

# Salsa dance and perceived mental health benefits: A servant leadership theory-driven study

Domene, P & Lawson, C

Published PDF deposited in Coventry University's Repository

## Original citation:

Domene, P & Lawson, C 2019, 'Salsa dance and perceived mental health benefits: A servant leadership theory-driven study' Central European Journal of Sport Sciences and Medicine, vol. 28, no. 4, 15996, pp. 107-118

<https://dx.doi.org/10.18276/cej>

DOI 10.18276/cej

ISSN 2300-9705

ESSN 2353-2807

Publisher: Wydawnictwo Naukowe Uniwersytetu Szczeci

Central European Journal of Sport Sciences and Medicine is an open access scientific quarterly journal (CC-BY-SA license)

Copyright © and Moral Rights are retained by the author(s) and/ or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This item cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder(s). The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

# SALSA DANCE AND PERCEIVED MENTAL HEALTH BENEFITS: A SERVANT LEADERSHIP THEORY-DRIVEN STUDY

Pablo A. Domene,<sup>A, B, C, D</sup> Chelsey Lawson<sup>C, D</sup>

School of Life Sciences, Coventry University, Coventry, United Kingdom

<sup>A</sup> Study Design; <sup>B</sup> Data Collection; <sup>C</sup> Statistical Analysis; <sup>D</sup> Manuscript Preparation

## Address for correspondence:

Pablo A. Domene, BSc (Hons), MSc, PhD  
School of Life Sciences, Coventry University  
Priory Street, Coventry, CV1 5FB, United Kingdom  
E-mail: domenep@gmail.com

**Abstract** The purpose of the current study was to assess servant leadership dimensions, perceived mental health benefits, and correlations between the two following an eight-week servant leadership theory-driven salsa dance programme taught to novice learners at a West Midlands, UK university. Upon completion of the salsa dance programme (frequency – once per week, intensity – moderate-to-vigorous physical activity, time – 90 minutes, type – group-based Cuban style salsa dance), a paper questionnaire was administered to the participants to complete in person. The questionnaire contained 18 items related to servant leadership dimensions (authenticity, empowerment, humility, standing back, and stewardship) in terms of the teaching and learning of salsa dance and four items related to perceived mental health benefits (mood enhancement, self-confidence, skill mastery, and social well-being). Authenticity and stewardship were rated higher in females when compared to males. Differences were found between perceived mental health benefits in both females and males with mood enhancement rated highest in both genders. This is the first study we are aware of to have applied principles of servant leadership in the teaching of salsa dance as a leisure-time physical activity. Servant leadership may have facilitated the high perceived mental health benefits observed.

**Key words** health promotion, Latin dancing, Robert K. Greenleaf, university students

## Introduction

### Mental health in UK university students

Common mental disorders, such as anxiety and depression, are increasing in prevalence in UK young adults (Stansfeld et al., 2016). In this population group, common mental disorders can markedly disrupt daily functioning and cause severe emotional distress. In turn, lowered mood, lack of self-confidence, and feelings of social isolation often manifest (Royal College of Psychiatrists, 2011). A mental health and well-being survey of the English population in 2014 showed the prevalence of symptoms of common mental disorders in 16–24 year olds to be 26% and 9% for females and males, respectively (Stansfeld et al., 2016). The same survey taken two decades earlier in England, Scotland, and Wales indicated the prevalence used to be moderately lower, at 19% and 8% for females

and males, respectively, for symptoms of common mental disorders in the same age range (Stansfeld et al., 2016). Of note, the majority (89%) of current full-time undergraduates in the UK are of this age ( $\leq 24$  years), according to recent data published by the Higher Education Statistics Agency (2019). Although it was reported that the number of undergraduates experiencing mental illness in UK universities is approximately equal to that found in the general population (Macaskill, 2013), minimal recent empirical work has been published in the peer-reviewed literature confirming this. One survey of 6,504 UK undergraduates of both genders reported that 13% of students consider themselves to have a mental health condition, with anxiety and depression being the most common (Unite Students, 2016).

