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The Mediating Role of Social Processes in the Effect of Achievement Goals on Well-Being

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Abstract

This study investigated the relationships of achievement goals, team-membership exchange (TMX), social support and well-being (fatigue, stress, job satisfaction, general well-being (GWB) and work engagement). It was hypothesized that the relationship of mastery goals with well-being may be explained by their positive relationships with TMX and social support, whereas the relationship of performance goals may be explained by their negative relationships with both social processes. Data of 258 persons showed that (1) mastery-approach goals were negatively related to fatigue and positively to job satisfaction and work engagement and that TMX explained its relationship with work engagement, (2) mastery-avoidance goals were positively related to fatigue and stress and negatively to job satisfaction and GWB and that social support explained all these relationships, (3) Performance-approach goals were not related to well-being or to TMX and social support, and (4) performance-avoidance goals were positively related to fatigue and stress and negatively to job satisfaction and work engagement, but they were not related to TMX or social support. The implications of these results are covered in detail. The fact that mastery-approach and mastery-avoidance have opposite effects shows that the presumed underlying mechanism of mastery goals should be reconsidered. And one of the practical implications of this study is the call for more emphasis on development without competition within organizations.

The Mediating Role of Social Processes in the Effect of Achievement Goals on Well-Being

One of the important objectives of occupational health psychology is the identification of factors that influence employees' well-being. In pursuit of this objective numerous factors have been identified, ranging from work environment to personality to specific daily hassles (Sulsky & Smith, 2005). The increased understanding of employees' well-being enables interventions to be made and allow for jobs to be designed in a way that suits not only economic purposes but also the needs of the persons who perform those jobs.

A need which is common to all humans is the need for affiliation (McClelland, 1961). It is so deeply embedded in the human nature that Aristotle described humans as "the social animal". It makes intuitive sense that when this need is thwarted this will have a negative impact on the person's well-being. Research confirms that this social need has strong effects on health and well-being (e.g. Baumeister & Leary, 1995). Since the work place is a place where a large part of the employees spends more time than with their family, the work place is one of the prominent places to satisfy this need. Employers and employees benefit from studies that address the effects of need for social interaction in an occupational setting. For example, research suggests that increasing social skills and doing team-building exercises helps to prevent burnout (Corrigan, Holmer, Luchins & Buican, 1994). Further investigations in this direction contribute to a better work environment.

Another need that lies at the core of human behavior and is strongly embedded in the work place is the need for achievement (McClelland, 1961). Employees have motivational goals that allow them to perform at work and differences in how these motivational goals are formulated have various effects. Not only do these differences have an effect on performance (e.g. Janssen & van Yperen, 2004), but also on well-being (e.g. Van Yperen & Janssen, 2002). Managers and

employers are responsible to keep their subordinates and employees motivated. Understanding what positive and negative consequences each sort of motivation carries is therefore indispensable.

The present study aims to add to the understanding of what affects well-being, by studying how the effect of motivational goals can be explained by the effect of social interaction on well-being. In the subsequent sections we will outline this question in the following way: First, the effect of motivational goals on well-being will be discussed. Second, previous research and theory, which shows how motivational goals affect social processes, will be discussed. This discussion leads to the reasons why this study addresses quality of team-member relations (TMX) and social support, which will be used to build a model which hypothesizes that the effect of motivational goals on well-being is explained by the effects of TMX and social support on well-being. In line with this thesis suggestions are made to improve work settings to arrive at a more optimal functioning of individual employees and teams. However, in the following section there will first be an explication of what in this study is meant by well-being.

Well-Being

Most people will agree that well-being is an important component of life. But there probably exist as many definitions of it, as people who try to define it. The present study will restrict itself to the well-being that is related to and influenced by the work place and an important influence in the present approach is the call for more positive organizational scholarship (Cameron, Dutton & Quinn, 2003). These authors argue that approaching well-being as the absence of misery or disease is lopsided, and in order to arrive at more optimal performance and experience a positive approach is needed. Positive organizational psychology is directed towards well-being in an optimal sense (Seligman & Csikszentmihalyi, 2000). It does not reject the approach of absence

of undesired things, but it emphasizes subjects like virtuousness, vitality, cooperation and meaningfulness. Through this light the further definition of well-being will be shaped.

Keyes, Shmotkin and Ryff (2002) identified that well-being consists of two distinct components, namely, subjective evaluations of life and psychological evaluations of life. Their study did not address occupational health, but addressed well-being in the broadest sense. In order to make use of their findings the present study will try to replace the measures with occupational ones.

The subjective evaluation is the sum of general positive and negative affect (Keyes et al., 2002). Since general well-being is not independent from the work place it makes sense to include a general well-being (GWB) variable. Also, including a job satisfaction measure fits this component of well-being, as well as the positive occupational setting. Moreover, job satisfaction has previously been researched in the achievement goals context (e.g. Janssen & Van Yperen, 2004; Van Yperen & Janssen, 2002). Including it would make the empirical evidence for this relationship stronger and the understanding of it more specific.

To measure a psychological evaluation of occupational life the concept ‘work engagement’ matches the goal of the present study. It is originally a measure of burnout, but framed in positive terms (Schaufeli & Salanova, 2006). An engaged person is characterized by high levels of energy and vigor, dedication and absorption. Work engagement has generally been researched using the Job Demands-Resources model (Demerouti, Bakker, Nachreiner, Schaufeli, 2001; see Bakker & Demerouti, 2007, for an overview). In this model job demands and job resources are considered to be antecedents of exhaustion and engagement. Job resources include social resources like supervisory coaching and social support (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007). This makes the use of work engagement in the present study rather interesting for researchers of this field. Although the present study does not use the complete model, it

might fuel future research to consider achievement goals and TMX as additional variables to the Job Demands-Resources model. Lastly, fatigue and stress are added as measures for well-being. Fatigue was used by a previous study (Van Yperen & Janssen, 2002), which the present study wishes to extent. Stress is measured because it has become an important factor in daily occupational life (Cummings & Vandenberg, 1981). Therefore it serves the practical purpose of this study well.

To get more insight into the relation between achievement goals and well-being the next section will consist of defining achievement goals and previous studies in the field of well-being.

Achievement Goals and Well-Being

In studies on motivational goals ‘achievement goals’ are the most extensively studied subject. These goals are commonly defined as *the competence-relevant purpose for engaging in and directing of behavior in an achievement situation* (Elliot, 2005). To keep consistent with the original research and theoretical considerations by Elliot and Harackiewicz (e.g. 1994), and a classification of DeShon and Gillespie (2005), the present study uses the concept in the sense of *adopted goals*. Achievement goals, in this sense, are adopted and not stable over situations, domains, and time. This means that persons cannot be labeled performance or mastery oriented, because they change goals due to situations and time. This contrasts with the dispositional usage of the concept such as in the trait or mental framework usage (DeShon & Gillespie, 2005).

The central element in achievement goals is competence (Elliot, 2005). Different achievement goals can be formed as one orients oneself differently towards one’s competence. Four different achievement goals have been identified, differing on two dimensions. The first dimension is definition. Goals are formed in either mastery or performance terms. Mastery goals are oriented towards *developing* competence, and performance goals are oriented towards *demonstrating*

competence. The second dimension is valence. Goals are formed in either an approach or an avoidance way. Approach goals are oriented towards being *better*, and avoidance goals are oriented towards *not* being *worse*. For example, when having a mastery-avoidance goal, the purpose of behavior is to avoid losing skills or task incompletion (Elliot, 2005).

Often mastery and performance are misconceived to be each others opposite on the same dimension. However, these four different forms of achievement goals are not mutually exclusive, meaning that one could, in theory, score high on all the different goals. They are simply goals which are pursued, and in different situations one can have different goals or even multiple goals (see Van Yperen & Janssen, 2002, for such an approach).

