

Dance Confidence, Age and Gender.

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ABSTRACT

Dance Confidence is a measure of domain-specific self-esteem as applied to how a person feels about their social and recreational dance ability. This study is concerned with how dance confidence varies as a function of gender and age group. 13,715 people watched a video and then completed an on-line survey. The results show that dance confidence varies as a function of gender and age group, such that, in general, females have higher levels of dance confidence than males, and dance confidence changes at significant points in the developmental cycle. For females dance confidence levels start high in early adolescence, they drop significantly post 16 and then rise steadily through late-teens and early twenties before leveling off during mid-life. There is a significant drop in dance confidence for women when they reach their mid-late fifties. For men, dance confidence levels start low and then rise steadily during late teens and early twenties, before leveling off during mid-thirties. There is a significant increase in dance confidence for men when they reach their mid-sixties. The results, and the link between social dance and self-esteem, are discussed within the context of two theoretical models of self-esteem, the “Reflected Appraisal Model” and the “Competencies Model”.

## INTRODUCTION

Dance Confidence can be understood within the framework of the self-concept and self-esteem. The self-concept is concerned with how someone thinks about or perceives themselves. Rosenberg (1965) defines self-esteem as, “a positive or negative attitude toward a particular object, namely, the self” (p. 30). (see also Wells & Marwell, 1976). Leary and Downs (1995) draw a distinction between Trait and State self-esteem while Harter (1999) draws a distinction between Global and Situational (or Domain-specific) self-esteem.

According to Robins & Trzesniewski (2005) global self-esteem changes across the lifespan at key developmental periods. The developmental changes in global self-esteem reported by Robins & Trzesniewski (2005), which are based on a total of 88 published articles, suggest that for both males and females, global self-esteem is higher for younger teenagers, below the age of 18, than for those in the 18-22 age group. Global self-esteem appears not to change as a function of age between 23 and 49. Global self-esteem then rises steadily during the 50s and 60s before it drops for both men and women who are in their 70s and 80s.

In addition to changes in global self-esteem across the life-span there are also gender differences in global self-esteem at certain points across the lifespan. Robins & Trzesniewski (2005) report that males have higher global self-esteem than

females in adolescence and throughout adulthood. This gender difference was not observed in childhood and it narrows, before disappearing, in older age.

Gender differences have also been observed in domain-specific self-esteem. In a meta-analysis of gender differences in domain-specific self-esteem Gentile, Grabe, Dolan-Pascoe, Twenge, Wells & Maitino (2009) report that women had higher domain-specific self-esteem in only two out of ten domains. Gentile et al. report that women had higher domain-specific self-esteem in behavioral conduct and moral-ethical self-esteem but that men had higher domain-specific self-esteem in physical appearance, athletic, personal self and self-satisfaction self-esteem. They report no gender differences in domain-specific self-esteem in academic, social acceptance, family and affect self-esteem.

Dance Confidence is an aspect of domain specific self-esteem, and is an indicator of how someone feels about themselves in relation to their recreational/social dancing ability. Dance confidence is not a measure of how accomplished a person has been in taking and passing dance exams, or in learning formal aspects of dancing. Rather it is a measure of how people feel about their own “freestyle” recreational dance ability.

The link between social dance and self-esteem can be explained within at least two theoretical models of self-esteem. These models are the “Reflected Appraisal Model” and the “Competencies Model”.

The Reflected Appraisals Model suggests that self-esteem is based on an individual's perception of the opinions and perceptions of other people. Baumeister & Leary (1995) suggest that individuals have a need to belong. The Reflected Appraisals Model is based on a social framework of self-esteem (Rosenberg, 1965), such that social factors, for example, cultural, family, peer group norms, and religion, influence an individual's self-esteem. According to this model the self-esteem people have based on their social dancing can be influenced by how other people respond to their social dancing.

