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Outperforming in the Workplace: Predicting Employee Sensitivity About Being the Target of a Threatening Upward Comparison

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ABSTRACT

The Sensitivity about being the Target of a Threatening Upward Comparison (STTUC) at work was investigated in a vignette study with 425 full-time employees. The perceived self-esteem of the outperformed colleague (high/low) and the relationship between the outperformer and outperformed (like/dislike) were manipulated. A positive relationship predicted more negative emotions in the outperformer (STTUC), while a negative relationship predicted more positive emotions. Low perceived self-esteem of the outperformed did not trigger STTUC but diminished positive emotions in the outperformer. The outperformer's personality traits (sociotropy, narcissism, trait affect) were stronger predictors of STTUC and positive emotions than the relationship or perceived self-esteem of the outperformed. Our study's predictors explained a larger percentage of variance of STTUC than of positive emotions.

Introduction

Social comparison is an integral part of the workplace. Employees often compare themselves with their coworkers to assess their standing in the organization. Additionally, formal practices, such as pay policies and performance appraisal systems provide avenues for employees to compare themselves with their coworkers (Festinger, 1954; Greenberg et al., 2007). Performance appraisal systems, such as providing (monetary) awards, aim to stimulate performance by rewarding and recognizing high performers and by motivating employees (Gallus & Frey, 2016; Ganegoda & Bordia, 2019). However, these appraisal systems can also have unintended negative consequences, for instance when employees may engage in unethical activities to improve their ranking (Charness et al., 2014). Also, when employees are outperformed by their coworkers, feelings of envy can arise. Envy in turn can lead to a range of detrimental behaviors, such as interpersonal harm-doing (e.g., González-Navarro et al., 2018; Reh et al., 2018) reducing help to the envied others (e.g., Koopman et al., 2020), and even fraud or sabotage (e.g., Duffy et al., 2008; Thiel et al., 2021). Additionally, it can result in decreased self-esteem, perceived resource depletion, and self-blame for failure in the envier (Duffy et al., 2021).

At the other end of the envy dyad, the person who becomes the target of envy may experience both positive and negative consequences. Being envied can be interpreted as a sign of achieving a superior status, which can be viewed positively. However, being the target of envy can also lead to negative emotions, as the envied person may feel responsible for the unhappiness of the envious individual or feel threatened by their dissatisfaction, resentment, or hostility (Parrott, 2016). Thus, contrary to popular belief, outperforming others is not always exclusively a positive experience; it can also elicit negative emotions in the outperformer. In 1999, Exline and Lobel developed a framework called Sensitivity about being the Target of a Threatening Upward Comparison (STTUC) to understand the negative emotions that can arise when individuals are perceived as having a superior status. This framework includes those being envied but more generally focuses on people being perceived as having a superior status. This can encompass various situations, such as achieving the highest academic grade,

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receiving a promotion at work, or leading a happier or healthier life compared to others.

Previous studies on STTUC have primarily focused on students, with only a limited number investigating its relevance in the workplace (e.g. Henagan, 2010; Henagan & Bedeian, 2009). As emotions play an important role in the workplace, significantly impacting employee well-being, engagement, creativity, and citizenship behavior (Fisher, 2019), investigating STTUC in a workplace setting is particularly relevant.

Based on the Affective Events Theory, which states that specific workplace events trigger emotional responses in employees (Weiss & Cropanzano, 1996), Ohly and Schmitt (2015) developed a taxonomy categorizing positive and negative event clusters, each linked to distinct emotional states. Interestingly, the concept of outperformance is absent from this taxonomy, but it may relate to three positive event clusters which were distinguished by Ohly and Schmitt, namely: "praise, appreciation, positive feedback," "goal attainment, problem-solving, task-related success," and "perceived competence through social interaction." These clusters are typically seen as positive events, evoking positive emotions. Taking STTUC into account these ostensibly positive events could take a negative turn when outperformance is involved.

Recognizing the important role of emotions in professional settings, the present study focuses on STTUC within the workplace. By doing so we aim to address the gap in research on STTUC in the workplace and expand our understanding of STTUC. Given that STTUC involves a conflict between the competing goals of "getting ahead" and "getting along" (Koch, 2023; Lee et al., 2018), investigating it in a workplace setting is particularly relevant, as both objectives hold significance in that context.

Theoretical background

The STTUC framework originated from research on social comparison (Festinger, 1954; for reviews, see Dijkstra et al., 2008; Wood, 1989). Traditionally, social comparison research focused on individuals who engage in upward or downward comparisons based on how they fare relative to others. In the case of STTUC, the focus shifts to the person with superior status who becomes the target of an upward comparison. Apart from envy, upward comparisons can trigger a range of negative emotions in individuals making such comparisons, including anger, resentment, and sadness (Smith, 2000). The outperformer can be aware of these negative feelings experienced by the person being outperformed. The outperformer's sensitivity to the fact that his/her superior status poses a threat to the outperformed person can result in concern for that individual and negative emotions, such as anxiety, sadness, or guilt in the outperformer (Exline & Lobel, 1999).

