



Entrepreneurs' Job Satisfaction and Its Relationship to Super-Leadership and Self-Leadership

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Abstract:

How is entrepreneurs' job satisfaction influenced by their use of super-leadership and self-leadership strategies? Can a mindset geared toward leading others and oneself predict entrepreneurs' job satisfaction? This article reports research on entrepreneurs' use of super- and self-leadership strategies and their subsequent ratings of personal job satisfaction. One-hundred-and-two entrepreneurs completed a questionnaire measuring the super-leadership dimension "coaching and communicational support", four dimensions of self-leadership (i.e., constructive thought focus, natural reward focus, physical vitality focus, behavioral focus), and job satisfaction. Structural equation analysis lends support to a model where self-leadership behavior is introduced as a variable mediating the relationship between super-leadership and job satisfaction of entrepreneurs. Implications for research and applications are discussed.

Keywords: Self-Leadership; Super-Leadership Behavior; Entrepreneurship; Job Satisfaction.

Introduction

In today's world, successful entrepreneurial behavior seems to become more and more important for several reasons: One reason is that business opportunities lack the profitability they once had (D'Intino, Goldsby, Houghton, & Neck, 2007).

Another reason is that modern economies increasingly depend on new ideas and creative developments. Dress, Lumpkin, and McGee (1999: 85) stated "virtually all organizations - new startups, major corporations, and alliances among global partners - are striving to exploit product-market opportunities through innovative and proactive behavior". Innovation and proactivity are essential facets of successful entrepreneurial behavior (DiLiello & Houghton, 2006). Even companies in industries with little volatility need to constantly seize new business opportunities to remain viable (Renko et al., 2015).

A third reason that successful entrepreneurship deserves attention is that criteria of success have been extended. Success used to be assessed by "hard" criteria such as venture growth and profitability (Higgs, 2003). Recently, success has also been measured by "soft" criteria such as establishing an organizationally committed workforce through entrepreneurs' empowerment of their employees (Wong & Laschinger, 2013; Dewettinck & van Ameijde, 2010). Several studies showed that employees who were empowered by their leaders were more satisfied, emotionally more committed, and felt more comfortable and energized compared to employees who were less empowered by their leaders (Elloy & Randolph, 1997; Elloy, 2005; Solanski, 2008; Müller et al., 2013; Wong & Laschinger, 2013; Dewettinck & van Ameijde, 2010).

Entrepreneurs' Super-Leadership Behaviors

Leaders were described as empowering if they used "coaching and communicative support" behaviors. Coaching and communicative support has been found as a core facet of "super-leadership behaviors" (Müller, Sauerland & Butzmann, 2011; Müller et al., 2013; Wong & Laschinger, 2012). Similarly, entrepreneurs who show super-leadership behaviors may be perceived as helpful coaches, facilitators of communication and role-models for their employees. Manz and Sims (1990, 2001) coined the term "super-leadership" to describe leadership behaviors as commonly shared within the organization and widely allocated among the entire workforce. Recent studies confirmed that "coaching and

communicative support" was a distinct dimension of super-leadership in autonomous work teams as well as in more centralized structured work settings (e.g., Arnold, Arad, Rhoades, & Drasgow, 2000; Müller et al., 2013; Vecchio, Justin, & Pearce, 2010). As documented by these studies, super-leadership was practiced within entrepreneurial teams as well as in firms led by single entrepreneurs.

When leaders used coaching and communicative support, employees reported greater organizational commitment and felt empowered to lead themselves toward set goals (Müller et al., 2013). Furthermore, employees of empowering leaders were more satisfied with their job (Müller et al., 2011), felt more accomplished, and reported enhanced well-being on the job (Seligman, 2008; Turner, Barling & Charharatos, 2002; Bowling, Eschleman, & Wang, 2010) compared to employees in traditional work settings. Conceptually, one may generalize evidence gathered by studying leadership in organizations to entrepreneurial leadership. Empirically, however, the relationship of entrepreneurs' super-leadership (i.e., entrepreneurs' self-perceptions of super-leadership) and their personal job satisfaction has not yet been studied.

