The Effect of Transformational Leadership Behaviour on Follower Task Performance of Volunteers in German Non-Profit Sport Clubs

Final paper

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Abstract

This paper contributes to the understanding of the effects of transformational leadership behaviour on the task performance of volunteers in non-profit sport organizations. An experimental independent 1-factor design was used to examine, if the treatment group, whose emotions were positively influenced using a movie, would perform better on a d2 test of attention than the control group, which was shown a video to elicit neutral emotions. Although the treatment group showed a better task performance level, results were not significant. Further research needs to be applied to get a better understanding for how far emotions have an influence on the task performance of volunteers in non-profit sport organizations.

Non-profit sport clubs are considered as the base of the voluntary sport system in Germany (Wicker & Breuer, 2011). This statement is supported by findings from the German Olympic Sports Confederation (GOSC). The figures show that almost one out of three German citizens is a member of a sport club (GOSC, 2009). In addition Misener and Doherty (2009) argue that human resources, planning and development capacity were of higher importance for the goal of achievement for non-profit sport clubs than other capacities. In this context the right leadership style can be considered as a critical factor for an effective volunteer management of a non-profit sport club. Interesting is the finding of Liang and Steve Chi (2012), who showed on the example of the Taiwanese army that transformational leadership (TFL) will be more effective on enhancing subordinates positive emotions (PE) and follower task performance (TP), if followers are high susceptible to positive emotions. As we assume that volunteers, who do not get paid for their work, have a strong emotion based motivation, it is of interest to test if the insights of Liang and Steve Chi (2012) can be also applied to non-profit sport organizations. Even though arising from the for-profit area, the implementation of so-called Feel-Good-Managers in several German enterprises, an employee who keeps the best possible working conditions and tries to relax co-workers in stressful situations, underpins the current relevance of this domain (Maas, 2013). The purpose of the study is to contribute to the existing knowledge of how far certain emotion states have an influence on the level of attention of humans.

Literature review

In this section some definitions of the terms in the title are provided.

Transformational leadership Within the last 10 years TFL developed to one of the most relevant topics within leadership literature (Chi & Pan, 2012; Bass & Avolio, 2000; Judge & Piccolo, 2004; Avolio, Walumbwa, & Weber, 2009). As a consequence, also with regard to sport organizations relevant literature is available (Soucie, 1994; Hoye, 2006; Hoye & Cuskelly, 2003; Hoye, 2004; Chelladurai, 1980; Hovden, 2000; Pfister & Radtke, 2009; Doherty & Danylchuk, 1996). Yukl (1989, p. 204) defines TFL as "the process of influencing major changes in attitudes and assumptions of organizational members and building commitment for the organizations mission and objectives". According

to Bass (1985), transformational leaders can encourage followers to perform at a high level by exhibiting four behavioural characteristics: (1) *idealized influence* (2) *inspirational motivation* (3) *intellectual stimulation* and (4) *individual consideration*. In other words, "by exerting idealized influence or behaving in charismatic ways, transformational leaders arouse strong emotions, respect, and loyalty from their followers" (Liang & Steve Chi, 2012, p. 2-3).

Follower task performance The term task performance is often used in line with self-efficacy (Shea & Howell, 1999; Walumbwa, Wang, Lawler, & Shi, 2004). Quite a lot of studies have been undertaken in the last years to predict the effect of TFL on followers' task performance. According to Chi and Pan (2012) these studies have mainly focused on three types of mediators: (1) *followers' perceptions towards the leader*, such as leader-member exchange and trust in supervisors; (2) *affective mediators*, such as positive moods and negative emotions; and (3) *motivational mediators*, such as self-efficacy, intrinsic motivation, and self-concordant goals.

Positive emotions The concept of positive emotions is used to describe a precise state of the human being, including feelings like e.g. joy, happiness, love, satisfaction. Nevertheless the term has a long research experience in the psychological field: Fredrickson (1998) for example developed the broaden-and-build theory to describe the form and function of a subset of positive emotions. The same author argues that negative emotions received more empirical attention than positive emotions and moreover gives a definition for positive emotions as some personally meaningful circumstance (i.e. they have an object), typically short-lived and occupying the foreground of consciousness (Fredrickson, 2004). Many other authors focused on the process of elicitation and induction of emotional states (i.e. positive, negative, and neutral emotions) and the different ways in which this induction can be processed (Hamm & Vaitl, 1993; Macht, Roth, & Ellgring, 2002; Gross & Levenson, 1995; Velten, 1968; Westermann, Spies, Stahl, & Hesse, 1996).

