

ISSN: 2148-1148



# International Journal of Science Culture and Sport (IntJSCS)

International Refereed Scientific Journal

ICV Score: 73,50

Volume 4 Issue 2  
June 2016



[www.iscsjournal.com](http://www.iscsjournal.com)



[www.iscsjournal.com](http://www.iscsjournal.com)  
International Refereed Scientific Journal

## TABLE OF CONTENTS

*1) A Comparison of Preferred Leader Behaviour between Physical Education and Non-Physical Education Male Students, 139-149*

Rajkumar SHARMA, Yuwraj SHRIVASTAVA

Doi Number: <http://dx.doi.org/10.14486/IntJSCS494>

*2) Biochemical Changes from Preparation to Competitive Period in Soccer, 150-161*

Gioldasis ARISTOTELIS

Doi Number: <http://dx.doi.org/10.14486/IntJSCS495>

*3) An Assessment of the Self-Rated General Health of Vietnam and German Elderly, 162-170*

Hung Manh NGUYEN

Doi Number: <http://dx.doi.org/10.14486/IntJSCS498>

*4) The Effectiveness of the Usage of the Cooperative Learning in the Development of Certain Basic Competencies in Volleyball for Pupils (15-16) Years Old, 171-176*

Brahim HARBACH, Djamel MOKRANIL, Houcine BENZIDANEL, Djourdem BENDEHIBAL, Sabria ABDELI

Doi Number: <http://dx.doi.org/10.14486/IntJSCS504>

*5) Sports Policy of Turkey in Development Plans, 177-186*

Yaşar AKÇA, Gökhan ÖZER

Doi Number: <http://dx.doi.org/10.14486/IntJSCS505>

*6) An Evaluation of Fine and Gross Motor Skills in Adolescents with Down Syndromes, 187-194*

Şehmus ASLAN, Ummuhan BAŞ ASLAN

Doi Number: <http://dx.doi.org/10.14486/IntJSCS509>

*7) Cooperative Learning as Formative Approach in Physical Education for All, 195-205*

Carmelo MUNAFO

Doi Number: <http://dx.doi.org/10.14486/IntJSCS513>

*8) The Investigation of Emotional Intelligence of Men and Women Futsal Athletes, 206-217*

Yusuf SOYLU, Melih SALMAN, Osman YILMAZ, Gözde GÜZELGÖZ

Doi Number: <http://dx.doi.org/10.14486/IntJSCS514>

*9) The Engagement of Schoolchildren Females in Extracurricular Sports Activities, 218-229*

Ratko PAVLOVIC

Doi Number: <http://dx.doi.org/10.14486/IntJSCS516>

*10) Differences among Elite Female Rowers Regarding Carbohydrate Consumption at Rest, 230-239*

Dana BADAU, Valeriu TOMESCU, Adela BADAU, Ștefan Adrian MARTIN

Doi Number: <http://dx.doi.org/10.14486/IntJSCS518>

*Field : Sport Sciences, Physiology*

*Type : Research Article*

*Received: 29.03.2016 –Accepted: 14.05.2016*

## **An Assessment of the Self-Rated General Health of Vietnam and German Elderly**

**Hung Manh NGUYEN**

Faculty of Sport and Physical Education, Vinh University, 182 Le Duan, Vinh City, VIETNAM

**Email:** [hungtdt@gmail.com](mailto:hungtdt@gmail.com)

### **Abstract**

The main aim of this study is to compare the differences in self-rated general health of the elderly between Vietnam and Germany. There is significant difference in physical health domain ( $B = 4.30$ ,  $p = 0.05$ ), marking a possible tendency for the Vietnamese sample to show higher values, and  $R^2$  (0.024) accounts for 24% of variance in self-rated physical health, supports the stability of country as a predictor for self-rated physical health status. There is no significant difference in mental health domain between Vietnamese and German samples. There is also difference in age group of the two samples.

