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MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

**„How Action Orientation, Fear of Negative Evaluation
and Self-Consciousness Affect Performance under
Pressure in Competitive Ballroom Dancing“**

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angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of
Master of Science (MSc)

Wien, 2020 / Vienna 2020

Studienkennzahl lt. Studienblatt /
degree programme code as it appears on
the student record sheet:

UA 066 840

Studienrichtung lt. Studienblatt /
degree programme as it appears on
the student record sheet:

Masterstudium Psychologie UG2002

Betreut von / Supervisor:

Ass.-Prof. Mgr. Dr. Peter Gröpel

**How Action Orientation, Fear of Negative Evaluation and Self-Consciousness
Affect Performance under Pressure in Competitive Ballroom Dancing**

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March 2020

Abstract

The present study looks at the personality traits *action versus state orientation*, *fear of negative evaluation* and *self-consciousness* and their effect on performance under pressure. After reviewing recent literature it proposes a) a negative correlation of state orientation b) a positive correlation of fear of negative evaluation and c) a positive correlation of self-consciousness with performance under pressure. After exclusion, the sample consists of $n=36$ competitive ballroom dancing couples from the German speaking regions. They completed an online questionnaire about these three traits and reported three to five tournament results to evaluate their performance under pressure.

Keywords: action versus state orientation, fear of negative evaluation, self-consciousness, competitive ballroom dancing, sport psychology

Die vorliegende Studie betrachtet die Persönlichkeitsmerkmale *Handlungs- versus Lageorientierung*, *Angst vor negativer Bewertung* und *Selbst-Aufmerksamkeit* und ihren Einfluss auf Leistung in einer Drucksituation. Nach einer Literaturübersicht stellt sie folgende Thesen auf: a) Lageorientierung hat eine negative Korrelation, b) Angst vor negativer Bewertung zeigt eine positiven Korrelation und c) Selbst-Aufmerksamkeit zeigt eine positiven Korrelation mit Leistung unter Druck. Die Stichprobe besteht, nach Exklusion, aus $n=36$ Leistungstänzern im Gesellschaftstanz aus dem deutschsprachigen Raum. Sie nahmen an einem Online-Fragebogen teil, der diese Persönlichkeitsmerkmale abgefragt hat und lieferten Ergebnisse von drei bis fünf Turnieren um ihre Leistung unter Druck zu messen.

Schlüsselwörter: Handlungs- versus Lageorientierung, Angst vor negativer Bewertung, Selbst-Aufmerksamkeit, Leistungssport, Gesellschaftstanz, Sportpsychologie

How Action Orientation, Fear of Negative Evaluation and Self-Consciousness Affect Performance under Pressure in Competitive Ballroom Dancing

By now there are many studies about choking, which is defined by Baumeister (1984) as a performance decrease under pressure, in competitive sports, but none in the field of competitive ballroom dancing. Otten (2009) for example looked at basketballers and under which circumstances they choke or clutch, which he defines as the opposite to choking, a better performance under pressure. He found that a participant's feeling of control would lead to a better performance while a shift of attention to the task would lead to anxiety which leads to self-focus and a loss of performance.

Competitive ballroom dancing is different to many more traditional sports, as the performance or score has no objective anchors like goals or points, and if one ever watches a ballroom tournament there are never reports of the percentage a couple danced in step such as possession in a soccer match. The couples are rated by judges, which, as shown by Rohleder et al. (2007), leads to increased stress response. The core concept of performance in dance sport is being evaluated by others. This is why this present study chose *fear of negative evaluation* as one the personality traits to look at in combination with performance in a ballroom tournament.