According to Exline and Lobel, three conditions must be met for these negative emotions to be experienced: First, people must perceive themselves as the target of an upward comparison and believe that others see them as an outperformer. Second, the outperformer must believe that their superior status poses a threat to the outperformed person. Third, the outperformer must experience concern about the outperformed person's response, whether it pertains to their own well-being, the well-being of the outperformed person, or the relationship between them. Importantly, STTUC focuses on the perception of the outperformer, regardless of whether this perception aligns with reality.

Drawing from different research domains, Exline and Lobel (1999) theorized factors that influence STTUC, including characteristics of the outperformer, characteristics of the situation, and characteristics of the outperformed person and their relationship. Since the introduction of the STTUC concept, multiple empirical studies have been conducted on this topic. A systematic review on STTUC found evidence supporting the STTUC framework and factors that influence its occurrence (Zuiker et al., 2019).

Factors that influence STTUC

Characteristics of the outperformer

Most research on the characteristics of the outperformer has focused on personality traits and gender. It was initially theorized that STTUC may be more frequent and intense for women compared to men, attributed to their greater attention to intimacy, connectedness, and their higher scores on empathy (Exline & Lobel, 1999). However, subsequent research has yielded mixed findings, with some studies showing the anticipated association between gender and STTUC, while most have found no significant gender differences (Koch, 2023; Zuiker et al., 2019).

Among the personality correlates studied, sociotropy and narcissism have received the most extensive attention in relation to emotional responses to outperformance. Sociotropy refers to an excessive concern about interpersonal relationships. Individuals high in sociotropy have a strong need for positive relationships, pleasing others, and seeking approval (Robins et al., 1994, 1997). Past studies have consistently shown that sociotropy is the strongest and most robust positive predictor of STTUC. Sociotropy has been strongly associated with concern about negative

responses from peers when outperforming (Exline et al., 2004), and it has been demonstrated that sociotropy is linked to a greater perception that the outperformed person feels threatened. This perception, in turn, predicts more interpersonal concern, leading to greater emotional distress (Exline et al., 2012). Using a scenario-based measure called the Test of Responses to Outperforming Others (TROO), Exline and Zell (2012) consistently found that sociotropy predicts higher levels of distress.

On the other hand, narcissism is characterized by grandiosity, self-love, inflated self-views, and a lack of empathy (Campbell et al., 2011). Narcissism has been negatively correlated with concern about negative responses from the outperformed person (Exline et al., 2004) and distress related to STTUC (Koch & Totton, 2015). Exline and Zell (2012) found narcissism to be a robust predictor of positive emotions on the TROO.

Characteristics of the situation

Exline and Lobel (1999) proposed that STTUC would be more intense when there is direct contact with the outperformed person and in situations that promote comparison, such as competitive environments. STTUC would also be more intense in situations that increase the threat to the outperformed person, for instance when the domain of comparison is relevant to the outperformed person. Additionally, STTUC distress is more probable when outperformance implies deviant status within a group, as seen in top performers who surpass an entire group of individuals.

Several studies indeed have identified several characteristics of the situation that reinforce STTUC. Henagan (2010) found that a competitive climate generates greater concern about the outperformed person's reaction. It was also confirmed that STTUC is heightened when individuals outperform others in a domain that is relevant to the outperformed person (Romani et al., 2016; Tal-Or, 2008).

The perceived deservingness of the outperformer's superior status also influences the experience of STTUC. Koch and Totton (2015) used vignettes in which the outperformer's success was deserved in some cases and undeserved in others (e.g., an outperformer achieving a higher grade despite spending more time partying compared to their partner, who studied diligently). They found that outperformers experienced more STTUC when their success was perceived as undeserved. In an experiment by Van de Ven et al. (2010), participants received a financial bonus that they either deserved or did not deserve. They discovered that individuals who were undeservedly better off than others were more fearful about the jealousy of the other person compared to those who were deservedly better off.

Furthermore, the type of recognition for outperformance also plays a role. Exline et al. (2004) found that students preferred private recognition and were only interested in public recognition if they anticipated positive reactions from their peers. When they were concerned about negative reactions, they were less interested in public recognition.

Characteristics of the outperformed person and of the relationship

The characteristics of the outperformed person and of the relationship are the least investigated factors that may have an influence on STTUC (Zuiker et al., 2019).

Exline and Lobel (1999) proposed that individuals would be more susceptible to STTUC when they outperform those who are most likely to feel threatened by the upward comparison, such as vulnerable or fragile individuals. Outperformers who perceive the outperformed person as vulnerable or fragile may experience stronger STTUC.