**Keywords:** German, mental health, physical health, Vietnam

## Introduction

It is stated that a preventive approach based on screening plus early intervention prevents or delays the appearance of functional decline or reduces its consequences (Hébert, 1997). We suggest that different cultural backgrounds lead to a different degree in lifestyle-moderated physical activity which is passed on from the older generation to the younger one. This study aims to examine the differences in physical activity performance levels between an Asian (Vietnam) and a European (Germany) country.

Moreover, life expectancy at the age of 60 ( $e_{60}$ ) in Germany is 22 years for men and 25 years for women, while it is 20 years for men and 23 years for women in Vietnam (United Nations, 2004). It is conspicuous that the differences in life expectancy in these two countries are decreasing with age from about eight years at birth to only about 2 years for men and women, respectively, at the age of 60. These differences in life expectancy between the two countries may be the result of cultural disparities regarding socio-cultural conditions and circumstances. The most striking differences that might have an impact on factors influencing a healthy and longer life could be seen in the way people are socially integrated and are participating in different socio-cultural domains like living arrangements and work. Living arrangements of the elderly in Vietnam and Germany are different. Only a small amount of Vietnamese elderly are living alone, and the majority prefer to live with adult children (Knodel, Friedman, Truong, & Bui, 2000). About 60% of adult children who live nearby their parents see them daily (Hirschman & Vu, 1996). 73.1% of Vietnamese elderly are living with children (Pfau & Giang, 2009), whereas only 6% of German elderly ( $\geq 65$  years old) are living with at least one member of a younger generation (Statistisches Bundesamt, 2011). This shows large differences with respect to inter-generational living arrangements between Vietnam and Germany.

In addition, labour force of the elderly is differently distributed between Vietnam and Germany. While 62% of Vietnamese elderly aged 60-69 years (70-79 years: 35%) are still working after retirement (Vietnam National Aging Survey, 2011), only 6% of German elderly aged 65-74 years ( $>74$  years: 1%) do so (Statistisches Bundesamt, 2011). This raises the question if working and living conditions in older age contribute to a higher level in physical performance. There have been numerous studies on effects of physical activities on health of the elderly (Mummery, Schofield, & Gaperchione, 2004; Taylor, et al., 2004; Wagner, LaCroix, Buchner, & Larson, 1992), but only few studies comparing measures of functional ability among the elderly in different cultures. As measures of functional ability in daily life are used to decide whether elderly people can still live in their home independently, it is very important to distinguish between general activities and activities that are dependent on lifestyle and culture.

## Methods and Materials

### *Study design*

This is a cross-sectional study. The data was taken at pretest of an intervention study in both samples. The Vietnamese sample was recruited in Vinh City, Vietnam and consists of 96 community-dwelling individuals, who were at the time of exploration 60 to 80 years old ( $M = 69.0 \pm 5.1$ ) and at registration participating in a Tai Chi course as beginners (Nguyen & Kruse, 2012). The German sample was recruited in eleven regions in Germany and consists of 159 community-dwelling individuals aged 59-90 years ( $M = 72.2 \pm 6.1$ ). German data was

collected during the pretest phase of an evaluation study conducted in collaboration with the German Red Cross (Cihlar & Kruse, 2011). Data was saved in and calculated via SPSS 19.

Participants were asked to complete an informed consent. Inclusion criterion for both samples was that subjects were able to fully perform the Senior Fitness Test. Exclusion criteria were serious diseases such as symptomatic coronary insufficiency, angina pectoris, obvious cognitive deficits, uncontrolled (higher than 160/100) high blood pressure, functionally dependent, and regular use of assistive devices.

