Chennai – 600 116, India. I have been in clinical and teaching Physiotherapy for the past 25 years. I am PhD scholar. I am working on Influence of Yoga on Autonomic Nervous System. Honor of Awards received: Distinguish Service Award by the Indian Association of Physiotherapists on 23.01.05. ----"Best Teacher Award" (Chosen by Vice Chancellor, The Tamil Nadu Dr. MGR Medical University on 05.09.2011) --- Fellowship Award – 51st by The Indian Association of Physiotherapists 2013 (FIAP).

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## Clinical outcomes of self-administrated, well-structured home-based rehabilitation after ACL reconstruction

**Shahzada Junaid Amin**

University of Hail, Saudi Arabia

In order to investigate the clinical outcomes of early, self-administrated, well-structured and extensive home based rehabilitation after ACL reconstruction, a descriptive case series was conducted. The study included 50 participants between the ages of 22-38 years who had received the home based rehabilitation with weekly follow up to physiotherapy clinic after bone-patellar tendon-bone (BPTB) graft anterior cruciate ligament (ACL) reconstruction. The rehabilitation protocol was muscle strength training, joint mobility training, cryotherapy, and gait reeducation. The measured outcomes were VAS, knee ROM, anterior posterior knee stability, balance, strength, and post-operative complications. The mean age was 30.2±5.1 years (range 22-38 years). 99% patients reported no pain while 1% reported mild pain during rest or activity. Of the 50 respondents, the knee ROM of the 46 (92%) subjects were 0-130, and 4 (8%) subjects were < 100. The anterior-posterior stability of 96 % participants was <3 mm, 3%>3-5 mm and 1%>5 mm. Of 50 participants, 3% were reported with postoperative complications. The home based exercise plan, the participants improved significantly in strength, pain, range of motion, gait and balance. The results clearly indicate that early, well-structured and extensive home based rehabilitation after ACL reconstruction significantly improves the clinical outcomes. In addition, the post-operative complications and level of disability was also reported very low. Obviously, home based rehabilitation also provides the cost effectiveness which is appreciated in the developing countries.

### Recent publications

1. Shahzada Junaid Amin (2017) Curriculum trends in physiotherapy institutions of Saudi Arabia. Journal of Physiotherapy and Sports Medicine 6(2):17.
2. Shahzada Junaid Amin (2015) Sources and perceived level of stress among health students – Example from Saudi Arabia. Foundation University Medical Journal (FUMJ), Special Issues 20:15.
3. Shahzada Junaid Amin (2012) Perception of physical therapists about professional growth and development in developing countries – example from Pakistan. Journal of Physiotherapy and Sports Medicine 2 (2):15

### Biography

Shahzada Junaid Amin is an Educationist at University of Hail, Saudi Arabia. He holds a Doctor of Physical therapy and Master's degree in Health Professional Education (MHPE). Previously, he has served different academic and clinical institutions in Pakistan. He has been involved with various roles like Educationist, Clinician and Research Supervisor during his professional career. He has presented his research work in national and international events. He has published papers in reputed journals and has is also an Editorial Board Member of scholarly peer reviewed international journals. He has research interest in Orthopedic and Sports PT, Geriatrics, Teaching and Learning, Assessment, and Educational Technology.

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## Physical benefits of prayers strengthen your faith and fitness

**Ghazal Kamran**  
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Prayer benefits will make the human body of the sporting and the exercise aspects will be discussed. Salah (prayer) is performed by Muslim believers and spiritual benefits of prayer (Salah) it has been widely recognized however many health care providers are unaware that process of praying promotes many physical benefits which can be used for effective exercise prescription in dynamic ways. Prayers require the worshiper to move through several distinct bodily postures while reciting specific supplications. Body goes through a unique exercise during the Salah. So, person gets a flexible and healthy body. Salah (prayer) must be performed at least five times a day by Muslim believers, consists of 40 rakaats. It involves with physical activities which include standing, bowing, prostration and sitting consecutively. Each position involves the movement of different parts of the human body in ways that encourage health and wellbeing. Salah consists of rakaats, each rakaat being a series of 7 postures. For example, before sunrise, 2 rakaats or 14 postures must be performed. Thus each Muslim is under obligation to perform 119 postures per day that is 3750 postures per month and 42,840 postures per year. Suppose, if we live up to an average of 50 years, Salah being obligatory from the age of 10 years, we would have performed 1,713,600 postures compulsorily in this lifetime. Each Rakka lasts between 3 and 6 minutes & energy cost of 2 and 4 Rakka prayers found to have a positive effect on metabolic function. For an 80 kg person, energy cost of daily prayers was about 80 calories a day, and could be considered a form of physical activity that enhances fitness. Salah postures are similar to yogic postures and therefore Salah, while being performed as a religious obligation, can simultaneously give all the benefits of yoga. Prayer movement direction outside of worship, there are benefits circulatory, respiratory, digestive, nervous, and to the hormonal system.