The 2 x 2 framework was formulated by Elliot in 1999. In that work he combined two formerly distinct perspectives of motivational goals: Mastery and performance, and approach and avoidance goals. Both perspectives have separately been researched with regard to well-being. Significant results have been found of avoidance goals decreasing subjective well-being (Elliot, Sheldon & Church, 1997; Elliot & Sheldon, 1997), and increasing physical symptoms, (Elliot & Sheldon, 1998), worry, and health center visits (Elliot & McGregor, 2001). These effects of avoidance goals on health variables are explained to come from fear of failure. This disposition enables self-regulation but is centered on a negative object. The constant focus on (the preventing of) failure drains the person of energy and thus making the person less able to cope with stress and disease (Elliot, 2006; Elliot & Murayama, 2008; Chen, Wu, Kee, Lin & Shui, 2009). A study of Kaplan and Maehr (1999) showed that mastery-approach goals were positively related to well-being, whereas performance-approach goals were negatively related to well-being. Van Yperen and Janssen (2002) compared having none, one or two goals. They found that having one predominant goal leads to more fatigue. Moreover, if the performance-approach goal was predominant this fatigue was accompanied by a decrease in job satisfaction. While the other

studies mentioned were conducted using students, the study of Van Yperen and Janssen (2002) was conducted in an organizational setting. This makes their research particularly useful for the present study.

All these results give reason to speculate about the possible effects of achievement goals on occupational health. However, there are a few important issues. First, only one of the enumerated studies was conducted in an organizational setting. Secondly, only one dimension of the achievement goals is considered at each study, because of which the specific effects are not investigated. Finally, the results cannot be transferred to the 2 x 2 framework without inconsistencies. Namely, in the research on approach and avoidance goals, approach goals indicate an overall positive effect. This contrasts the negative effect of performance-approach goals found in the study of Kaplan and Maehr (1999). This contradiction might be an indication for the existence of boundary conditions. Namely, variables show altered effects when their conditions (here the other goals) are not taken into account. This can explain why different studies find incongruent results. Although it is not the emphasis of this study, the present study will analyze if the main effects are qualified by other goals. On the basis of previous research the following hypotheses¹ can be formed:

Hypothesis 1a. Mastery-approach goals are positively related to well-being.

Hypothesis 1c. Mastery-avoidance goals are positively related to well-being.

Hypothesis 1c^{alt}. Mastery-avoidance goals are negatively related to well-being.

Hypothesis 1d. Performance-approach goals are negatively related to well-being.

Hypothesis 1d^{alt}. Performance-approach goals are positively related to well-being.

Hypothesis 1d. Performance-avoidance goals are negatively related to well-being.

¹ All hypotheses are graphically represented in Figure 1.

In the following section the effects of achievement goals on social processes are going to be discussed. This discussion shows that the achievement goals are expected to influence team-member relations and social support in way which is either beneficial or maleficent for well-being. Namely, social interaction, social support in particular, has a strong effect on well-being and thus, the relationship of achievement goals with these social processes is expected to explain at least a part of the effect of achievement goals on well-being.

Achievement Goals and Social Interaction

The adoption of achievement goals by scholars that study social processes is quite recent. The first mention is in 1997 in a study of VandeWalle and Cummings in which they investigated the effect on feedback-seeking behavior. In recent years other effects on social behavior were also found. The process that underlies these effects of achievement goals on social interaction can be explained with the idea of *interdependence* of goals. According to Deutsch's theory of cooperation and competition (Deutsch, 1949; Johnson & Johnson, 1992), goals can either orient a person positive or negative interdependent on means or outcomes. Positive interdependence results in the situation in which the attainment of the goal is dependent on the success of the means or outcomes of others, whereas negative interdependence is a situation in which attainment of the goal is dependent on the failure of means or outcomes of others. Put simply, in the first situation you win if others win, in the second you win if others lose.

Because mastery goals are concerned with self-development their attainment is not dependent on the outcomes of others, they do not result in outcome interdependence. However, in learning it is beneficial to have role models (Baranowski, Perry & Parcel, 2002). Colleagues who are skilled function as these role models and persons with mastery goals benefit from being around them. Through observing and interacting with more developed co-workers, skills will be developed. So,

mastery goals result in positive means interdependence. In contrast, performance goals result in negative outcome interdependence. When striving to be better (or not worse) than others outcomes are important, not means. Also, in order to be better (or not worse) success of performance goals is dependent on the failure of goals of others. Deutsch's theory (1949) predicts that goals that orient persons positive interdependent will foster cooperation, whereas negative interdependent goals will foster competition. In the following outline of previous findings we see how mastery and performance goals fit these predictions.

Poortvliet, Janssen, Van Yperen and Van de Vliert (2007) showed that persons with performance goals are less open in information exchange and adopt an exploitative orientation towards this exchange (in comparison with persons who score low on performance goals). That is, persons with performance goals try to hide useful information from others. Also, they found that persons with mastery goals were almost completely open in their information exchange. VandeWalle and Cummings (1997) showed that performance goals lead to less feedback-seeking behavior, and mastery goals lead to more feedback-seeking behavior. In contrast with performance goals a person with a mastery goal will not 'lose' when evaluated critically, instead feedback serves the mastery goal's purpose, because it stimulates learning. Therefore the mastery oriented person will actively search for feedback and cooperate in evaluation settings. This is also indicated in another sense by Janssen and Van Yperen (2004). In their research on the effect on leader-member exchange, they found that performance goals lead to a low quality relationship between subordinate and supervisor, whereas mastery goals lead to a high quality relationship. This relationship included both what kind of information is exchanged, and how this occurs. Also, the low relationship was characterized by formality, transactional exchange, and distance between leader and subordinate. And the high relationship was characterized by mutual trust, respect, and loyalty (Janssen & Van Yperen, 2004). These effects were explained by stating that

persons with mastery goals strive to learn, and actively engage in social exchanges with an experienced supervisor who can teach them. Persons with performance goals strive to be superior and they perceive their superiors as an opponent. Finally, Darnon, Muller, Schrager, Pannuzzo, and Butera (2006), showed that mastery goals predict use of epistemic conflict regulation, and performance goals predict use of relational conflict regulation. Epistemic conflict regulation attempts to integrate both views of the persons in conflict, requiring cognitive restructuring, whereas relational conflict regulation emphasizes evaluation and affirmation of self-competence to protect self-worth. These results support the idea that mastery goals lead to cooperation and performance goals lead to competition.

The present study tries to find support for this idea and extent these findings by investigating two other aspects of social interaction. Research on what influences the role of an occupational position show that interaction with colleagues is the most important influence. Seers (1989, p. 118) wrote: "*the responses of an individual in a focal role can best be understood as the product of the interactions between the occupant of the focal role and that set of role senders with whom the focal member generally interacts*". Considering the rapid increase in teamwork in the past two decades this will be even more evident today. Therefore, this study moves away from the dyadic social relations, as investigated by Janssen and Van Yperen (2004) and Darnon et al. (2006) and investigates how employees perceive their relationships with all their team-members. This aspect of social interactions is an instrumental aspect. That is, it addresses what *behavior* is present according to the employees' perception. In social interaction one can also discriminate an affective aspect. That is, how employees *feel and value* their relationships with colleagues. If and how employees are helped with their work by colleagues is an instrumental aspect, whereas their appreciation and friendliness is an affective aspect.

Seers (1989) investigated how much of the occupational role was actually influenced by team work. In this investigation he defined a construct which addressed the relationships of the focal person with his or her team members. This construct is called *team-member exchange quality* (TMX). He found that the effect of TMX was distinct from and complementary to the effect that a supervisor had on the role. The present study uses the same construct, because it reflects how employees perceive the exchange relations with their team as a whole. It is an addition to the previous found effects on social interaction, because it allows insight on how achievement goals affect relationships with a team instead of dyadic relationships. Also, it assesses the person's willingness to help others, share ideas and feedback, and how these are received from others, which is in line with the discussion about the cooperativeness and competitiveness of the achievement goals.