### **Physical activity and mental health**

Evidence suggests a likely association between engagement in physical activity and enhanced mental health outcomes in adults. Using cross-sectional methods, in a very large sample of 1.2 million adults, S.R. Chekroud et al. (2018) demonstrated that mental health burden was lower in individuals who took part in team- or group-based exercise in comparison to other physical activity types. Moreover, and specifically in students aged 16–24, similar findings were presented where better mental health and social connectedness were observed in those engaging in team- and group-based physical activity when compared with physical activity performed alone (Dore, O'Loughlin, Schnitzer, Datta, Fournier, 2018). Additionally, in a recent meta-analysis, in adults, physical activity was purported to improve mental health most effectively when undertaken as a leisure-time pursuit, as opposed to physical activity taken part in in any other domain (White et al., 2017). In university students specifically, leisure-time physical activity has also been demonstrated to be beneficial for well-being (Molina-Garcia, Castillo, Queralt, 2011). Intriguingly, although increasing levels of physical activity were associated with reduced anxiety and depression in UK undergraduates (Tyson, Wilson, Crone, Brailsford, Laws, 2010), recently, a systematic review of physical activity and mental health research in university students indicated inconsistent evidence of a beneficial effect when considering only low and moderate risk of bias studies (Dogra et al., 2018).

### **Servant leadership**

As a multi-dimensional leadership theory, servant leadership advocates for personal interaction between leader and follower, an emphasis on nurturing and serving follower needs, and fundamentally, positioning the follower first so that essentially the leader becomes the servant of the follower (Greenleaf, 1977). Practicing servant leaders place the interests, motivations, and needs of others before their own (Greenleaf, 1977). Although reported to be a personal, complex, difficult to describe, and sometimes paradoxical leadership style (Westre, 2008), servant leadership has been steadily gaining momentum in the peer-reviewed literature since the original works of R.K. Greenleaf (1977) and L.C. Spears (1995) were published. Servant leadership application has been investigated widely within the context of organisational psychology, and to a lesser degree, in educational psychology, health psychology (Eva, Robin, Sendjaya, van Dierendonck, Liden, 2018), and sport psychology (Hammermeister et al., 2008; Rieke, Hammermeister, Chase, 2008; Westre, 2008). We are unaware, however, of empirical work that has applied principles of servant leadership to facilitate the teaching of physical activity for mental health-enhancing purposes. As servant leadership is focussed on the creation of opportunities for followers to grow and flourish (Greenleaf, 1977), we posit that this particular leadership style may lend itself well to the teaching of physical activity

to young adults in a university setting. N. Eva et al. (2019) provide the following contemporary definition of servant leadership theory:

Servant leadership is an (1) other-oriented approach to leadership (2) manifested through one-on-one prioritizing of follower individual needs and interests, (3) and outward reorienting of their concern for self towards concern for others within the organization and the larger community (p. 114).

In the current study, we considered each student in the salsa dance programme to be a follower, everyone involved with or attending the classes to be the organisation, and the university itself to be the larger community.

## Purpose of the study

Salsa dance is an enjoyable (Domene, Moir, Pummell, Easton, 2014) group-based leisure-time physical activity that is not only popular with adults in the UK (National Health Service, 2016), but also potentially efficacious in terms of the enhancement of mental health outcomes (Birks, 2007; Coruh, 2014; Domene, Moir, Pummell, Easton, 2016). Currently, no empirical work has been published in the peer-reviewed literature to assess whether R.K. Greenleaf's (1977) servant leadership theory can facilitate the teaching of mental health-enhancing physical activity to novice learners in a university setting. It remains unclear whether a salsa dance programme taught to UK university students of both genders using principles of servant leadership would result in perceived mental health benefits. Furthermore, it is unclear whether the responses to servant leadership and any perceived mental health benefits would be different between females and males. It is also unknown whether servant leadership and any perceived mental health benefits would correlate and whether these correlations would be different between genders. Therefore, the purpose of the current study was to assess servant leadership dimensions (authenticity, empowerment, humility, standing back, and stewardship) using the Servant Leadership Survey short version (van Dierendonck et al., 2017), perceived mental health benefits (mood enhancement, self-confidence, skill mastery, and social well-being) (Maraz, Kiraly, Urban, Griffiths, Demetrovics, 2015), and correlations between the two following an eight-week servant leadership theory-driven salsa dance programme taught to novice learners at a West Midlands, UK university.

## Methods

### Ethical approval and study design

Ethical approval for the study was granted by the Faculty of Health and Life Sciences Ethics Committee at the lead author's university. A pre-experimental one group posttest-only design was used (Thyer, 2012).

### Participants

Recruitment of participants was undertaken using online advertisements placed on the university virtual learning environment Moodle Version 3.4 (West Perth, Western Australia, Australia). As students access the virtual learning environment regularly, this method of recruitment ensured all students had equal opportunity to take part. Inclusion criteria stated participants must be enrolled as full-time students (either as undergraduates or postgraduates) and be novice learners of salsa dance. Exclusion criteria stated the study would not be suitable for those unable to take part in leisure-time physical activity at a moderate-to-vigorous intensity. No mental

health-related inclusion or exclusion criteria were set. Participants gave their informed consent in writing prior to commencement of the study.