Theoretical framework

The mediated-moderation model The mediated-moderation model was firstly hypothesized by Liang and Steve Chi (2012). Survey data was collected comprising 304 soldiers of the Taiwanese military. The aim of the model was to examine TFL from an emotion-based perspective, adding as moderator the factor susceptibility to positive emotions (STPE) and considering follower PE as mediator in the relationship between follower perceptions of TFL and follower TP.

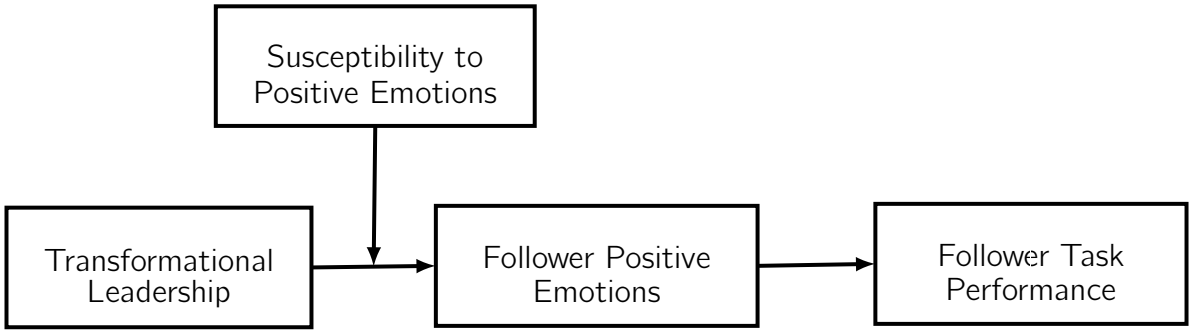


Figure 1: The mediated-moderation model according to Liang and Steve Chi (2012)

The simplified model After analyzing the mediated-moderation model of Liang and Steve Chi (2012) (see figure 1), it was decided to pursue a simplified version in the following contribution. The simplified model is shown in figure 2, and was applied due to time and feasibility issues. As a result, the underlying study focuses on the influence of follower PE on follower TP. Regarding PE literature review has realized that movies are the best method to elicit especially positive emotions in a laboratory environment (Westermann et al., 1996; Gross & Levenson, 1995; Rottenberg, Ray, & Gross, 2007). At this point the remark of Rottenberg et al. (2007) has to be mentioned, who stressed the complexity of eliciting emotions in a laboratory as it is such an elusive construct. The study of Gross and Levenson (1995) provided a variety of validated movies, which can be used to trigger specific emotions. Different categorizations, as e.g. amusement, anger, disgust or fear were analyzed. For the groups experiment, the category of amusement was the closest to use for eliciting positive emotions. In fact, when Gross and Levenson (1995) compared

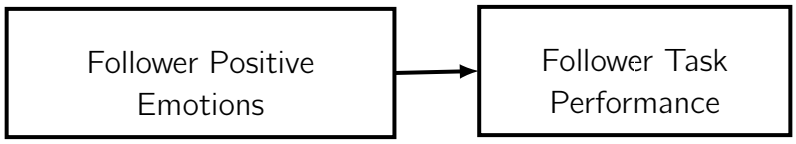


Figure 2: The simplified model for the research project at hand

their results with other studies, they found out that their amusement films elicited more amusement than any other emotion (Gross & Levenson, 1995, p. 101). One of the filmclips was chosen as the primary movie to elicit positive emotions in the subsequent research work. The choice of a movie to elicit a neutral state of mind appeared to be more obscure. Although examples were given by Gross and Levenson (1995) e.g. the showing of color bars or abstract shapes, the discrimination of this emotion was not as high as for amusement; 66% for neutral, compared to 82% for amusement. After consultation with the course instructor, the research group decided to use an unvalidated movie showing a natural environment. The decision how to measure TP was mainly based on the concept of attention emphasized by Nideffer (1981), who stated: "In fact, it is difficult to conceive of a single situation in which an individual's ability to pay attention and concentrate on certain things while ignoring others is not critical to effective performance. It does not matter whether the person is involved in complex sport, walking across the street, read a book or making a simple decision, everyone needs to attend" (Nideffer, 1981, p. 26). The next section introduces the applied test in order to measure people's attention. Based on the proposed theoretical framework following hypotheses can be derived:

Null-hypothesis H_0 Participants with higher PE show the same TP level than participants with a neutral emotion state.

Alternative hypothesis H_1 Participants with higher PE show a better TP level than participants with a neutral emotion state.

Method

Subjects Participants were gathered using convenience sampling mostly among cohort members of the 2012/2014 Master Sport Management program at GSU and other stu-

dents from GSU. The participants were systematically distributed to either the treatment group or the control group. GPower estimated a total sample size of $N = 70$ for an effect size of 0.8. In the end a sample size of $n = 40$ could be conducted. From these 40 participants there were 25 males and 15 females, which were mostly students from GSU. The average age of the sample was 24 years.

Measures The treatment group was shown a movie, which should elicit a positive emotion state, therefore also called positive group in the following, while the control group was shown a movie, which should elicit a neutral emotion state and called neutral group in the following respectively. The positive movie was a clip from the movie *"When Harry met Sally"* validated by Gross and Levenson (1995) and Rottenberg et al. (2007) for its effect on the positive emotion state. The video can be watched on YouTube following this link: http://www.youtube.com/watch?v=FZluzt3H6tk. For the neutral group a modified, unvalidated version of a video showing an hawaiian sunset was chosen, which can be found on YouTube at http://youtu.be/87guGAXMb5k. Task performance was measured using an online-version of the d2 test of attention (d2 test) (http://frickelpower.bplaced.net/d2/) (Brickenkamp, 1962; Raviv & Low, 1990; Schmidt-Atzert, 2004). As a first step the participants were introduced into the d2 test before they were advised to watch the video with the explicit instruction to use the movie to put themselves into a positive/neutral emotion state. After the movie the participants could switch directly to the d2 test and start the test by themselves without any disruption. After finishing the d2 test, the participants were asked to fill out a questionnaire, consisting of three main parts. At first they were self reporting their feelings during the concentration test on the job affect scale by Burke, Brief, George, Roberson, and Webster (1989). The Job affect scale was used by Liang and Steve Chi (2012) to measure follower PE. The scale was developed by Burke et al. (1989) and based on the earlier work of Watson and Tellegen (1985). The scale consists of 20 items describing positive and negative emotional markers (Liang & Steve Chi, 2012). Liang and Steve Chi (2012) used only the six items that assess PE: "calm", "strong", "excited", "enthusiastic", "peppy", and "elated". Second, the amount of emotions experienced while watching the film were subsequently detected with the aid of the post-film questionnaire (Rottenberg et al., 2007), finalizing with some basic questions on

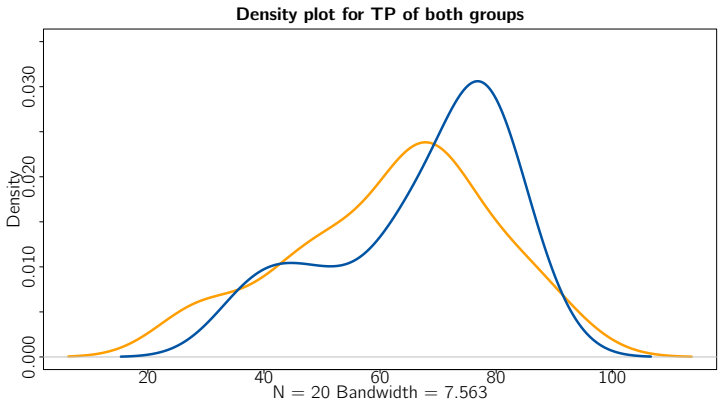


Figure 3: Density plot for TP of both groups

demographics like age, gender, educational attainment and nationality.