The Competencies Model (James, 1890) suggests that self-esteem is based on how competent someone feels with regards to his or her accomplishments in a particular domain. The competencies model predicts that if someone feels they have accomplished more within a particular domain then they will have a higher level of self-esteem within that domain than someone who feels they have accomplished less within that domain. According to the competencies model, the self-esteem people have based on their social dancing can be influenced by the level of their social dance accomplishments.

The present study is exploratory and is interested in how Dance Confidence varies as a function of age and gender.

## METHOD

### Respondents

A non-probability sampling technique was used. 13,715 people between the ages of 13 and 86 (Mean age = 33.4, SD = 11.18) self-selected to complete an online survey. 8,816 (64.3%) of the respondents were male and 4,899 (35.7%) were female.

### Procedure and Materials

A video was posted on the BBC Radio 4 website (URL 1). The video was titled “Diagnosing your dancing style” by the BBC and it showed a male dance-scientist demonstrating different styles of dancing. The styles varied by the size of the movements and by the degree of movement coordination.

Viewers were asked to think about their own dancing and to record which style of dancing best described their own style in terms of size and coordination. The video was 4:08 minutes. At the end of the video viewers were asked to complete an on-line survey.

The on-line survey (URL 2) asked respondents to give details of their age and gender and in addition to describing their dance movements in terms of their size and coordination they were asked the following question:

“Imagine you are at a party where other people, and you, are dancing. Compared to the average person of your own age and gender how good a dancer do you think you are?”

Respondents were asked to rate their dancing ability on a 7-point scale, where 1= terrible, 2 = very poor, 3 = poor, 4 = average, 5 = good, 6 = very good, 7 = excellent. This question provided an indication of a respondent’s Dance Confidence.

The video and link to the on-line survey were posted on the BBC website on the 21<sup>st</sup> October 2008 to coincide with the broadcast of an interview with the author of this paper about the psychology of dance on the BBC Radio 4 “Today” program in the UK. The data reported here were gathered from respondents during a twelve-month period.

## RESULTS

Figure 1 shows mean dance confidence ratings as a function of gender and age category.

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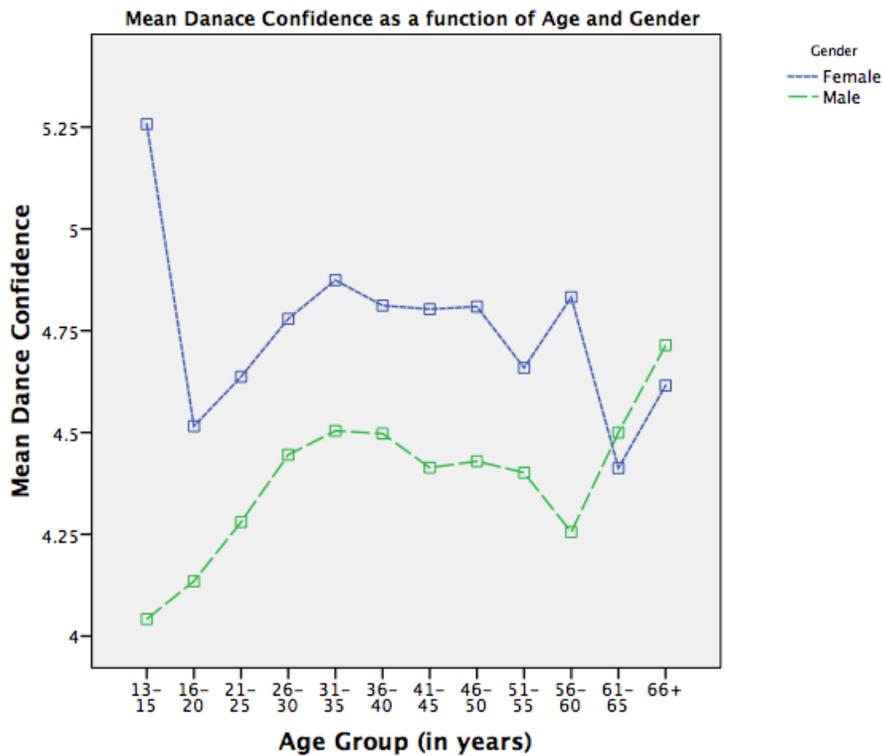
Figure 1 about here

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For clarity of interpretation the results will be reported in three sections. Section 1 will report the results for people between the ages of 13 and 25 (Young People). Section 2 will report the results for people between the ages of 26 and 55 (middle

years people). Section 3 will report the results for people over the age of 55 (older people).