## Procedure

### Salsa dance programme

An eight-week salsa dance programme was taught at an appropriate level for novice learners with instruction delivered by an experienced salsa dance teacher. The classes were held on a weekday evening with consistent start and end times in a 22 × 11 m laboratory research space at the lead author's university. No financial or academic incentives were given for attendance. Frequency of the classes was once per week. Intensity of the classes was set to a moderate-to-vigorous physical activity level (approximately 5.4–6.6 metabolic equivalents) based on the study by P.A. Domene and C. Easton (2014). Time of the classes was 90 minutes. Type of the classes was group-based Cuban style salsa dance commencing with the basic steps taught in a non-partner fashion and progressing through to more complex steps including partner work. Eight classes in total were delivered by the salsa dance teacher and attendance was on a strictly voluntary basis.

### Incorporation of servant leadership theory

Principles of servant leadership theory were incorporated into the teaching of the salsa dance programme. The salsa dance teacher had previously completed a four-year undergraduate degree in human kinetics at a servant leadership-based university and had previous experience delivering leisure-time physical activity sessions (including salsa dance) to adults using principles of servant leadership theory. These principles are in alignment with the contemporary definition of servant leadership theory provided by N. Eva et al. (2019). The classes were structured in a manner that emphasised motive, mode, and mindset (Eva et al., 2019) in the teaching of a servant leadership theory-driven salsa dance programme.

## Measures

### Participant characteristics

Upon completion of the salsa dance programme, a three-page (A4 size) paper questionnaire was administered to the participants to complete in person. Participants self-reported age and gender. Participants also confirmed their enrolment as full-time students and that they were novice learners of salsa dance prior to commencement of the study.

### Servant leadership dimensions

The questionnaire contained 18 items related to servant leadership dimensions in terms of the teaching and learning of salsa dance. An adapted version of the Servant Leadership Survey short version by D. van Dierendonck et al. (2017) was used. This questionnaire has been reported to be a valid and reliable measure of servant leadership dimensions in adults (van Dierendonck et al., 2017). The questionnaire's five dimensions comprised authenticity, empowerment, humility, standing back, and stewardship. Ratings were measured using a six-point Likert-type scale ranging from "Fully disagree" to "Fully agree". Item wordings were altered slightly from the original version to reflect the teaching and learning of salsa dance. Example items include: "My salsa teacher is open about his/her

limitations and weaknesses" (authenticity); "My salsa teacher gives me the information I need to learn salsa well" (empowerment); "My salsa teacher learns from criticism" (humility); "My salsa teacher keeps himself/herself at the background and gives credit to others" (standing back); and "My salsa teacher emphasises the importance of paying attention to the good of the whole" (stewardship).

### Perceived mental health benefits

The questionnaire contained four items related to perceived mental health benefits. Based on the Dance Motivation Inventory by A. Maraz et al. (2015), mood enhancement, self-confidence, skill mastery, and social well-being were selected for investigation in the current study as these were the highest rated mental health-related reasons that account for why adults take part in Latin dance as a leisure-time physical activity. The reliability of the Dance Motivation Inventory has been demonstrated (Maraz et al., 2015). In the current study, ratings of perceived mental health benefits were measured using a 100 mm visual analogue scale. The validity of this method has been reported by E.P. Ahearn (1997). Anchor statements of "Fully disagree" and "Fully agree" were used to rate the following four items: "I feel the salsa classes improve my mood" (mood enhancement); "I feel the salsa classes improve my self-confidence" (self-confidence); "I feel I improve in my ability to dance by attending the salsa classes" (skill mastery); and "I feel I make friends by attending the salsa classes" (social well-being).

### Statistical analyses

IBM SPSS Statistics Version 25 (Armonk, New York, USA) was used to conduct all statistical analyses. Differences between females and males were analysed using Mann-Whitney *U* tests. Differences within servant leadership dimensions and perceived mental health benefits were analysed using Friedman tests. Post hoc analyses were performed using Wilcoxon signed-rank tests with a Bonferroni adjustment applied. Correlations between servant leadership dimensions and perceived mental health benefits were analysed using Spearman rank correlations. Central tendency and dispersion are presented as *Mdn* ( $Q_1 - Q_3$ ). Effect sizes were calculated using Cohen's *r* and interpreted as .10, .30, and .50 for small, medium, and large effects, respectively. All analyses were performed as two-tailed tests. Statistical significance was set at  $p < 0.05$ . Figures are shown as Tukey boxplots.