Design It was used an independent groups 1-factor design with PE representing the independent variable and TP representing the dependent variable.

Results

Analysis All computations and graphics were done using the R software package for statistical computing (see http://www.R-project.ort) (Gandrud, 2013).

Distribution The distribution of the data representing the task performance results of figure 8a are shown in figure 3 for both, the positive and the neutral group in a density plot. In addition Shapiro-Wilk Normality Test was used to check the sample for normal distribution, as it provides high excellence especially for small sample sizes (Royston, 1982). The neutral group follows a normal distribution (p=.52, W=.96), whereas the data for the positive group is not normally distributed (p=.031, W=.89).

Descriptive statistics Figure 4 shows the gender distribution of the two samples. Figure 5 shows the emotion states of both groups during the d2 test according to the self-reported job-affect scale, whereas figure 6 shows the emotions experienced while watching the movie, which were surveyed using the post-film questionnaire. As the d2 test consisted of 14 sequences the completion rate per sequence is shown in figure 7. In order to compare the performance of both groups the arithmetic mean for each group was calculated and used as

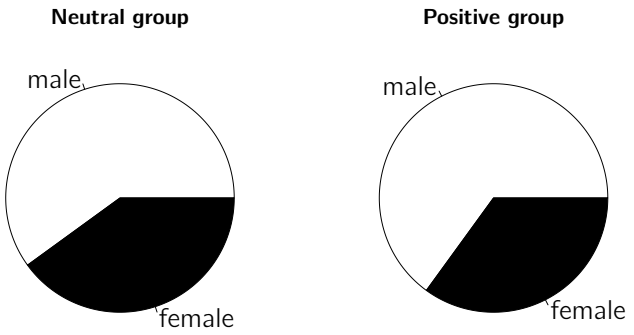


Figure 4: Gender distribution

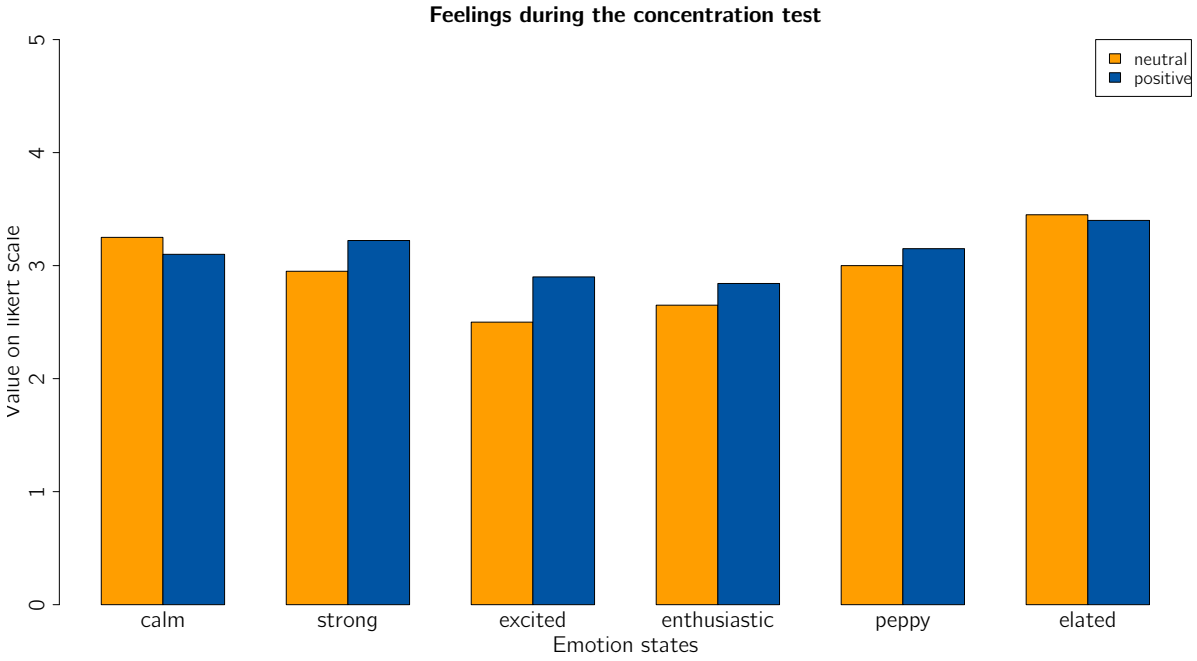


Figure 5: Results from the job affective scale (1=not at all; 5=very much)

