

An Examination of the Relationship between Authentic Leadership and Psychological Well-Being and the Mediating Role of Meaningfulness at Work

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Abstract

Previous studies have examined the relationship between charismatic-types of leadership and well-being but not specifically authentic leadership which gives importance to how leaders are intrinsically composed rather than mere behaviours. This study explored whether authentic leadership and well-being are related and whether meaningfulness of work mediates this relationship. Well-being was measured from two perspectives namely hedonic and eudaimonic well-being. 123 participants completed a questionnaire survey while correlational and mediation analyses, using the Sobel Z test with bootstrapped samples, were used to answer the research questions. Results revealed that authentic leadership is both related to subjective well-being and to flow. In addition, meaningfulness of work partially mediated the relationship between leadership and subjective well-being but fully mediated the relationship with flow. The results are discussed in view of their theoretical and practical implications. Finally, a series of limitations are provided to secure the interpretative boundaries of the results obtained.

Keywords: Authentic leadership; well-being; meaningfulness

1. Introduction

Authentic leadership is embedded in a field called positive organizational scholarship (POS) and has been influenced by positive psychology (c.f. Seligman & Csikszentmihalyi, 2000). Nelson and Cooper (2007) argue that POS has helped organizational psychology to move away “from a disease and dysfunction model to a new look at the world of work with a focus on positive attributes of people and organizations” (p. 3) (see also Luthans & Youssef, 2007; Luthans & Avolio, 2009). POS has sometimes been criticised as being a re-packaging of well-known theories and constructs in organizational psychology but re-touched with a dose of ‘positivity’ (Hackman, 2009). [Fineman \(2006\)](#) emphasises that it can only be significant if it manages to fill us in with knowledge creation and scholarly contributions that complement but do not abandon mainstream organizational psychology theory. To this end, Cameron, Dutton and Quinn (2003) and others (e.g. Luthans & Avolio, 2009; Morgan Roberts, 2006) point out that while POS is in many ways parallel to positive psychology, it shifts away from only focusing on the positive aspects of constructs but recognizes the other side of the coin.

One construct on the agenda of POS is the ‘old’ construct of leadership (Bass, 1990). Within the POS strand, the leadership construct is examined for positive aspects in leaders and their impact on followers (Quick, Cooper, Gibbs, Little & Nelson, 2010).

2. Authentic leadership

This study explores an emerging strand of leadership that deals with inner-self aspects of leadership. Authentic leadership (Luthans & Avolio, 2003) borrows to a large extent from transformational leadership (Burns, 1978), which refers to the ability of the leader to influence followers by encouraging and inducing praise to perform beyond their expectations and go the extra mile (Bass, 1999). Transformational leadership has mostly been investigated through the leader’s behaviour rather than the way the leader *is*, although components of transformational leadership underlie many positive components like hope, charisma and enthusiasm (Avolio, Bass & Jung, 1999; Kark, Shamir & Chen, 2003). Judge and Piccolo’s (2004) meta-analysis revealed that transformational leadership had the strongest association ($\rho=.44$) with a variety of outcomes including psychological well-being (see also Arnold, Turner, Barling, Kelloway & McKee, 2007; Kelloway, Turner, Barling, & Loughlin, 2012; Nielsen, Randall, Yarker & Brenner, 2008; Nielsen & Daniels, 2012).

2.1 The nature of authentic leadership

Authentic leadership focuses on inherent and intrinsic moral and malleable quasi-traits that originate from a person’s value standards, self-awareness and moral principles. These qualities equip leaders with a way of thinking about their behaviours and can explain how some leaders flourish whereas others don’t (Morgan Roberts, 2006). Authenticity, a central concept for positive psychology (Harter, 2005), is indeed embedded in the earlier works of Rogers (1963) and Maslow (1968). Harter (2005) lists a variety of psychological benefits for being authentic namely higher self-esteem, more positive affect and more hope for the future. In the organizational realm, authentic leadership focuses its emphasis on the natural *intrinsic* qualities of the leader as being more salient than the *exhibited* behaviours of the leader and the impact of those qualities on followers through their authentic actions and relations. Hence authentic leadership extends beyond the authenticity of the leader as a person to encompass authentic relations with followers (Gardner, Avolio, Luthans, May & Walumbwa, 2005). Avolio and Gardner (2005) state “authentic leaders are anchored by their own deep sense of self” (p. 329).