Entrepreneurs' Self-Leadership Behaviors

The use of coaching and communicative support may not be the only source of satisfaction and well-being for entrepreneurs. Another important source may be a proactive mindset, goal-directed reasoning, and so called "self-leadership" capacities (Müller, 2005). As has been found for leaders, entrepreneurs who lead themselves may feel successful in their domain (D'Intino et al., 2007). Self-leadership occurs if the individual uses strategies to direct thoughts and behaviors, make plans to create rewarding circumstances, and achieve self-set goals and tasks (Manz, 1986; Manz & Neck, 2004).

The concept of self-leadership was first developed and proposed by Manz (1983, 1986) as an extension of self-management theory (Manz & Sims, 1980, 1986). According to current research, self-leadership includes four different types or foci of strategies to improve personal experiences and effectiveness: (1) constructive thoughts; (2) natural rewards; (3) effective behaviors; (4) physical vitality (Manz & Neck, 2004; Neck & Manz, 2012; Prussia, Anderson, & Manz, 1998; Müller, Georgianna, & Roux, 2010; Houghton & Neck, 2002).

1. Constructive Thoughts

Examples of constructive thought strategies are replacing negative self-talk and mental imaging by positive beliefs and expectations (Manz, 1986; Manz & Neck, 2004; Neck & Manz, 1992), intentionally activating and directing will-power and volition (Müller, 2006a), and using mental imagery of successful task performance (Driskell, Copper, & Moran, 1994; Neck & Manz, 1992). D'Intino et al. (2012) argued that using constructive thought strategies should help entrepreneurs to have a more optimistic outlook on future challenges of their business. In addition, it should be helpful for entrepreneurs to envision ways to successfully accomplish their goals and how to deal with obstacles that might obstruct the attainment of desired goals (Driskell, Copper, & Moran, 1994). The empirical validity of these assumptions, however, has not yet been established.

2. Natural Rewards

Through natural reward strategies individuals create situations in which they are motivated by self-conduct or rewarded by inherently enjoyable aspects of the task or activity (Manz & Neck, 2004; Manz & Sims, 2001). One natural reward strategy identified by previous research was to build more pleasant and enjoyable features into a given activity so that the activity itself became more attractive and enjoyable (Manz & Neck, 2004; Manz & Sims, 2001). Another natural reward strategy was to re-attribute physiological arousal in positive terms (e.g., excitement, challenge) and utilize its proactive effects (Müller & Braun, 2009). Natural rewards can be detected by an open-minded exploration of tasks and performance situations at the working place (Müller et al., 2010). The benefit of natural reward strategies should consist in making work more motivating and decreasing tension between occupational roles and roles outside the job (Neck & Manz, 1992). D'Intino et al. (2012) speculated that by using natural reward strategies entrepreneurs should create a work environment that leads to more satisfying and interesting business ideas and thereby increase the likelihood of being – economically and psychologically- successful.

3. Effective Behaviors

Behavioral self-leadership strategies targeted individuals' self-awareness and planning activities accordingly (D'Intino, Goldsby, Houghton, & Neck, 2012). Previous research identified the systematic self-observation of behavior during goal attainment (e.g., by keeping a diary or behavior log) as one major self-leadership strategy (Georgianna, 2007; Manz & Neck, 2004; Manz & Sims, 1980, 2001). Other behavioral self-leadership strategies are the observation of role-models who show successful ways of problem solving (Neck & Manz, 2007) and the flexible adaptation of behaviors to situational change (Müller, 2006a). It was hypothesized that behavioral self-leadership should make entrepreneurs more aware of their personal outcomes and initiatives (D'Intino et al., 2012).

4. Physical Vitality

Physical vitality strategies targeted individuals' intentions to participate in programs that improve physical health and fitness (Neck, Mitchel, Manz, & Thompson (2004). For instance, individuals who used physical vitality strategies maintained a healthy diet by keeping records of daily food intake and associated times, settings, reasons, and feelings (Georgianna, 2005; Müller et al., 2010). The use of physical vitality strategies was found to result in more physiological energy, psychological well-being, and potential to perform (Neck & Cooper, 2000). Entrepreneurs should benefit from using such strategies since their work is physically and mentally often more stressful than serving in a business (Moser, Zempel, Galais, & Batinic, 2000).

Since entrepreneurs' use of self-leadership has not yet been empirically studied, the current study assesses entrepreneurs' use of self-leadership and its relationship to entrepreneurs' super-leadership.

