

Sport participation and physical activity by employees in tertiary institutions: a demographic perspective

Professor Y. T. Joubert*
DCom (Industrial Psychology)
Department of Human Resource Management
University of South Africa
PO Box 392, Unisa,0003
Tel: 012 429 3399 Fax: 086 510 6885
E-mail: joubeyt@unisa.ac.za

&

Professor A. Grobler
PhD (Industrial & Organisational Psychology)
Graduate School of Business Leadership
University of South Africa

Corresponding author*

Abstract

Joubert and Grobler (2014) developed an OTSS questionnaire (Organisational Team Sport Survey) which consisted of five factors namely *coping skills / achieve goals; friends / able to work in a team; physical activity / health; improve production and work / life balance*. The purpose of this study was to use the instrument developed by Joubert and Grobler (2014) and to analyse the differences in opinion of the importance, role and value of team sport and physical activity, facilitated with an organisational context, between the demographic groups (age categories, race groups and gender groups). Different demographic groups were expected to report different opinions. A total of 208 respondents participated in this study. The findings of this study indicated that there is a significant difference in opinion between the age and gender groups but there was statistically no significant difference between races, probably due to the representativeness of the sample. The findings of this study will contribute to human resource practitioners, wellness practitioners and management in general regarding the perceived role and nature of organised sport and physical activity by employees in tertiary organisations.

Keywords: coping skills, health, organisational team sport, physical activity, productivity, wellbeing, work/life balance.



Source:http://www.bucs.org.uk/core/core_picker/loading.asp?id=22329

Introduction

Limited literature is available on organised team sport in organisations and the benefits it holds for an organisation. A qualitative study was done by Joubert (2010; 2012) to determine the benefits of organisational team sport interventions for organisations and its employees. Subsequently, a scale was developed by Joubert and Grobler (2014), which will be used to determine the opinion of employees (of tertiary institutions, from now on referred to as organisations) regarding the role and nature of organised team sport and physical activity in their organisations. A diverse workforce brings however new ideas, views and perceptions to an organisation, and should diverse employees be able to work together, they will work towards a specific goal and will be more motivated, which will give the organisation a competitive advantage (Joubert, 2012). The most common primary diversity dimensions in the South African workforce are age, race and gender. The purpose of this study is to look at the differences of opinion between age, race and gender using the organisational team sport scale (OTSS) developed by Joubert and Grobler (2014).

Literature Review

The South African workforce is diverse and continuously increasing in the diversity in terms of its employee composition. According to Swanepoel, Erasmus and Schenk (2008), diversity of a workforce should be managed and facilitated, if not, it could lead to a lack of employee motivation and commitment towards adversarial relationships, common goals, lack of trust and respect among employees, and low levels of quality, productivity, profitability and customer service. Thomas (2011) is of the view that only 5% of South African employees know the goals that they are supposed to pursue which results in work teams pulling in different directions. It is

therefore important for human resource and wellness practitioners, as well as management to implement interventions to enhance team work and individual coping strategies. The introduction of team sport and facilitated physical activities within the organisational context are proposed to be interventions to address this cause.

Sport enhances coping skill and participants can achieve goals

Coping is defined as the cognitive and behavioural efforts by individuals to manage the internal and external demands which are encountered during a specific stressful situation (Lazarus and Folkman, 1984; Gaudreau and Blondin, 2002).

Limited literature is available on age differences and coping, but two radical different hypotheses can be derived from the literature namely, that older employees are rigid, and they are unable to be kindly disposed towards the use of ineffective and passive mechanisms. Already in the early years Pfeiffer (1977) was of the opinion that older individuals use primitive coping mechanisms. Stress starts to change with advance in age (Aldwin, 1991) and therefore different coping mechanisms might occur to handle this stress. Persons of different ages face different stressors or life circumstances. For instance, older individuals have to deal with a number of "exit events", which results in threats and losses, where younger individuals have to deal with "entrance events", which is challenging and creates uncertainty (McCrae, 1982). Any study of coping strategies and coping has to determine whether the respondents have to cope with health problems, which is a reality to all age groups (although the nature and magnitude may vary). Health is more likely to induce emotion-focused or relaxing coping, rather than instrumental action (Aldwin, 1991).

Different studies investigating stress and coping mechanisms have noted that there

are gender differences with regard to perceptions regarding desirability of changes in life; frequency of reporting problems; overall scores on chronic daily or role strain stressors; and the frequency and type of the use of different coping strategies (Copeland and Hess, 1995). With regard to perceived desirability of changes in life, it was found that females perceive stressful events in a more extreme view, albeit positive or negative, than males. The most consistent findings regarding coping skills and gender differences is that females, more often than males, tend to rely on their social support from friends, parents or siblings, increasing their interpersonal involvement (Williams and McGillicuddy-De Lisi, 1999).