In the Handbook of Sport Psychology, Beilock and Grey (2007) state that one explanation for choking are attentional theories. And there are two directions researchers argue. One direction are distraction based theories, where the lack of control over ones focus leads to a decrease in performance. In their study, Fernández-Castillo and Caurcel (2015) suggest that students who have higher levels of anxiety have less control over their attention, they become distracted, which in return leads to a worse performance in an exam. That would again be an argument for fear of negative evaluation as a construct to look at, when discussing performance losses. On the other hand, Beilock and Grey (2007) argue that most sport performances should not be disrupted by attentional distraction, as the skills, which are about to be distracted, are already that well learned and don't need much attention anymore, that distraction should not have an effect. This leads to the opposite direction researchers argue: Inward attention or too much attention on oneself. Baumeister (1984) states that under pressure one starts to become more self-conscious and perform worse. The reason for this, as Beilock and Carr (2001) state, is that one starts to monitor the execution of an already well-learned skill and stops doing it automatically, which leads to a worse performance. Self-consciousness seems especially relevant for

competitive ballroom dancing, as there is a public and a private self-consciousness and the dancers are likely to think about their appearance and how they are perceived by the judges and the crowd.

Most studies studied their theories under experimental conditions, which has its benefits, but the present study chose to use real tournaments to measure the athlete's performance under pressure to add to the existing literature concerning performance pressure.

These core constructs, which are subject of this study, are now being looked at with the appropriate theoretical background and in detail and the sport *competitive ballroom dancing* is going to be explained.

Competitive Ballroom Dancing

Only couple-based competitive ballroom dancing tournaments were subject to this study, no group or solo dancing. The basic rulesets are going to be explained so that anybody can understand this study. Some rules or nuances might be left out for the sake of understanding and accessibility.

There are many different ways of dancing but for this study only international ballroom dancing tournaments are of relevance. These are divided into three categories: A tournament is either *Standard*, which consists of slow waltz, Viennese waltz, slow foxtrot and quickstep, *Latin*, which includes the dances samba, rumba, cha cha cha, paso doble and jive or *Ten-Dance*, which includes, as the name indicates, all ten dances. Most dance couples, especially in higher divisions, focus on one of these three categories.

The couples are separated into skill brackets according to their points from D, C, B, A to S, D being the lowest. Depending on the skill bracket there are a few different rules for tournaments, which are not relevant for this study. The couples can only move up from one skill bracket to another if they gained enough points, but they cannot get demoted. The couples are separated into age groups as well and dance only against other couples of the same category (latin/standard/ten-dance), skill bracket and age group. Most dance tournaments run many divisions and age brackets on one weekend.

Each dance lasts for 60 to 90 seconds without a real break in-between the dances. One round consists of all five dances and takes about 7 to 9 minutes. The number of rounds depends on the number of couples starting. If there are seven or less couples there is only the final. Depending on the size of the dancefloor there is

a maximum number of couples per round allowed and if the number of couples in one round exceeds that limit, the rounds are split into as many *heats* as needed. Between the rounds there is a short break where the results are released and the couples learn if they succeed into the next round or got eliminated.

The couples are rated by a set of judges who are always an uneven number and consist of former athletes or trainers with a license to judge. The rating system differs between rounds and finals. In the rounds judges give the couples *marks* based on their performance, which they want to see in the next round. Judges give as many marks as couples are allowed in the next round/final. In the final, each judge gives each couple a placement recommendation.

The following example will help the understanding: There is a tournament with 22 couples starting. The size of the dancefloor allows a maximum of 12 couples on the floor. The rounds are going to be the following: Round one with 22 couples, round two with 12 couples and the final with 6 couples. According to the rules, in the first round the couples get split into two heats á 11 couples and each judge assigns 12 marks per dance, as round two shall consist of 12 remaining couples. After the first round with both heats, 10 couples are excluded and 12 couples move on to round two. In round two, all 12 couples can dance each of the five dances at the same time and each judge assigns 6 marks. In the final, each judge gives each couple a placement recommendation from 1 to 6 and depending of the distribution of these placement recommendations of all judges, the couples receive notice of their final rank.

All results of competitive ballroom competitions can be found online and are public, which is quite relevant for this study. The competitive ballroom dance scene is quite proud of their transparency. One does not only see the results of any tournament and any dancer online, but also how each judge rated the couples in any dance and any round.