Entrepreneurs' Job Satisfaction

Job satisfaction is one of the major subjective indicators of successful entrepreneurship. It is related to life satisfaction, happiness, presence of positive affect or absence of negative affect, respectively, and general well-being at work (e.g., Bowling, Eschleman, & Wang, 2010; Diener, Suh, Lucas, & Smith, 1999). Some studies explored entrepreneurs' job satisfaction. For example, entrepreneurs were more satisfied with their job and general lifestyle if their aptitude potential for mastering challenges of occupational independence was developed (Müller & Gappisch, 2005). Entrepreneurial aptitude potential not only correlated with entrepreneurs' job satisfaction but also with entrepreneurs' self-leadership (Müller, 2014). Hence, one may conclude that entrepreneurs' self-leadership will impact entrepreneurs' job-satisfaction. Compared to employees, entrepreneurs were more satisfied with their job (Moser et al., 2000), although entrepreneurs simultaneously have to deal with more stressful task requirements, long-ranging workload and daily hassles from in- and outside the job. Entrepreneurs' job satisfaction – despite of these adverse circumstances- seem to stem from their use of self-leadership: Kieschke and Schaarschmidt (2005) explain that entrepreneurs used self-leadership strategies to induce healthy behaviors, performing effectively, and create a positive commitment to possibilities of personal and job related growth. Empirical confirmation of Kieschke and Schaarschmidt's (2005) explanation is partly offered by a correlational study conducted by Amin et al. (2014). Amin et al. (2004) sampled one hundred entrepreneurs and measured entrepreneurs satisfaction with themselves and their jobs, their concerns of self-improvement and health related concerns. Entrepreneurs' satisfaction with themselves and their job was significantly correlated to their concerns of self-improvement, and - to a minor degree - health concerns.

Employees who reported that their leaders used super-leadership also reported greater job satisfaction than employees whose leaders showed traditional leadership behavior (Elloy & Randolph, 1997; Elloy, 2005). To which extent entrepreneurs' super-leadership impacts their own job satisfaction has not been analyzed. From the aforementioned direct relationship of super-leadership behavior and employees' job satisfaction one may speculate that employees' satisfaction might have a positive effect on leaders and entrepreneurs, and hence, increase entrepreneurs' job satisfaction. To empirically investigate this assumption, the following hypothesis is examined:

Hypothesis 1: Entrepreneurs' super-leadership (i.e., coaching and communicative support) will be positively related to entrepreneurs' job satisfaction.

There is ample evidence that employees, leaders, and entrepreneurs were more successful – subjectively as well as objectively – if they competently applied self-leadership strategies to accomplish tasks and perform at work (Manz & Sims, 1987; Pearce et al., 2009; Brown & Fields, 2011; Stewart, Courtright, & Manz, 2011; Butzmann, 2011). We expected to replicate existing findings and hypothesized:

Hypothesis 2: Entrepreneurs' self-leadership will be positively related to entrepreneurs' job satisfaction.

The impact of self-leadership (i.e. individuals' use of constructive thoughts, natural rewards, effective behavioral planning, and concerns of physical vitality) on job satisfaction has been well studied. However, the impact of self-leadership on entrepreneurs' job satisfaction has not yet been addressed. Furthermore, the impact of self-leadership on job satisfaction and super-leadership has not yet been studied. Manz and Sims (2001, 2007) conceptually discussed that entrepreneurs' super-leadership and employees' self-leadership and job satisfaction correlated positively. Thus we assumed that entrepreneurs' self-evaluations of super-leadership, self-leadership and job satisfaction are also correlated positively. Furthermore, the effect of entrepreneurs' super-leadership should be mediated by entrepreneurs' self-leadership. Hence, we examined the following hypothesis:

Hypothesis 3: The relationship between entrepreneurs' use of super-leadership (i.e., “coaching and communicative support”) and entrepreneurs' job satisfaction will be mediated by their use of self-leadership strategies.

Recall that Manz and Sims (1980) proposed the term super-leadership to describe leaders who develop their employees' self-leadership capacities by teaching them self-leadership strategies. One way that such teaching occurs is through direct role-modeling of self-leadership to the employees. Thus, a direct relationship of entrepreneurs' self-leadership (i.e. their

use of constructive thoughts, natural rewards, effective behavioral planning, and concerns of physical vitality) and their super-leadership should exist. Thus, we examined the following hypothesis:

Hypothesis 4: There is a direct relationship of the entrepreneurs' use of super-leadership (i.e., "coaching and communicative support") and their use of self-leadership strategies.