So what characterizes authentic leadership? Avolio, Gardner and Walumbwa (2005) define it as a process that “draws from both positive psychological capacities and a highly developed organizational context to foster...positive behaviours on the part of leaders and associates, producing self-development in each” (p. 12). Authentic leadership moves beyond the leader’s behavior in view of one’s followers but comprises an introspective analysis of how much that behaviour is a true reflection of one’s intrinsic qualities and extent to which that sense of self is consistent with one’s beliefs and values. It transcends from self-determination theory which is centered on the belief that human nature shows persistent positive features by showing effort, agency and commitment in one’s lives to act autonomously and empowered (Ryan & Deci, 2000). According to Avolio and Chan (2008) these intrinsic qualities are comprised of qualities that the leader must boldly question and answer about himself/herself. This reality check should then predict the development of one’s self-awareness and one’s capability to regulate one’s emotions and behaviours leading to growth (Illies, Morgeson, & Nahrgang, 2005). Authentic leaders also show a high degree of consistency between their values, beliefs and actions and this has positive consequences on one’s physical and psychological well-being.

2.2 Components of authentic leadership

Illies, et al., (2005) suggested that authentic leadership comprises of four essential components. The first, *self-awareness*, relates to the self-concept and being able to acknowledge one’s internal strengths and weaknesses. Being aware of one’s strengths and limitations has effect on one’s ability to regulate emotions and to possess a sense of self that is contingently appropriate in relation to the sense of others and of the world. The second component, *unbiased processing*, is akin to humility and the concept of unconditional positive regard (Rogers, 1990) and implies having a realistic sense of one’s abilities, skills and knowledge to perform without seeking to rationalize failures to external events and irrelevant variables. The third, *authentic behaviour/action*, refers to how much people act in accordance to their true self as opposed to an attempt to act in a socially desirable way and hence avoid punishment or pain.

Hence inauthentic leaders are more likely to let social pressures and external forces determine their behaviour for action. According to Kernis (2003), authentic leaders will be sensitive to the fit between expressing their true self and the environment and be aware of the potential implications of their behaviour. The fourth component, *authentic relational orientation*, involves valuing and striving for achieving openness and truthfulness in relationships through an active process of self-disclosure, mutual intimacy and trust. It implies therefore honesty, sincerity and ability to face up to errors by willingly apologizing. It also implies building genuine and emotionally healthy relationships with followers.

Later, Gardner et al., (2005) attempted to integrate these various perspectives and definitions of authentic leadership and proposed a self-based model of authentic leader and follower development. Their final model focused on the core self-awareness and self-regulation components of authentic leadership. They identified several distinguishing features associated with authentic self-awareness and self-regulation processes, including values, identity, internalized regulation, balanced processing of information, relational transparency, and authentic behaviour. A more parsimonious model has been proposed by Walumbwa, Avolio, Gardner, Wernsing and Peterson (2008). Fit statistics supported a second-order factor structure composed of four factors namely self-awareness, relational transparency (akin to unbiased processing), internalized moral perspective (akin to authentic behaviour/action), and balanced processing. Results also demonstrated that the factors are not entirely independent and that a single second-order factor accounts for this dependence. Thus, it might not be reasonable to conceptualize the measures as assessing entirely separate and distinct constructs. In addition, these factors correlated with a host of important organizational outcomes like citizenship behaviour, job satisfaction, commitment and performance. Finally, they also demonstrated associations with conceptually related constructs like transformational leadership and ethical leadership but did not correlate so highly as to indicate construct redundancy.

3. Authentic leadership and well-being

Macik-Frey, Quick and Cooper (2009) have proposed a research agenda that links authentic leadership and health. They suggest that by understanding better the dimensions of positive health amongst followers, will lead us to understand better leadership effectiveness. Hence an examination of the link between these two is undoubtedly warranted.