Sport and physical activity in general can be used as a coping mechanism. In a study done by Leedy (2000) it was found that highly committed runners had a lower level of depression and anxiety than those who were classified as recreational runners (Leedy, 2000). Older individuals, more often than younger individuals, use a wider variety of coping strategies and methods to reduce the impact of stressful events such as reappraisal or planned problem-solving.

Enhanced friendships during sport participation

Birds of a feather flock together, but how important is friendship in an increasingly unequal and diverse society? On individual and organisational level intergroup ties such as informal and formal networks, as well as other connections among social dissimilar individuals or groups, are important for social life and theory (Kao and Joyner, 2004).

In a study done by McNelles and Connolly (1999) it was found that males and females differ in intimate behaviours in interactions with their friends, but not in their sustainment of shared affect. Females establish their intimacy through self-

disclosure and discussions, while men establish their intimacy through shared activities. When ties between individuals from different races and cultures act as social bridges, it results in limited communities of interest, increased identities, intergroup conflicts and reduced inequalities (De Souza Briggs, 2007). Best or higher-order friends are more likely to share the same activities than higher-order friendship counterparts. Shared activities (such as participating in the same sport code) are usually an indicator of friendship intimacy. In general mixed-racial friends share fewer activities than same-racial friends. Another study done by Kao and Joyner (2004) found little difference in activities among friends between mixed-racial and same-racial friends. Kao and Joyner's (2004) findings further suggest that even if individuals are able to break racial boundaries in friendships (intragroup relationships), their friendships will still face greater challenges than friendships between individuals of the same race.

In a study done by Chandler (2006) regarding the advantages of sport in an organisation, it was found that positive relationships develop between colleagues because employees are friends through sport. Discussion topics on sport also break down the barriers between suppliers, customers and colleagues. Cohesion among team members forms because they have learned in their sport participation to unite together to pursue the common purpose and goals of the team.

This means that, if the employees are able to bond together outside the realm of sport, for instance in a workplace, there is social cohesion and harmony among them because they share the same interests. Muleskinner (2003) agrees with this statement, indicating that sport participation strengthens friendships and harmony among participants. To conclude, if friendships are formed, say through sport participation, they are better able to work in harmony together (Joubert, 2012).

Sport enhances physical activity and health of participants

Regular physical activities have a rehabilitative and preventive effect for 25 or more chronic diseases and adverse health disorders. However, the majority of adults are unable to meet the minimum physical activity guidelines to benefit their health. Some reasons for that are occupation variables such as hours of work and changes in the labour market such as technological changes and globalisation. Employees work harder and longer than ever before due to increased workloads. A standard work week has been expanded to also include overtime hours, work over weekends and an increase in responsibilities and demands (Kirk and Rhodes, 2011).

Because of the above, there is a decline in physical activity with age. A decline in physical activity is lesser in males than in females and the decline also varies in the intensity and the type of the activity (Sallis, 2000). Males have more favourable physical activity patterns than females, which are most notably for vigorous, regular activity and strengthening, and to a lesser degree for sustained activity, but the physical activity patterns become fewer with the advance of age (Caspersen, Pereira and Curran, 2000). Other inter-individual differences between different age groups also play a role, for instance, muscle strength decline, maximal oxygen intake decline, heart rate decline, flexibility or elasticity of tendons, joints and ligaments decline, and calcium loss. Strength peaks around the age of 25 and plateaus between 35 and 40 years of age (Shepard, 1998).

Although physical activities are promoted, only a small number of adults are engaged in physical activity at a level which is sufficient to maintain a healthy lifestyle. Regular physical activity is associated with reducing the risk factors for numerous

chronic diseases; it is still of major public health importance to encourage people to become more active (Proper, Staal, Hildebrandt, Van Der Beek and Van Mechelen, 2002).

Sport improves productivity in an organisation

Team sport has a positive impact on an organisation, which improves productivity and gives the organisation a competitive advantage. Chandler's (2006) research indicates that employees participating together in sport feel more motivated and are more effective in their responsibilities because sport taught them to work together as a team. Team participation in an organisation promotes the sharing of ideas which enhances creativity.