To investigate the relationships with the affective aspect of social interaction and how this is related to well-being, the present study also wishes to investigate social support. Social support is generally defined as that part of psychological and material resources (perceived or real) that is provided by social contacts, i.e. spouses, friends and family (Cohen & Wills, 1985). In the present study it will be restricted to what psychological resources the occupational social contacts provide. On the basis of the discussion of Deutsch's theory (1949) and previous research the following hypotheses were formed:

Hypothesis 2a. Mastery-approach goals are positively related to TMX and social support.

Hypothesis 2b. Mastery-avoidance goals are positively related to TMX and social support.

Hypothesis 2c. Performance-approach goals are negatively related to TMX and social support.

Hypothesis 2d. Performance-avoidance goals are negatively related to TMX and social support.

Social support is a well documented subject by well-being researchers. Among other effects it is thought to have a buffering effect on strains of stress. This means that in conditions of high stress, those who perceive higher social support experience less strain (Schmieder & Smith, 1996). This effect is explained by the influence of (perceived) social support on the appraisal and reappraisal of stressful situations. According to Cohen and Wills (1985) the *belief* that there are other people available to help in times of need influences either one of two processes, or both. These processes are the perception of potential harm itself, and the perceived ability to cope with a potentially harmful situation. In both processes social support counteracts the perceived harm because the person appraises the situation with a larger amount of resources to cope with the situation. This larger amount of resources consists of the perceived social resources and the personal resources. Practically this means that an addition of social support turns a perceived inability to cope into a perceived ability to cope.

The present study discriminates instrumental aspects of social interaction from affective aspects. It seems self-evident that the positive effect of the affective aspect (social support) goes hand in hand with the instrumental aspect (TMX). Therefore, the following hypotheses were formed:

Hypothesis 3a. TMX is positively related to well-being.

Hypothesis 3b. Social support is positively related to well-being.

Mediating Role of Social Support

The previous discussion of theory has laid the ground work for the main hypothesis of this thesis. Namely, social processes explain the effect of achievement goals on well-being. The enumerated effects of achievement goals on well-being are in line with the disposition of each

goal in social interaction. That is, mastery goals lead to cooperation and have a positive effect on well-being and performance goals lead to competition and have a negative effect on well-being. The present study hypothesizes that these relationships are not distinct, but have a character. Mastery goals are positively related to well-being, *because* they lead to cooperation and therefore high quality contacts and appreciation of colleagues, which provide resources to buffer fatigue and stress and strive for optimal well-being. Performance goals are negatively related to well-being, *because* they lead to competition and therefore do not provide those high quality contacts or appreciation of colleagues and miss the resources to buffer fatigue and stress and strive for optimal well-being. Accordingly, the following hypotheses were formed:

Hypothesis 4a. TMX and social support mediate the positive relationship of mastery-approach goals with well-being.

Hypothesis 4b. TMX and social support mediate the relationship of mastery-avoidance goals with well-being.

Hypothesis 4c. TMX and social support mediate the relationship of performance-approach goals with well-being.

Hypothesis 4d. TMX and social support mediate the negative relationship of performance-avoidance goals with well-being.

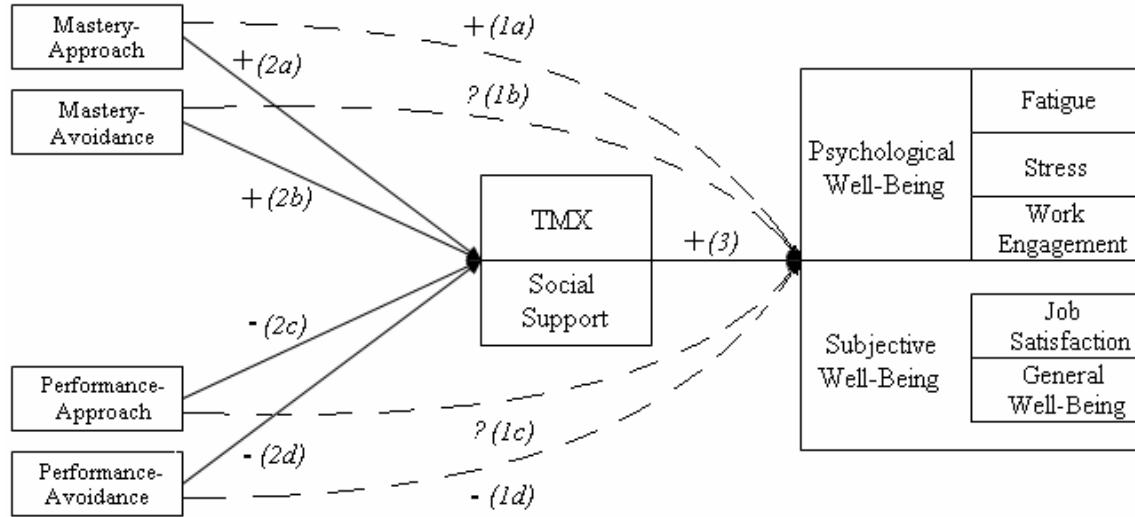


Figure 1. Mediation model of the effect of achievement goals on well-being. The direct effect is in dotted lines, the mediation effect via team-member exchange (TMX) and social support. Well-being is considered to consist of two segments. The corresponding hypotheses are in parentheses.

Method

Sample

The relationships between achievement goals, team-member exchange, social support, and well-being were examined by using a self-report questionnaire. The questionnaire could be filled out electronically and on paper. Potential respondents were approached through use of e-mail, forums, personal contact and in public transport. Of the total of filled out surveys, 50% was collected electronically, 41.9% on paper in public transport and 8.9% on paper through family and friends. Participants were informed of the general purpose of the study and confidentiality on the introductory page of the questionnaire.

The participants performed a wide range of different jobs in different industrial branches, including government, education, retailing, hotel and catering industry, health care, construction and financial services. Also a wide range of functions were represented, including consultants, front officers, back officers, managers, teachers, nurses and researchers.

Of the 258 participants 52.6% was male and 98.4% was Dutch. Age ranged from 16 to 64, with an average of 35.08 ($SD = 13.68$). Tenure ranged from 1 to 42 years, with an average of 8.54 ($SD = 10.02$). On average the participants worked 30.58 hours a week ($SD = 13.28$), ranging from 5 to 65.

Measures

Achievement Goals. The individual differences in adoption of achievement goals were measured with a scale used by Van Yperen (2004). This is the validated Dutch version of the scale used by Elliot and McGregor (2001). The questions were adapted so that they fit an occupational setting. The participants responded to three mastery-approach items ($\alpha = .80$), three mastery-avoidance items ($\alpha = .82$), three performance-approach items ($\alpha = .86$), and three performance-avoidance goal items ($\alpha = .63$). An example of a mastery-approach goal item is “I want to learn as much as possible from this job.” An example of a mastery-avoidance goal item is “I am often concerned that I may not learn all that there is to learn in this job.” An example of a performance-approach goal item is “. It is important for me to do better than my colleagues.” An example of a performance-avoidance goal item is “My goal in this job is to avoid performing poorly.” Participants answered using a 7-point Likert scale (1 = *not at all true for me*, 5 = *very true for me*).

Quality of team-member exchange. The quality of team-member exchange (TMX) was measured with an eleven-item scale based on Seers (1989). A sample item is “Others are willing to finish work assigned to me”. Participants indicated the extent to which they agreed with the items on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*; $\alpha = .71$).