3.1 'Positive' Well-being: Differentiating between hedonic and eudaimonic well-being

Well-being is a complex construct (Ryan & Deci, 2001). It is therefore no surprise that positive psychologists have rallied the case for a more positive perspective of well-being (c.f. Keyes & Lopez, 2010; Maddux, 2010). For example Quick et al. (2010) comment that: "The translation of POS concepts into the workplace can be explored by examining what constitutes healthy individuals and in turn, healthy work" (p. 271). This attempt to boost the value of positive health has been championed by several scholars (e.g. Deiner, 2000; Fredrickson, 2001; Ryff, 1989) but they have not totally disregarded the counterpart of negative health (e.g. Ryff & Singer, 1998).

This study examines two broad specific perspectives of positive well-being: hedonic and eudaimonic well-being. There exists some evidence suggesting that well-being is best conceptualized as a multi-dimensional construct that includes both (Ryan & Deci, 2001). Hedonism (Kahneman, Diener & Schwarz, 1999) reflects the view that well-being consists of pleasure, happiness, satisfaction and a host of other positive states.

Hence, this perspective emphasizes that affective (emotional) states are a strong index of well-being. For instance, Warr (1990) developed an instrument for measuring affective well-being characterized by three axes (pleased-displeased; enthusiastic-depressed; contented-anxious) and which he refers to as the 'happiness' wheel (Warr & Clapperton, 2010). The role of affect in organizational processes is not new to POS (see Brief & Weiss, 2002 for a review) and there have been several attempts to push it further up in the agenda (e.g. Fredrickson & Branigan, 2005). The predominant view among hedonic psychologists is that well-being consists of the experience of pleasure versus displeasure broadly construed to include all judgments about the good/bad elements of life (Diener, Sapyta & Suh, 1998). By defining well-being in terms of pleasure versus pain, hedonic psychology places itself as a clear and unambiguous target of research intended primarily to maximise human happiness. Most research within this stream of psychology has employed subjective well-being (SWB) (Diener & Lucas, 1999) as a primary index of hedonic well-being. SWB consists of three components: life satisfaction, the presence of positive mood, and the absence of negative mood (collectively known as 'happiness').

In spite of several debates on whether SWB constitutes a hedonic form of well-being, SWB has reigned as the primary index of well-being during the past decade and a half.

On the other hand, eudaimonism concerns the realisation of human potential ([Waterman, 1993](#)). Eudaimonic theories maintain that not all desires, even those of personal value to the person, would necessarily lead to well-being. Even though they are pleasure producing, some outcomes are simply not good for people and would not promote wellness. Thus, from the eudaimonic perspective, subjective happiness does not equate with well-being. [Waterman \(1993\)](#) states that the eudaimonic concept calls upon people to live in accordance with their true self, which is a crucial aspect of authenticity ([Hatter, 2010](#)). He suggests that eudaimonia occurs when people's life activities are most congruent with deeply held values and are holistically or fully engaged. 'Flow' is one construct that characterizes this category of eudaimonic well-being. Flow is a condition, rather than a mere emotional state, that includes both perceived challenges and the achievement of clear proximal goals ([Nakamura & Csikszentmihalyi, 2005](#)) in what one does. For [Csikszentmihalyi \(1990\)](#) flow is the holistic sensation that people feel when they act with total involvement. People in flow are intimately immersed in their activities and this generates a sense of fulfillment and internal goodness. [Bakker's \(2008\)](#) work identified three core aspects of flow: enjoyment, intrinsic motivation and absorption. Flow has not gone unnoticed in the work context and studies have started to appear to include this construct of eudaimonic well-being (e.g. [Fullager & Kelloway, 2009](#); [Mäkikangas, Bakker, Aunola & Demerouti, 2010](#); [Rodriguez-Sanchez, Schaufeli, Salanova, Cifre & Sonnenschein, 2011](#)).

3.2 Leadership and well-being

Most studies about leadership relate styles and behaviours with goal achievement and performance. It is not very usual to find studies that link specifically leadership with follower well-being but this has become more evident with the increased interest in more charismatic-driven leadership theories. Indeed, several studies point into this direction. A relationship between leadership and well-being has been established ([van Dierendonck, Haynes, Borrill and Stride, 2004](#)) and also that leadership behaviour and subordinate well-being are linked in a feed-back loop (e.g., [Arnold et al., 2007](#); [Nielsen et al., 2008](#)).