Performance under Pressure

Athletes such as competitive ballroom dancers have to be able to perform under the pressure of a tournament and judges rating their performance. But a recent study of Genakos et al. (2015) shows that pressure decreases the performance of athletes. But what is pressure? Baumeister (1984) defines *pressure* “as any factor or combination of factors that increases the importance of performing well” (p.610), which describes the tournament situation. More precisely, a competitive ballroom

dancing tournament stretches over several rounds and the couples get the results after each round. Genakos et al. (2015) conducted their study about diving tournaments, which are divided into three rounds as well, and they found that the interim rank given to the divers between the rounds had a negative effect on the diver's performance as the pressure raises. As the couples in competitive dancing receive their results in-between the rounds as well and their rank improves after each round, as the worse couples get eliminated, their pressure rises each round. Thus, their performance should decline. This study wants to find out who is more prone to these mechanisms and who is not.

DeCaro et al. (2011) suggested that not only the personality of the participants but also the type of pressure and the type of task influence if one might succeed or fail to perform well. They differentiate between monitoring pressure and outcome pressure, and show that shifting the attention inwards helps to prevent performance loss when learning a new rule-based skill. However, there was no negative effect on performance when the skill needed executive control to perform well and the pressure was high. This leads to associating the constructs of self-consciousness and focus of attention with performance under pressure.

Self-Consciousness

In 1975, Fenigstein et al. constructed a scale for the trait self-consciousness with the following classification:

(a) preoccupation with past, present, and future behavior; (b) sensitivity to inner feelings; (c) recognition of one's positive and negative attributes; (d) introspective behavior; (e) a tendency to picture or imagine oneself; (f) awareness of one's physical appearance and presentation; and (g) concern over the appraisal of others. (p. 523)

This already defines self-consciousness very well, but self-consciousness can be separated furthermore into public and private self-consciousness (Fenigstein et al., 1975). Private self-consciousness describes the focus of attention on one's own thoughts, feelings and reactions of the body while public self-consciousness describes the shift of attention to how oneself is being perceived by others and how one's actions affect others. For dancers, both forms of self-consciousness should be very relevant as they not only try to perform as well as possible in a tournament, like any athlete, but their performance depends on how they are perceived by the judges.

Studies about self-consciousness and performance under pressure show conflicting results but some of these differences can be explained. Baumeister (1984) showed that participants who score high on self-consciousness perform better under pressure than those who score low on self-consciousness. The explanation behind that, according to Baumeister (1984), might be that those scoring higher are already used to the amount of thoughts and self-observation happening in a high pressure situation like a tournament and are able to cope well, while those scoring low on self-consciousness don't have the routine and experience from their everyday life of this amount of self-focus. According to these findings, competitive ballroom dancers who score low on self-consciousness should perform worse than those who score high on it.

Wang et al. (2004) conducted a study about self-consciousness and performance loss under pressure as well but they changed the experiment and came to a different conclusion. In their study, competitive basketball players took free throw shots in a low and in a high pressure situation. Their study showed a significant effect of self-consciousness and a decrease of performance under pressure. The major difference between the two studies of Wang et al. (2004) and Baumeister (1984) was the fact that the task in the study by Wang (2004) et al. was a task already learned performed by skilled competitive athletes, where the self-consciousness disrupts the already automated execution of the task. Normally the competitive athletes know exactly what to do, without thinking about it. But if the athletes are very self-conscious, they start to think about an actually well learned task. While in the study of Baumeister the participants just learned the task (ball rolling task) and the increased focus of high self-consciousness might have even helped learning the new skill (Wang et al, 2004), Beilock and Carr (2001) show that monitoring an already automated skill leads to a loss of performance as the automated sequence of performing this skills gets broken down into its pieces and one has to work through the steps. In his study, Brockner (1979) shows the same effect of high self-consciousness and a decrease of performance under pressure.

Another study supporting this direction comes from Fenigstein (1984). He showed that participants who score high on self-consciousness think they are the target of others' attention, even when they are not, which increases the self-consciousness even more, which, especially in a tournament setting, should lead to a downward spiral. These literature reviews lead to the first hypothesis.

Hypothesis 1: Dancers who score high on SAM (self-consciousness) perform worse under pressure than dancers who score low on SAM.

Fear of Negative Evaluation

Fear of negative evaluation was defined by Watson and Friend (1969) “as apprehension about others' evaluations, distress over their negative evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively” (p.449). With their basketball free throw study, Wang et al. (2004) showed not only an effect of self-consciousness on performance decrease under pressure but they also showed a correlation of the trait anxiety and a loss of performance under pressure. As Watson and Friend (1969) found out, there is a relationship between anxiety and their scale *FNE* which, in its shortened form, was used in this study to measure fear of negative evaluation.