Method

Participants

One hundred and two German entrepreneurs participated in the study. They were selected by a quota sampling procedure based on demographical characteristics close to how these characteristics are distributed in the population of German entrepreneurs (Statistical Yearbook, 2012, see Table 1). Inclusion criteria incorporated entrepreneurs with at least one employee. No exclusions were made with regard to types of business, location of firms, and duration of entrepreneurship. All entrepreneurs were contacted by personal communication and received the questionnaire that was used in the current study. Fifty-one percent of the contacted entrepreneurs participated in the study and returned the completed form.

The demographic characteristics of the sample are summarized and displayed in Table 1.

Table 1: Observed Frequencies, Means, Standard Deviations and Ranges For Entrepreneurs' Demographic Characteristics (N = 102).					
Demographic	Sample (Frequency, Percent)	Population (Mean, Percent)	Sample Mean	Std. Deviation	Range
Age	102 (100 %)	46.6	47.5	10.4	27-72
Biological Sex					
-Male	86 (84 %)	76 %			
-Female	16 (16 %)	24 %			
Education					
-College or University	57 (56 %)	61 %			
-Vocational School and On-the-Job training	42 (41 %)	39 %			
- -No response	3 (3 %)				
Years in business	102 (100 %)	14.9	14.5	10.5	1-40
Number of employees	102 (100 %)		13	24.1	1-185
Type of business					
-Private sector	49 (48 %)	45 %			
-Manufacturing	17 (17 %)	11 %			
-Transportation	12 (12 %)	22 %			
-Other	24 (23 %)	22 %			

According to available data of official sources the sample of entrepreneurs included a greater proportion of males and a lower proportion of entrepreneurs working in the trade and transportation business. As to the other demographical characteristics the sample was sufficiently representative.

Design and Data Collection

The study's layout was a non-experimental, predictive survey design. Data were collected over a four months period in 2010. The entrepreneurs received printed material that included some general information about the purpose of the study, a questionnaire measuring respondents' use of self-leadership strategies, coaching and communicational support, and job satisfaction as well as demographics (e.g., age, gender, type of education, number of employees). Respondents received a pre-paid return envelope to mail back the completed materials. Participants were invited to separately mail back a contact

form in order to participate in a raffle to win Euro 15 book or movie vouchers as a token of appreciation. Participants also were invited to indicate on the feedback form if they wanted to receive the overall results of the study upon its completion.

Measures

Super-leadership. Coaching and communicative support was measured by a scale consisting of five items. The five items were taken from a standardized German super-leadership questionnaire (“Fragebogen zur Diagnose von Führung durch Selbstführung”) which was developed and validated by Müller, Sauerland, and Butzmann (2011) and documented in a test-manual by Müller (2013). The scale was a short self-description version of the coaching and communicative support-scale of this questionnaire (see Appendix). The items had to be answered on a Likert-type rating scale ranging from “0” (“describes my own leadership behavior not at all”) to “3” (“describes my own leadership behavior very well”). The internal consistency of the short scale version was $\alpha = .91$. In addition, the reliability was estimated by Guttman’s Lambda 2 since this coefficient is a better estimate of the reliability than Cronbach’s alpha if items do not meet the assumption of essential tau-equivalence (see Guttman, 1945; Sijtsma, 2009), yielding $\lambda_{(2)} = .76$.

Self-leadership. Self-leadership was measured by a short version of the German Self-leadership-Questionnaire (GSLQ). The GSLQ was partially derived from Houghton and Neck’s (2002) Revised Self-leadership Questionnaire (RSLQ) and extended to include items measuring will power activation, emotional self-reward, and health-promoting behavior. Confirmatory factor analyses yielded measures of self-leadership that replicated the aforementioned dimensions of self-leadership, i.e., (1) constructive thought strategies; (2) natural reward strategies; (3) behavioral strategies, and (4) physical vitality strategies (Müller, 2006a; Müller, Georgianna, & Roux, 2010). As a standardized measure of self-leadership, the GSLQ has approved psychometrical properties (Müller, 2014). The reliability of the four scales varied between .69 and .89 (internal consistencies), and between .72 and .78 (test-retest-coefficients). In order to reduce time constraints for participation, the current study used a short version of the GSFQ-consisting of 20 items. Of the 20 items, five items measured the four dimensions of self-leadership (i.e., (1) constructive thought strategies; (2) natural reward strategies; (3) behavioral strategies; (4) physical vitality strategies; see Appendix A). Response options for each item ranged from “0” (“describes me not at all”) to “3” (“describes me very well”). The reduced number of items yielded lower reliability scores of the short scales than found for the scales of the standard version (i.e., constructive thought strategies: $\lambda_{(2)} = .63$; natural reward strategies: $\lambda_{(2)} = .79$; behavioral strategies: $\lambda_{(2)} = .70$; physical vitality strategies: $\lambda_{(2)} = .72$)