Social support. Social support was measured with a nine-item scale adopted from the Questionnaire on the Experience and Assessment of Work (QEAW; Van Veldhoven & Meijman,

1994). In comparison with the TMX scale, this scale of social support contains items that measure the social and emotional climate of the work place instead of the relations. A sample item is “Do you feel appreciated by your colleagues while working?”. Participants answered using a 4-point Likert scale (1 = *never*, 4 = *always*; $\alpha = .77$).

Fatigue. Fatigue was measured with an eleven-item scale adopted from the QEAW (Van Veldhoven & Meijman, 1994). A sample item is “By the end of the working day, I feel really worn out”. Participants answered using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*; $\alpha = .88$)

Stress. Stress was measured with the fourteen-item Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983). A sample item is “In the last month, how often have you felt nervous and ‘stressed’?”. Participants answered using a 5-point Likert scale (1 = *never*, 5 = *very often*; $\alpha = .84$).

Work engagement. Work engagement was measured with the seventeen-item Utrecht Work Engagement Scale (UWES, Schaufeli & Bakker, 2003). The UWES consists of three subscales: Vigor (six items, $\alpha = .82$), dedication (five items, $\alpha = .92$) and absorption (six items, $\alpha = .82$). An example of a vigor item is “At my work, I feel bursting with energy”. An example of a dedication item is “I am enthusiastic about my job”. An example of an absorption item is “I am immersed in my work”. Participants answered using a 7-point Likert scale (0 = *never*, 6 = *always*; aggregated $\alpha = .94$).

General well-being. GWB was measured with the five-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Grifin, 1985). A sample item is “In most ways my life is close to my ideal”. Participants answered using a 7-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*; $\alpha = .87$).

Job satisfaction. Job satisfaction was measured with a five-item general job satisfaction scale developed by Bacharach, Bamberger and Conley (1991). A sample item is “How satisfied are you

with your present job in light of your career expectations". Participants answered using a 5-point Likert scale (1 = *very dissatisfied*, 5 = *very satisfied*; $\alpha = .87$)

Results

Exploratory analyses

In order to analyze the data securely the distinct validity of each achievement goal and of TMX and social support was investigated. For the factor analysis on the achievement goals a principal axis factoring with oblique rotation was used. The results are shown in Table 1. The results showed evidence for the proposed four factors. A principal axis factoring on the items of TMX

Table 1.

Results of Principal Axis Factoring of Achievement Goals

Variables and items	Factors			
	1	2	3	4
Mastery-approach				
item1	.669			
item2	.773			
item3	.822			
Mastery-avoidance				
item1		.723		
item2		.782		
item3		.830		
Performance-approach				
item1			-.863	
item2			-.766	
item3			-.828	
Performance-avoidance				
item1				.502
item2				.945
item3		.330		.402
Eigenvalue	3.00	2.23	1.92	1.51
Percentage of variance explained	25.02	18.61	15.97	12.56

Note. Direct oblimin rotation is used. Only loadings > .3 are shown. The items can be found in the Appendix

and social support did not clearly demonstrate two distinct factors. To further investigate whether the two variables were distinct a principal components analysis with oblique rotation was conducted on the social items. The results showed six factors with an eigenvalue above 1. A scree plot showed a bend after the fourth factor, indicating that the only the first four of these six factors were the most important. These four factors accounted for 48% of the total variance. Consequently a second principal components analysis was used, but now restricted to four

Table 2.

Results of Principal Components Analysis of Team-Member Exchange and Social Support

Variables and items	Factors			
	1	2	3	4
Team-member exchange				
item1		.641		
item2		.641		
item3		.778		
item4		.582		
item5	.327			
item6			.616	
item7	.332		.481	
item8			.338	
item9			.597	
item10			.741	
item11			.606	
Social Support				
item1	.688			
item2	.770			
item3	.644			
item4			.792	
item5	.661			
item6			.389	
item7	.472		.490	
item8	.424		.534	
item9			.755	
Eigenvalue	4.42	2.30	1.62	1.28
Percentage of variance explained	22.13	11.52	8.10	6.42

Note. Direct oblimin rotation is used. Only loadings > .3 are shown. The items can be found in the Appendix

factors. The results are shown in Table 2. These results showed that the items of TMX load on two factors, while the items social support loads on two other factors, with one exception. This is evidence that TMX and social support are empirically distinct variables. Next, the two factor model of well-being was investigated. A confirmatory factor analysis using AMOS (Arbuckle, 2009) was conducted to test the two factor model of well-being. The results rejected the model ($NFI = 0.8$, $RFI = 0.25$, $TLI = 0.26$, $RMSEA = 0.25$). Other compositions of the two factors neither produced a significant model fit. These results argued to use the five variables separately. Due to these exploratory findings, further analyses will not only take TMX and social support as distinct variables, but the well-being variables will also be taken into consideration as distinct variables. Table 3 presents the means, standard deviations and Pearson correlations of the variables. As expected, mastery-approach goals appear to be positively correlated to work engagement, job satisfaction, social support and TMX. The negative relationships with fatigue and stress and the positive relationship with GWB are also in the predicted direction but not significant. Mastery-avoidance goals were positively correlated to fatigue and stress, and negatively to job satisfaction, GWB. Contrary to the expectations, mastery-avoidance goals were negatively correlated to TMX and social support. No relationship appeared with work engagement. The correlations of performance-approach goals and the other variables are all insignificant and around zero. As expected, the performance-avoidance goals showed significant positive relationships with fatigue and stress. The negative relationship with GWB was also in the expected direction, but not significant.

Regression analyses

In order to test the hypothesized model hierarchical regression analyses were conducted. The analyses to test hypotheses 1, 3 and 4 consisted of regression analyses of three successive steps

Table 3.

Means, standard deviations and correlations of all tested variables (n = 258)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Gender (1=♀ 2=♂)	1.47	.50															
2 Age	35.08	13.68	.01														
3 Education	5.93	1.83	-.01	.20**													
4 Tenure	8.54	10.01	-.00	.68***	.05												
5 Hours a week	30.58	13.28	-.14*	.24***	.22***	.20**											
6 Performance-approach	4.16	1.42	-.17**	-.36***	.03	-.26***	.09										
7 Mastery-approach	5.95	.89	-.07	.00	-.02	.01	.18**										
8 Performance-avoidance	4.28	1.27	-.06	.01	-.16*	.09	-.11	.11	.18**								
9 Mastery-avoidance	3.16	1.36	.03	-.24***	.03	-.23***	.02	.13*	.04	.17**							
10 TMX	3.58	.39	-.18**	-.01	-.05	-.01	.08	.01	.16*	.03	-.17**						
11 Social Support	3.35	.39	-.12*	-.03	-.11	.03	-.01	-.06	.12*	-.01	-.15*	.32***					
12 Fatigue	2.53	.703	.02	-.07	.03	-.06	-.02	.04	-.11	.23***	.38***	-.10	-.20**				
13 Stress	2.46	.521	.11	-.17**	-.05	-.22***	-.19**	-.02	-.05	.18**	.36***	-.18**	-.20**	.51***			
14 Job Satisfaction	3.68	.783	-.11	.16*	-.06	.16**	.20**	-.09	.17**	-.11	.19**	.24***	.28***	-.29***	-.33***		
15 General Well-Being	5.17	1.11	-.13*	.05	.05	.18**	.06	.04	.06	-.09	-.23***	.23***	.31***	-.29***	-.45***	.36***	
16 Work Engagement	4.09	1.026	-.07	.23***	.05	.26***	.39***	-.00	.35***	-.04	-.03	.27***	.15*	-.18**	-.33***	.63***	.38***

Note: * p < .05; ** p < .01; *** p < .001.

on each well-being variable. In the first step the socio-demographic variables were entered as covariates. In step 2 the achievement goals were entered. In step 3 both TMX and social support were entered to test their mediating effect. The analyses to test hypotheses 2a and 2b consisted of regression analyses of two successive steps on TMX and on social support. In the first step the socio-demographic variables were entered as covariates. In step 2 the achievement goals were entered.