Byrne et al. (2015) found the same effect, even if it was not in a study with athletes but on a computer task with time and social pressure. They showed a negative effect of neuroticism and performance under pressure. The positive relationship between neuroticism and anxiety is well established (e.g. Kotov et al., 2010; Muris et al., 2005; Trull & Sher, 1994).

Mesagno et al. (2012) conducted a study with basketball free throw shots as well and used *FNE* as independent variable. They split the participants, depending on their *FNE* scores, into a high- and a low-*FNE* group and excluded the ones which were in the middle. The participants then had to perform free throw shots once in a low pressure situation and once in a high pressure situation. Mesagno et al. (2012) found a significant effect of *FNE* on performance. The low-*FNE* participants had no significant difference in performance between the two pressure conditions while the high-*FNE* group, as predicted, had significantly worse performances in the high pressure situation.

Geukes et al. (2017) also conducted a study with basketball free throws under high and low pressure conditions and they could confirm the findings of the previous studies. The difference to the other studies is, that they used the real pressure situation of an actual basketball match as high pressure condition. They found a significant negative effect of fear of negative evaluation on the free throw accuracy.

Rohleder et al. (2007) conducted a study with ballroom dancers about stress and cortisol levels. According to their findings they suggest that part of the stress

comes from the received attention from judges and the crowd, as the stress level was significantly higher in couple dances, where the participants receive more individual attention, than in group formation dances, where the attention is more split between the groups. Contradicting this thesis, they state that another explanation could be the social support of the fellow dancers in a group dance. Nevertheless the fear of negative evaluation and attention are interesting phenomena to look at when discussing performance decrease and the literature suggest that the ballroom dancers in this study who load high on FNE are going to perform worse under pressure than those who score low on FNE.

Hypothesis 2: Dancers who score high on FNE (fear of negative evaluation) perform worse under pressure than dancers who score low on FNE.

Action versus State Orientation

The third personality trait which will be looked at in this study is the construct of action versus state orientation. Kuhl (1984) established the construct of one's disposition to react to a situation either action- or state-oriented. This construct describes one's impediments or a lack of these, to go through with an action or not. When something happens or needs to be done some people seem to be able to just do it (action-orientated) or think of all the things that did go wrong the previous time (state-oriented) (Kuhl, 1984). Gröpel (2016) showed that state-oriented basketballers, who were prompted to monitor their already well learned skill of free throws closely, would perform worse than their action-oriented counterparts who got the same instruction.

Hypothesis 3: Dancers who are state-orientated perform worse under pressure than dancers who are action-orientated.

Method

To reach the needed sample size the participants of this study were recruited and shared with another study about competitive ballroom dancers. The intervention of the other study happened after all data for this study was compiled and the short questionnaire was added to the online form. A G*power analysis showed that a sample of 55 couples was needed. This study will mostly use couples and not individuals.

Participants

Participants had to meet various criteria to be included in the study. First, both of the dancers of the couples needed to take part in the study and complete the online questionnaire. Second, they needed to take part in at least three tournaments with at least eight participants in order to make sure that there is at least one round and a final. If possible, the goal was to gather data of five tournaments with two or more rounds. And third, these tournaments needed to be danced with the same partner, obviously.

Recruitment happened in three ways: The researchers visited dance sport clubs and competitive ballroom dancing tournaments in Vienna and recruited participants on the spot and put up flyers. Additionally, competitive ballroom dancers on online databases got contacted via Facebook and many dance sport clubs in the German speaking region were called. Fifty-three competitive ballroom dancing couples were recruited and finished the online questionnaire. Of these 53, three were no couple but sole participants who were excluded from the study. Furthermore, 14 couples had to be excluded as they did not meet the criteria of at least three tournaments with at least two rounds in the last nine months. As a result, the final sample was $n=36$. There were no same-sex couples, which means that the sample consists of 36 men and women. Their age ranged from 11 to 64 ($M=35.01$, $SD=15.76$) and their dance sport clubs are located in Austria, Germany and Switzerland.