Figure 1: Showing mean Dance Confidence ratings as a function of Gender and Age Group.



Young People

A two factor Analysis of Variance (ANOVA) was used to analyse dance confidence ratings in younger people. Factor 1: Gender, had two levels (male, female). Factor 2: Age Group, had three levels (<16, 16-20, 21-25). The dependent variable was Dance Confidence rating. Data from 3,812 respondents were included in this analysis.

There was a significant main effect of Gender ( $F(1, 3806) = 30.91, p < .001, \eta^2 =$

.008) and a significant main effect of Age Group ( $F(2, 3806) = 4.63, p < .01, \eta^2 = .002$ ). There was a significant interaction between Gender and Age Group ( $F(2, 3806) = 3.61, p < .05$ ). These results show that Dance Confidence scores vary both as a function of gender and age group. Such that for females dance confidence scores are significantly higher in the <16 age group than in the 16-20 age group ( $t(390) = 3.24, p < .01$ ), and there is no difference in dance confidence scores between the 16-20 and 21-25 age groups ( $t(1294) = 1.65, p > .05$ ). Whereas for males there is no difference in dance confidence scores between the <16 and 16-20 age groups ( $t(712) = .328, p > .05$ ) and dance confidence scores are significantly higher in the 21-25 age group than the 16-20 age group ( $t(2455) = 2.46, p < .05$ ).

### Middle Years People

A two factor ANOVA was used to analyse dance confidence ratings in middle years people. Factor 1: Gender, had two levels (male, female). Factor 2: Age Group, had six levels (26-30, 31-35, 36-40, 41-45, 46-50, 51-55). The dependent variable was Dance Confidence rating. Data from 9219 respondents were included in this analysis. There was a significant main effect of Gender ( $F(1, 9207) = 113.46, p < .001, \eta^2 = .012$ ). There was no main effect of Age Group ( $F(5, 9207) = 1.71, p > .05$ ). The interaction between Gender and Age Group was not significant ( $F < 1$ ). These results show that Dance Confidence scores are higher for females than for males, and this difference does change with age.

### Older People

A two factor ANOVA was used to analyse dance confidence ratings in older people. Factor 1: Gender, had two levels (male, female). Factor 2: Age Group, had three levels (56-60, 61-65, >66). The dependent variable was Dance Confidence rating. Data from 684 respondents were included in this analysis. There was no significant main effect of Gender ( $F < 1$ ) and no significant main effect of Age Group ( $F < 1$ ). There was a significant interaction between Gender and Age Group ( $F(2, 678) = 4.94, p < .01, \eta^2 = .014$ ). These results show that Dance Confidence scores vary both as a function of gender and age group. The interaction between Gender and Age Group can be accounted for by two sets of findings. First, there are gender differences in Dance Confidence in the 56-60 age group, such that females have higher dance confidence than males ( $t(402) = 4.48, p < .001$ ), but there are no gender differences in Dance Confidence in either the 61-65 age group ( $t(196) = .416, p > .05$ ) or the >66 age group ( $t(80) = .323, p > .05$ ). Second, there are age differences in Dance Confidence that are different for males and females. For females Dance Confidence levels are significantly higher in the 56-60 age group than in the 61-65 age group ( $t(251) = 2.68, p < .01$ ) and there is no difference in Dance Confidence levels between the 61-65 and >66 age groups ( $t(104) = .66, p > .05$ ). For males there are no differences in Dance Confidence levels between the 56-60 and 61-65 age groups ( $t(347) = 1.48, p > .05$ ) or between the 61-65 and >66 age groups ( $t(172) = .917, p > .05$ ). However, there is a difference in Dance Confidence levels between the 56-60 and >66 age groups, such that Dance Confidence levels are higher in the older age group ( $t(285) = 2.24, p < .05$ ).