Following social contagion theory, leaders inject hope, resilience ([Norman, Luthans & Luthans 2005](#)) and positive mood ([Bono & Ilies, 2006](#)) among followers. [Offermann and Hillmann \(1996\)](#) found a significant relationship between leader behavior and subordinate reports of work stress. Their study showed how improving leadership development serves as a medium to reduce employee stress. [Sosik and Godshalk \(2000\)](#) also found a link between mentor leadership behaviour and job-related stress such that increased mentor transformational behaviour was generally related to less job-related stress amongst mentees. [Gilbreath and Benson's \(2004\)](#) study revealed that supervisor behaviour can contribute to the prediction of psychiatric disturbance beyond the contribution of other influential variables. Their results supported the hypothesis such that leadership behaviour predicted psychiatric disturbance over and above other variables. In addition, [Dierendonck, Haynes, Borrill and Stride \(2004\)](#) found that the best model with the best fit suggested that leadership behaviour and subordinate responses are linked in a feedback loop. Similarly, [Sy, Cote and Saavedra \(2005\)](#) found that groups with leaders in a positive mood exhibited more coordination and expended less effort than did groups with leaders in a negative mood. Lastly, [Bono and Ilies \(2006\)](#) reported that facilitating the experience of positive mood among employees results in many behavioural outcomes associated with charismatic leadership, suggesting positive emotions and mood contagion as one of the basic psychological processes linking charismatic leadership with outcomes. These studies indeed imply that the behaviour of leaders can make a difference in the happiness and well-being of followers by influencing their emotional lives.

3.3 Explanations about followers' perceptions of their leaders and reported well-being

Following from this expanding literature on leadership and well-being, this current study examines two specific research questions: Firstly, to what extent does authentic leadership relate to the two categories of well-being? Secondly, does people's connectivity with their work (i.e. meaningfulness) mediate the relationship between authentic leadership and well-being?

Studies examining the relationship between leadership and well-being have already been reviewed and this project adds to this list by examining specific aspects of authentic leadership (c.f. [Walumbwa et al. 2008](#)) and well-being.

What plausible explanations may be made to explain this relationship? Two particular theories may offer insights into the mechanisms underlying this relationship. The first, Implicit Leadership Theory (ILT), proposes that leadership and followership are perceptual and behavioural social constructs (Shondrick & Lord, 2010). Such perceptions emerge from our cognitive schemas that originate from our experiences generating typical stereotypes of how things are and should be. Lord (1985) employed this to develop a recognition-based theory of leadership such that when people encounter persons who exhibit specific characteristics and behaviours, these are matched with an internal category within the follower's mind-set. As a consequence of this, the follower identifies the other person as a leader. The second theory is leader-member exchange (LMX) theory (Graen & Cashman, 1975) whereby effective leadership is derived from the quality of the dyadic leadership relationship. Benefits of good LMX include better employee job satisfaction, lower levels of job stress and improved well-being (Epitropki & Martin, 2005). Returning to the construct of authentic leadership, it is plausible that perceived authenticity represents a strong cognitive category of benevolent leader but one that balances firmness with fairness.

The authentic leader is perceived by the follower as one who inherently 'walks one's talk', is genuine, and one who displays an honest and realistic perception of the self-rendering him/her more credible and hence potentially influential. Both the perception of the leader as benevolent and the quality relationship that develops elicits significant levels of positive emotional states in the followers as described in emotional contagion. This implicit imprint matches with a model of 'authenticity' and generates a state of wellness in the follower who feels comfortable and psychologically safe in the presence of such individuals. In addition, Gardner et al., (2005) emphasize that authentic leaders radiate authentic relations with their followers. In line with LMX theory and ILT, it is plausible to argue that the quality of the relationship perceived by the follower determines the outcome of the relationship such as the follower's state of well-being.

SWB postulates that well-being is derived from the happiness and other positive states that one acquires from one's goals and how one is valued. Because SWB is derived from judgments emanating from one's realm including work (Diener, 2000) and because the quality of perceived leadership may be a source of how one qualifies one's work experience, it is hypothesized that:

Hypothesis 1: Authentic leadership is positively related to Subjective Well-Being.