### Biography

Ghazal Kamran is working at Al Ain Hospital (AAH), UAE since September 2010 as Senior Physiotherapist and she has completed her Bachelor in Physiotherapy in 2003 from University of Karachi and started her professional career from Aga Khan University Hospital AKUH Karachi, Pakistan where she worked for six years, she moved to UAE in 2010. She is a Team leader for Cardiac rehabilitation, Intensive Care Physiotherapy and Diabetes program in AAH. Her areas of special interests are Cardiac Rehabilitation, Integrated Chronic Disease Management, Intensive Care Physiotherapy, Health Promotion and Fitness. She has also participated as a speaker at Middle East Rehab conference and in different forums

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## Ageing with spinal cord injuries and preventing complications

Tarik Zetica<sup>1</sup> and Suad Trebinjac<sup>2</sup><sup>1</sup>Rehafit MHMC in Kuwait<sup>2</sup>Dubai Physiotherapy & Rehabilitation Center, UAE

Spinal cord injury (SCI) in elderly patients is increasingly common and the prevalence of spinal injuries among older adults has been increasing more and more. The spinal cord injury (SCI) affects different systems such as sensory, motor, autonomic nervous system generating a clinical picture of paraplegia or quadriplegia both accompanied by many organ dysfunctions. The individual with SCI typically is young at the time of injury and as a result of the SCI, experiences an immediate reduction of some of the functional reserves and capacities. The patient with SCI experiences a more rapid development of characteristics related to normal ageing. The mechanism of trauma and patterns of SCI differ from those in younger patients. Additionally, the high prevalence of degenerative changes and stenosis in the elderly population may influence the clinical presentation and treatment patterns. Systemic medical issues and severity of neurological injury may contribute to the extremely high mortality rate in elderly patients. The elderly patients who survive SCI have the potential for meaningful functional and neurological recovery and require directed rehabilitation to this end so the prevention of ageing related complications are very important in patient with SCI. The learning objectives are to describe ageing process in able bodied people; to highlight physical and psychological impact of spinal cord injuries (SCI); to explain differences in ageing between able bodied and SCI people; and to explore prevention of ageing related complications in people with SCI.

### Recent publications

1. Tarik Zetica (2017) Neuro-Developmental Treatment for the patient suffering from the hemispatial sensory neglect due to stroke: Case report, KW-17.
2. Suad Trebinjac, Tarik Zetica, Skikic E M (2009) The effects of McKenzie exercises for patients with low back pain, our experience. *Bosnian Journal of Basic Medical Sciences* 3(4):70-75
3. Suad Trebinjac (2017) Regenerative Treatments in Sports and Orthopedic Medicine; Chapter 8-Platelet-Rich Plasma to Enhance Orthopedic Procedures. ISBN 9781620701126.
4. Mahmoud Ezzat Nazzal, Mohammed Ahmed Saadah, Loai Mohammed Saadah and Suad Mustafa Trebinjac (2009) Acute ischemic stroke: Relationship of brain lesion location & functional outcome. *Disability and Rehabilitation* 31(18):1501-6.

### Biography

Tarik Zetica is a Physical Therapy Coordinator and Assistant Manager at Refahit MHMC Kuwait where he works for last four years. He graduated at University of Sarajevo, Faculty of Health Sciences. He has years of experience in research, evaluation, teaching and administration, physiotherapy department management, initiating appropriate treatment intervention based on clinical assessment and clinical research. He has spent few years in managing and coordinating a multi-disciplinary team to assess, diagnose, intervene, plans and support athletes across all sports in Asia, within the Olympic program to overcome their injury and return to performance. For the last few years he is performing clinical assessments, setting goals and providing treatment plans for clients mainly acute and chronic musculoskeletal disorders including neck and back pain, joints, muscles, tendons, ligaments disorders, pain management and rehabilitation of sports injuries and neurological disorders including stroke, brain injuries, spinal cord injuries.