The results of the regression on the well-being variables are reported in Table 4. Mastery-approach goals were positively related to fatigue ($B = -.13$, $t = -2.749$ $p = .006$), job satisfaction ($B = .15$, $t = 2.594$ $p = .01$) and work engagement ($B = .35$, $t = 5.224$ $p = .000$). The results showed a not significant relationship with stress and GWB with both a coefficient around zero. The significant results confirmed hypothesis 1a. Mastery-avoidance goals were found to be significantly related to fatigue ($B = .18$, $t = 5.573$, $p = .000$), stress ($B = .11$, $t = 4.697$, $p = .000$), job satisfaction ($B = -.08$, $t = -2.082$ $p = .038$) and GWB ($B = -.12$, $t = -3.118$, $p = .002$). The results showed no significant relationship with work engagement, with a coefficient around zero. The significant results all confirmed hypothesis 1b^{alt}. Therefore hypothesis 1b was rejected. Performance-approach goals were found to be not related to any of the well-being variables. This result rejected both hypotheses 1c and 1c^{alt}. This is highly unexpected, because previous studies found significant effects on job satisfaction (Janssen & Van Yperen, 2004) and subjective well-being (Kaplan & Maehr, 1999). One difference with these previous studies was the inclusion of four achievement goals instead of two. The absence of an effect of performance-approach goals might be explained by one of the added goals. However, hierarchical regression analyses in which the other goals were added later than performance-approach goals rejected this explanation. Performance-avoidance goals were found to be positively related to fatigue ($B =$

Table 4.

Results of Regression Analyses of Achievement Goals on Well-Being Variables with TMX and Social Support as Mediating Variables

Variables	Fatigue			Stress			Job Satisfaction			General Well-Being			Work Engagement		
	step 1	step 2	step 3	step 1	step 2	step 3	step 1	step 2	step 3	step 1	step 2	step 3	step 1	step 2	step 3
Gender	.03	.03	.02	.10	.09	.06	-.09	-.12	-.04	-.29*	-.27	-.15	-.02	-.03	.08
Age	.00	.00	.00	.00	.00	.00	.00	.00	.00	-.01	-.02*	-.01	.00	.00	.00
Education	.02	.02	.01	.00	.00	.00	-.05	-.04	-.04	.04	.03	.05	-.03	-.03	-.02
Tenure	.00	.00	.00	-.01*	-.01*	-.01*	.01	.01	.01	.01*	.03**	.03**	.02	.02*	.02*
Work hours	.00	.00	.00	-.01*	-.01	-.01	.01**	.01*	.01*	.00	.00	.00	.03***	.02***	.02***
Mastery-approach	-.13**	-.13*	-.02	-.02	-.02	-.02	.15*	.11	.07	.07	.01	.35***	.31***		
Mastery-avoidance	.18***	.18***	.11***	.10***	.10***	.10***	-.08*	-.05	-.05	-.17**	-.12*		.03	.06	
Performance-approach	.01	.01	-.03	-.03	-.03	-.03	-.06	-.06	-.04	.04	.06		-.03	-.01	
Performance-avoidance	.11**	.11**	.07**	.07**	.07**	.07**	-.09*	-.09*	-.09*	-.10	-.10		-.10*	-.10*	
TMX	.06	.06	-.09	-.09	-.09	-.09	.25	.25	.25	.37*	.37*		.53***		
Social Support															
Adjusted R ²	-.01	.17	.18	.06	.18	.20	.05	.11	.17	.04	.09	.09	.17	.17	.25
															.29

Note. Unstandardized regression coefficients are reported. On step 1 covariates entered. On step 2 achievement goals entered. On step 3 team-member exchange (TMX) and social support entered. For the regression analyses on fatigue, stress, job satisfaction and general well-being, n was 243. For the regression analysis on work engagement, n was 243. The adjusted R² shows how much variance each model explains.

* $p < .05$ (two-tailed test), ** $p < .01$ (two-tailed test), *** $p < .001$ (two-tailed test)

.11, $t = 3.201, p = .002$) and stress ($B = .07, t = 2.888, p = .004$), and negatively related to job satisfaction ($B = -.09, t = -2.194, p = .029$) and work engagement ($B = -.10, t = -2.080, p = .039$). The relationship with GWB was also negative, but was just above the .05 significance level ($B = -.10, t = -1.762, p = .08$). All these results confirmed hypothesis 1d.

Furthermore, TMX was positively related to GWB ($B = .37, t = -.035, p = .04$) and work engagement ($B = .53, t = 3.416, p = .001$), and social support was negatively related to fatigue ($B = -.24, t = -2.1486, p = .03$) and stress ($B = -.18, t = -2.1402, p = .03$) and positively to job satisfaction ($B = .41, t = 3.2558, p = .001$) and GWB ($B = .68, t = 3.8021, p = .000$). The significant relationships confirm hypothesis 3a and 3b. However, it should be noted that TMX was only related to two of five well-being variables.

Subsequently, hypotheses 2a to 2d were tested. As expected, mastery-approach goals were positively related to TMX ($B = .063, t = 2.212, p = .028$) and marginally significant to social support ($B = .056, t = 1.926, p = .055$). Contrary to the expectations, mastery-avoidance goals were negatively related to TMX ($B = -.049, t = -2.569, p = .011$) and social support ($B = -.044, t = 2.255, p = .025$). Performance-approach and performance-avoidance goals showed no relationships with TMX or social support. These results confirmed hypothesis 2a, rejected 2b, because an effect was found contrary to the hypothesis, and rejected 2c and 2d, because no effect was found. Again hierarchical regression analyses in which performance-approach was entered earlier than the other goals did not show another goal explaining the effect of performance-approach goals.

Finally, the mediation effects of TMX and social support were investigated. Baron and Kenny (1986) describe three conditions that indicate the existence of mediation effects. First, the independent variables (here achievement goals) should be related to the presumed mediators (here TMX and social support). Second, the presumed mediators should be related to the

Table 5.

Results of Bootstrapping Analyses of Achievement Goals on Well-Being Variables, Mediated by TMX and Social Support

		Fatigue				Stress			
		Total Indirect	Via TMX	Via SS		Total Indirect	Via TMX	Via SS	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Mastery app		-.0415	.0124	-.0129	.0268	-.0515	.0002	-.0409	.0004
Mastery avo		-.0079	.0279	-.0204	.0084	.0004	.0351	.0009	.0274
Job Satisfaction									
		BS BC 95% CI				General Well-Being			
		Total Indirect	Via TMX	Via SS		Total Indirect	Via TMX	Via SS	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Mastery app		.0058	.0861	.0017	.0485	-.0010	.0617	.0133	.1374
Mastery avo		-.0578	-.0100	-.0338	-.0016	-.0463	-.0042	-.0895	-.0169
Work Engagement									
		BS BC 95% CI				BS BC 95% CI			
		Total Indirect	Via TMX	Via SS		Total Indirect	Via TMX	Via SS	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Mastery app		.0071	.0946	.0053	.0787	-.0055	.0523		
Mastery avo		-.0675	-.0093	-.0580	-.0071	-.0363	.0048		

Note. TMX, team-member exchange; BS, bootstrapping; BC, bias corrected; CI, confidence interval; app, approach; avo, avoidance; In bold are the confidence intervals that do not contain zero and meet all conditions of mediating effects (Baron & Kenny, 1996). These confidence intervals are significant at the .05 level, two-tailed.

dependent variables (here the well-being variables). Third, when the presumed mediators are added to the regression analyses the effect of the independent variables on the dependent variables should be significantly reduced.