## DISCUSSION

The main findings of the present sample are that Dance Confidence levels are generally higher for females than for males and patterns of Dance Confidence change across the lifespan.

### Gender Differences in Dance Confidence

Dance Confidence is a domain-specific indicator of self-esteem and this paper suggests there are gender differences in dance confidence, and therefore domain-specific self-esteem. In the present sample women under the age of 60 have higher levels of domain-specific Dance Confidence self-esteem than men, and there are no differences in dance confidence self-esteem between men and women over the age of 60. In their meta-analysis of gender differences in domain-specific self-esteem Gentile et al. (2009) report that women had higher domain-specific self-esteem in two out of ten domains. The present sample adds to this body of research and provides provisional evidence suggesting that women under the age of 60 have higher levels of domain-specific self-esteem within the domain of social dance confidence than men.

### Self-esteem across the lifespan

The present sample shows that dance confidence based self-esteem changes with age. This finding is consistent with data on the relationship between age and global self-esteem reported by Robins & Trzesniewski (2005). While the general patterns of change in self-esteem across the lifespan reported by Robins & Trzesniewski

(2005) are mirrored in the present study there are several key differences between the global self-esteem levels previously reported and the domain-specific self-esteem levels observed in this sample. First, Robins & Trzesniewski (2005) report that global self-esteem for boys in the 13-17 age group is higher than in boys in the 18-22 age group. The data reported in the current sample show the opposite effect in domain-specific dance confidence, such that dance-related domain-specific self-esteem starts at a low level and then goes up, as boys get older. Second, Robins & Trzesniewski (2005) report that in men over the age of 65 global self-esteem goes down over the next two decades. However, in the present sample domain-specific self-esteem rose in men over 60.

#### Dance Confidence and Young People

The present study observed changes in dance confidence in younger people that varied as a function of gender and age group. The present study found that although levels of dance confidence were high in girls below the age of 16 dance confidence levels drop significantly in girls post-16. This finding can be explained within the Competency Model of self-esteem such that girls pre and post 16 use social recreational dance for different purposes and this change in purpose reflects a change in the competency of social dance. One hypothesis is that pre-16 girls use recreational dance as a fun enjoyable activity. Girls of this age might either dance on their own at home, in small groups with other girls or they attend formal dance classes. Dancing is for fun. All these activities increase their dance confidence because young girls are accomplished and competent at using dance for these purposes. Girls post 16

often give up formal dance classes, and they are likely to start dancing publically in front of members of the opposite sex (at social parties or discos etc.). Girls post 16 are not accomplished in this use of social recreational dance when they first embark on it and therefore, according to the Competency Model, this would explain why they have lower levels of domain-specific self-esteem. According to this hypothesis dance confidence should increase as girls become more accomplished and competent with this new purpose of social recreational dance, and this is indeed what the present study has found.

The Competency Model can also account for the low levels of dance confidence observed in young boys (pre-16) and in the significant relative increase in dance confidence observed in boys post 20. Pre-16 boys do not enjoy the same advantage of high dance confidence levels as girls of the same age because they do not use dance in the same way as girls during this period of their development. Young boys are less likely to dance with male friends at home and they are less likely to enroll in formal dance classes than girls.

The Reflective Appraisal Model can also provide an account for the rise in dance confidence in boys in their late teens and early twenties. The Reflective Appraisal Model predicts that if other people respond positively to a person's social dancing then that person will develop a high level of domain-specific dance-related self-esteem.