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## Biomechanical analysis of sit-to-walk movement in parkinson's patients

Moataz M El Semary, Nawal A Abou Shady, Hayam Mahmoud Sayed and Mohamed El Said Al Awaady  
Cairo University, Egypt

**Aim:** The aim of this study was to evaluate the ankle-knee-hip interaction during sit-to-walk (STW) movement and clinical functional abilities of the lower limbs in Parkinson's patients.

**Methods:** Twenty male patients, ages ranged from 55 to 70 years, stage II and III according to modified Hoehn and Yahr classification of disabilities and ten male healthy elderly subjects, ages ranged from 55 to 70 years, participated in this study. All subjects were assessed for clinical functional abilities of the lower limbs, ground reaction force (GRF) and spatiotemporal data and range of motion (ROM) of hip, knee and ankle joints during STW movement.

**Results:** The results showed very significant differences in the GRF among the normal subjects and Parkinson's patients during STW movement. There were significant differences in hip, knee and ankle joints ROM during STW. There were significant differences in spatiotemporal findings during STW movement. The Parkinson's disease patients did not merge the two tasks of STW while the elderly subjects merged it. There was impairment in clinical functional abilities of the lower limbs in Parkinson's patients.

**Conclusion:** A continuum of STW performance and clinical functional abilities whereby the healthy elderly people performed the task more efficiently than Parkinson's patients.

### Biography

Moataz M El Semary has completed his PhD from Cairo University. Currently, he is working as Lecturer of Physical Therapy for Neuromuscular Disorder and its Surgery, Faculty of Physical Therapy, Cairo University.

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## Scientific Tracks & Abstracts Day 2

Novel Physiotherapies 2018

# Sessions:

Day 2 March 20, 2018

**Yoga | Geriatric Physiotherapy | Chiropractic Technique | Manual Physiotherapy Strategies | Experimental Techniques in Physiotherapies**

## Session Chair

**Rumiana Tasheva**

National Sports Academy, Bulgaria

## Session Co-Chair

**Mohammad Takroni**

King Faisal Specialty Hospital and Research Center, KSA

### Session Introduction

**Title: The relationship among four measurements of round shoulder posture**

**Yuan-Chun Chiu**, Taiwan University, Taiwan

**Title: The risk of fall among community dwelling elders in Saudi Arabia**

**Shahzada Junaid Amin**, University of Hail, Saudi Arabia

**Title: Asia physical therapy students association -our missions and future vision**

**Yu Otake**, University of Hiroshima, Japan

**Title: GNE Myopathy: recognizing key features to optimize physical therapy treatment in a rare myopathy**

**Jenna DeSimone**, Rusk Rehabilitation, USA

**Title: Physiotherapy hand glove**

**Mohamed Alamin**, Sudan university, Sudan

**Title: Prevention of rheumatic diseases: Physical treatment, prevention, basic knowledge, classification**

**Visar Tifeku**, Physical Therapy and Rehabilitation Centre, Ferizaj, Kosovo

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## The relationship among four measurements of round shoulder posture

Yuan-Chun Chiu, Hi-Hsuan Weng, Lin-Ling Huang, Szu-Jieh Mao, Chih-Chin Lai and Jiu-Jenq Lin  
National Taiwan University, Taiwan