#### *Outcome assessment*

To screen if higher performance levels in selected physical abilities involve higher levels in subjective feelings of health status, the SF-36 was used for assessment of subjectively rated health. The Short Form-36 (SF-36) is a widely established instrument in studying quality of life (Bergfeldt, Sköld, & Julin, 2009; Birtane, Uzunea, Tastekin, & Tuna, 2007; Lundberg, Johannesson, Silverdahl, Hermansson, & Lindberg, 2000; Nante, et al., 1999; Piscavet & Hoeymans, 2004; Schlenk, et al., 1998), and has been shown to be both, valid and acceptable in a normal healthy population and reliable across diverse patient groups (McHorney, Ware, & Lu, 1994; McHorney, Ware, Lu, & Sherbourne, 1993). A generic measurement allows the comparison with other diseases and general populations, as it is not specific to any age, disease, or treatment group. The SF-36 is suitable for self-administration and has the advantage of describing the impact of the disease in terms of patient-centred outcome rather than the disease-centred outcome perceived by clinicians. Short Form-36 explores eight indicators related to quality of life (Ware & Sherbourne, 1992), while health-related quality of life indicators can be identified. The 36-item short-form was constructed to survey health status in the Medical Outcomes Study and consists of 36 items that measure the following eight concepts: limitations in physical activities because of health problems (physical functioning), limitations in usual role activities because of physical health (role-physical), bodily pain (bodily pain), general health perceptions (general health), energy and fatigue (vitality), limitations in social activities because of physical or emotional problems (social-functioning), limitations in usual role activities because of emotional problems (role-emotional), and psychological distress and well-being (mental health) (Ware & Sherbourne, 1992). For means of interpretation a total score for physical and mental domains of health is calculated.

#### *Statistical analysis*

Hierarchical regression models were used to assess the interaction and connection of predictive factors between the two samples. Analysis of variance (ANOVA) was used to analyse group differences.  $P < 0.05$  was considered to be statistically significant. Before applying the  $t$ -test the normal distribution of the data was controlled.

## **Results**

Table 1 shows descriptive data for the entire sample. Data are mean  $\pm$  SD or percentage (and number). Group differences were calculated by independent sample  $t$ -test for continuous variables and  $\chi^2$  test for categorical variables.  $T$  or  $\chi^2$  values (and degrees of freedom) are shown. It shows that the two samples differed with respect to the examined age groups ( $p < 0.001$ ). 95% confidence intervals reveal age groups of 63.9 to 74.1 years for the Vietnamese and 66.1 to 78.3 years for the German sample, which states that the German sample included older participants in comparison to the Vietnamese one. Even if both samples mainly

consisted of people on the edge of or in retirement, this age differences may have an influence on the data analysis.

**Table 1.** Characteristics of study samples

Variable	Total (N=255)	Vietnam (N=96)	Germany (N=159)	Group differences
Sex (% female)	65.5(167)	50(48)	74.8(119)	16.35(1) ***
Age (years)	71.0 ±6.0	69.0 ±5.1	72.2 ±6.1	4.27(253) ***
Height (cm)	163 ±0.1	159 ±0.1	166 ±0.1	6.55(252) ***
Weight (kg)	69.4 ±13.5	61.6 ±5.4	74.1 ±14.7	9.68(216.1) ***
BMI (kg/m <sup>2</sup> )	25.9 ±3.7	24.3 ±1.1	26.9 ±4.4	7.01(188.0) ***
WHR	0.93 ±0.1	0.95 ±0.1	0.92 ±0.1	-3.17(250.8) **

\* $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , *n.s* = not significant; BMI = Body Mass Index; WHR = Waist Hip Ratio.

Results in the domain of self-rated physical health did not show significant values for one of the selected predictors (Table 2). Only Country exceeded the significance level ( $B = 4.30$ ,  $p = 0.05$ ) marking a possible tendency for the Vietnamese sample to show higher values, and  $R^2$  (0.024) accounts for 24% of variance in self-rated physical health, supports the stableness of country as a predictor for self-rated physical health status.