Together with the person-related benefits, as discussed above, employers also experience benefits from employees who increase their physical activity (Proper et al 2002). The primary aim in implementing physical activity programmes in a workplace is that sport participants are healthier than non-sport participants (Kerr, Griffiths and Cox, 1996). Dishman, Oldenburg, O'Neal and Schepard (1998) also agree with this statement, adding that physical activity programmes in the workplace are implemented to enhance the employees' health and productivity.

Employees who are physically active tend to be more productive, healthier, happier and more motivated. Healthier employees are more productive because they are sick less often (less absenteeism), have more energy to complete the work allocated to them and have a camaraderie with their colleagues who also participate in sport, which enables them to work together as a team and work towards the same goal (Joubert, 2012).

Sport improves work/life balance of participants

Demands of work and demands of family or personal life... the question is, which demand is most important? This question, which is often difficult to answer, creates an imbalance in someone's life. A "time bind" occurs when work and personal or family demands are perceived to be uncontrollable. An individual will then feel that their work and personal or family demands each make legitimate claims on his/her life, but that individual is unable to control the balance between the demands. Females and part-timers experience more work/life imbalances. Although younger and less educated individuals also experience work/life imbalances, they have higher levels of schedule control and can therefore improve their work/life balance (Tausig and Fenwick, 2001).

Sport participants take their family along to sport events which could enhance their work/life balance. Not only are they participating in sport which relieves their stress levels and enhances their health, but they can also spend time with their family and friends during sport events. Non-participating employees and family are spectators and encourage the sport participants, which make them part of the team as well (Joubert and Grobler, 2014). Support from family, friends and colleagues

will help an employee feel as if they are valued and this will help enhance their work/life balance (Joubert, 2012).

Design of the study

The research design was cross-sectional. According to Bryman (2012) a cross-sectional design is a research that entails the collection of data on more than one case (usually quite a lot more than one) and at a single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables (usually many more than two), which are then examined to detect patterns of association.

In this study, the research strategy was purely quantitative. According to Bryman (2012), quantitative research usually emphasises quantification in collection and analysis of data. As a research strategy it is deductivist and objectivist and incorporates a natural science model of the research process (in particular, one influenced by positivism), but quantitative features.

Sample

The characteristics of the sample in terms of the three relevant demographical variables – gender, age and race – are reported in table 1.

Table 1: Characteristics of the sample (N = 208)

Category		<i>n</i>	Percent	Valid Percent	Cumulative Percent
Age	18–25yrs	16	7.7	7.7	7.7
	26–35yrs	89	42.8	42.8	50.5
	36–45yrs	77	37.0	37.0	87.5
	46yrs +	26	12.5	12.5	100.0
Race	African	198	95.2	95.2	95.2
	Coloured	2	1.0	1.0	96.2
	White	5	2.4	2.4	98.6

	Indian	3	1.4	1.4	100.0
Gender	Female	94	45.2	45.2	45.2
	Male	114	54.8	54.8	100.0

The representation of the gender groups was slightly higher for the male group with 54.8% compared to that of 45.2% of the female group. The majority of the respondents were within the broad age category of 26-45 years, with 42% being between 26 and 35 years and 37% between 36 and 45 years. In terms of race, the overall majority of the participants were African (95.2%) followed by whites (2.4%), Indian (1.4%) and coloured (1.0%).

Measurement instrument

In this study, the organisational team sport scale (OTSS) developed by Joubert and Grobler (2014) was used. The development

of this scale consisted of 3 initial phases, with a qualitative study (phase 1) and a phase 2, where information obtained from phase 1 was used to develop a scale which consisted of 53 items. In phase 3, a total of 208 respondents completed the scale. The number of items was reduced to 52 through principal component analyses and a 5-factor structure was suggested. The final version of the OTSS contains 52 items that assess coping skills or goals achieved, relationships among participants, physical activity and health, benefits of sport for the organisation and work/life balance. The descriptive statistics as well as the 5 factors identified in the Joubert and Grobler (2014) study are depicted in table 2.