Flow, on the other hand, rests on the notion of one's actualization and fulfillment from one's task and work. One thus derives flow when s/he is enticed by his/her challenges and proximal goals. It is a state derived primarily from the challenges imposed by the task and the feedback from the environment to adjust one's actions in the process. At face value, leadership may have a less direct impact on flow but it nevertheless provides a strong medium for followers to acquire high degrees of flow (Nakamura & Csikszentmihalyi, 2005). Hence authentic leaders provide environments that create conducive positive channels for feedback and honesty while keeping at bay negative emotions from invading followers' connectivity with the task. It is this combination of interactive elements that generates enhanced flow. Hence it is hypothesized that:

Hypothesis 2: Authentic leadership is positively related to Flow but relatively less than in the case of SWB.

Moreover, this study also examines possible mediators. One is meaningfulness of work. In the positive psychology literature, 'meaning' is a central construct as it signifies how individuals make connection between one aspect of life and another. Meaning signifies a process of sense-making and schema formation to generate a sense of stability (Baumeister & Vohs, 2005). According to Baumeister (1991) meaning is derived from four needs namely purpose (providing a sense of the future), values (providing saliency to different aspects in life), self-efficacy (providing an effort to achieve certain states that are meaningful) and self-worth (providing reasons for attaining that which is deemed as good). The meaningfulness of work reflects the connection that people make with their work and the characteristics of their work such as variety and feedback (Hackman & Oldham, 1980) but also typical affective states about one's work. Perceived leader behaviours have an important role on the impact of what people give in return in their work as highlighted by LMX theory including the value, saliency and connectivity that work generates for people. This is likely to impact well-being. Arnold et al., (2007) and Nielsen et al., (2008) found that meaningfulness of work and work characteristics mediated the relationship between transformational leadership and well-being. In line with the broaden-and-build theory (Fredrickson, 2001, 2005), if perceptions of authentic leadership are positively held by followers, this is likely to increase the sense of connectivity people have with their work and hence improves their sense of well-being. Hence:

Hypothesis 3: Meaningfulness of work will mediate the relationship between authentic leadership and well-being.

4. Method

4.1 Participants and Research Settings

123 participants from five different micro enterprises took part in this study. All participants were white-collar workers and worked in service-oriented organizations. Moreover, participants could identify and interact with their immediate leader and therefore had a close working relationship with him or her. This last condition provided a more realistic assessment of one's leader. Sample characteristics are in Table 1.

Table: Sample characteristics

Organisation Number	1	2	3	4	5
Total N of which	14	16	24	34	35
Males (n)	1	0	14	24	22
Females (n)	13	16	10	10	13
Average tenure (months)	69.3	91.8	106.4	85.8	73.5
SD tenure (months)	59.5	65.2	74.0	73.5	72.6
Range tenure (months)	1-168	12-216	12-276	1-240	8-312

Organization sector: 1=Wellness & Beauty; 2=Education; 3=Communication; 4=ICT; 5=Mobile

4.2 Measures

Authentic Leadership: The 16-item Authentic Leadership Questionnaire (ALQ Version 1 Rater) by Avolio, Gardner and Walumbwa (2007) and by Walumbwa et al. (2008) was used. The ALQ has four dimensions: Transparency, morality, balanced processing and self awareness. Collinearity diagnostics revealed a high level of multicollinearity between the components. Employing the guidelines by Tabachnick and Fidell (2001), the Variance Inflation Factor (VIF) and Tolerance level indices (1/VIF) were used to assess multicollinearity. These were very high (<2.6: standard value is less than 1.5) and low (>.37: standard value is higher than .85) respectively. It was therefore decided to follow the authors' suggestion and consider all four dimensions as one single construct. All items were scored on a 5-point scale ranging from 0=Not at all to 4= Frequently, if not always. This global measure had an internal reliability of .954.

Psychological well-being: Both perspectives of well-being were assessed in this study (Ryan & Deci, 2001). The hedonic perspective was measured using the 5-item Satisfaction with life scale (Deiner, Emmons, Larsen & Griffen, 1985), which was slightly modified by including the word 'work' in front of 'life'. Items were scored on a 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree. Example items include "The conditions of my working life are excellent" and "I would change almost nothing from my working life". Internal reliability equalled .853.

The eudamonic perspective was measured via Bakker's (2008) 13-item Work-related Flow Inventory (WOLF) comprising of 3 factors including Absorption, Work Enjoyment and Intrinsic Motivation. However, for the purposes of this study, and in line with Bakker's own suggestion, all 13 items were added up to create one global score of work flow. Participants were asked to rate how often they experience each of the statements described in WOLF and items were scored on a 7-point scale ranging from 1=Never to 7=Always. Example items include "When I am working, I think about nothing else" and "I find that I also want to work in my free time". Internal reliability for all 13 items equalled .886.