**Table 2.** Hierarchical regression model for self-rated physical health

Predictor	Unstandardized coefficients: Regression coefficient B			
	Step 1	Step 2	Step 3	Step 4
Education <sup>a</sup>	0.67	0.21	0.16	-0.09
Sex <sup>b</sup>		-4.31	-4.29	-3.42
Age <sup>c</sup>			-0.08	-0.01
Country <sup>d</sup>				4.30*
$R^2$	0.001	0.02	0.02	0.024*
Adjusted $R^2$	-0.003	0.01	0.004	0.023*

<sup>a</sup>0 = < 5 years, 1 = 5 to 9 years, 2 = 10 to 12 years, 3 = > 12 years; <sup>b</sup>0 = male, 1 = female; <sup>c</sup>59 to 90 years; <sup>d</sup>0 = Germany, 1 = Vietnam; \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



Similarly, results in the domain of self-rated mental health did not show any significant value for one of the selected predictors (Table 3). It means that Education, Sex, Age and Country are not predictor for mental health in the comparison between the two countries.

**Table 3.** Hierarchical regression model for self-rated mental health

Predictor	Unstandardized coefficients: Regression coefficient B			
	Step 1	Step 2	Step 3	Step 4
Education <sup>a</sup>	-2.73	5.41	4.70	5.32
Sex <sup>b</sup>		-2.469	-2.469	-2.265
Age <sup>c</sup>			-085	0.58
Country <sup>d</sup>				0.40
R <sup>2</sup>	0.00	0.07	.010	0.011
Adjusted R <sup>2</sup>	-.004	-.001	-.003	-.006

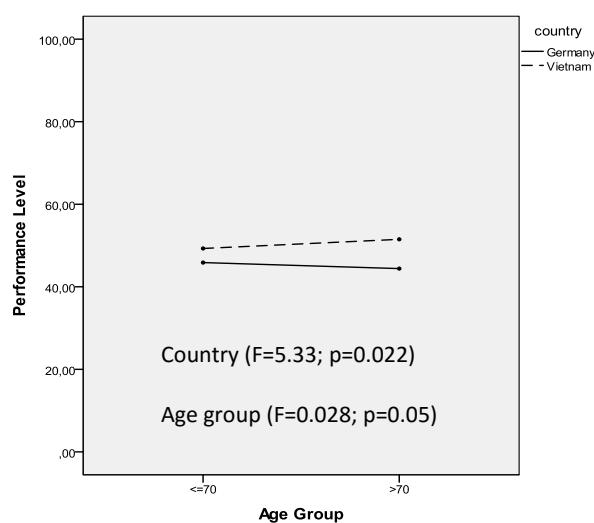
<sup>a</sup>0 = < 5 years, 1 = 5 to 9 years, 2 = 10 to 12 years, 3 = > 12 years; <sup>b</sup>0 = male, 1 = female; <sup>c</sup>59 to 90 years; <sup>d</sup>0 = Germany, 1 = Vietnam; \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001

#### *Age-related performance levels*

After having examined the predictive value of different variables, especially of country, for performance in motor abilities and subjectively rated health, the question arises if the performance level of the Vietnamese and German participants differs with regard to different age groups. In reference to the median of the whole sample, the age of 70 years was chosen to divide the participants in dichotomic age groups. Figure 1 shows age-related performance levels for the physical and mental health domains which revealed significant values with respect to country.

Data for self-rated health show no differences in age group ( $F = 0.028$ ,  $p = 0.868$ ) and age-related performance levels between the two countries ( $F = 0.653$ ,  $p = 0.420$ ). ANOVA for country as independent variable indeed produces a significant value ( $F = 5.332$ ,  $p = 0.022$ ), but as the hierarchical regression model and for education and age controlled ANCOVA ( $F = 3.236$ ,  $p = 0.073$ ) show, this can be explained by the influence of other factors (education, age, sex). With respect to self-rated health status, the Vietnamese and German participants did not show any level- differences in or between age groups, stating that an average level of self-rated health was produced in both countries and in both age groups.