Table 2: Descriptive statistics, Cronbach’s alpha coefficient and inter-item correlations of the OTSS

Factor	Weighted average (/ 5)	s	Skewness	Kurtosis	α
F ₁ Coping skills / achieve goals	3.86	.62	-.82	2.04	.92
F ₂ Friends / able to work in team	3.98	.62	-1.20	2.94	.89
F ₃ Physical activity / health	4.32	.66	-1.52	3.39	.86
F ₄ Improve production	3.88	.68	-1.03	2.35	.81
F ₅ Work / life balance	3.82	.67	-.62	.68	.82

Source: Joubert and Grobler (2014)

The descriptive statistics in table 2, as reported by Joubert and Grobler (2014), showed acceptable psychometric properties in terms of the distribution as the skewness ranging between -.82 and -1.52, and the kurtosis values ranging from .68 and 3.39. This is within the parameters of normal distribution of 2 and 7 for the skewness and kurtosis values respectively (Ryu, 2008). The Cronbach’s alpha coefficients of the factors were acceptable if the guideline of $\alpha > .70$ (De Vos, Strydom, Fouché and Delpont, 2011; Tavakol and Dennick, 2011)

is applied. It would thus appear that the factors possess acceptable levels of internal consistency.

All the factors reported relatively high mean scores, and are defined as:

- *Coping skills / achieve goals* entails trust between employees, be friends with one another, are committed, are not prejudiced or have no preconceived ideas about their peers (Joubert and

Grobler 2014). The mean score obtained on this factor was 3.86.

- *Friends / able to work in a team* is the degree to which employees are able to accommodate and accept individual differences (Joubert and Grobler, 2014). The mean score obtained on this factor was 3.98.
- The factor *Physical activity / health* entails physical activity which is the most effective disease prevention behaviour for employees (Joubert and Grobler, 2014). The mean score obtained on this factor was 4.32.
- *Improve production* is the degree to which an employee is able to improve his or her mood and to set clear targets and objectives. The mean score obtained on this factor was 3.88.
- *Work / life balance* entails employees being able to divide their time among work and life (Joubert and Grobler, 2014). The mean score obtained on this factor was 3.82.

Statistical analysis

The statistical analysis was carried out by means of SPSS version 23, a statistical program. Descriptive statistical data analyses (means, skewness and kurtosis) were used. Statistical analysis was performed using one-way ANOVA and t-tests. When the overall ANOVA showed significant differences between groups, the Scheffe post hoc test was used to determine the pairs of groups that were different. The accepted level of significance was $p < .05$, and in certain instances $p < .1$, and is clearly indicated in the tables. The effect size of the differences in means between the groups was determined. According to Pallant (2010), values of .30, .50 and .80 represent small, medium, and large effect sizes respectively (Cohen's d).

Results

The impact that age has on the five OTSS factors was determined with one way analysis of variance (ANOVA), and is reported in table 3.

Table 3: ANOVA with the age category as grouping variable and the OTSS factors as dependent variable (Omnibus test)

		Sum of Squares	df	Mean Square	F	Sig.
F ₁	Between Groups	5.44	3	1.81	4.96	$p < .001$
	Within Groups	74.48	204	.37		
	Total	79.91	207			
F ₂	Between Groups	5.11	3	1.70	4.64	$p < .001$
	Within Groups	74.84	204	.37		
	Total	79.95	207			
F ₃	Between Groups	2.40	3	.80	1.86	$p = .14$
	Within Groups	87.84	204	.43		
	Total	90.24	207			
F ₄	Between Groups	7.70	3	2.57	5.90	$p < .001$
	Within Groups	88.65	204	.43		
	Total	96.35	207			
F ₅	Between Groups	10.03	3	3.34	8.18	$p < .001$

	Within Groups	83.37	204	.41
	Total	93.40	207	

With F_1 : Coping skills / achieve goals; F_2 : Friends / able to work in a team; F_3 : Physical activity / health; F_4 : Improve production and F_5 : Work / life balance

The ANOVA omnibus test yielded four factors that have statistically significant differences $F(3, 204) p < .001$, between the respective age categories, namely Factor 1: Coping skills / achieve goals; Factor 2: Friends / able to work in a team; Factor 4:

Improve production and Factor 5: Work / life balance. In order to determine the specific age groups that differ from each other, a Scheffe post hoc test was performed. The effect size in terms of Cohen's d was also calculated, and is reported in table 4.

Table 4: Differences (and effect sizes) of between the age categories on the OTSS factors as a result of the Scheffe post hoc test