According to Darwin (1871) one function of social dance for young men is as a courtship display. Social recreational dance is therefore part of the sexual selection, or mate selection, process. According to this view young men dance for two reasons. First, they dance to make themselves stand out from their mate selection

competitors. Second, they dance to display themselves to potential mates. We know that the way young men dance, and the way they are perceived by women, is related to both their hormonal make up (Fink et al., 2007) and their genetic quality (Brown et al. 2005). In social dance settings, such as discos and nightclubs, men are clearly being watched and evaluated as potential mates. Evaluation such as this is just the type of social feedback that the Reflective Appraisal Model suggests will have an impact a person's domain-specific dance-related self-esteem. As men and women use dance more and more as part of the mate selection process during their late teens and early twenties they will both become more competent with this function of dance and they will both get used to receiving feedback from other people and this will lead to higher ratings of dance confidence during this period.

#### Dance Confidence and the Middle Years

The present study found that in the middle years dance confidence levels were significantly higher in women than in men and that dance confidence levels did not change as a function of age. One suggestion for the stability of dance confidence levels during this period is that from a mate selection process this is the period when people typically marry and have children. According to the UK Office for National Statistics (2005) the average age of first marriage in the UK in 1991 was 27 for men and 25 for women and the mean age of childbearing for women is 29. These data suggest that from the mid-20s onwards people are moving away from the stage of mate selection and they are beginning to settle down with their partners and are starting a family. If social and recreational dance forms part of the courtship

process it is unsurprising that no major age related changes therefore occur to dance confidence during this period.

Many first marriages break down and people remarry. The UK Office for National Statistics report the average age of marriage for people who have previously been divorced is 37 for women and 40 for men. Therefore, for people who are divorced they are likely to enter the mate selection process again and they may use recreational dance once again as part of this process. In a future study it would be interesting to understand the extent to which divorced people use recreational dance as part of the mate selection process in later life and also to understand if the dance confidence levels of divorced people who are using dance as part of the mate selection process is different to the dance confidence levels of people of the same age who are married and who are no-longer using dance as part of the mate selection process. The Reflective Appraisals Model would predict higher domain-specific dance-related self-esteem in such divorced people because they will be receiving more feedback on their social dancing than married people who are not engaging in social and recreational dance for the same reason.

#### Dance Confidence in Older People

The present study observed changes in dance confidence in older people that varied as a function of both gender and age group. The present study found that for people in the 56-60 age group women had higher levels of dance confidence than men. This finding is consistent with similar gender differences observed in all younger age

groups. However, the present study also found that for the first time across the developmental cycle there was no difference between men and women in dance confidence in either the 61-65 or >66 age groups. This closing of the dance confidence gap is characterised in two ways. First, female dance confidence drops significantly post 60 and male dance confidence increases significantly during the period between 60 and 66+.

The drop in dance confidence seen in women over the age of 60 is consistent with the decline in global self-esteem reported by Robins and Trzesniewski (2005) for women of the same age. Robins and Trzesniewski (2005) provide several possible explanation for such an age-related decline in self-esteem, which are based on situational factors, such as retirement, loss of spouse, declining health and lower socioeconomic status. It is clear to see how such factors might have a negative impact on both global self-esteem and on domain-specific dance-related self-esteem. Loss of a partner, reduced income and serious negative health could all prevent someone from engaging in social and recreational dance and this reduced participation might, according to a competency model, make people feel less accomplished in the activity. However, if this were the main explanation for a decline in dance confidence then we should expect to see a similar decline in dance confidence in men as well as women, which we do not see. Another explanation could be linked to this period being the time when women become post-menopausal. The post-menopausal stage is the time when women can no longer conceive a child. If perceptions of dance ability are related to fertility-based courtship

displays then it is unsurprising that a negative change in dance confidence occurs during this stage in a women's life.