Meaningfulness of work: Spreitzer's (1995) 3-item subscale of Meaningfulness of Work was used. Items were scored on a five-point Likert scale from 1=Strongly disagree to 5=Strongly agree. An example item includes: "The work I do is very important to me". Internal reliability equalled .864.

All four constructs were subjected to confirmatory factor analysis using AMOS version 19, to establish construct and discriminant validity. We tested the four hypothesized models against each other: a four-factor model (representing the four constructs), a one-factor model (assuming no differentiation between the constructs), and a null-factor model (the data does not yield a single factor). We tested the four-factor model with both uncorrelated factors and correlated factors. Table 2 shows reasonably good model fit statistics. CFI and TLI indices are close to 0.9 and this is considered a reasonably good model fit. Additionally, the correlated four-factor model showed an optimal RMSEA of less than 0.07, as well as optimal upper and lower limits of the 90% confidence interval for the population value of RMSEA. [Browne and Cudeck \(1993\)](#) recommended a value of 0.08 or less as indicating a reasonable error of approximation. RMSEA takes into account the error of approximation in the population, in order to be able to assess how well the model with unknown but optimally chosen parameter values fits the population (Bryne, 2001). The improvement of model fit was also checked by calculating the differences in χ^2 values in relation to degrees of freedom for each model. The correlated model also showed an optimal χ^2/df ratio, which is recommended to be less than five (Arbuckle, 1996).

Table 2: Fit indices of confirmatory factor analysis for the four constructs authentic leadership, psychological well-being, workflow and meaningfulness.

	χ^2	df	CFI	TLI Rho2	RMSEA (LO90, HI90)	χ^2/df
Null-model	2517.06	666			.18 (.18, .19)	3.78
1-factor ^a	2441.43	631	.37	.30	.15 (.15, .16)	3.82
4-factors (uncorrelated) ^{*b}	875.71	598	.85	.83	.08 (.06, .09)	1.46
4-factors (correlated) ^{*c}	823.35	593	.90	.86	.07 (.06, .08)	1.39

Note. N=123

*Based on modification indices, several error terms were correlated

^a Difference null model and one-factor: $\Delta \chi^2$ (df)= 75.63(35)***

^b Difference one-factor and four-factor (uncorrelated): $\Delta \chi^2$ (df)= 1565.72(33)***

^c Difference four-factor (uncorrelated) and four-factor (correlated): $\Delta \chi^2$ (df)=52.36 6(5)***

*** $p < .001$

Hair et al. (2006) recommend that the rules of thumb for construct validity are: a) standardised loading estimates of 0.5 or higher; b) an average variance extracted (AVE) of 0.5 or greater; and c) a construct reliability of 0.7 or higher. Indeed on further analysis the four constructs achieved all the above cut-off points. Moreover, the square root of AVE for each construct must be greater than the inter-correlations with the other constructs to signify discriminant validity ([Bhattacharjee & Sanford, 2006](#)). These criteria were achieved for all four constructs.

Thus, while it is conceded that structural equation modeling generally requires large samples, Iacobucci (2010) comfortably remarks that SEM models can perform well even with small samples of between 50 to 100, especially when testing simple models, as in this case, for convergence.

4.3 Data analysis

The first and second hypotheses were tested using correlation analysis. The third hypothesis was tested using mediator analysis. A mediator follows the pathway $A \rightarrow B \rightarrow C$ where B is the mediator. Most studies have employed the approach recommended by [Baron and Kenny \(1986\)](#). However, a more precise test is the Sobel Z test ([Preacher & Hayes, 2004](#)). This test follows the same line of thought as Baron and Kenny (1984) but also examines indirect effects.

This means that rather than establishing mediation through direct effects only (i.e. A on B, B on C and A on C), the Sobel Z test also provides an examination of A on C through A on B on C thus providing further additional information to the researcher about the relationship mechanics. In addition, Preacher and Hayes (2004) make a fine distinction between mediation and indirect effects and allow for the proviso that although a mediating effect, in the conventional sense, may not exist it is possible to find a situation where the ‘effect’ on C is an indirect impact of A on B. Finally the Sobel Z test requires large samples. Hence, they suggest bootstrapping techniques to increase the sample size from the original sample size and avoid problems of non-normality. The procedures and macro provided by Preacher and Hayes (2004) were strictly adhered to in these analyses.