	(I) Age (in years)	(J) Age		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		Effect size
							Lower Bound	Upper Bound	
F_1	36–45 $n=77$; $SD=.59$ $M=4.01$	18–25	$n=16$; $SD=.84$ $M=3.49$.52*	.17	.02	.05	.98	Large effect Effect Size $d > .80$
		26–35	$n=89$; $SD=.61$ $M=3.37$.28*	.09	.03	.02	.55	Large effect Effect Size $d > .80$
F_2	18–25 $n=16$; $SD=.84$ $M=3.31$	36–45	$n=77$; $SD=.59$ $M=3.87$	-.56*	.17	.01	-1.03	-.09	Medium effect Effect Size $.50 < d < .80$
		46 +	$n=26$; $SD=.47$ $M=3.87$	-.56*	.19	.04	-1.10	-.01	Medium effect Effect Size $.50 < d < .80$
F_4	18–25 $n=16$; $SD=.84$ $M=3.29$	36–45	$n=77$; $SD=.59$ $M=3.91$	-.62*	.18	.01	-1.13	-.11	Large effect Effect Size $d > .80$
		46 +	$n=26$; $SD=.47$ $M=4.07$	-.78*	.21	.00	-1.37	-.19	Large effect Effect Size $d > .80$
F_5	18–25 $n=16$; $SD=.84$ $M=3.00$	26–35	$n=89$; $SD=.61$ $M=3.68$	-.68*	.17	.00	-1.17	-.19	Large effect Effect Size $d > .80$
		36–45	$n=77$; $SD=.59$ $M=3.86$	-.86*	.18	.00	-1.36	-.37	Large effect Effect Size $d > .80$
		46 +	$n=26$; $SD=.47$ $M=3.78$	-.78*	.20	.00	-1.36	-.21	Large effect Effect Size $d > .80$

* The mean difference is significant at the 0.05 level.

With F_1 : Coping skills / achieve goals; F_2 : Friends / able to work in a team; F_4 : Improve production and F_5 : Work / life balance

The age group 36–45 years ($M=4.01$) differs significantly from the groups 18–25 years ($M=3.49$) and 26–35 years ($M=3.37$) with the mean score differences of .52 and .28 respectively (large effect; $d > .80$), on

Factor 1: Coping skills / achieve goals. On Factor 2: Friends / able to work in a team, the age group 18–25 years ($M=3.31$) reported significantly lower mean scores (medium effect size $.50 < d < .80$) than the

age groups 36–45 years and older than 46 years (both $M=3.87$). The mean difference is .56 for both of the groups.

The differences reported on Factor 4: *Improve production*, is also for the 18–25 years group ($M=3.29$) and the age groups 36–45 years ($M=3.91$) and older than 46 years ($M=4.07$). The mean score differences are .62 and .78 (large effect size $d > .80$). The 18–25 years group ($M=3.00$) measured significantly lower than

the 26–35 years ($M=3.68$), 36–45 years ($M=3.86$) and older than 46 years groups ($M=3.78$) on Factor 5: *Work / life balance*. The mean score differences are .68, .86 and .78 respectively, with large effect size $d > .80$.

The impact that race has on the five OTSS factors was determined with one way analysis of variance (ANOVA), and is reported in table 5.

Table 5: ANOVA with the race category as grouping variable and the OTSS factors as dependent variable (Omnibus test)

		Sum of Squares	df	Mean Square	F	Sig.
F ₁	Between Groups	3.43	3	1.14	3.05	$p = .03$
	Within Groups	76.48	204	.37		
	Total	79.91	207			
F ₂	Between Groups	1.57	3	.52	1.36	$p = .26$
	Within Groups	78.38	204	.38		
	Total	79.95	207			
F ₃	Between Groups	1.35	3	.45	1.03	$p = .38$
	Within Groups	88.90	204	.44		
	Total	90.24	207			
F ₄	Between Groups	2.88	3	.96	2.09	$p = .10$
	Within Groups	93.48	204	.46		
	Total	96.35	207			
F ₅	Between Groups	1.03	3	.34	.76	$p = .52$
	Within Groups	92.37	204	.45		
	Total	93.40	207			

With F₁: Coping skills / achieve goals; F₂: Friends / able to work in a team; F₃: Physical activity / health; F₄: Improve production and F₅: Work / life balance

No significant differences between the races were reported ($p < .05$), most probably because of the skew representation of the race groups. The white, coloured and Indian race groups were significantly under represented compared to the African group.

The last demographical variable in this study is gender, and table 6 includes the results of the t-tests on the OTSS factors as dependent variable, and the gender groups as grouping variable.