**Figure 1.** Age-related differences of self-rated health between the two countries.

## Discussion

Self-rated physical health factors differ between Vietnam and Germany. Considering the higher functional level of the Vietnamese sample in important motor abilities, the result showed that both samples rated their health status on a comparable level but not for physical one. This might be the result of a culturally mitigated understanding of health, because on a cross-cultural basis, health can not only be seen as the physical status of the body but is interpreted through cultural knowledge (Fry, 2007). One factor for self-rated functional level and health status in this context, is the degree to which a society provides technological assisting devices like pacemakers, glasses or walkers and the state of development in medicine, for example in orthopaedic surgery, to compensate functional loss. The different organization of life in cultures with extended families as a buffer for elderly people with functional impairments, serves as a totally different structure, in which other values and perceptions of physical health and functionality exist (Fry, 2007). These cultural differences are especially strong between Asian and European countries and could explain why objectively assessed levels of motor abilities are not reflected in self-rated mental health status in this study.

The results we present in this study might be moderated by differences in living arrangements, which, in addition to the different working conditions in Vietnam and Germany, may have an influence on the different levels in physical activity performance and function as an explanation for the smaller performance-level disparities between age groups of the Vietnamese sample. The higher numbers of Vietnamese elderly people who live together with the generation of their children or even grandchildren in respect to German elderly people (73.1% vs. 6%) (Pfau & Giang, 2009; Statistisches Bundesamt, 2011) might lead to a more active and participating lifestyle in Vietnam, which, again, might contribute to cognitively and physically demanding environments. An active lifestyle and resulting higher levels of physical abilities are not only the outcome of performing sports activities but they

seem to be influenced to a great extent by an enhanced and demanding environment in which elderly people have the opportunity to stay active and face challenges within their everyday life. Therefore, interventions promoting physical activity in old age will not only have to provide sports facilities and programmes but above that will have to create environments in which physical activity is a constant factor in everyday life (Wallmann, Bucksch, & Froböse, 2012). In countries with a culture of comparable low everyday physical activity, this is not only a challenge for health promoters but for the whole exo- and macro-system of the society (Bronfenbrenner, 1986) which include politics and conventions, values, laws or traditions.

Differences in the lifestyle-moderating domains *living arrangements* and *labour activity* could serve as an explanation for the imbalance in physical activity performance levels between the two studied countries and as a result could lead to the convergence of life expectancy of Vietnam and Germany from birth ( $e_0$ ) to the age of 60 years ( $e_{60}$ ), stating that a physically active lifestyle is able to contribute to an extension of life expectancy in higher age. German older people would profit from an enhancement of their physical demands in everyday life, and thus could use the potentials of their living conditions to full capacity. Researching the circumstances, situations and stimuli after retirement in different cultures could provide a basis for the future constitution of physically demanding living environments for older people.

## Conclusion

This cross-sectional study is to assess the general health of Vietnamese and German elderly. There is significant difference in physical health domain, but not for mental health domain between Vietnamese and German samples. There is also difference in age group of the two samples. Study limitations are descriptive data differences in socio-demographic variables, especially in the examined age groups, and an imbalance of the total number of recruited participants between Vietnam and Germany.

## Conflict of Interest

The author has not declared any conflicts of interest.