The first two conditions were tested in the previous analyses. The third condition was tested by using bootstrap analyses (Preacher & Hayes, 2008). These analyses calculate a 95% confidence interval (CI) of the total and unique mediating effects. Mediating effects that do not contain zero in their CI's are significant. The results are shown in Table 5. Most of the expected mediations were insignificant, mostly because the first two conditions were not met. Mastery-approach goals met the first two conditions for its relationship with fatigue, job satisfaction and work engagement. However, only the relationship with work engagement was significantly mediated by TMX ($CI = .0053$ to $.0787$). Mastery-avoidance goals showed significant mediations with all its relationships with the well-being variables: With fatigue via social support ($CI = .0004$ to $.0351$), with stress via social support ($CI = .0007$ to $.0225$), with job satisfaction via social support ($CI = -.0463$ to $-.0042$), and with GWB via TMX ($CI = -.0498$ to $-.0020$) and social support ($CI = -.0645$ to $-.0078$). For performance-approach and performance-avoidance goals the first two conditions were not met, so no significant mediations could be found. These results suggest that the mediation of the effect of achievement goals on the well-being variables by TMX and social support exists, however, not for all relationships of achievement goals with well-being and not always by both social variables. Figure 2 is a graphical representation of the found results.

Additional analyses

With the analyses and results of the previous section all the hypotheses of this thesis were tested. However, previous research (Van Yperen & Janssen, 2002) raised awareness about the

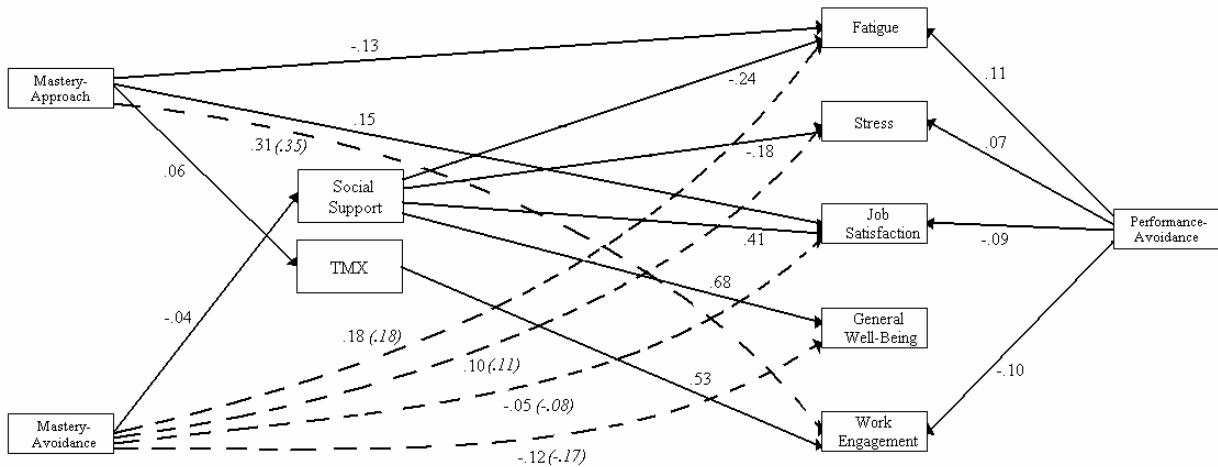


Figure 2. Model of the found results. Mediated effects are represented by dotted lines. The effect without considering mediation is presented between parentheses. Performance-avoidance is presented on the right to show that its effects are not mediated. Note that mastery-approach goals are also related to social support (.056) and mastery-avoidance to team-member exchange (TMX; -.049), but these relationships did not have mediating effects and are therefore not represented.

effect of multiple goals. That is, they investigated whether the presence of one goal affected the effect of the other goal. They investigated this by looking at interaction effects. The present study wished to give an answer to their call for more research into this direction, by investigating whether the enumerated effects are qualified by other goals. This was done with regression analyses of three successive steps on the well-being variables. In the first step the socio-demographic variables were entered as covariates. In step 2 the achievement goals were entered. In step 3 the interaction variables entered. These interaction variables were formed by centering the variables and multiplying them. In this way the possibility of multicollinearity was reduced (Howell, 2007). The results showed no significant effects of the interaction variables. Especially for fatigue, this is quite unexpected. Namely, van Yperen and Janssen (2002) showed the effects of multiple goals using fatigue as a dependent variable. Apparently this result can not be replicated by the present study.

Because the present study used the 2 x 2 framework, three-way and four-way interactions might also be investigated. However, these complex effects need a strong theoretical foundation to be interpretable. Merely fishing for significant effects is unfavorable, especially when it makes present understanding unnecessarily complex. The present study is not aimed in that direction and therefore leaves the question of relevant three-way and four-way interactions for future research.

Discussion

The present study investigated the relationships of achievement goals with well-being. The core of the study was formed around the question whether these relationships can be explained by the effect that achievement goals have on social processes. The most important findings are (1) that each achievement goal does not have a similar effect on all well-being variables. Therefore, no general conclusion to the effect of achievement goals on well-being can be made. The relationships with each well-being variable must be discussed separately. (2) The mastery-approach goals were positively related to both TMX and social support, (3) the mastery-avoidance goals were negatively related to both TMX and social support, and (4) the hypothesized mediation effect exists for the effect of mastery-approach goals on work engagement and for the effects of mastery-avoidance goals on fatigue, stress, job satisfaction and GWB.

These results emphasize the beneficial effect of mastery-approach goals and the maleficent effect of both avoidance-goals, which is in concord with previous findings (e.g. Elliot & Sheldon, 1997). The positive relationships of mastery-approach goals with TMX and social support showed evidence for the cooperative orientation that these goals were presumed to carry. This cooperation partly explains why employees, who are oriented towards their skills and

development, report that they feel vigorous, dedicated and absorbed at work. Employees who motivate themselves with avoidance goals perceive more fatigue and stress and less job satisfaction, general well-being and work engagement. Employees who direct their avoidance goal to their own skills report even a larger decline in these aspects (except for work engagement). In contrast with mastery-approach goals, mastery-avoidance goals involve a decrease in team-member exchange and social support, which partly explains their negative effect on the well-being aspects. This was unexpected, because on the basis of logic mastery-goals should have a cooperative nature, but empirically this study shows that this presumption does not hold.

Also, the effect on work engagement indicates that achievement goals and TMX could be embedded in the Job Demands-Resources model (Demerouti et al., 2001). This model considers job resources as one of the antecedents of work engagement. These resources include social support (e.g. Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007), but the present study shows that TMX was found to have a significant influence on work engagement, whereas social support did not. TMX could therefore be an addition or replacement to this model. However, specific research of these speculations is needed. Also, TMX mediates the effect of the achievement goals, indicating that the achievement goals could be an antecedent of job resources in this model of work engagement. Next to this implication, the findings have a couple more implications and raise couple of questions. These will be discussed in next section.

Theoretical implications

First, performance-approach goals showed no relationships with the well-being variables or with the social variables, although previous studies with comparable variables did find significant results (e.g. Darnon et al., 2006; Kaplan & Maehr, 1999). These findings are puzzling and the

question “why?” remains unanswered. The results were so far from the significant level that statistical power does not seem to be the answer and that a difference in measurement scales would explain the absence of an effect is mere speculation.