**R**ounded shoulder posture (RSP), associated with altered scapular kinematics and muscle activities can increase stress at the shoulder and result in pain, numbness, loss of function, and various neuromuscular symptoms. This study investigated the validity and reliability of four measurements for RSP in health subjects. Twenty-one healthy subjects (age:  $22.3 \pm 2.0$ ) were recruited. Four RSP measurements including pectoralis minor index (PMI), acromial distance (AD), scapular index (SI) and shoulder angle (SA) were taken on dominant shoulder of each subject. Convergent validity was presented by Pearson correlation matrix among four tests. The intra-class correlation (ICC) (1, 3) was 0.96, 0.94, and 0.99 for SI, AD, and PMI, respectively. Standard error of measurement was 1.2, 0.3 cm, and 0.1 for SI, AD, and PMI, respectively. High to moderate Pearson correlations were  $r = -0.61$  ( $p < 0.05$ ) between AD and SI,  $r = -0.52$  ( $p < 0.05$ ) between AD and SA. Low correlations were  $r = -0.22$  ( $p > 0.05$ ) between AD and PMI and  $r = 0.29$  ( $p > 0.05$ ) between SI and PMI. The standard error of the measurement (SEM) values of AD and PMI reflected excellent test-retest agreement. Despite similar construct for measuring RSP among four tests, only AD, SA and SI had high convergent validity. The study shows that SI and SA in addition to AD could be alternative ways to measure RSP. On the other hand, the negative correlation between PMI and SI and AD demonstrates length of pectoralis minor is highly related to RSP. Caution should be taken when interpreting these clinical measurements for RSP.

### Biography

Yuan-Chun Chiu has completed his Undergraduate degree from Chung Shan Medical University in Taiwan and currently pursuing his master's program at National Taiwan University, Department of Physical Therapy.

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## The risk of fall among community dwelling elders in Saudi Arabia

**Shahzada Junaid Amin**

University of Hail, Saudi Arabia

**Background:** Falls and fall-related injuries are a common and serious problem among older adults as such events can result in disability, chronic pain, loss of independence, a reduced quality of life, and in severe cases, even death. The aim of the study was to determine the fear and risk of fall among the older adults in Saudi community. Another objective was to assess the types of injuries relating to fall.

**Methods:** A cross-sectional survey was conducted using a self-reported, close-ended Likert-type questionnaire containing 16-item called fall efficacy scale international FES-I. To ensure the reliability and validity the Arabic version of FES-I was used for data collection. After the ethical committee approval, the 102 subjects were approached who met the selection criteria. The questionnaire was distributed to collect a random sample from community dwelling elders inside the Hail city aged  $\geq 65$  years.

**Results:** Of the 94 participants from 102 subjects responded the questionnaire giving a response rate of 92%. The mean age of participants were 74.7 years (SD 7.10) including 26 (28%) females and 68 (72%) males. Of the 94 respondents, 46 (47%) subjects were found with fall history and 48 (53%) were found without any fall. A higher score of FES-I indicates a greater fear of fall. 66-75 years age group was suffering more with fall than the other age groups. Of the 94 respondents, 44% experienced fall inside house and 66% experienced fall outside the house. The direction of falls was on side 31.1%, backwards 10.6%, forwards 8.5%. Among the fall related injuries, the bruises 12%, soft tissues injuries 10.6% and fractures 7% were reported.

**Conclusion:** The results suggested that the fall risk and the associated injury and cost are challenges both in health care facilities and in the community. Falls are associated with increased length of stay, increased health care utilization, poorer health outcomes and increased costs. Therefore, effective fall prevention programs are imperative for older people in Saudi Arabia to reduce the morbidity and mortality.

### Recent publications

1. Shahzada Junaid Amin (2017) Curriculum trends in physiotherapy institutions of Saudi Arabia. *Journal of Physiotherapy and Sports Medicine* 6(2):17.
2. Shahzada Junaid Amin (2015) Sources and perceived level of stress among health students – Example from Saudi Arabia. *Foundation University Medical Journal (FUMJ), Special Issues* 20:15.
3. Shahzada Junaid Amin (2012) Perception of physical therapists about professional growth and development in developing countries – example from Pakistan. *Journal of Physiotherapy and Sports Medicine* 2(2):15.

### Biography

Shahzada Junaid Amin is an Educationist at University of Hail, Saudi Arabia. He holds a Doctor of Physical Therapy and master's degree in Health Professional Education (MHPE). Previously, he has served in different academic and clinical institutions in Pakistan. He has been involved with various roles like Educationist, Clinician and Research Supervisor during his professional career. He has presented his research work in national and international events. He has published papers in reputed journals and has is also an Editorial Board Member of scholarly peer reviewed international journals. He has research interest in Orthopedic and Sports PT, Geriatrics, Teaching and Learning, Assessment, and Educational Technology.

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