Materials and Procedures

After the recruitment, the participants received a link to an online questionnaire which began with an informed consent form which the participants had to agree to in order to continue with the study. In the case of the one underage couple, a legal guardian signed an extra informed consent form. On the second page of the online questionnaire, they were asked to fill out their demographics and answer questions about their skill and age bracket. On the next three pages, they had to fill out the self-report questionnaires about Fear of Negative Evaluation, Action and State Orientation and Self-Consciousness. After that, they were asked to fill out one page for the second study using the same sample about their relationship quality. On the last page before the acknowledgments they were asked to fill in the first name of themselves and their dance partner. This way, it was made sure that their answers could be merged and their tournament results could be linked to their questionnaires. After

all the data of the individuals were combined to a couple score, the names were deleted of the work file.

Participants were asked to hand in their tournament results. For most couples, this data was not enough which is why the remainder of the needed results was looked up online. For this, two dance sport databases were used to see all the tournaments the participants took part in, *www.dancesportinfo.net* and *www.worldddancesport.org*. These results were put into an Excel-table which will be explained later in the study.

After downloading the data from the online-questionnaire, the data of the second study using the same sample was deleted, as it has no relevance to this present study. To create a usable SPSS work file, the participants were sorted and put into their respective couples, numbered randomly from 1 to 36. The tournament data from the Excel-table was entered into the SPSS-file. After that, having the performance scores of the couples and the respective performance results, their names could be deleted of the work file. All excluded couples were filtered out as well.

As the next steps, items needed to be reversed were reversed and the scores for the three questionnaires were formed. The present study chose two ways to analyze the couples' data. For the first way of measurement, the means of both dance partners scores were calculated and a new mean consisting of both of these means was calculated for each scale to represent the couple mean. The argument behind that is that both partners bring in their dispositions and they can balance themselves out. The second way to analyze the scores was that for each couple, the lower score of the three scales was assigned. This means that when analyzing the data, the score of the partner with the hypothesized worse score was used, as one might argue that the weak link of the couple is the deciding factor if the performance decreases or not. In this case, a low score means that the score was used which was considered to be the hypothesized unfavorable score, depending on the context. More precisely, for SAM the higher score was used (greater self-consciousness), for FNE, the higher of the two scores was used as well (higher tendency for anxiety), and for HAKEMP-90 the lower score (state oriented) was used.

Performance

Tournament results as measure of performance were chosen and included in this study with the following rules: a) at least eight participants or 2+ rounds, b) in the last nine months, c) with the same partner, d) as recent as possible without violating

the previous rules, e) as many as five tournaments which meet the criteria with a minimum of three tournaments. Rules a, b and c had to be met in order for the couple to be included in the study.

As there are no ranks or absolute measures of performance in the non-final rounds for the couples, but only marks if they should move on to the next round, ranks had to be formed. Every round consists of five dances which means a couple could get $5 \times \text{the number of judges}$ marks. The couple(s) with the most marks would be rank one and so on. There are quite often couples with the same number of marks in one round and as a result they would all share one rank which means the next number of marks would get a lower rank. The following example illustrates this: Nine Couples start a tournament with 5 judges. After the first round of dances, the maximum number of marks a couple can have is 25 (5 dances $\times$ 5 judges). As seen in Table 1, couple one and couple three share the first place while the couple with the next most marks, couple seven, is on the third place. In this example, couples two, eight and nine would be eliminated and the other six couples would move on to the final, where each judge gives each of the couples a rank recommendation and the mean of these forms the final placement of each couple.

Table 1

An Example of the Rating System used in this study for one Round

	Judge A	Judge B	Judge C	Judge D	Judge E	Marks total	Rank
Couple 1	5	5	5	5	5	25	1.
Couple 2	0	1	3	2	0	6	8.
Couple 3	5	5	5	5	5	25	1
Couple 4	5	4	2	4	3	18	5.
Couple 5	4	3	2	3	5	17	6.
Couple 6	3	4	5	4	5	21	4.
Couple 7	3	5	5	4	5	22	3.
Couple 8	5	3	3	3	2	16	7.
Couple 9	0	0	0	0	0	0	9

As stated, in order to compare the results of different rounds and the final, ranks were formed even for the non-final rounds. This was done by counting the checkmarks a participating couple received in a round and assigning it a rank. To make it comparable, the relative placement of the couple for each round was formed by dividing the previously formed rank by the number of participating couples in that tournament. For the sake of simplicity these results were multiplied by 100. This procedure was done for every round a couple participated in and for each of the three to five tournaments. An Excel-table was made with this data for every couple. Table 2 shows this procedure for one couple.