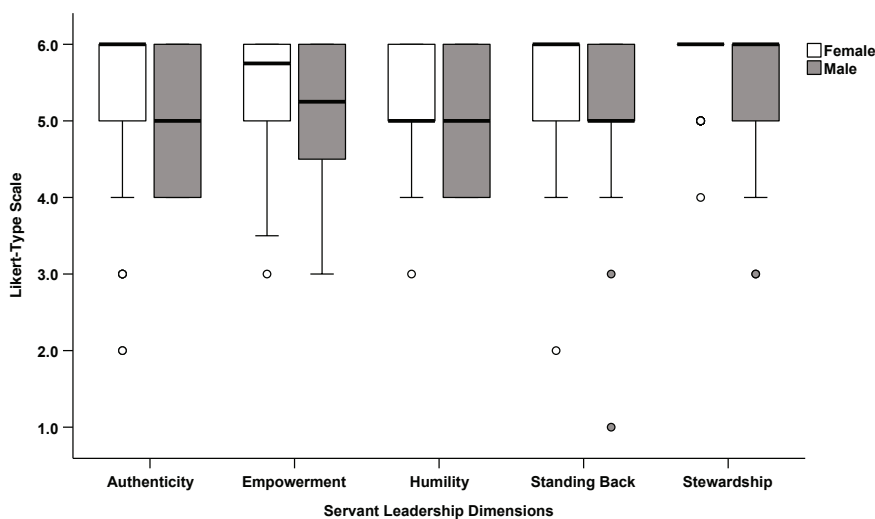
## Results

### Data screening, response rate, and participant characteristics

One hundred twenty-three students completed the salsa dance programme (with an attendance of  $\geq 6$  classes) and were invited to take part in the study. Of these, 106 volunteered to complete the questionnaire. Six were excluded from the statistical analyses due to either not meeting the inclusion criteria or for having excessive missing data ( $>2$  items unanswered). Where missing data were  $\leq 2$  items unanswered, imputation was performed using within-participant *Mdn* values. There were no missing data for perceived mental health benefits. The response rate for the study, therefore, was 81% ( $100/123 = 0.81$ ;  $0.81 \times 100 = 81$ ). The final sample ( $N = 100$ ) comprised 70 females and 30 males. No difference ( $p > 0.05$ ) was found in age between females (21 (20–26) years) and males (23 (20–27) years).

## Servant leadership dimensions

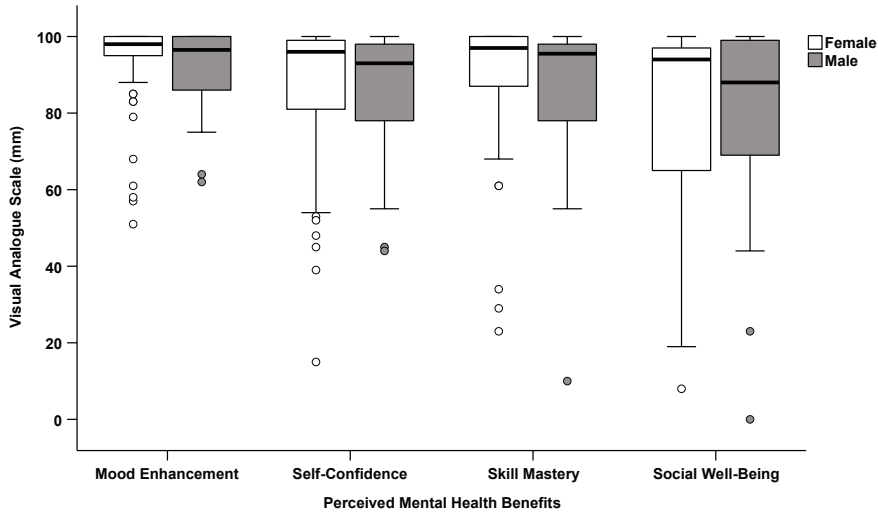
In females, a difference ( $p < 0.001$ ) was found between servant leadership dimensions; however, in males, no difference ( $p > 0.05$ ) was found. Ratings across servant leadership dimensions for both females and males are shown in full in Figure 1. Post hoc analysis for females indicated that stewardship was higher than authenticity ( $p < 0.001$ ; effect size  $- .43$ ), empowerment ( $p = 0.001$ ; effect size  $- 0.35$ ), humility ( $p < 0.001$ ; effect size  $- 0.48$ ), and standing back ( $p < 0.001$ ; effect size  $- 0.39$ ). No other differences (all  $p > 0.05$ ) were found in the pairwise comparisons. When comparing between females and males, authenticity ( $p = 0.040$ ; effect size  $- 0.21$ ) and stewardship ( $p = 0.010$ ; effect size  $- 0.26$ ) were higher in females. No other differences (all  $p > 0.05$ ) were found between females and males.