It is not clear why dance confidence levels go up in men over the age of 60. There are, however, several possible hypotheses that can be posed. First, it is possible that in men under the age of 65 dance confidence is negatively influenced by the high dance confidence of women, such that, in relation to dance confidence, men might be intimidated by women's confidence. The observed post-menopausal decrease in women's dance confidence may release men from a lack of confidence in their own dance ability, because they no longer feel so intimidated by high levels of female dance confidence their own dance confidence is able to rise. Second, optimistic people are less likely to suffer from life threatening conditions, such as cardio vascular disease, coronary heart disease and stroke, than pessimistic people (e.g. Giltay, Geleijnse, Zitman, Hoekstra & Schouten, 2004; Kubzansky, Sparrow, Vokonas & Kawachi, 2001; Ostir, Markides, Peek & Goodwin, 2001), and positive affect can be protective against general mortality rates (Cohen & Pressman, 2006). It might be the case that the current sample of older men includes those optimists who have outlived their pessimistic contemporaries. However, if this were the case then we should expect to see general levels of self-esteem go up for older men as well, but according to Robins and Trzesniewski (2005) this is not the case.

Clearly, more research is needed to understand the reasons why dance confidence levels increase for men over 60 and decrease for women over 60, leading to convergence of

dance confidence levels across gender for the first time in the lifespan. As has been suggested, this might be due to developmental changes, such that age drives the change in dance confidence. It might also be due to older people historically being more involved in partner dancing, which might lead to equality of dance confidence scores across the genders. These positions could be tested in a number of ways. First, in a longitudinal study it would be interesting to see if convergence of dance confidence scores occurs when today's young people reach 60. As there are differences between men and women in dance confidence scores in all age groups up to 55 we only have to wait five years to see if the dance confidence scores of people who are currently 55 change as a function of age. Second, we could examine the dance confidence scores of (younger) people who currently engage in partner dance. If there is no difference in dance confidence scores in younger partner dancers, then we might conclude that partner dancing is responsible for the equalizing effect on dance confidence. Nevertheless, it is not clear why partner dancing should reduce the dance confidence of women.

### Limitations of the Present Study

There are several limitations of the present study. First, in order to reach the widest range of respondents a self-selecting, non-probability sampling technique was used. This might have resulted in a self-selecting error. However, the large sample size in the present study, and the distribution of respondents across the lifespan, mitigates against such an error. Second, the video-stimulus showed only a male dancer. The presence of a male dancer may have influenced how men, and women, made their dance confidence ratings. A future replication might consider using a genderless, ageless, dancing avatar. Third, the

distribution of respondents between the genders and across the ages was not even. A stratified sampling technique could be used to overcome this in a replication or extension of the current study. Fourth, dance confidence self-esteem was derived from a single-item self-esteem scale. There is a wide range of self-esteem scales varying in terms of the number of items and factors they purport to measure. For example, the Heatherton & Polivy (1991) scale consists of 20 items and the Rosenberg (1965) scale consists of 10 items. Some measures of self-esteem use a single item. For example, the Single Item Self-esteem Scale (SISE) (Robins, Hendin & Trzesniewski, 2001) asks participants to rate their own self-esteem using the single statement “I have high self-esteem” and they found that the SISE had very high convergent validity with the Roseberg (1965) self-esteem scale. This shows that self-esteem can be measured as reliably with a single item as it can with multiple items.

### Directions for Future Research

The data set reported in the present paper examines dance confidence in both men and women from across the lifespan. As such, all comparisons that are made between people of different age groups are based on independent samples. One issue with this approach is that the differences that have been observed statistically may not be due to age differences per se but may instead be due, for example, to differences in the way people of different ages have engaged with social and recreational dance throughout their life. In a future replication of this study it would be informative to use advanced longitudinal techniques to examine how dance confidence changes as a function of age using a repeated measures design, where the same participant is questioned at multiple points

throughout their life.

The present study has shown very clearly that dance confidence changes as a function of gender and age group. However, these are not the only factors that will influence person's dance confidence. In order to understand what other factors influence dance confidence a future replication of this study could examine other mediating factors that influence dance confidence. Such factors as prior dance experience, cultural background, relationship status, attitude to physical exercise and general health status may also contribute to dance confidence levels.

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