Table 6: T-test with the gender category as grouping variable and the OTSS factors as dependent variable

		Sum of Squares	df	Mean Square	F	Sig.
F ₁	Between Groups	2.42	1	2.42	6.44	$p = .01$
	Within Groups	77.49	206	.38		
	Total	79.91	207			
F ₂	Between Groups	1.69	1	1.69	4.46	$p = .04$
	Within Groups	78.25	206	.38		
	Total	79.95	207			
F ₃	Between Groups	.82	1	.82	1.90	$p = .17$
	Within Groups	89.42	206	.43		
	Total	90.24	207			
F ₄	Between Groups	.58	1	.58	1.25	$p = .26$

	Within Groups	95.77	206	.46		
	Total	96.35	207			
F ₅	Between Groups	1.28	1.00	1.28	2.87	<i>p</i> =.09
	Within Groups	92.12	206	.45		
	Total	93.40	207			

With F₁: Coping skills / achieve goals; F₂: Friends / able to work in a team; F₃: Physical activity / health; F₄: Improve production and F₅: Work / life balance

The results of the t-tests reported in table 8 indicate that there are statistically significant differences between the female and male gender groups [*F* (3, 204)], with the differences on Factor 1: Coping skills / achieve goals and Factor 2: Friends / able to work in a team, both on *p* < .05 level, and Factor 5: Work / life balance on *p* < .10

level. Gender did not have any impact (*p* < .05 or *p* < .10) on two factors of the OTSS, namely Factor 3: Physical activity / health and Factor 4: Improve production.

The effect size of the differences was calculated, and is reported in table 7 with the mean score differences.

Table 7: Differences (and effect sizes) between the gender groups reported on the OTSS factors

		N	Mean	Mean difference	Std. Deviation	Std. Error	Effect size
F ₁	Female	94	3.72		.68	.07	Small effect Effect Size .30 < <i>d</i> < .50
	Male	114	3.94	.22*	.56	.05	
	Total	208	3.84		.62	.04	
	Model	Fixed Effects				.61	
	Random Effects					.11	
F ₂	Female	94	3.88		.63	.07	Small effect Effect Size .30 < <i>d</i> < .50
	Male	114	4.06	.18*	.60	.06	
	Total	208	3.98		.62	.04	
	Model	Fixed Effects				.62	
	Random Effects					.09	
F ₅	Female	94	3.73		.72	.07	Small effect Effect Size .30 < <i>d</i> < .50
	Male	114	3.89	.16**	.62	.06	
	Total	208	3.82		.67	.05	
	Model	Fixed Effects				.67	
	Random Effects					.08	

* The mean difference is significant at the 0.05 level.

** The mean difference is significant at the 0.1 level.

With F₁: Coping skills / achieve goals; F₂: Friends / able to work in a team and F₅: Work / life balance

The male gender group reported higher mean scores on three of the factors namely Factor 1: Coping skills / achieve goals (*M*=3.94 compared to *M*=3.72 of the female group; *p* < .05); Factor 2: Friends / able to work in a team (*M*=4.06 compared to *M*=3.88 of the female group; *p* < .05) and Factor 5: Work / life balance (*M*=3.89

compared to *M*=3.73 of the female group; *p* < .10 level). The differences are .22, .18 and .16 for the three factors respectively, all with a small effect size (.30 < *d* < .50).

Discussion

The OTSS was developed, administered to 208 respondents and standardised by Joubert and Grobler (2014). It consists of five factors, namely *Coping skills / achieve goals*; *Friends / able to work in a team*; *Physical activity / health*; *Improve production* and *Work / life balance*. It reported acceptable technical properties (Cronbach alpha coefficients). The purpose of this study is to use the results obtained by Joubert and Grobler (2014), to analyse the differences between the demographic groups of age categories (comprising the 18–25yrs; 26–35yrs; 36–45yrs and 46yrs + groups), race groups (African, coloured, Indian and white) as well as the gender groups (female and male). Significant differences between the age groups as well as the gender groups were reported on certain factors, but there were no statistically significant differences between the races. This is probably due to the sample that mainly comprises participants from the African race group (95% of the participants).

The participants generally responded positively on all five factors of the OTSS. The highest mean score ($M=4.32$) was reported for Factor 3, namely *Physical activity / health*. This is an indication that the respondents felt strongly about the fact that sport will benefit an individual's health, and that physically active individuals are more productive, able to cope with stress, more energetic and are better prepared to handle day to day demands. This was the general view of all the demographical groups, including the age, the race and the two gender groups as no significant differences on this factor have been reported. This finding relate to the findings of Proper et al. (2002) in that regular physical activity can be associated with reduced risk factors for numerous chronic diseases.