Table 2

An Example of one Couple in the Excel-Sheet

Round Tournament	Round 1 rank	R1: relative	Round 2 rank	R2: relative	Round 3 rank	R3: relative	Final rank	Final relative
T 1:14								
Couples	9.	64,3	6.	42,9	<i>n/a</i>	<i>n/a</i>	6.	42,9
T2:15								
Couples	1.	6,7	4.	26,7	<i>n/a</i>	<i>n/a</i>	3.	20
T3: 16								
Couples	1.	6,3	3.	18,9	<i>n/a</i>	<i>n/a</i>	5.	31,3
T4: 9								
Couples	3.	33,3	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	3.	33,3
T5: 58								
Couples	23.	39,7	21.	36,2	23.	39,7	<i>n/a</i>	<i>n/a</i>

Note. N/a is in place for rounds that did not take place or after the elimination of the couple.

The further a couple is into the tournament the higher the pressure is to perform well. To measure the performance under pressure, the mean of all of the relative results of each round of a couple, excluding the final or their last round before elimination, however far they got, was calculated. Of these three to five values, depending on the number of tournaments, the mean was taken and it formed the low pressure performance score.

The relative result of each last round a couple reached in the tournaments was averaged as well and it formed the high pressure performance score of the couple. The low pressure score was subtracted from this last round score, or high pressure performance score, and the new value formed the performance difference score.

Self-Consciousness

Self-consciousness was assessed with the Fragebogen zur Erfassung dispositionaler Selbstaufmerksamkeit (SAM) scale by Filip and Freudenberg (1989). It is a German questionnaire which is based on the Self-Consciousness Scale (SCS) by Fenigstein et al. (1975). The SAM is divided into a public self-consciousness scale with 14 items and a private self-consciousness with 13 items. An example item for the public scale is “I feel uncomfortable, when I’m being watched” and an example item for the private scale is “I think about myself”. All 27 items can be answered on a 5-point Likert scale ranging from 1 (*very rarely*) to 5 (*very often*). As suggested by Hinz et al. (2010) for this study a general self-consciousness consisting of both the public and private self-consciousness was used. The score ranges from 27 to 135 with a higher score meaning a higher tendency to self-conscious thoughts. This scale was also conducted with the online questionnaire.

Fear of Negative Evaluation

Fear of negative evaluation was compiled with the Furcht vor negativer Evaluation - Kurzskala (FNE-K) by Reichenberger et al. (2016), the German version of the brief fear of negative evaluation - revised (BFNE-R). It is a 12-item scale. Each item is a statement and the participants were asked to which extent this sentence describes them with answers ranging from 1 (*not at all characteristic of me*) to 5 (*extremely characteristic of me*) on a 5-point Likert scale. An example item would be “I worry about what other people will think of me even when I know it doesn’t make any difference” or: “When I am talking to someone, I worry about what they may be thinking about me”. The higher a participant scores on this scale the greater is his or her tendency to fear negative evaluation. As there are 12 items the minimum score is 12 and the maximum is 60. This scale was part of the online questionnaire.

Action versus State Orientation

Action versus state orientation was collected through the Handlungskontrollfragebogen (HAKEMP-90) (Kuhl, 1990) in the short version. It consists of 24 dichotomy items, forcing the participants to choose either an action-orientated reaction or a state-orientated reaction. Each item describes a situation which could happen on any day and participants are asked to choose between two possible reactions. One example item is: “When I have lost something that is very valuable to me and I can’t find it anywhere: a). I have a hard time concentrating on something else b.) I put it out of my mind after a little while”. The items were coded in the way that a

higher score means a stronger tendency to action orientation and a lower score a stronger tendency to state orientation. Items 5, 7, 8, 13, 16, 18, 22, 23, 24 were poled negatively and had to be reversed. This scale was also part of the online questionnaire.