**Figure 1.** Servant leadership dimensions in female ( $n = 70$ ) and male ( $n = 30$ ) West Midlands, UK university students following completion of an eight-week servant leadership theory-driven salsa dance programme for novice learners

## Perceived mental health benefits

Differences were found between perceived mental health benefits in both females ( $p < 0.001$ ) and males ( $p = 0.035$ ). The ratings are shown in full in Figure 2. Post hoc analysis for females indicated that mood enhancement was higher than self-confidence ( $p < 0.001$ ; effect size  $- 0.40$ ) and social well-being ( $p < 0.001$ ; effect size  $- 0.52$ ). Self-confidence ( $p = 0.006$ ; effect size  $- 0.28$ ) and skill mastery ( $p < 0.001$ ; effect size  $- .41$ ) were also higher than social well-being. Post hoc analysis for males indicated that mood enhancement was higher ( $p = 0.002$ ; effect size  $- 0.32$ ) than social well-being. No other differences (all  $p > 0.05$ ) were found in the pairwise comparisons for either females or males. When comparing between females and males, no differences (all  $p > 0.05$ ) were found in any of the perceived mental health benefits.



**Figure 2.** Perceived mental health benefits in female (n = 70) and male (n = 30) West Midlands, UK university students following completion of an eight-week servant leadership theory-driven salsa dance programme for novice learners

### Correlation analyses

In females, low and moderate positive correlations were found between servant leadership dimensions and perceived mental health benefits. The correlations are shown in full in Table 1. No correlation, however, was found between humility and social well-being, stewardship and mood enhancement, and stewardship and self-confidence (all  $p > 0.05$ ). In contrast, in males, only stewardship was found to be moderately positively correlated with mood enhancement ( $r_s = 0.46$ ;  $p = 0.011$ ). No other correlations were found between servant leadership dimensions and perceived mental health benefits (all  $p > 0.05$ ) in males.

**Table 1.** Correlations between servant leadership dimensions and perceived mental health benefits in female West Midlands, UK university students following completion of an eight-week servant leadership theory-driven salsa dance programme for novice learners (n = 70)

	Perceived Mental Health Benefits			
	mood enhancement	self-confidence	skill mastery	social well-being
	Servant Leadership Dimensions			
Authenticity	$r_s = 0.33$ ; $p = 0.006$	$r_s = 0.29$ ; $p = 0.015$	$r_s = 0.33$ ; $p = 0.005$	$r_s = 0.27$ ; $p = 0.026$
Empowerment	$r_s = 0.27$ ; $p = 0.027$	$r_s = 0.29$ ; $p = 0.013$	$r_s = 0.31$ ; $p = 0.009$	$r_s = 0.28$ ; $p = 0.018$
Humility	$r_s = 0.28$ ; $p = 0.018$	$r_s = 0.27$ ; $p = 0.022$	$r_s = 0.35$ ; $p = 0.003$	
Standing Back	$r_s = 0.24$ ; $p = 0.046$	$r_s = 0.33$ ; $p = 0.006$	$r_s = 0.37$ ; $p = 0.002$	$r_s = 0.30$ ; $p = 0.013$
Stewardship			$r_s = 0.28$ ; $p = 0.019$	$r_s = 0.28$ ; $p = 0.018$

Note: Data are presented as Spearman rank correlations where statistically significant.



## Discussion

### Summary

This is the first study we are aware of to have applied principles of R.K. Greenleaf's (1977) servant leadership theory in the teaching and learning of salsa dance as a leisure-time physical activity for the enhancement of mental health outcomes. It was found that in novice learners, stewardship was the most highly rated servant leadership dimension and mood enhancement was the most highly rated perceived mental health benefit. Positive correlations between servant leadership and perceived mental health benefits were found in both genders and were of low to moderate magnitudes. Although a pre-experimental study design was chosen, our results suggest that servant leadership may have facilitated the high perceived mental health benefits observed following engagement in the salsa dance programme.