The OTSS factor that reported the second highest mean score ($M=3.98$) is Factor 2:

Friends / able to work in a team, which is an indication that the respondent felt strongly that individuals who participate in sport are better equipped to build productive relationships with clients, and that they are able to understand, accommodate and accept individual differences. They are further of the opinion that sport enhances communication between individuals, they find it easier to make friends and they find it easier to work in teams. The older age groups (36–45 years and older than 46 years) responded more positively on this factor, compared to the youngest age category in this study (18–25 years). This is also the case with male participants compared to the female participants. This finding confirms the findings found in Chadler's (2006) study that positive relationships are developed between employees because they are friends through sport. It further confirms the findings by Muleskinner (2003) and Joubert (2012) who agrees that participation in sport strengthens friendships and they are able to work in harmony together.

The third highest factor in terms of the overall mean score ($M=3.88$), is Factor 4: *Improve production*, which is an indication that the respondents are of the opinion that individuals who are participating in sport are more productive than those who are not participating in sport. It also has a positive impact on their mood, making them more productive. Participation in sport also enhances goal setting, and prepares individuals to overcome obstacles in daily life. Individuals who participate in sport are further more inclined to constantly seek new and better ways of doing things. Interestingly enough, it is the older age groups of 36 years and older that feel significantly stronger about the role of physical activity in performance improvement than the youngest age category: the 18–25 years group. This finding confirms Kerr et al. (1996) view that employees who participate in sport are healthier than non-sport participants. This also confirms the findings of Dishman et al

(1998) that physical activity programmes in a workplace enhances the employees' health and productivity because employees who are physically active are more productive, happier, motivated and healthier. Joubert's (2012) findings are also confirmed in that employees who participate are healthier and therefore are less sick (less absent), have more energy to complete their work and build camaraderie with their colleagues who also participate in sport which in turn enables them to work as a team towards the same organisational goal.

The OTSS factor that followed in terms of the mean score reported ($M=3.86$) is Factor 1: *Coping skills / achieve goals*. The respondents are of the opinion that sport contributes to the following areas in terms of work: creativity, motivation, better interpersonal relationships, cultural awareness, development of talents, enhanced work performance, stimulate competitiveness and ambition, commitment and dedication, punctuality, self-assurance, task completion and team and group functioning in general. In terms of the difference in opinion of the age groups, the same pattern has been identified as in the first two factors. The age group 36–45 years differs significantly from the groups 18–25 years and 26–35 years; the male respondents also reported a higher mean score on this factor than the female group. The findings of this study correlates with the findings of Leedy (2000) who was of the view that highly committed athletes' depression and anxiety levels are lower.

Work / life balance or Factor 5 reported the lowest mean score, although still high with $M=3.82$. The participants are of the opinion that sport would enhance their work-life-family balance. Individuals who are participating in sport are able to divide their time between work, family and life demands in general. The same pattern was again identified in terms of the difference between the age as well as the gender groups. The younger age group (18–25 years) reported

lower on this factor compared to all the other age groups (in other words 26 and older), as well as the females compared to the males. This finding correlates with the findings from Joubert's (2012) study that employees' work/life balance is enhanced during sport events because they receive support from their family, friends and colleagues and therefore also feel valued.

Conclusion

Physical activity (including sport participation) is considered to be an important dimension of health and general wellbeing. It further plays an important part in coping, interpersonal relationships (working in a team), work behaviour and work performance, and lastly work / life balance (including family life).

This opinion is generally shared by respondents older than 26 years and who are male. The age group 18-25 years and the female respondents to this study have a significantly less positive (although not negative) view on the constructs measured in this study as summarised in the paragraph above.

Recommendations

- Organisations should develop flexible human resource management policies to accommodate sport participation and physical activities (e.g. gymnasiums) as they enhance health and wellness in general, which have a positive impact on work related behaviour (e.g. less absenteeism) and performance.
- Team sport within the workplace should be encouraged, as it has positive impact on the interpersonal dynamics in a workplace, including better cultural awareness, shared goals, attitudes of respect and caring, etcetera.
- The younger age groups should be encouraged to participate in these

processes, as well as the female employees.

- It is lastly recommended that this study be conducted in a more representative environment, and across industries to allow researchers to do industry and other comparative studies.

References

Aldwin, C.M. (1991). Does age affect the stress and coping process? Implication of age differences in perceived control. *Journal of Gerontology*, 46(4):174 – 180.

Bryman, A.D. (2012). *Social Research Methods* (4th edition). New York NY. Oxford University Press.

Caspersen, C.J., Pereira, M.A. & Curran, K.M. (2000). Changes in physical activity patterns in the United States, by sex and cross-sectional age. *Medicine and Science in Sports & Exercise*, 32(9):1601 – 1609.

Chandler, R. (2006). *The impact of sport on the workplace*. A research report commissioned by Hudson.