Henagan (2010) examined STTUC-related concern in relation to the extent to which the outperformed person actually felt threatened by the upward comparison. This study focused on sales agents who either won or did not win awards and showed that the actual threat felt by the non-winners had only a marginal effect on the STTUC-related concern experienced by the winners. However, this finding does not contradict the theory of STTUC, as it emphasizes that STTUC is based on the *perception* of the outperformer. One does not need to be the actual target of a threatening upward comparison to experience STTUC (Exline & Lobel, 1999). This implies that studies on the characteristics of the outperformed person should focus on the perceived characteristics rather than the actual characteristics of the outperformed person.

The relationship between the outperformer and the outperformed person is another factor that can influence the emotional responses of the outperformer. Exline and Lobel (1999) theorized that outperforming someone in close and friendly relationships could evoke empathic concerns, as outperformers tend to care about the needs of those close to them and wish to shield them from pain. Subsequent empirical studies have indeed shown that greater concern and negative emotions are experienced when surpassing friends or acquaintances, whereas more positive feelings, such as pride and happiness are reported when

the outperformed person is disliked (Exline & Lobel, 2001; Romani et al., 2016). Although friendships and acquaintanceships are less common in the workplace, positive workplace relationships are seen to play a pivotal role in fostering positive emotions (Colbert et al., 2016). The research of Exline and Lobel (2001) and Romani et al. (2016) suggests that when outperformance comes into play, particularly in positive workplace relationships, negative emotions can be triggered.

Present study

The present study utilized a between-subject vignette design to explore STTUC in the workplace. Through this study we aimed to build upon the limited existing research on STTUC in the workplace, specifically the work of Henagan (2010) and Henagan and Bedeian (2009), as described in the preceding sections. The present study also aimed to enhance our understanding of STTUC by examining the effects of the perceived characteristics of the outperformed person and of the relationship between the outperformer and the outperformed on STTUC, aspects that have been underinvestigated to date.

Zell et al. (2020) proposed that outperformed individuals who are perceived as competitive, unhappy, or have low self-esteem are more likely to be seen as threatened. In our study, we specifically focused on the aspect of low self-esteem. This is because previous studies have indicated an association between low self-esteem and an increased susceptibility to envy (Smith et al., 1999; Vecchio, 2005), as well as the fact that people can readily recognize low self-esteem in others (MacGregor & Holmes, 2011). Consequently, outperformers may observe the low self-esteem of the outperformed person and believe that the upward comparison poses a threat to them.

Based on these considerations, our first hypothesis *(H1)* posited that outperformers experienced more negative emotions (STTUC) when they perceived their outperformed colleague as having low self-esteem, compared to high self-esteem. Additionally, we explored the impact of perceived self-esteem on the positive emotions associated with outperforming others *(RQ1)*.

Regarding the relationship between the outperformer and the outperformed person, previous studies have examined the effects of surpassing a friend, acquaintance, or disliked person (Exline & Lobel, 2001; Romani et al., 2016). In the workplace context, where friendships and acquaintanceships are less common, we distinguished between a liked and disliked colleague to further explore the effect of relationship on STTUC.

Consistent with the previous research (Exline & Lobel, 2001; Romani et al., 2016), we hypothesized that outperformers experienced more negative emotions when they liked the outperformed colleague *(H2)*, and more positive emotions when they disliked them *(H3)*.

Furthermore, we expected an interaction effect between the perceived self-esteem of the outperformed person and the friendliness of the relationship: We suspected that the effect of friendliness on negative emotions would be influenced by self-esteem, such that in a friendly relationship low self-esteem would increase one's negative emotions *(H4)*.

Taking into account the significant impact of sociotropy and narcissism on the emotional experiences of outperformers as has been documented in previous studies (for reviews, see Koch, 2023; Zell et al., 2020; Zuiker et al., 2019), we incorporated these two variables in our research. Additionally, we aimed to account for another personality characteristic, namely the general (trait, positive and negative) affect of outperformers. It is important to note that affect has a strong dispositional component that can impact individuals' momentary emotional states (Watson et al., 1988). Including this factor in our study was important to mitigate the possibility that the negative and positive emotions observed in outperformance situations were attributable to general (trait) affect.

Lastly, we explored the relative influence of the factors investigated in this study. Personality can be regarded as an internal factor, whereas the relationship and characteristics of the outperformed can be seen as more external factors. Which factors exert the greatest influence on the emotional experiences of the outperformer? *(RQ2)*.

Materials and methods

Vignettes

Vignettes were created in which participants assumed the role of a company employee in a hypothetical work-related scenario. The vignettes depicted a situation in which participants outperformed a colleague who was aware of being outperformed (first condition of STTUC). Participants were led to believe that the outperformed colleague felt threatened by the upward comparison, as the description portrayed the colleague as frustrated (second condition of STTUC).