### Servant leadership dimensions

The Servant Leadership Survey short version focusses on the personal relationship that develops between leader and follower and is evaluated from the follower's perspective (van Dierendonck, Nuijten, 2011; van Dierendonck et al., 2017). Servant leaders go beyond their self-interests and create opportunities for followers to become the best version of themselves that they can be (Greenleaf, 1977). In the current study, an eight-week servant leadership theory-driven salsa dance programme was taught to novice learners in a university setting with followers (the students) rating the dimension of stewardship highest in the leader (the salsa dance teacher). In this context, stewardship can be thought of as willingness to take responsibility for the promotion of leisure-time physical activity to students in the larger community (the university itself) through emphasis of service instead of control (Aij, Rapsaniotis, 2017; van Dierendonck, Nuijten, 2011). The high stewardship rating is likely due to the salsa dance teacher having facilitated others to focus on the common interests of the organisation (everyone involved with or attending the classes), for example building an environment that promotes both physical activity and mental health, while remaining socially responsible and with a sense of obligation to the common good (Aij, Rapsaniotis, 2017; van Dierendonck, Nuijten, 2011). Moreover, the salsa dance teacher considered the students as individuals entrusted under his/her care (Greenleaf, 1977). Hence, as a trustee, this meant ensuring the responsible running of the salsa dance programme with an overarching concern for the well-being of the followers, organisation, and larger community (Block, 1993).

### Perceived mental health benefits

In the current study, both female and male university students rated mood enhancement as the highest perceived mental health benefit following completion of the salsa dance programme. This is in line with the study of A. Maraz et al. (2015) who reported the same finding in recreational Latin dancers. Similarly, according to P.A. Domene et al. (2014), psychological outlook ("a state of improved mental health and well-being, experiencing a sense of enjoyment or accomplishment, or being relaxed and without feelings of stress or tension"; p. 35) was found to be the dance-related perceived benefit of greatest importance in non-professional salsa dancers. Although the two aforementioned studies were undertaken using adults of both genders, neither was conducted in a university setting nor sought to recruit specifically university students per se. Additionally, it was reported that students are challenged not only with having to learn important new skills at university, such as living independently, creating

new relationships, managing finances, and handling academic pressures (Parker, Summerfeldt, Hogan, Majeski, 2004), but experience higher levels of poor mental health than pre-university (Bewick, Koutsopoulou, Miles, Slaa, Barkham, 2010). Much of this goes undetected and unsupported in the current university system (Macaskill, 2013; Royal College of Psychiatrists, 2011). Hence, it may be exactly these types of stressors that cause university students to seek out leisure-time pursuits that they perceive to be mood enhancing. Weekly salsa dance classes, therefore, may benefit mental health through mood enhancement as participation has been shown to foster interest and enjoyment (Domene et al., 2014), both of which are central to autonomously motivated behaviour (Ryan, Deci, 2000), and reduce feelings of distress acutely (Domene et al., 2016).

### **Correlation analyses**

Servant leadership was found to be positively related to perceived mental health benefits in the current study. This may be explained through the fulfilment of follower needs satisfaction as servant leadership has been shown to influence feelings of autonomy, competence, and relatedness (Ryan, Deci, 2000) within organisational contexts (Chiniara, Bentein, 2016; Mayer, Bardes, Piccolo, 2008). Servant leaders are invested in the growth, development, and well-being of their followers, and as such, work hard to ensure these basic psychological needs are satisfied in those they are leading. It is plausible that as the servant leadership dimensions and perceived mental health benefits were both highly rated, that participation in the salsa dance programme did indeed satisfy follower needs, thereby contributing to the associations found. Recently, in a sport context, G.S. Sullivan (2019) provided theoretical support for how needs satisfaction can facilitate servant leaders in meeting the basic psychological needs of their followers. Moreover, those who experience fulfilment of their autonomy, competence, and relatedness needs are more likely to continue with task engagement due to increased intrinsic motivation (Ryan, Deci, 2000). There is some evidence of servant leadership theory applied in a sport context that supports this in university students (Hammermeister et al., 2008).