Job Satisfaction. The job satisfaction measure was taken from a standardized German questionnaire developed and validated by Jiménez (2010). In this questionnaire, employees are required to evaluate job conditions such as work content, work context, work schedule, colleagues, career opportunities, pay, decision making, supervision, challenge of work, organizational politics, and work in general. The nine items being used in this study were selected with reference to work conditions of entrepreneurs and reformulated accordingly. The measure of job satisfaction entailed the entrepreneurs’ evaluation of communication within the firm, challenges of own work, relationships to employees, relationships between employees, physical and technical work equipment, own revenue, own work and leisure time, own work performance, and work in general. Response options on a five-point Likert-type scale ranged from “-2” (“very dissatisfied”) to “+2” (“very satisfied”). The reliability of this scale was $\lambda_{(2)} = .80$.

Data Analysis

Descriptive Statistics. Means, standard deviations, and zero-order correlations of variables measuring super-leadership, self-leadership, and work satisfaction were computed using the Statistical Program for Social Sciences (SPSS) Version 22.0 for Windows (IBM 2014).

Structural Equation Modeling. Structural equation modeling (SEM) was used to examine a mediator model based on the assumptions that (a) super-leadership directly influences self-leadership of entrepreneurs, (b) self-leadership directly influences work satisfaction, and (c) the effect of super-leadership on job satisfaction is completely or at least partially mediated by self-leadership. Manifest variables of self-leadership were scale-values of constructive thought strategies, natural reward strategies, behavioral strategies, and physical vitality strategies, while parcels were used as manifest variables of super-leadership and job satisfaction (see below).

To account for non-normality in the data the robust maximum likelihood (MLR) estimator of the *Mplus* program was used (Muthén & Muthén, 1998-2012). The MLR method takes violations of the assumption of multivariate normality into account by adjusting standard errors and χ^2 -square values accordingly (Yuan & Bentler, 2000).

Item Parceling. Parceling is when a scale of items is comprised of the sum or average of two or more items (Little, Cunningham, Shahar, & Widaman, 2002). Instead of the original items of the scale, the parcels are then used as the manifest variables of the measurement model. Parceling is preferable over using single items as manifest variables when ideal conditions are not met, such as when sample size is small. The benefit is that parcels are more reliable than single

items, fewer parameters are to be estimated in the model, and parceling reduces Type II error rates (cf. Little, Rhemtulla, Gibson, & Schoemann, 2013).

The sample size of the current study was quite small ($N = 102$), therefore parcels for the latent predictor variable super-leadership and for the latent outcome variable job satisfaction were constructed by summing items. As super-leadership was measured by five items, only two item parcels could be formed instead of the generally recommended number of three parcels per construct. For job satisfaction, which was measured by nine items, three parcels were formed. Following the item-to-construct balance procedure as described by Little, Cunningham, and Shahar (2002), combinations of parcels on the basis of the item-to-construct loadings were chosen whereby the item with the highest loading is combined with the item with the lowest item loading, the second highest item loading with the second lowest loading, and so on.

Model fit. The model fit was evaluated by several fit indices provided by the *Mplus* program: the χ^2 test and its associated p -value, the root mean-square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the standardized root mean square residual (SRMR). Good model fit is indicated by a non-significant χ^2 -value, $RMSEA \leq .06$, CFI and TLI $\geq .95$, and $SRMR \leq .08$ (cf. Hu & Bentler, 1999; Schermelleh-Engel, Moosbrugger, & Müller, 2003). For evaluating the fit of nested models, the Satorra-Bentler scaled chi-square difference test was used (Satorra, 2000).