the main measure for TP. Table 1 provides an overview of the moments of distribution of TP. Figure 8a shows the performance in the d2 test, which represents the TP in this study with the support of boxplots, whereas figure 8b shows the accuracy of both groups in the d2 test. In the following paragraph the two groups are checked for significant differences with regard to TP.

Independent two sample t-test The independent two sample t-test was conducted to compare TP in neutral emotion conditions and positive emotion conditions. Although the t-test only can be applied for normal distributed data, a requirement, which is not fully fulfilled in the research paper at hand, the test was chosen as it is assumed, a bigger

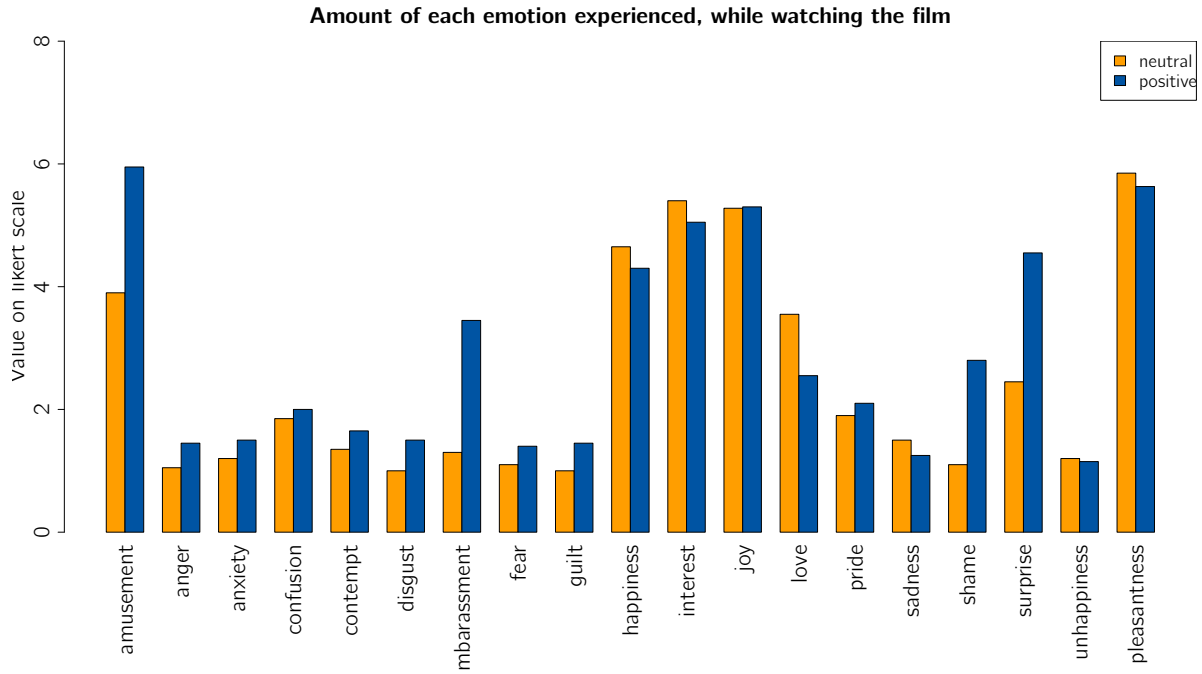


Figure 6: Emotions experienced while watching the film (1=none; 8=extremely)