To manipulate the independent variables, namely the perceived self-esteem of the outperformed person

(high/low) and the relationship between the outperformer and outperformed (like/dislike), four distinct vignettes were developed. Situational variables known to influence STTUC (relevant performance field, competitive climate, undeserved success, public recognition) were integrated into the vignette. This approach prevented participants from constructing uncontrollable pieces of information that could induce STTUC (Auspurg & Hinz, 2015). Consequently, the following four vignettes were created:

> You are working for a company and are responsible for securing contracts to provide services to other businesses. You won some very significant contracts in the past year, and you are about to win another important contract. You are aware that this could get you the promotion you really want.
> However, your colleague Chris is also after this promotion.
> Chris is a colleague who you feel has high (low) self-esteem. You get along with Chris very well (For some reason you can't stand Chris).
> Although you did not work as hard as Chris to get the promotion, you are the one who secures it. During a team meeting you are praised by the manager for your performance in front of the entire team. You notice that Chris is clearly very frustrated by the situation.

The vignettes underwent a pretest with 40 participants recruited from the online data collection platform Prolific. Specifically, 20 male and 20 female UK citizens who were full-time employed and held undergraduate, graduate, or doctorate degrees were selected. Participants received £0.70 as compensation for their participation.

Each participant read one of the four vignettes and subsequently answered two questions to verify whether the independent variables were correctly perceived (manipulation check):

1. In the story you just read your colleague Chris is a colleague who you feel has: High self-esteem/low self-esteem.
2. Furthermore, your colleague Chris is a colleague: You get along with very well/you can't stand.

Participants also responded to two questions to assess their familiarity with the vignette situation: To what extent is it easy for you to imagine being in this sort of situation? and To what extent can you relate to the situation presented here? The response options ranged from 1 (very little) to 5 (very much).

The manipulation check was successfully passed by 92.5% of the participants, which was deemed acceptable. Participants demonstrated sufficient familiarity with the vignette ($M = 3.48$, $SD = 1.01$). No modifications were made to the vignette based on these results.

Participants

Participants were recruited in April 2022 using the online data collection platform Prolific. We specifically selected UK citizens who were currently employed full-time and had completed either an undergraduate degree, graduate degree, or doctorate degree. To ensure the participants' current full-time employment status, a prescreening question was included, asking: "What is your employment status?" Out of the 475 participants initially recruited, 470 responded that they were full-time employed. These 470 individuals were then invited to complete the questionnaire and received a compensation of £1.90 for their participation. Subsequently, 29 participants were excluded due to failing the manipulation check and an additional six failed the attention checks (see Procedure below). Although participants were selected by Prolific according to their completed educational degree, 10 participants reported an educational degree that did not meet our selection criteria and were also excluded.

Among the remaining 425 participants, 49.8% identified as female, 49.3% as male, and 0.7% as non-binary/third gender. The majority of participants (82.7%) identified as White. The mean age of the participants was 37.46 years ($SD = 10.37$), and their average work experience was 16.21 years ($SD = 10.63$). Participants were employed across various sectors, including Education & Training (15.6%), Government & Public Administration (12.8%), and Medicine (10.9%). In terms of their highest educational attainment, 58.1% of participants had completed an undergraduate degree, 36.2% a graduate degree, and 5.6% a doctorate degree.

Procedure

This study obtained ethical approval from the ethics committee of the Erasmus University Rotterdam, the Netherlands (ETH2122-0366). Data collection was conducted through an online survey using Qualtrics. Participants provided their consent and were randomly assigned to one of four conditions based on two levels of self-esteem of the outperformed person (high or low) and two levels of relationship quality (like or dislike).

Upon reading the scenario, participants were instructed to respond to questions that assessed the dependent variables: negative emotions (STTUC) and positive emotions. The same manipulation check questions used in the pilot study were included:

1. In the story you just read, your colleague Chris is a colleague who you feel has: High self-esteem/low self-esteem.
2. Furthermore, your colleague Chris is a colleague: You get along with very well/you can't stand.

Additionally, participants were asked the same familiarity questions as in the pilot study to assess their level of engagement with the vignette: To what extent is it easy for you to imagine being in this sort of situation? To what extent can you relate to the situation presented here? Response options ranged from 1 (very little) to 5 (very much). The familiarity with the vignette was deemed satisfactory ($M = 3.66$, $SD = 0.97$).

Finally, participants completed scales on sociotropy, narcissism, and general positive/negative affect (see next section on these measures). Two attention checks were included: It is important that you pay attention to this study. Please click "strongly disagree." Only participants who passed the manipulation check and both attention checks were included in the data analysis (see Participant section).

Measurement instruments

Negative emotions (STTUC) and positive emotions

After reading the scenario participants were asked: To what extent do you think you would experience each of the following emotions in this situation? A list of eight emotions, randomized by Qualtrics, was presented to the participants. Adapted from the study by Exline and Zell (2012) these emotions consisted of four positive emotions (pride, happiness, satisfaction, gratitude) and four negative emotions, aka STTUC (sadness, anxiety, guilt, shame). Items were rated on a Likert scale from 1 (very little) to 5 (very much).