Results

Inter correlations, means and standard deviations of all manifest variables are shown in Table 2.

Table 2: Means, Standard Deviations, and Zero-Order Correlations of Indicators Measuring Super-leadership, Self-leadership, and Job Satisfaction (N = 102)												
		M	SD	1	2	3	4	5	6	7	8	9
1	SL1	4.34	1.28	1.00								
2	SL2	5.59	1.87	.64**	1.00							
3	CT	9.66	2.53	.31**	.21*	1.00						
4	NR	10.59	2.79	.38**	.35**	.25**	1.00					
5	BS	7.52	2.98	.17*	.25**	-.04	.23**	1.00				
6	PV	8.89	3.25	.20*	.20*	.01	.17*	.24**	1.00			
7	JS1	9.31	1.45	.37**	.25**	.32**	.36**	.19*	.15	1.00		
8	JS2	9.08	1.82	.47**	.50**	.26**	.30**	.22**	.15	.61**	1.00	
9	JS3	8.53	1.74	.29**	.23**	.29**	.37**	.09	.27**	.54**	.48**	1.00

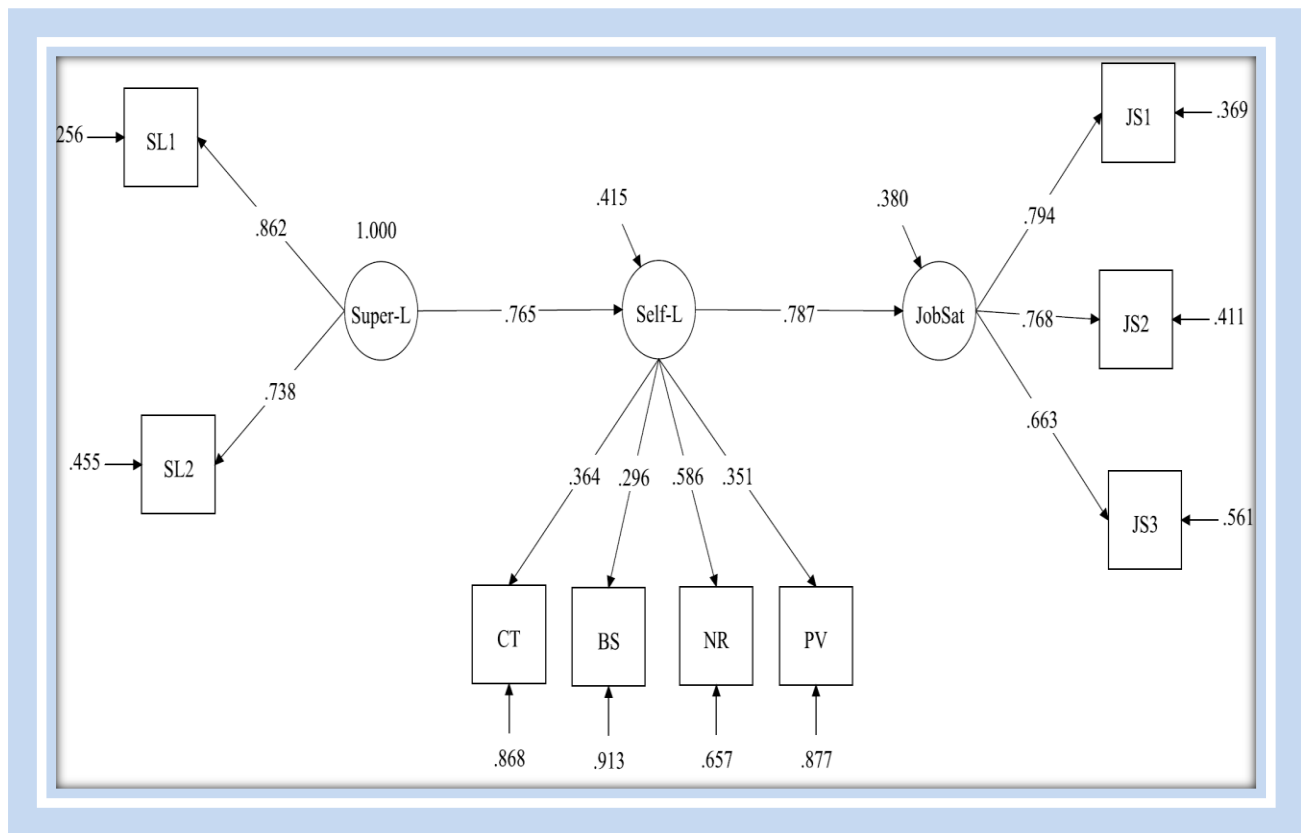
Note. SL = Super-leadership, SL1 and SL2 = Parcels 1 and 2; Indicators of Self-Leadership: CT = Constructive Thought, NR = Natural Reward, BS = Behavioral Strategies, PV = Physical Vitality; JS = Job Satisfaction, JS1, JS2, JS3 = Parcels 1, 2, and 3.