### **Limitations and future research recommendations**

Despite the current study being novel in terms of servant leadership application to facilitate the teaching of mental health-enhancing physical activity, there are certain research limitations that we must acknowledge. First, no data were collected on the academic subject enrolled in by the participants. Having this data may have influenced the perceived mental health benefits as W. Larcombe, S. Finch and R. Sore (2015) reported that differences were found in depression, anxiety, and stress between university students enrolled in different academic subjects. Second, data were not collected on the academic year of study of the participants. This too may have influenced the perceived mental health benefits. It was reported by Macaskill (2013) that differences existed in psychiatric morbidity between academic year of study in (specifically UK-based) university students. Third, as the study design chosen was pre-experimental, cause and effect cannot be determined from our results. In the future, servant leadership theory-driven physical activity research should move from efficacy to effectiveness study designs (Thyer, 2012) in order to more comprehensively assess mental health outcomes in university students.

### **Conclusions**

Following an eight-week servant leadership theory-driven salsa dance programme taught to novice learners at a West Midlands, UK university, high perceived mental health benefits were observed with mood enhancement

being the most highly rated in both genders. Low to moderate positive correlations were found between servant leadership dimensions and perceived mental health benefits. The current pilot study suggests possible feasibility of procedures for future implementation in a randomised controlled trial of salsa dance-based mental health-enhancing physical activity for university students. Using an appropriate study design that addresses the true effectiveness of this particular form of leisure-time physical activity could be actioned through funding from already established university-based mental health support services. In a similar fashion to the work of A. Macaskill (2013), this research was carried out at a post 92 university that has engaged with the UK government's widening participation agenda in relation to higher education access. We feel greater consideration ought to be given to mental health-enhancing physical activities targeting students specifically at universities such as these (Macaskill, 2013; Royal College of Psychiatrists, 2011).

## References

- Ahearn, E.P. (1997). The use of visual analog scales in mood disorders: A critical review. *Journal of Psychiatric Research*, 31 (5), 569–579.
- Aij, K.H., Rapsaniotis, S. (2017). Leadership requirements for Lean versus servant leadership in health care: A systematic review of the literature. *Journal of Healthcare Leadership*, 9, 1–14.
- Bewick, B., Koutsopoulou, G., Miles, J., Slaa, E., Barkham, M. (2010). Changes in undergraduate students' psychological well-being as they progress through university. *Studies in Higher Education*, 35 (6), 633–645.
- Birks, M. (2007). Benefits of salsa classes in treatment of depression. *Nursing Times*, 103 (10), 32–33.
- Block, P. (1993). *Stewardship: Choosing service over self-interest*. San Francisco, CA: Berrett-Koehler.
- Chekroud, S.R., Gueorguieva, R., Zheutlin, A.B., Paulus, M., Krumholz, H.M., Krystal, J.H., Chekroud, A.M. (2018). Association between physical exercise and mental health in 1.2 million individuals in the USA between 2011 and 2015: a cross-sectional study. *The Lancet. Psychiatry*, 5 (9), 739–746.
- Chiniara, M., Bentein, K. (2016). Linking servant leadership to individual performance: Differentiating the mediating role of autonomy, competence and relatedness need satisfaction. *The Leadership Quarterly*, 27 (1), 124–141.
- Coruh, E.A. (2014). The comparison of wellness levels between individuals participating and nonparticipating in recreational latin dancing. *Procedia – Social and Behavioral Sciences*, 152, 368–371.
- Dogra, S., MacIntosh, L., O'Neill, C., D'Silva, C., Shearer, H., Smith, K., Cote, P. (2018). The association of physical activity with depression and stress among post-secondary school students: A systematic review. *Mental Health and Physical Activity*, 14, 146–156.
- Domene, P.A., Easton, C. (2014). Combined triaxial accelerometry and heart rate telemetry for the physiological characterization of Latin dance in non-professional adults. *Journal of Dance Medicine & Science*, 18 (1), 29–36.
- Domene, P.A., Moir, H.J., Pummell, E., Easton, C. (2014). Physiological and perceptual responses to Latin partnered social dance. *Human Movement Science*, 37, 32–41.
- Domene, P.A., Moir, H.J., Pummell, E., Easton, C. (2016). Salsa dance and Zumba fitness: Acute responses during community-based classes. *Journal of Sport and Health Science*, 5 (2), 190–196.
- Dore, I., O'Loughlin, J.L., Schnitzer, M.E., Datta, G.D., Fournier, L. (2018). The longitudinal association between the context of physical activity and mental health in early adulthood. *Mental Health and Physical Activity*, 14, 121–130.
- Eva, N., Robin, M., Sendjaya, S., van Dierendonck, D., Liden, R.C. (2019). Servant Leadership: A systematic review and call for future research. *The Leadership Quarterly*, 30 (1), 111–132.
- Greenleaf, R.K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness*. New York: Paulist Press.
- Hammermeister, J., Burton, D., Pickering, M., Chase, M., Westre, K., Baldwin, N. (2008). Servant-leadership in sport: A concept whose time has arrived. *The International Journal of Servant-Leadership*, 4 (1), 185–215.
- Higher Education Statistics Agency. (2019). *Figure 4 – HE student enrolments by personal characteristics*. Retrieved from: <https://www.hesa.ac.uk/data-and-analysis/sb252/figure-4.csv>.