## REFERENCES

- Bergfeldt U, Sköld C, Julin P (2009). Short form 36 assessed health-related quality of life after focal spasticity therapy. *J Rehabil Med*, 41, 278-281.
- Birtane M, Uzunea K, Tastekin N, Tuna H (2007). The evaluation of quality of life in fibromyalgia syndrome: a comparison with rheumatoid arthritis by using SF-36 health survey. *Clin Rheumatol*, 26, 679-684.
- Bronfenbrenner U (1986). Recent advances in research on the ecology of human development. In R. K. Silbereisen, K. Eyferth & G. Rudinger (Eds.). Berliner Springer. *Development as action in context*, 287-310.
- Cihlar V, Kruse A (2011). Evaluation der DRK Bewegungsprogramme. Status Quo Analyse interventionsstudie Handlungsempfehlungen. Heidelberg: Institut für Gerontologie.
- Fry CL (2007). Comparative and cross-cultural studies. In J.E Birren (ed). *Encyclopedia of gerontology*, 2nd edn. San Diego: Academic Press, 1(291-298).
- Hébert R (1997). Functional decline in old age. *Can Med Assoc J*, 175, 1037-1045.
- Hirschman C, Vu ML (1996). Family and Household structure in Vietnam: Some slimpes from a recent survey. *Pacific Affairs*.
- Knodel J, Friedman J, Truong SA, Bui TC (2000). Intergenerational exchanges in Vietnam: Family size, sex composition, and the location of children. *Population Studies*, 54(1), 89-104.
- Lundberg L, Johannesson M, Silverdahl M, Hermansson C, Lindberg M (2000). Health-related quality of life in patients with psoriasis and atopic dermatitis measured with sf-36, DLQI and a subjective measure of disease activity. *Acta Derm Venereol*, 80, 430-434.
- McHorney CA, Ware JE, Lu JFR (1994). The MOS 36-item short-form health survey (SF-36). III. Tests of data quality, scaling assumptions and reliability across diverse patient groups. *Med Care*, 32, 40-66.
- McHorney CA, Ware JE, Lu JFR, Sherbourne CD (1993). The MOS 36-item short-form health survey (SF-36): II. Psychometric and clinical test of validity in measuring physical and mental health constructs. *Med Care*, 31, 473-483.
- Mummery WK, Schofield G, Gaperchione C (2004). Physical activity dose-response effects on mental health status in older adults. *Aust NZ J Public Health*, 28(2), 180-184.
- Nante N, Groth N, Guerrine M, Galeazzi M, Kodraliu G, Apolone G (1999). Using the SF-36 in a rural population of elderly in Italy: a pilot study. *40(1-7)*.
- Nguyen MH, Kruse A (2012). A randomized controlled trial of Tai chi for balance, sleep quality and cognitive performance in elderly Vietnamese. *Clinical Intervention in Aging*, 2012(7), 185-190.
- Pfau WD, Giang TL (2009). Remittances, living arrangements, and the welfare of the elderly in Vietnam. Working paper series. Vietnam development forum, Macrch 2009.
- Piscavet HSJ, Hoeymans N (2004). Health related quality of life in multiple musculoskeletal diseases: SF-36 and EQ-5D in the DMC<sub>3</sub> study. *Ann Rheum Dis*, 64, 723-729.

- Schlenk EA, Erlen JA, Dunbar-Jacob J, McDowell J, Engberg S, Sereika SM et al. (1998). Health-related quality of life in chronic disorders: a comparison across studies using the MOS SF-36. *Quality of Life Research*, 7, 75-65.
- Statistisches Bundesamt. (2011). Im Blickpunkt: Ältere Menschen in Deutschland und der EU.
- Taylor AH, Cable NT, Faulkner G, Hillsdon M, Narici M, Van Der Bij AK (2004). Physical activity and older adults: a review of health benefits and the effectiveness of interventions. *J Sports Sci*, 22(8), 703-725.
- United Nations (2004). World population prospects: The Revision Population Database. Retrieved from <http://esa.un.org/unpp/index.asp?panel=1> on June 11, 2013.
- Vietnam National Aging Survey. (2011). VNAS 2011.
- Wagner EH, LaCroix AZ, Buchner DM, Larson EB (1992). Effects of physical activity on health status in older adults. *Annu Rev Public Health*, 13, 451-468.
- Wallmann B, Bucksch J, Froböse I (2012). The association between physical activity and perceived environment in German adults. *Eur J Public Health*, 22(4), 502-508.
- Ware JE, Sherbourne CD (1992). The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. *Med Care*, 30(6), 473-483.