* $p < .05$, ** $p < .01$ (one-tailed)

Table 2 displays that the majority of intercorrelations is positive and significant. As expected both subscales of super-leadership are positively correlated with the subscales measuring job satisfaction. The intercorrelations of the complete scales were $r = .42$ ($p < 0.001$). As predicted by Hypothesis 1, the entrepreneurs' coaching and communicative support was positively related to entrepreneurs' job satisfaction. In other words, the more entrepreneurs led by encouraging their employees to lead themselves, the more the entrepreneurs were satisfied with their own job.

According to Hypothesis 2, a positive relationship was expected between the entrepreneurs' self-leadership and job satisfaction. The subscales of both measures confirmed this expectation. The multiple correlation between the subscales of self-leadership and the complete job satisfaction scale was $R = .56$ ($F_{(4,96)} = 11.2$; $p < 0.001$). Our findings are in line with numerous studies that showed a positive correlation of employees' self-leadership and job satisfaction. The more entrepreneurs used self-leadership strategies the more job satisfaction they expressed. In particular, entrepreneurs' use of natural reward strategies yielded the greatest impact on their job satisfaction (see Figure 1).

Figure 1: Structural Equation Model of Super-leadership Behavior, Self-Leadership Behavior, and Job Satisfaction with Standardized Parameter Estimates.



Note: Super-leadership (Super-L) was measured by two parcels, SL1 and SL2, self-leadership (Self-L) by Constructive Thoughts (CT), Behavioral Strategies (BS), Natural Rewards (NR), and Physical Vitality (PV), and Job Satisfaction (Job Sat) by three parcels, JS1, JS2, and JS3.

In other words, the more entrepreneurs were able to create and detect an intrinsically rewarding work environment the more satisfaction they experienced with their job.

The mediating effect of self-leadership being predicted by hypothesis 3 was analyzed by two structural equation models. Table 3 summarizes the fit-indices of the two structural equation models.

Table 3: Fit Indices of Two Nested Structural Equation Models						
Model of Super-leadership	χ^2	df	RMSEA	CFI	TLI	SRMR
Model 1	30.60	25	.047	.97	.97	.06
Model 2	30.01	24	.050	.97	.96	.06

Note: Model 1 assumes that the effect of super-leadership on job satisfaction is completely mediated by self-leadership; Model 2 is a less restrictive mediator model with an additional path added between super-leadership and job satisfaction. The Satorra-Bentler scaled difference test was not significant ($SB-\chi^2_{diff}(1df) = .750, p > .05$).

As seen in Table 3, the first model tested the assumption that the effect of super-leadership on job satisfaction is completely mediated by self-leadership. In this model, the direct path from super-leadership to job satisfaction was fixed to zero. The results show that the model fitted the data well. The complete model with standardized parameter estimates is depicted in Figure 1 (see above).

All path coefficients of the model were statistically significant ($p < .01$). As described by Hypothesis 4 we found a direct effect of super-leadership on self-leadership (.765) and a direct effect of self-leadership on job satisfaction (.787), both effects were positive. In addition, the indirect effect (IE) of super-leadership on job satisfaction was significant (IE =

.628, $SE = .139$, 90% CI [.271, .985], $p < .01$) indicating that super-leadership substantially affects job satisfaction, but that this effect is mediated by self-leadership. So, as predicted in Hypothesis 3, super-leadership only impacts how entrepreneurs were satisfied with their work if their behavior is based on own self-leadership strategies. The impact of this finding is discussed below.