- Larcombe, W., Finch, S., Sore, R. (2015). Who's distressed? Not only law students: Psychological distress level in university students across diverse fields of study. *Sydney Law Review*, 37 (2), 243–273.
- Macaskill, A. (2013). The mental health of university students in the United Kingdom. *British Journal of Guidance & Counselling*, 41 (4), 426–441.
- Maraz, A., Kiraly, O., Urban, R., Griffiths, M. D., Demetrovics, Z. (2015). Why do you dance? Development of the Dance Motivation Inventory (DMI). *PLoS One*, 10 (3), e0122866.
- Mayer, D.M., Bardes, M., Piccolo, R.F. (2008). Do servant-leaders help satisfy follower needs? An organizational justice perspective. *European Journal of Work and Organizational Psychology*, 17 (2), 180–197.
- Molina-Garcia, J., Castillo, I., Queralt, A. (2011). Leisure-time physical activity and psychological well-being in university students. *Psychological Reports*, 109 (2), 453–460.
- National Health Service (2016). Dance for fitness. Retrieved from: <https://www.nhs.uk/live-well/exercise/dance-for-fitness> (30.06.2016).
- Parker, J.D.A., Summerfeldt, L.J., Hogan, M.J., Majeski, S.A. (2004). Emotional intelligence and academic success: Examining the transition from high school to university. *Personality and Individual Differences*, 36 (1), 163–172.
- Rieke, M., Hammermeister, J., Chase, M. (2008). Servant leadership in sport: A new paradigm for effective coach behaviour. *International Journal of Sports Science and Coaching*, 3 (2), 227–239.
- Royal College of Psychiatrists (2011). *Mental health of students in higher education*. London: Royal College of Psychiatrists.
- Ryan, R.M., Deci, E.L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25 (1), 54–67.
- Spears, L.C. (1995). *Reflections on leadership: How Robert K. Greenleaf's theory of servant-leadership influenced today's top management thinkers*. New York: John Wiley & Sons.
- Stansfeld, S., Clark, C., Bebbington, P., King, M., Jenkins, R., Hinchliffe, S. (2016). Chapter 2: Common mental disorders. In: S. McManus, P. Bebbington, R. Jenkins, T. Brugha (eds), *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014* (pp. 37–68). London: NHS Digital.
- Sullivan, G.S. (2019). *Servant Leadership in Sport*. London: Palgrave Macmillan.
- Thyer, B.A. (2012). *Quasi-experimental research designs*. New York: Oxford University Press.
- Tyson, P., Wilson, K., Crone, D., Brailsford, R., Laws, K. (2010). Physical activity and mental health in a student population. *Journal of Mental Health*, 19 (6), 492–499.
- Unite Students (2016). *Student resilience: Unite Students insight report*. Bristol: Unite Students.
- van Dierendonck, D., Nuijten, I. (2011). The Servant Leadership Survey: Development and validation of a multidimensional measure. *Journal of Business and Psychology*, 26 (3), 249–267.
- van Dierendonck, D., Sousa, M., Gunnarsdottir, S., Bobbio, A., Hakanen, J., Pircher Verdorfer, A., Cihan Duyan, E., Rodriguez-Carvajal, R. (2017). The cross-cultural invariance of the Servant Leadership Survey: A comparative study across eight countries. *Administrative Sciences*, 7 (2), 8.
- Westre, K. (2008). Servant-leadership in the context of sport. *The International Journal of Servant-Leadership*, 4 (1), 123–139.
- White, R.L., Babic, M.J., Parker, P.D., Lubans, D.R., Astell-Burt T., Lonsdale, C. (2017). Domain-specific physical activity and mental health: A meta-analysis. *American Journal of Preventative Medicine*, 52 (5), 653–666.

**Cite this article as:** Domene, P.A., Lawson, C. (2019). Salsa Dance and Perceived Mental Health Benefits: a Servant Leadership Theory-Driven Study. *Central European Journal of Sport Sciences and Medicine*, 4 (28), 107–117. DOI: 10.18276/cej.2019.4-10.