Second, this study shows that the underlying processes for the effects of mastery-goals on well-being and the effects of performance-avoidance on well-being are not the same. The effects of both mastery goals are partly explained by its relationships with social interaction, whereas performance-avoidance goals are not related to these processes. This shows that, although all are achievement goals, they are fundamentally different in how they affect well-being and possible other variables. That is, finding effects of one goal does not necessarily mean that other goals have an opposite effect or an effect at all. So in what do they exactly differ? Mastery-avoidance and performance-avoidance have similar effects on well-being, but persons with performance-avoidance goals do not have their social behavior and values decreased. This might indicate a positive side of competition, because one needs to keep interacting with other employees to compete with them. In this way an employee is guarded against isolation, but the avoidance orientation continues to have a negative effect on well-being. Mastery-avoidance goals might promote isolation out of sadness (Sideridis, 2008), anxiety (Dickson, 2006; Sideridis, 2008) or fear (Conroy & Elliot, 2004; Sideridis, 2008), because they preoccupy the employee with their own skills and failures. Mastery-approach goals also preoccupy the employee with their own skills, but isolation is probably rejected because of the eagerness to learn from others. However, these explanations remain speculative and the best use of them would be to be material for new research questions.

Third, the relationships of achievement goals with TMX and social support have not been previously investigated. The present results are in line with previous results, but can be considered an addition to both the achievement goals and the social processes field. Namely,

these results show how the instrumental aspect (TMX) of social interaction has different effects than the affective aspect (social support). Whereas social support is alone in the effect on fatigue, stress, and job satisfaction and has a prominent role in the effect on GWB, TMX is alone in the effect on work engagement. Also, whereas all the relationships of mastery-avoidance goals are mediated by social support, only one of three relationships of mastery-approach goals is mediated and this by TMX. This shows that future research must separate between these aspects and can consider if there will be a difference in effect. The difference in mediation might be explained by what the cooperation of mastery-approach is directed at. Employees with these goals aim to develop skills (Elliot, 2005). Therefore it makes sense that they seek the instrumental over the affective aspect of social interaction. That is, they wish to help others and be helped, finish other's work, and are flexible with switching jobs with others, etc. In this way they can learn more about their job and develop themselves better. Since the relationships with fatigue and job satisfaction are better explained by social support and because TMX and social support are correlated, the effect of TMX becomes insignificant. Thus, no mediation effect can be found for mastery-approach goals. This explanation shows to be partly correct, because a regression analysis on job satisfaction with only TMX as a mediator does indeed show a mediating effect for mastery-approach goals. However, with fatigue TMX remains insignificant.

Fourth, the mediations are significant, but they do only explain a small part of the effects. A large part of the effects seems to be distinct from social interaction. Is this effect only there because of the mastery goals or can other mediators also explain a part of the effect? Leader-member exchange is a likely candidate (Janssen & Van Yperen, 2004) and so are intrapersonal processes like self-efficacy (Kaplan & Maehr, 1999). Future research should consider both *intrapersonal* and *interpersonal* mediators, to answer this question.

Fifth, the interaction effects did not show significance although previous research showed an effect with similar variables. There were some methodological differences that could explain this. Namely, the sample of Van Yperen and Janssen (2002) a bit larger (n was 322) and consisted of employees of two university departments. The present sample is smaller, but broader. It could be that the effect of multiple goals cannot be generalized, or needs to have a larger broader sample to be found. Also, the goal orientation scale was different from the one used in the present study. Van Yperen and Janssen (2002) used a 19 items scale (Van Yperen & Diderich, 1998) to measure only mastery- and performance-approach goals, whereas the present study used a 12 items scale (Van Yperen, 2004) to measure four achievement goals. A difference in effect might indicate that the scales don't measure the same constructs. These questions must be answered by future research.

Sixth, this study shows that using the 2×2 framework can give meaningful results. This remark seems superfluous, but the dichotomous and trichotomous frameworks are still preferred, because the use of mastery-avoidance goals is disputed (DeShon & Gillespie, 2005). Other studies (e.g. Van Yperen, Elliot & Anseel, 2009) underscore the same point and use of the 2×2 framework is needed to understand the influence of achievement goals better.

Finally, these results contribute to the empirical foundation of positive psychology. The importance of personal development and interest in the work itself is not only a humanistic idea, but has evidence in scientific research. This study hopes to contribute to positive organizational scholarship and to inspire others to this field. Moreover, the work place is a place where many employees spent more time than at home or with family and every opportunity to gain more meaningfulness from it should be seized. To accomplish this a few practical implications are offered.

Practical Implications

These results are quite a direct argument for the importance of positive psychology (Seligman & Csikszentmihalyi, 2000). Namely, they show that thinking in positive terms (mastery-approach goals) contributes to well-being, job satisfaction and engagement and they underscore the importance of personal growth for employees and the eradication of avoidance goals. Not only shall the promoting mastery-approach goals and eradicating avoidance goals decrease fatigue and stress (negative psychology), but they will also give a positive boost to organizations by making employees more satisfied, vigorous, dedicated and absorbed. In order to increase mastery-approach goals it is important to consider that these goals orientate employees towards the actual work itself, whereas performance goals make employees concerned with outcomes (Elliot, 2005). Put in practical terms, organizations who wish to contribute to their employee's vitality, satisfaction, well-being and work engagement need to create a climate in which growth, personal improvement and task innovation predominate performance outcomes. More specifically, organizations need to foster a learning climate which is self-oriented and task-oriented so that mastery goals will be increased. In order to prevent the formation of mastery-avoidance goals, the direction of this learning climate should be toward better skills and practices, instead of maintaining present ones. This also means that the use of competitive or performance oriented reward systems should be questioned. They might spark performance in short term, but a decrease in vitality, satisfaction, well-being and work engagement will cause serious issues in the long run. The image of mastery-approach goals is often that they are unfavorable for economic purpose, but research (Van Yperen, 2003) shows that mastery-approach goals prevail in economically successful organizations. Moreover, performance goals, especially performance-avoidance prevail in economically unsuccessful organizations (Van Yperen, 2003).

Managers and coaches can foster this climate by stimulating questions like: What did you learn of doing your job last year? What will you learn of doing your job next year? What skills do you want to improve? However, practitioners should be wary for a competitive climate in which learning achievements become a status object. Growth should be self-assessed, instead of with external evaluation criteria, in order to create and maintain mastery-approach goals. If evaluation criteria are used, or employees are in another way externally motivated to have mastery-approach goals, employees might come to see their growth in terms of outcomes and will form performance goals. This leads to faking mastery-approach goals, because it will lead to social likability and simple because it is rewarding (Darnon, Dompnier, Delmas, Pulfrey & Butera, 2009; Dompnier, Darnon & Butera, 2009). In this case organizations simple would have missed the point of studies that advocate mastery-approach goals.

Finally, VandeWalle and Cummings (1997) and VandeWalle, Brown, Cron and Slocum (1999) suggest that mastery-goals can be fostered by training the employees in their self-concepts and attributions of ability and effort. Persons with mastery goals consider ability a malleable quality (Dweck & Leggett, 1988) and effort the main cause for their development and success (Duda & Nicholls, 1992). Persons with performance goals consider ability as fixed and effort of minor relevance. This is explained by how the self-concepts and implicit theories of intelligence are formed. For mastery goals this is done through effort and for performance goals this is done through ability. Trainings that increase the conviction that effort is relevant and ability can change through effort and time will be likely to help increase mastery-approach goals.

Limitations and suggestions for future research

First, since the present study was cross-sectional designed, the found results cannot be a basis on which causal inferences can be made. The causal relations described in this study are

speculative and the results can be interpreted differently due to this limitation. Regression analyses that contained a different order of variables showed that the reversed effect is also possible. Further longitudinal research should investigate how these variables are causally related.

Second, since all the collected data was self-assessed and subjective there is an absence of objective data. It could be that the collected data is not a correct representation of reality. However, Elliot and McGregor (2001) found similar results using objective data (health center visits). This similarity gives an indication that the present findings are not unrealistic. Future research could add more specificity to understanding the relations of achievement goals with well-being by investigating the effects on objective variables such as absence or physiological aspects of well-being. Also, data from different sources (supervisors, peers) could be used to construct more objective data.