Finally, a second, less restrictive mediator model was tested in which the direct path between super-leadership and job satisfaction was freely estimated assuming that the effect on job satisfaction was only partially mediated by self-leadership. The results show that the second model fitted the data about equally well as the more restrictive model (see Table 3). As both models were nested, the chi-square difference test using the Satorra-Bentler (SB) scaled difference test (Satorra, 2000) could be used for model comparison. The model difference test revealed a non-significant value, $SB-\chi^2_{diff}(1df) = .750$ ($p > .05$), indicating that the more restrictive model with the path fixed to zero between super-leadership and job satisfaction should be kept.

Discussion

The study examined the relationships between entrepreneurs' super-leadership behavior, self-leadership, and job satisfaction. The obtained results confirmed most hypotheses being formulated. As expected, all correlations between measures of super-leadership, self-leadership, and job satisfaction were positive. An unexpected finding was that the impact of super-leadership on job satisfaction was completely mediated by self-leadership strategies: high values of coaching and communicative support yielded high values of natural rewards, constructive thoughts, and physical vitality for themselves, which in turn yielded high values of job satisfaction. The subjective efficiency of the entrepreneurs' super-leadership did not seem to stem from their super-leadership capacities but from their self-leadership. In other words, entrepreneurs' capacity to lead others through super-leadership was completely dependent upon their ability to practice self-leadership on a personal level. If entrepreneurs were able to activate a proactive mindset and engage in self-leadership, their use of super-leadership behavior yielded job satisfaction. In the context of leadership-research this finding may be interpreted in terms of contingent assumptions in theories of leadership effectiveness (Northouse, 2010). The major impact of natural reward strategies and the creation of intrinsically motivating task conditions on entrepreneurs' job satisfaction has been documented by other researchers (e.g., Asiri, 2011).

Manz (1990) as well as Sims and Manz (1995) argued that being an effective super-leader in organizations requires one to become a competent self-leader first. According to results of the current study this notion seems to apply even more for entrepreneurs: the positive impact of entrepreneurs' super-leadership was completely mediated by their use of self-leadership. Research by Müller (2014) has shown that self-leadership is closely related to entrepreneurial trait potential and the ability to successfully start an own business. It seems plausible to assume that without a proactive mindset and personality entrepreneurial aspirations and initiatives would be hard to realize (Neck et al., 1997). From the results of the current study it became apparent that self-leadership may not only contribute to venture creation but also to successfully lead and run own businesses.

To apply the current study's findings, the obtained results may point to differences in the way how organizational and entrepreneurial leadership behavior should be trained. Contrary what sometimes is proposed as beneficial outcome of qualifying managers in organization (see Hunt & Weintraub, 2002), a mere training of coaching and communication techniques might not be of similar value for improving entrepreneurial leadership behavior. Although entrepreneurs may also benefit from competencies to coach and advise employees, benefits for entrepreneurs seem to hinge on entrepreneurs' competencies of self-leadership. Thus, diagnosing and – if necessary – training entrepreneurs' self-leadership competencies *prior to* teaching them coaching and communication techniques seems beneficial.

Limitations

The current study has some limitations due to external validity of results, methodology, and conceptual scope of evidence. The external validity is limited by the non-random sampling of entrepreneurs. Results obtained by measures from randomized samples might differ from results of the current study. Some external validity, however, may be given since some demographical characteristics of the study's sample were matching characteristics of the entire population. Methodologically, limitations have to be considered because all measures were collected from the same persons. As in other non-experimental predictive survey designs within-subject measures the relationships between the latent variables may be biased by effects of social desirability, positive self-presentation or halo. A third limitation refers to necessary extensions of evidence within the conceptual approach being studied. One option for further research should be to objectify super-leadership by – for instance – supplementing self-reports by observational data of the entrepreneurs' actual behavior, i.e. coaching and communicatively supporting their employees. Another option should be to relate super-leadership and self-leadership to harder criteria of successful entrepreneurship, for instance the productivity of employees or concrete indicators of personal responsibility and self-initiative within the entire work-force.

Conclusion

The current study empirically examined an important facet of subjectively successful entrepreneurship. It was found that entrepreneurs' super-leadership behavior had significant impact for their job satisfaction if they also used self-leadership strategies. The mediation effect of self-leadership highlights the value of self-control and self-efficacy for entrepreneurs when coaching employees and supporting self-leadership within their firms. This kind of external and internal leadership allows entrepreneurs to cope more effectively with tasks, problems, and challenges that their hard and responsible work deserves.

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