When collapsing across the four vignettes, principal component analysis with varimax rotation suggested two factors: negative emotions (Eigenvalue = 4.2, 53% of variance, $\alpha = .85$) and positive emotions (Eigenvalue 1.3, 17% of variance, $\alpha = .84$). The scree plot supported the existence of two factors.

Sociotropy

Participants completed the 24-item Sociotropy subscale of the Personal Style Inventory II: PSI-II (Robins et al., 1994). Each item was rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items include "I often put other people's needs before my own" and "I try to please other people too much." Robins et al. found internal consistency reliabilities of .88 and .90.

Narcissism

Participants completed the short version of the Narcissistic Personality Inventory: NPI-16 (Ames et al., 2006). The short version, consisting of 16 items, was used because we only needed a measure of narcissism as a general factor *vs.* subscale information. Ames et al. found internal consistencies for the NPI-16 ranging from .65 to .72. The NPI-16 employs a forced-choice format presenting participants with a narcissistic and non-narcissistic statement. Following the recommendation of Boldero et al. (2015) we used a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items include "I think I am a special person" and "People always seem to recognize my authority."

General positive and negative affect

Participants' general (trait) positive and negative affect were assessed using the Positive and Negative Affect Schedule: PANAS (Watson et al., 1988). The PANAS consists of two 10-item scales that measure positive feelings (e.g., enthusiastic, excited) and negative feelings (e.g., upset, nervous). Varying instructions make it possible to measure state affect (right now, today) and trait affect (past year, general). We used the trait-version in which we asked participants how they feel in general. The 20 items were randomly presented per participant and rated on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Watson et al. found the following internal consistency reliabilities for the General scales: positive affect scale $\alpha = .88$, negative affect scale $\alpha = .87$.

Statistical analyses

To test whether low self-esteem of the outperformed colleague (*H1*) and a friendly relationship (*H2*) resulted in more negative emotions experienced by the outperformer, we performed a two-way analysis of covariance (ANCOVA) with perceived self-esteem of the outperformed person (high/low) and the relationship between the outperformer and outperformed

(like/dislike) as independent variables and negative emotions (STTUC) as dependent variable. To rule out whether the effect could be accounted for by sociotropy and trait negative affect, these variables were included as covariates.

Another ANCOVA was performed with perceived self-esteem of the outperformed person (high/low) and the relationship between the outperformer and outperformed (like/dislike) as independent variables and positive emotions as dependent variable to test whether an unfriendly relationship results in more positive emotions (*H3*) and to explore the effect of self-esteem on the positive emotions of the outperformer (*RQ1*). To rule out whether the effect could be accounted for by narcissism and trait positive affect, these variables were included as covariates.

With negative emotions the interaction between self-esteem of the outperformed and the relationship was examined (*H4*).

Additionally, we employed hierarchical regression analysis on both negative and positive emotions to explore which factor has a stronger effect: characteristics of the outperformer, characteristics of the outperformed person, or the relationship between outperformer and outperformed (*RQ2*). The regression analyses were checked for multicollinearity. Variance Inflation Factors (VIF) above 10 or Collinearity Tolerance values below 0.1 are indicative of problems with multicollinearity (Field, 2018). In the present research, the above mentioned independent variables showed VIF's ranging from 1.02 to 1.38, which is way below the threshold of 10, and Collinearity Tolerance values ranging from 0.72 to 0.98, which is way above the threshold of 0.1. These values show that there is no danger of multicollinearity.

Results

Table 1 shows the alpha's, means and standard deviations and the bivariate correlations between all study variables.

Descriptive results

The survey software Qualtrics randomly assigned 105 participants to the High SE × Like condition, 106 to High SE × Dislike, 108 tot Low SE × Like, and 106 to Low SE × Dislike. Preliminary analyses revealed no significant participant differences across conditions regarding age, gender, work experience, education level and familiarity with the situation in the vignette. Women ($M = 2.49$, $SD = 1.0$) were more likely to experience negative emotions in the outperformance situation (STTUC) than men ($M = 2.06$, $SD = .86$), $d = .46$. Furthermore, the following weak relationships were found: for age ($r = -.22$) and work experience ($r = -.19$) with negative emotions (STTUC) and for educational level ($r = -.10$) with positive emotions.