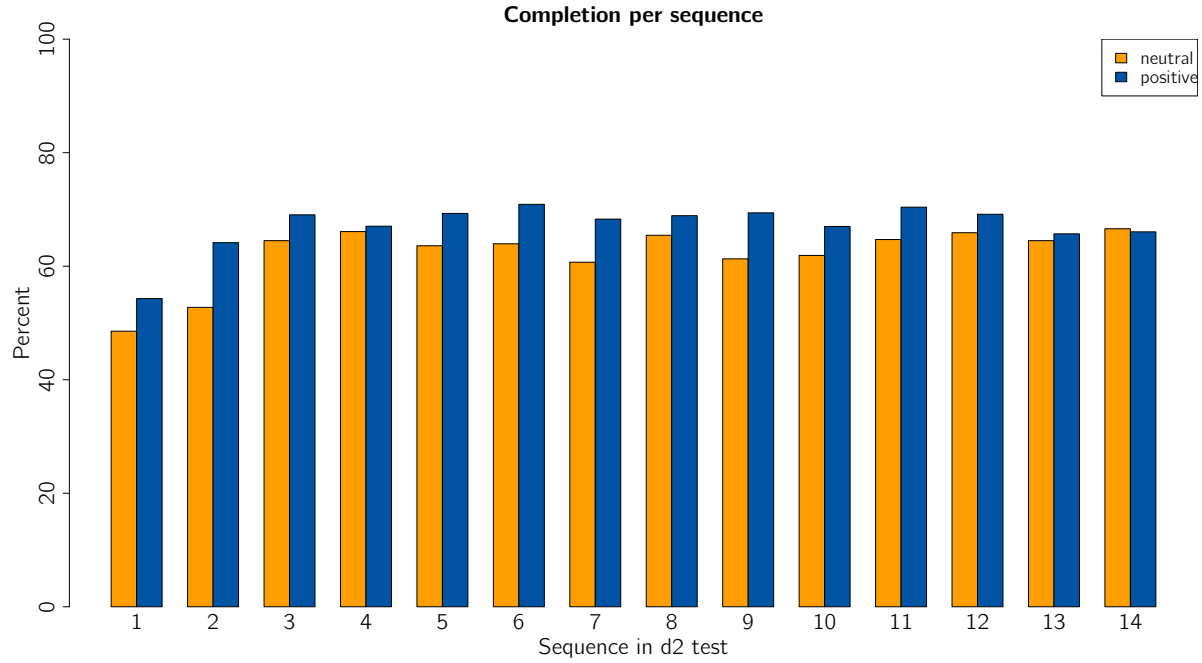
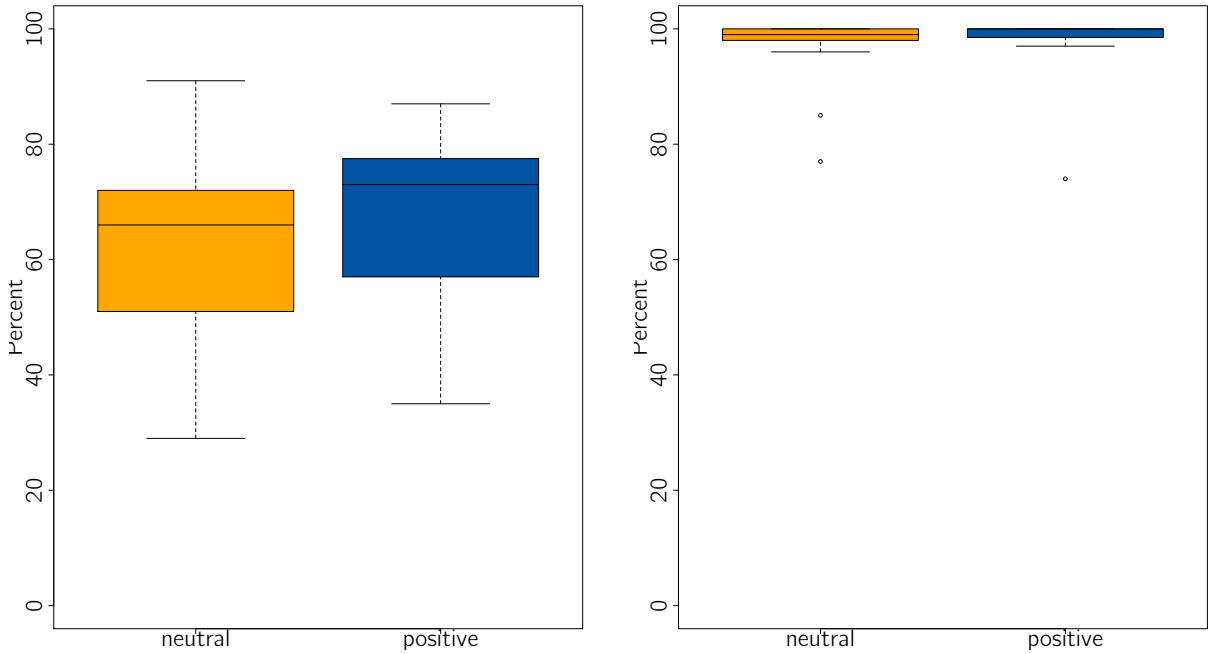