Results

All data refers to the couples and not the individuals participating in this study if not clearly stated otherwise. Of the 36 couples, 18, which means half of the sample, were from Austria, 16 from Germany (44%) and 2 couples from Switzerland (6%). As seen in Table 3a, the average performance of the couples for the low pressure condition was 31.52 (SD = 13.00) while the average of the high pressure condition was 34.09 (SD = 15.18) but with a higher score meaning a worse rank and performance.

All data which was used was tested for normal distribution with the Kolmogorow-Smirnow and the Shapiro-Wilk test and found non-significant, which means they are normally distributed. This included team scores on the three scales SAM (this one was significant for the Shapiro-Wilk test but not for the Kolmogorow-Smirnow), FNE-K and HAKEMP-90, the weak score of the teams of the same three scales and their performances in the low and high pressure situations.

Table 3a

Summary of Results – Performance Loss

	Low pressure	High pressure
	Mean (SD)	Mean (SD)
Performance score $n=36$	31.52 (13.00)	34.09 (15.18)

Note. A higher performance score means a worse performance.

Table 3b*Summary of Results – Scales*

Scale (min – max score)	Individuals $n=72$	Couples $n=36$
	Mean (SD)	Mean (SD)
SAM (27 – 135)	91.80 (14.00)	90.14 (13.72)
FNE-K (12 – 60)	33.60 (10.34)	32.23 (10.81)
HAKEMP-90 (24 – 48)	37.01 (5.10)	37.80 (5.00)

Self-Consciousness (SAM)

The average score of the individual participants on the SAM scale was 91.81 (SD = 14.00), as seen in Table 3b. Hinz et al. (2010) who standardized the SAM-scale on a representative German population ($n=2462$) showed a mean of 87.45 (SD = 15.08). A t-test was calculated to compare the means which was significant, $t(71) = 2.646$, $p = .010$, meaning that this studies' sample is significantly more self-conscious than the general German population.

Hypothesis 1 was: Dancers who score high on SAM (self-consciousness) perform worse under pressure than dancers who score low on SAM. To test this hypothesis, a Pearson correlation was calculated.

The team score of the SAM scale and the performance difference between the two conditions showed no significant effect: $r(34) = .226$, $p = .185$.

The weak score showed no significant effect as well, $r(34) = .160$, $p = .352$. This means the hypothesis 1 has to be rejected.

Fear of Negative Evaluation (FNE-K)

The average score of the individual participants on the FNE-K scale was 33.60 (SD = 10.34).

Hypothesis 2 was: Dancers who score high on FNE (fear of negative evaluation) perform worse under pressure than dancers who score low on FNE. This thesis was tested with a Pearson correlation as well. First for the couples' mean score on FNE-K which showed no significant effect: $r(34) = .274$, $p = .106$.

The weak partner of a couple did have a moderate to strong effect on the couples performance: $r(34) = .417$, $p = .012$. The fact that this correlation is positive means that if one of the dance partners has a high FNE score, their performance

under high pressure sufferers more often than if both partners have a low FNE score. According to these findings hypothesis 2 can be partly verified. If one of the dance couple scores high on FNE, the couple will perform significant more often worse under pressure than those couples who score low on FNE.

Action versus State Orientation (HAKEMP-90)

The average score of the individual participants on the HAKEMP-90 scale was 37.10 (SD = 5.10).

Hypothesis 3 was: Dancers, who are state-orientated perform worse under pressure than dancers who are action orientated. This means a higher score on the HAKEMP-90 scale, should lead to a higher performance difference score, as this means a performance decreases under pressure.

After performing a Pearson correlation, this hypothesis has to be rejected for the couples' mean scores: $r(34) = -.246$, $p = .149$ and if looked at the weak link of a couple, it has to be rejected as well: $r(34) = -.324$, $p = .054$. But even if the effects are not significant, both results show the opposite direction as hypothesized, as a lower score on the HAKEMP-90 means that the participant is more action orientated and a higher performance difference score means, that a couple performed worse under pressure. But as stated, these effects are not significant.