Inspection of the correlations between narcissism and sociotropy on the one hand and negative and

Table 1. Means, standard deviations, correlations between all variables and reliabilities (diagonal) of the scales.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender (female = 0, male = 1)	0.50	0.50	(–)											
2. Age (years)	37.46	10.37	.22	(–)										
3. Work experience (years)	16.21	10.63	.19	.93	(–)									
4. Educational level	–	–	−.07	−.10	−.18	(–)								
5. Self-esteem (low = 0, high = 1)	0.50	0.50	−.01	−.02	−.05	.11	(–)							
6. Relationship (dislike = 0, like = 1)	0.50	0.50	.08	.02	.02	.01	−.01	(–)						
7. Negative emotions (STTUC)	2.28	.96	−.23	−.22	−.19	.09	−.03	.17	(.85)					
8. Positive emotions	3.68	.85	.03	.06	.02	−.10	.09	−.12	−.52	(.84)				
9. Sociotropy	3.15	.65	−.31	−.26	−.22	.02	.02	−.06	.42	−.05	(.92)			
10. Narcissism	2.51	.63	.06	−.12	−.09	.02	.00	−.09	−.14	.20	−.01	(.89)		
11. Positive affect (trait)	3.36	.64	.09	.08	.08	.00	−.03	−.04	−.21	.21	−.12	.40	(.88)	
12.Negative affect (trait)	1.93	.72	−.20	−.23	−.19	.00	.05	−.03	.42	−.08	.42	−.01	−.31	(.91)

Note: Variables 7 and 8 were rated on a 5-point scale ranging from 1 (very little) to 5 (very much) and variables 9–12 on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

positive emotions on the other hand (see Table 1) shows that narcissism is negatively correlated to negative emotions and positively correlated to positive emotions, whereas sociotropy is only positively correlated with negative emotions without a noteworthy correlation with positive emotions. These findings suggest that narcissism is associated with experiencing more positive and less negative emotions in situations where one outperforms others. On the other hand, sociotropy appears to be related to more mixed emotions, where individuals high on sociotropy experience the same level of positive emotions as those low on sociotropy, but additionally experience more negative emotions.

Hypothesis testing

Predicting negative emotions (STTUC)

The results of the two-way ANCOVA revealed a small to medium main effect of relationship with more negative emotions reported when the outperformer liked the outperformed colleague (partial $\eta^2 = .050$; Like: $M = 2.46$, $SD = .06$; Dislike: $M = 2.09$, $SD = .06$), supporting hypothesis 2. Hypotheses 1 and 4 were not supported as the effect sizes of self-esteem (partial $\eta^2 = .003$) and the interaction between the two independent variables (partial $\eta^2 < .001$) were negligible. The covariates showed medium to large positive effects: sociotropy, partial $\eta^2 = .098$, and trait negative affect, partial $\eta^2 = .095$.

The results of the hierarchical regression analysis (see Table 2) showed that gender was negatively related to negative emotions, indicating that women experience more STTUC than men (step 1). In step 2 of the regression, the effect of gender diminished and the effect of educational level increased, indicating that a higher educational level is related to more STTUC. Also, sociotropy and trait negative affect were positively related to STTUC, whereas narcissism was negatively related to STTUC. Step 3 of the regression analysis showed that a friendly relationship was positively related to STTUC and accounted for variance in STTUC above sociotropy, narcissism, trait negative affect, and educational level. Self-esteem did not explain any variance in STTUC. In answering research question 2, results showed that the characteristics of the outperformer (sociotropy and trait negative affect) are stronger predictors of STTUC than the relationship between outperformer and outperformed. The perceived self-esteem of the outperformed person did not predict STTUC.

All in all, it appears that employees with a higher completed education level and who are low on narcissism, high on sociotropy, and high on trait negative affect reported more negative feelings in an outperformance situation (STTUC) when they liked the outperformed colleague.

Table 2. Hierarchical regression analysis predicting negative emotions in response to an outperformance vignette.

Predictor	Step 1 β	Step 2 β	Step 3 β
Gender	−.19	−.07	−.08
Age	−.25	−.10	−.11
Work experience	.08	.02	.03
Highest level of education completed	.07	.09	.09
Sociotropy		.25	.26
Narcissism		−.13	−.11
Positive affect (trait)		−.06	−.06
Negative affect (trait)		.26	.27
Relationship			.20
Self esteem			−.07
$R^2_{adjusted}$	.08	.27	.32
R^2_{change}	.09	.20	.04

Note: To understand the individual contributions of the predictors an additional analysis was run with predictors added individually. This generated the following R^2_{change} values: Sociotropy .179, Narcissism .020, Positive affect .013, Negative affect .061, Relationship .033, Self-esteem .002.

Predicting positive emotions

The results of the two-way ANCOVA revealed a small main effect of relationship with more positive emotions reported when the outperformer disliked the outperformed colleague (partial $\eta^2 = .011$; Like: $M = 3.60$, $SD = .06$; Dislike: $M = 3.77$, $SD = .06$), in line with Hypothesis 3. In answering research question 1 we found a main effect of self-esteem with more positive feelings reported when the outperformed person was perceived as having high self-esteem, although very weak (partial $\eta^2 = .008$, High SE: $M = 3.76$, $SD = .06$; Low SE: $M = 3.61$, $SD = .06$). The interaction between the two independent variables showed a negligible effect size (partial $\eta^2 = .002$). The covariates showed small positive effects: narcissism, partial $\eta^2 = .015$, and trait positive affect, partial $\eta^2 = .022$.