Copeland, E.P. & Hess, R.S. (1995). Differences in young adolescents' coping strategies based on gender and ethnicity. *Journal of Early Adolescence*, 15(2):203 – 219.

De Souza Briggs, X. (2007). "Some of my best friends are ...": Interracial friendships, class, and segregation in America. *City & Community*, 6:263–290.

De Vos, A.S., Strydom, H., Fouché, C.B. & Delpont, C.S.L. (2011). *Research at grass roots*. 4th edition. Pretoria: Van Schaik Publishers.

Dishman, R.K., Oldenburg, B., O'Neal, H. & Shephard, R.J. (1998). Worksite physical activity interventions. *American Journal Preventive Medicine*, 15:344–361.

Gaudreau, P. & Blondin, J.P. (2002). Development of a questionnaire for the assessment of coping strategies employed by athletes in competitive sport settings. *Psychology of Sport and Exercise*, 3(1):1 – 34.

Joubert, Y.T. & Grobler, A. (2014). Development of an organisational team sport scale (OTSS). *African Journal of Hospitality, Tourism and Leisure*, 3 (1).

Joubert, Y.T. (2010). *Organisation team sport intervention to minimise diversity constraints in the workplace*. Unpublished MCom dissertation. University of Pretoria.

Joubert, Y.T. (2012). *Towards an organisational team sport intervention model for managing diverse workforce*. Unpublished DCom thesis. University of South Africa.

Kao, G. & Joyner, K. (2004). Do race and ethnicity matter among friends? Activities among interracial, interethnic, and intraethnic adolescent friends. *The Sociological Quarterly*, 45(3):557 – 573.

Kerr, J., Griffiths, A. & Cox, T. (1996). *Workplace health, employee fitness and exercise*. London: Taylor & Francis.

Kirk, M.A. & Rhodes, R.E. (2011). Occupation correlates of adults' participation in leisure-time physical activity: a systematic review. *American Journal of Preventive Medicine*, 40(4):476 – 485.

Lazarus, R.S. & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Leedy, M.G. (2000). Commitment to distance running: coping mechanisms or addiction? *Journal of Sport Behavior*, 23(3):255 – 270.

McCrae, R.R. (1982). Age differences in the use of coping mechanisms. *Journal of Gerontology*, 37(4):454 – 460.

McNelles, L. & Connolly, J. (1999). Intimacy between adolescent friends: age and gender differences in intimate affect and intimate behaviours. *Journal of Adolescent Research*, 9:143 – 159.

Muleskinner, K.M. (2003). Sports a bridge for racial diversity. *College Media Network*. June. Retrieved 23 December 2010, from <http://media.www.themuleskinner.com>.

Pallant, J. (2010). *SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS for Windows* (4th ed.) Open University Press.

Pfeiffer, E. (1977). Psychopathology and social pathology. In JE Birren & KW Schaie (Eds.). *Handbook of the psychology of aging*. Van Nostrand Reinhold, New York.

Proper, K.I., Staal, B.J., Hildebrandt, V.H., Van der Beek, A.J. & Van Mechelen, W. (2002). Effectiveness of physical activity programs at worksites with respect to work-related outcomes. *Scandinavia Journal of Work, Environment & Health*, 28(2):75 – 84.

Ryu, E. (2008). Evaluation of model fit in multilevel structural equation modelling: level-specific model fit evaluation and the

robustness to non-normality. Unpublished D. Phill. thesis: Arizona State University.

Sallis, J.F. (2000). Age-related decline in physical activity: a synthesis of human and animal studies. *Medicine and Science in Sports and Exercise*, 32(9):1598 – 1600.

Schepard, R.J. (1998). Aging and exercise. In: *Encyclopedia of Sports Medicine and Science*, TD Fahey (Editor). Internet Society for Sport Science: <http://sportsoci.org>.

Swanepoel, B.J., Erasmus, B.J. & Schenk, H.W. (2008). South African human resource management: theory and practice. (4th ed.). Johannesburg: Juta.

Tausig, M. & Fenwick, R. (2001). Unbinding time: alternate work schedules and work-life balance. *Journal of Family and Economic Issues*, 22(2):101 – 119.

Tavakol, M. & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.

Thomas, I. (2011). *Teamwork requires conflict*. Retrieved 13 June 2011, from <http://www.leadersbeacon.com>.

Williams, K. & McGillicuddy-De Lisi, A. (1999). Coping strategies in adolescents. *Journal of applied developmental psychology*, 20(4):537 – 549.