Discussion

Hypothesis 1, which expected competitive ballroom dancers to perform worse under pressure if they load high on self-consciousness, had to be rejected both for the couples' mean score and for their, as a couple, weak score. These effects reported in this study are low to moderately strong but they are in the suggested direction. This samples' values on the SAM questionnaire are significantly higher than those of a representative German population (Rohleder et al. 2007), which on the one hand is expected with dancers, as they tend to exert themselves in order to make a good impression on others while they dancing. This can be seen, for example, looking at the amount of effort competitive dancers put in their outfit and appearance, for example using self-tanner (McMains, 2001). Additionally, as Picart (2006) states, the roles of masculinity and femininity that have to be shown on the dancefloor. The fact that the man-part has to lead and the woman-part has to follow, are all things a competitive dancer learns to be very conscious about.

On the other hand these factors might have had an effect on these results.

Fear of negative evaluation seems to have a moderate effect on a couples' performance under pressure. If one of the couple scores high on FNE they perform significantly worse under pressure. There is also a strong correlation between fear of negative evaluation and self-consciousness. When looking at the individuals, the results show that this correlation is significant $r(70) = .566, p < .001$ which is consistent with other research (e.g. Wang, 2004; Wine, 1971). This leaves the question open, why this study did not find a significant effect between self-consciousness and a performance loss under pressure.

The results of the third hypotheses are, even as they are not significant, interesting in a way that the direction of effects both for the couples' mean and for their weakest link score suggest a negative correlation which would mean that in competitive ballroom dancing state orientation is superior to action orientation to prevent choking under pressure. Of course, this is just a justified guess. However, it is an interesting finding for further research in reference to action versus state orientation and each of its benefits.

Limitations and Further Research

This research's sample size goal of 55 participating couples could not be met. After the exclusion of 17 couples, the present study is 19 couples short of the intended sample size. This can be an explanation for the non-significant results, especially of hypothesis 1, where the indicated direction of effects points in the direction predicted by this paper and the recent literature, but no significance could be found.

The way performance was operationalized in this study is a limiting factor. Checkmarks, as they are used in competitive ballroom tournaments, don't hold enough information as one would want to have to conduct a study. That is why this study tried to circumvent that problem by assigning ranks to the couples for each round based on the number of checkmarks received. However, there is still much information getting lost in the progress, as checkmarks, as a construct of evaluation, don't hold much information, just the recommendation of the judge that this couple is, in his opinion, better than the worst couples on the dancefloor. And the assigned rank, depending on the number with the same checkmarks, is a very weak indicator of performance, if many couples hold the same number of checkmarks. This is especially problematic in many of the big tournaments, where plenty of couples get full marks in the first round, which then all get a really good standing in this study, but then drop hard in the next couple of rounds. While conducting the study, different

options of handling this issue were discussed, which were, for monetary or time-limiting reasons not possible for this study, but might be relevant for future studies in the field of competitive ballroom dancing. One could hire external raters/judges who could rate the participating couples live or on a recording. However, depending on the sample size this could become very expensive. An added benefit would be that training sessions, or non-tournament settings, could be used as low pressure condition, which should improve the study even more. Video recordings have the issue of privacy protection of all the couples in the tournament, who are not part of the study. This could be circumvented by organizing a tournament on behalf of the study, which needs some kind of funding though.

Another possibility of performance measurement in dancing could be self-report diaries, which participants have to fill out after each training and right after the tournament.

Another limitation, not only for this study, but for any studies about ballroom dancing and performance, is the fact that the judges on these tournaments should be objective, but there are limiting factors making this problematic. First, most dance sport tournaments are hosted by a dance sport club, from which own couples participate. The very same dance sport club invites the judges as well. Furthermore, competitive dancers book training sessions with external trainers, who are not in their dance sport club, and many of those are judges as well. So a well-established technique seems to be, according to the participating couples of our study, to book a training session with trainers who are likely to judge your next tournament. There is no evidence on the objectivity of the judges, but many couples explicitly stated that this should be mentioned, when writing this study. This even forms a research gap, the correlation of judges and performance of couples.

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