Conclusion

This study aimed to investigate whether quality of team-member exchange and social support explained the effect of achievement goals on well-being. The results suggest that this idea is not far-fetched, but not true for all effects of achievement goals on well-being. Overall, the results argue that organizations that aim to have good social interaction and want their employees to experience well-being, satisfaction and engagement should encourage mastery-approach goals and discourage avoidance goals.

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Appendix (Questionnaire items)

Achievement Goals

1. Het is belangrijk voor mij dat ik beter presteer dan de collega's in mijn directe omgeving.
2. Het is belangrijk voor mij dat ik in vergelijking met anderen op mijn werk goed presteer.
3. Op mijn werk ben ik erop gericht om een betere beoordeling te krijgen dan mijn collega's.
4. Ik wil zo veel mogelijk leren in mijn werk.
5. Ik heb er behoefte aan om alles wat mijn werk aangaat zo goed mogelijk te beheersen.
6. Het is belangrijk voor mij om de inhoud van mijn werk zo grondig mogelijk te begrijpen.
7. Ik wil gewoon voorkomen dat ik het slecht doe in mijn werk.
8. Mijn doel in mijn werk is te voorkomen dat ik slecht presteer.
9. Mijn angst om slecht te presteren in mijn werk is vaak wat mij motiveert.
10. Ik maak mij zorgen dat ik inhoudelijk niet alles uit mijn werk haal wat mogelijk is.
11. Soms ben ik bang dat ik de inhoud van mijn werk niet zo grondig begrijp als ik wel zou willen.
12. Ik ben vaak bezorgd dat ik niet alles wat er te leren valt in mijn werk, er ook werkelijk uithaal.

Team-Member Exchange

1. Ik stel vaak betere werkmethoden voor aan anderen.
2. Anderen laten het me weten wanneer ik hun werk aantast.
3. Ik laat anderen weten wanneer ze mijn werk aantasten.
4. Teamleden erkennen mijn potentie.
5. Teamleden begrijpen mij wanneer ik een probleem heb.

6. Ik stel me flexibel op als het gaat om het ruilen van taken met teamleden.
7. Teamleden stellen zich flexibel op als het gaat om ruilen van taken met mij.
8. Ik vraag teamleden vaak om hulp.
9. Ik bied mij vrijwillig aan voor extra hulp aan anderen.
10. Ik ben bereid het werk wat aan anderen is toegewezen, af te maken.
11. Teamleden zijn bereid om het werk wat mij is toegewezen af te maken.

Social Support

1. Kunt u op uw collega's rekenen wanneer u het in uw werk wat moeilijk krijgt?
2. Kunt u als dat nodig is uw collega's om hulp vragen?
3. Is uw verstandhouding met uw collega's goed?
4. Heeft u conflicten met uw collega's?
5. Voelt u zich in uw werk gewaardeerd door uw collega's?
6. Heeft u te maken met agressie van uw collega's?
7. Zijn uw collega's vriendelijk tegen u?
8. Heerst er tussen u en uw collega's een prettige sfeer?
9. Doen zich tussen u en uw collega's vervelende gebeurtenissen voor?

Fatigue

1. Ik vind het moeilijk om me te ontspannen aan het einde van een werkdag.
2. Aan het einde van een werkdag ben ik echt op.
3. Mijn baan maakt dat ik me aan het eind van een werkdag nogal uitgeput voel.
4. Na het avondeten voel ik me meestal nog vrij fit.
5. Ik kom meestal pas op een tweede vrije dag tot rust.

6. Het kost mij moeite om me te concentreren in mijn vrije uren na het werk.
7. Ik kan weinig belangstelling opbrengen voor andere mensen, wanneer ik zelf net thuis ben gekomen.
8. Het kost mij over het algemeen meer dan een uur voordat ik helemaal hersteld ben na mijn werk.
9. Als ik thuis kom moeten ze mij even met rust laten.
10. Het komt vaak voor dat ik na een werkdag door vermoedheid niet meer toekom aan andere bezigheden.
11. Het komt voor dat ik tijdens het laatste deel van de werkdag door vermoedheid mijn werk niet meer zo goed kan doen.

Stress

1. Hoe vaak bent u van streek geweest doordat er iets onverwachts gebeurde?
2. Hoe vaak heeft u het gevoel gehad dat u geen controle had over de belangrijke dingen in het leven.
3. Hoe vaak heeft u zich nerveus of gestrest gevoeld?
4. Hoe vaak bent u succesvol omgegaan met vervelend gedoe in het leven?
5. Hoe vaak heeft u het gevoel gehad effectief om te gaan met belangrijke veranderingen in je leven?
6. Hoe vaak heeft u zich zeker gevoeld over uw vermogen om met persoonlijke problemen om te gaan?
7. Hoe vaak heeft u het gevoel gehad dat dingen liepen zoals u wilde?
8. Hoe vaak heeft u gemerkt dat u niet om kon gaan met de dingen die van u verwacht werden?
9. Hoe vaak was u in staat om irritaties in uw leven onder controle te houden?

10. Hoe vaak heeft u gevoeld dat u alles onder controle had?
11. Hoe vaak heeft u zich kwaad gemaakt omdat er dingen gebeurden waarover u geen controle had?
12. Hoe vaak bent u aan het peinzen geweest over dingen die u nog moet afmaken?
13. Hoe vaak bent u in staat geweest om uw tijd in te delen hoe u dat wilde?
14. Hoe vaak heeft u het gevoel gehad dat problemen zich zo hoog opstapelden dat u ze niet aankon?

Job Satisfaction

1. Hoe tevreden bent u met uw baan in vergelijking met banen in andere organisaties?
2. Hoe tevreden bent u met uw vorderingen die u maakt ten aanzien van de doelen die u zich gesteld heeft voor uw huidige positie?
3. Hoe tevreden bent u over de mogelijkheden in uw baan om te doen waar u het best in bent?
4. Hoe tevreden bent u met uw baan wanneer u denkt aan de verwachtingen ten aanzien van uw baan toen u eraan begon?
5. Hoe tevreden bent u over uw baan in het licht van uw carrière verwachtingen?

General Well-Being

1. Op veel vlakken komt mijn leven overeen met mijn ideaal.
2. De omstandigheden van mijn leven zijn geweldig.
3. Ik ben tevreden met mijn leven.
4. Tot nu toe heb ik in mijn leven de belangrijkste dingen die ik wil, gekregen.
5. Als ik mijn leven nogmaals kon leven, zou ik haast niets veranderen.

Work Engagement

1. Op mijn werk bruis ik van energie.
2. Ik vind het werk dat ik doe nuttig en zinvol.
3. Als ik aan het werk ben, dan vliegt de tijd voorbij.
4. Als ik werk voel ik me fit en sterk.
5. Ik ben enthousiast over mijn baan.
6. Als ik werk vergeet ik alle andere dingen om me heen.
7. Mijn werk inspireert mij.
8. Als ik 's morgens opsta heb ik zin om aan het werk te gaan.
9. Wanneer ik heel intensief aan het werk ben, voel ik mij gelukkig.
10. Ik ben trots op het werk dat ik doe.
11. Ik ga helemaal op in mijn werk.
12. Als ik aan het werk ben, dan kan ik heel lang doorgaan.
13. Mijn werk is voor mij een uitdaging.
14. Mijn werk brengt mij in vervoering.
15. Op mijn werk beschik ik over een grote mentale (geestelijke) veerkracht.
16. Ik kan me moeilijk van mijn werk losmaken.
17. Op mijn werk zet ik altijd door, ook als het tegenzit.