The results of the hierarchical regression analysis (see Table 3) showed that educational level was negatively related to positive emotions, indicating that a lower educational level was related to more positive emotions (step 1). In step 2 of the regression, narcissism, and trait positive affect were positively related to positive emotions and accounted for variance above educational level. Step 3 of the regression showed that an unfriendly relationship and perceived high self-esteem of the outperformed person were positively related to positive emotions, accounting for variance above narcissism, trait positive affect, and educational level. In further answering research question 1 and in line with the results of the ANCOVA, regression results showed that more positive feelings were

Table 3. Hierarchical regression analysis predicting positive emotions in response to an outperformance vignette.

Predictor	Step 1 β	Step 2 β	Step 3 β
Gender	.01	−.02	−.01
Age	.14	.14	.14
Work experience	−.12	−.12	−.12
Highest level of education completed	−.12	−.13	−.14
Sociotropy		−.01	−.01
Narcissism		.16	.15
Positive affect (trait)		.16	.16
Negative affect (trait)		−.01	−.02
Relationship			−.13
Self esteem			.13
$R^2_{adjusted}$	.01	.07	.10
R^2_{change}	.02	.07	.03

Note: To understand the individual contributions of the predictors an additional analysis was run with predictors added individually. This generated the following R^2_{change} values: Sociotropy .000, Narcissism .041, Positive affect .020, Negative affect .001, Relationship .011, Self-esteem .008.

reported when the outperformed person was perceived as having high self-esteem. The results also showed that the characteristics of the outperformer (narcissism and trait positive affect) seem to be somewhat stronger predictors of positive emotions than the relationship between outperformer and outperformed and the perceived self-esteem of the outperformed person, which answered research question 2.

All in all, it appears that people with lower education levels and who are high on narcissism and trait positive affect reported more positive feelings in an outperformance situation when they disliked the outperformed person and when the outperformed person was perceived as having high self-esteem.

Negative and positive emotions

If we compare the effect sizes of predictors for negative and positive emotions, we can observe that, overall, the effect sizes of the predictors of negative emotions (STTUC) are relatively large, while the effect sizes of predictors of positive emotions are relatively small (Cohen, 1992). We can therefore infer that while negative and positive emotions in outperformance situations have different predictors, the larger effect sizes of negative emotions suggest more robust associations between the predictors and negative emotions, indicating a potentially better predictability of STTUC, in comparison to positive emotions.

Discussion

The present study investigated Sensitivity about being the Target of a Threatening Upward Comparison (STTUC) within the workplace, aiming to enhance our understanding of this phenomenon. Specifically, we examined the least explored aspects of STTUC, focusing on how a perceived characteristic of the outperformed person and of the relationship impact STTUC in a professional setting.

Our findings reveal that the relationship between the outperformer and the outperformed person plays a role in predicting emotional responses. Positive relationships between the two predict more negative emotions in the outperformer (STTUC), while negative relationships predict more positive emotions in the outperformer. This aligns with earlier research, but our study contributes to the literature by contextualizing these findings within a workplace environment. While earlier investigations into the influence of relationships on STTUC primarily focused on students and their interactions with friends, acquaintances, and disliked persons (Exline & Lobel, 2001; Romani et al., 2016), our research delves into the realm of workplace dynamics. Our research shows that the amiability of professional relationships also significantly impacts the emotional experiences of those who are outperforming others.

The other focus of this study was to examine how the perceived self-esteem of the outperformed person affects the emotions of the outperformer. Contrary to our initial prediction, we found that perceived low self-esteem in the outperformed person did not result in more STTUC in the outperformer. However, we did find that self-esteem played a role in influencing the positive feelings of the outperformer. Specifically, when the outperformed person had high self-esteem, the outperformer experienced more positive feelings. Although low self-esteem in the outperformed person does not lead to negative feelings in the outperformer (STTUC), it may still diminish the positive feelings experienced by the outperformer.

Concerning the emotions experienced while surpassing others, our observations indicate that the personality characteristics of the outperformer (sociotropy, narcissism, trait affect) exert a more pronounced influence on both negative emotions and, to a somewhat lesser degree, positive emotions, as compared to external factors, such as the relationship and the perceived self-esteem of the outperformed person. This trend might be attributed to the geographical context of our study, which took place in the United Kingdom, a country characterized by its individualistic cultural orientation.

Research investigating the relationship between culture, particularly the dimensions of individualism and collectivism, and personality (Triandis, 2001) reveals that people within collectivist cultures tend to exhibit a flexible and less sharply defined personality. This arises due to their perception of themselves as

interconnected with their in-groups, which provides a stable social environment necessitating their adjustment. Consequently, they view the self as being malleable while considering the social environment as fixed. On the contrary people in individualistic countries regard their personality as stable and fixed and the social environment as changeable. This outlook leads them to shape their surroundings to harmonize with their personality traits.