Figure 7: Performance over time



(a) Performance in d2 test

(b) Accuracy in d2 test

Figure 8: Comparison of sample means of d2 test results

	neutral group	positive group
μ	62.3	67.05
σ^2	297.27	237.21
σ	17.24	15.4

Table 1: Moments of the distribution

sample size would have lead to a normal distributed dataset (Dalgaard, 2008). The results show, there was not a significant difference in the scores for TP between neutral emotion conditions (M=62.3, SD=17.24) and positive emotion conditions (M=67.05, SD=15.4); $t(37.53)$=-.92, p=.18. In other words, watching a video, which should elicit positive emotions, does not have a significant influence on the performance in the d2 test compared watching a video which should elicit neutral emotions.

Discussion

Limitations After seeing what the outcomes of the study are, and the fact that the results were not significant, it is important to analyze the limitations that the project had to face. One of the main limitations is clearly the small sample size. As stated before, GPower estimated an N of 70. The group that has been worked with, was only about half of the needed size. This was mainly due to time issues, since the time frame of completing all of the experiments was fairly short and the research group was only able to conduct so many experiments. It should be added that more than half of the participants were cohort students. Since every group introduced their topic beforehand in class, some students might have, intentionally or not, remembered what the study was about and what the group was looking for and by this influenced their behavior during the experiment. Furthermore, the fact that a convenient sampling has been used, leads to the assumption that the participants somewhat had similar characteristics. The majority of people were students from the GSU. Again, the fact that a lot of participants were cohort students, supports this view, that the group of participants was not chosen completely random and might have had similar characteristics that have an impact on how the experiments were conducted. Another aspect that might have had an impact on the outcome of the study was the condition of an unstandardised setting. This means that not all of the experiments took place in the same setting. This was mainly due to access reasons. Since the chosen laboratory was not available all the time, the main place for conducting the experiments was the library. Multiple influences, like noise and the movement of other students, must be taken into account here. Limitations can also be seen in the choice of videos. The movie that was chosen for eliciting neutral emotions has not been scientifically validated before. The research group took this video because of knowing that nature movies can have an influence on supporting a neutral state of mind. After talking to the participants and through the class discussion, it can be said that the neutral video tended to have more of a positive effect. While the real life climate was rather depressing and rainy, the presentation of a tropic beach area, gave the participants more of a warm feeling and therefore might have contributed to a rather positive state of mind. The positive movie might have also had a different effect than anticipated. Feedback of participants were that they sometimes did not feel too comfortable watching a scene where someone is

feigning sexual excitement. Since this video has been used to elicit positive emotions in earlier experiments, it is more likely that the crowded setting triggered the feeling of being uncomfortable than the video itself.

Implications for further research In the end, the results are not showing the significant difference that the research group was hoping for. Thoughts on this were that the design and the research questions should have gone further than just measuring the difference between positive and neutral emotions. It is hard to say, if these two emotions might be too close to each other, especially in an experiment that only lasts for 15 minutes and where this certain state of mind needs to be triggered in the first place. One idea is to add a third experimental group, which would be dealing with a movie that is supposed to elicit negative emotions. In this case, at least on a first and obvious observation, the difference between the emotions would be greater than just between a positive and neutral state of mind. However, this option was not considered because of time reasons. Since the research group was only able to find 20 participants for each of the groups, including a third experimental group might have resulted in even less participants for each emotion and therefore in less significance in the results.