This perspective highlights that the perceived stability of personality in individualistic cultures, like the UK, also makes it conceivable that personality exerts a stronger influence on emotions during outperformance, compared to external factors, such as the relationship and the perceived characteristics of the outperformed person. Further investigation within collectivist societies could offer insights into whether in these societies the significance of relationships and the characteristics of the outperformed individual outweigh the personality of the outperformer, thus contributing to a more refined understanding of how cultural backgrounds shape emotional experiences in outperformers.

Our study findings indicate further that it seems easier to predict negative emotions in outperformance situations (STTUC) than positive emotions, as the effect sizes of the predictors of negative emotions (STTUC) are rather large, and also larger than the effect sizes of the predictors of positive emotions, which are small (Cohen, 1992).

In line with earlier findings of Baumeister et al. (2001), Fisher (2019) argues that negative emotions carry more intensity than positive emotions due to their uncommon and distinct nature. Negative emotions are less expected than positive emotions. This concept applies to emotional responses when surpassing another person, as outperforming others typically triggers positive emotions whereas negative emotions are less expected.

In essence, the default emotional state during outperformance is positive, making its prediction more challenging. This is because even individuals susceptible to STTUC will encounter positive emotions when outperforming others. Their emotional state becomes ambivalent, encompassing both positive and negative emotions. Those less prone to STTUC, however, will predominantly experience positive emotions.

This notion is confirmed by the correlations found in this study: Individuals with high levels of sociotropy, indicative of greater susceptibility to STTUC, report a similar degree of positive feelings as those low on sociotropy. Yet, high sociotropy individuals also report more negative emotions compared to their low sociotropy counterparts, reflecting the ambivalence of their emotions. Conversely, individuals with high narcissism levels, and consequently reduced susceptibility to STTUC, report increased positive emotions and decreased negative emotions compared to their low narcissism counterparts.

Practical implications

Emotions play an important role in the workplace (Fisher, 2019) and according to the Affective Events Theory, specific workplace events trigger emotional responses in employees (Weiss & Cropanzano, 1996). Ohly and Schmitt (2015) developed a taxonomy in which the event clusters "praise, appreciation, positive feedback," "goal attainment, problem-solving, task-related success," and "perceived competence through social interaction" are seen as positive events, evoking positive emotions. Our research shows that it is important to adopt a more nuanced perspective, recognizing that these seemingly positive events can turn out negatively when outperformance is involved. Similarly, although positive workplace relationships play a pivotal role in fostering positive emotions (Colbert et al., 2016), when outperformance comes into play, particularly in positive relationships, it can trigger STTUC-related negative emotions.

Managers should exercise caution when implementing recognition and providing opportunities for task-related success. Competitive dynamics that pit employees against each other and create disparities in status should be avoided. Instead, fostering a collaborative environment where individual achievements contribute to collective success seems advisable.

Limitations and future research

The present study has some limitations and opportunities for future research. One limitation is that we examined a hypothetical situation, which introduces uncertainty about how closely real-world responses align with participants' anticipated reactions. However, this choice allowed us to implement an experimental design that successfully manipulated the perceived characteristics of the outperformed person and of the relationship and collected data from a substantial and diverse group of participants. Other experimental designs or field studies aimed at preexisting professional relationships and assessing perceptions of colleagues' self-esteem raise ethical and practical issues.

Another limitation lies in the use of self-esteem as the sole characteristic of the outperformed person. Perhaps other characteristics, such as outperformed individuals who are perceived as competitive, unhappy, or dispositionally envious, will influence STTUC

(Exline & Lobel, 1999; Zell et al., 2020). Future research could address these characteristics.

As the present study on STTUC in the workplace aimed at a characteristic of the outperformed person and of the relationship, further research could focus on the effect on STTUC of situational factors unique to the workplace, such as instances where employees can either stay or face job loss during company reorganizations.

Conclusion

The present study enhances our comprehension of Sensitivity about being the Target of a Threatening Upward Comparison (STTUC), particularly in the context of the workplace. It shows that the amiability of professional relationships significantly influences the emotional experiences of people who are surpassing others. Perceived low self-esteem in the outperformed person does not trigger negative feelings in the outperformer (STTUC) although it diminishes the positive feelings experienced by the outperformer. Personality traits of the outperformer, namely sociotropy, narcissism, and trait affect, exert a more substantial impact on the emotions felt by outperformers compared to external factors, such as the relationship and the perceived self-esteem of the outperformed person. Lastly, it seems that negative emotions in outperformance situations are easier to predict than positive emotions.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

The participants of this study did not give written consent for their anonymous data to be shared publicly. The anonymous data that support the findings of this study are available for other researchers from the corresponding author, A.A.M. Zuiker, upon reasonable request.

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