Conclusion

Finalizing, even if the results were not significant, probably mainly based on the mentioned limitations, a tendency towards a better performance of the positive group could be observed. Additional research could contribute to the topic of how far PE have an influence on TP and link it to a wider theoretical framework. A better understanding of the influence of certain emotion states on human behaviour could contribute to optimize leadership in non-profit organizations and the behaviour of superiors accompanied by less vulnerability towards social conflicts and economic ineffectiveness. This knowledge is necessary, especially in times of decreasing volunteering rates amongst the German population.

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A. Statistical Output and Questionnaire

A.1. Shapiro-Wilk Normality Test

```
shapiro.test(TP_neut)

##
##  Shapiro-Wilk normality test
##
## data:  TP_neut
## W = 0.9586, p-value = 0.5166

shapiro.test(TP_pos)

##
##  Shapiro-Wilk normality test
##
## data:  TP_pos
## W = 0.8935, p-value = 0.03124
```

A.2. Independent two sample t-test

```
t.test(TP_neut, TP_pos, alternative = "less")

##
##  Welch Two Sample t-test
##
## data:  TP_neut and TP_pos
## t = -0.9188, df = 37.53, p-value = 0.182
## alternative hypothesis: true difference in means is less than 0
## 95 percent confidence interval:
##   -Inf 3.968
## sample estimates:
## mean of x mean of y
##     62.30     67.05
```

A.3. Questionnaire

Deutsche Sporthochschule Köln
German Sport University Cologne
Institut für Sportökonomie und Sportmanagement
Institute of Sport Economics and Sport Management

Dear participant. Thanks for your participation so far. Please answer this questionnaire to finish the experiment.
Thank you very much in advance for your participation.

1. How did you feel during the concentration test (1= very slightly or not at all; 5= very much)?

	not at all 1	2	3	4	very much 5
Calm	□	□	□	□	□
Strong	□	□	□	□	□
Excited	□	□	□	□	□
Enthusiasitc	□	□	□	□	□
Peppy	□	□	□	□	□
Elated	□	□	□	□	□

2. Using the scale from 1 to 8 please indicate the amount of EACH emotion you experienced while watching the film.

	not at all 1	2	3	4	5	6	7	very much 8
Amusement	□	□	□	□	□	□	□	□
Anger	□	□	□	□	□	□	□	□
Anxiety	□	□	□	□	□	□	□	□
Confusion	□	□	□	□	□	□	□	□
Contempt	□	□	□	□	□	□	□	□
Disgust	□	□	□	□	□	□	□	□
Embarassment	□	□	□	□	□	□	□	□
Fear	□	□	□	□	□	□	□	□
Guilt	□	□	□	□	□	□	□	□
Happiness	□	□	□	□	□	□	□	□
Interest	□	□	□	□	□	□	□	□
Joy	□	□	□	□	□	□	□	□
Love	□	□	□	□	□	□	□	□
Pride	□	□	□	□	□	□	□	□
Sadness	□	□	□	□	□	□	□	□
Shame	□	□	□	□	□	□	□	□
Surprise	□	□	□	□	□	□	□	□
Unhappiness	□	□	□	□	□	□	□	□

3. Did you feel any other emotions during the film?

Yes □ **No** □

3.1 If yes, what emotion did you feel during the film? How strong (from 1 to 8)

	not at all 1	2	3	4	5	6	7	very much 8
.....	□	□	□	□	□	□	□	□

4. Please use the following pleasantness scale to rate the feelings you had during the film.

unpleasant 1	2	3	4	5	6	7	pleasant 8
□	□	□	□	□	□	□	□

5. Had you seen this film before?

Yes □ **No** □

6. Did you close your eyes or look away during any scenes?

Yes □ **No** □

7. How old are you? _____ years old

8. Please indicate your gender. □ Male □ Female

9. What is your highest educational attainment?

□ **Still pupil**	
□ **Secondary school**	□ **Secondary school with 6th form**
□ **University entrance diploma**	□ **University degree (BA/MA)**
□ **Other:**_____	

10. Please indicate your nationality: _____

THANK YOU!

Figure 9: The questionnaire used for the experiment