5. Results

The first and second hypotheses were tested using Pearson Product Moment correlations between authentic leadership and the two indices of well-being (Table 3).

Table 3: Descriptive and correlational statistics for authentic leadership, SWB and Flow

Variable	Mean	SD	α	1	2	3
1. Authentic leadership	41.50	12.44	.954	--		
2. Flow	59.86	12.70	.886	.24**	--	
3. SWB	16.34	3.80	.853	.30**	.51**	--

N=123; ** $p < .01$

These results show that authentic leadership correlates significantly with both flow and SWB. The coefficient for authentic leadership-flow was .24 ($p < .01$) while that for authentic leadership-SWB was .30 ($p < .01$), supporting hypotheses 1 and 2.

Hypothesis 3 was tested using the guidelines suggested by [Preacher and Hayes \(2004\)](#).

Table 4 presents the results obtained from these set of analyses for SWB.

Table 4: Mediating analyses of meaningfulness of work between authentic leadership and SWB

Variable pair	Beta	t	p
AL→SWB	.0902	3.4001	.0009
AL→M	.0372	2.8258	.0055
M→SWB (controlling for AL)	.5778	3.2761	.0014
AL→SWB (controlling for M)	.0687	2.6079	.0103
Indirect effect	.0215	Z 2.0848	.0371
			CI
			95%LC 95%UC
Bootstrap results for indirect effect	.0215	.0039	.0534
Bootstrap resample = 1000			

AL=Authentic Leadership
SWB=Subjective Well being
M=Meaningfulness of work

The results in Table 4 indicate that (i) SWB is predicted by authentic leadership, (ii) meaningfulness is predicted by authentic leadership, (iii) SWB is predicted by meaningfulness irrespective of whether people perceive their leader as authentic or inauthentic and (iv), SWB is predicted by authentic leadership irrespective of whether people see meaning in their work or not. Hence, these results suggest a partial mediation. In addition, the value for the indirect effect ($Z=2.0848$) was significant ($p<.05$) hence indicating a mediating pathway and this value was confirmed through the bootstrap sample as the true indirect effect ($Beta=.0215$) confirmed in the previous Z-value obtained, fell between the lower and upper 95% Confidence Interval.

Table 5 below provides the results for Flow.

Table 5: Mediating analyses of meaningfulness of work between authentic leadership and Flow

Variable pair	Beta	t	p
AL→Flow	.2336	2.5863	.0109
AL→M	.0372	2.8258	.0055
M→Flow (controlling for AL)	1.9727	3.2863	.0013
AL→Flow (controlling for M)	.0687	2.6079	n.s.
		Z	
Indirect effect	.0734	2.0878	.0368
		CI	
		95%LC	95%UC
Bootstrap results for indirect effect	.0734	.0093	.1784
Bootstrap resample = 1000			

AL=Authentic Leadership

M=Meaningfulness of work

The results in Table 5 indicate that (i) Flow is predicted by authentic leadership, (ii) meaningfulness is predicted by authentic leadership, (iii) Flow is predicted by meaningfulness irrespective of whether people perceive their leader as authentic or inauthentic and (iv), SWB is not predicted by authentic leadership after controlling for meaningfulness of work. Hence, these results point out at full mediation such that meaning at work impacts fully the relationship between authentic leadership and flow. In addition, the value for the indirect effect ($Z=2.0878$) was significant ($p<.05$) hence indicating a mediating pathway and this value was confirmed through the bootstrap sample as the true indirect effect ($Beta=.0734$), confirmed in the previous obtained Z-value fell between the lower and upper 95% Confidence Interval.

Hypothesis 3 was thus supported. In the case of SWB there was a partial mediation while in the case of Flow a full mediation was found.

6. Discussion

6.1 Summary and Interpretation of findings

This study suggested implicit leadership theory, LMX theory and emotional contagion as plausible theories to explain the relationship between authentic leadership and SWB / flow. People who perceive and categorise leaders as “positive”, “genuine” and “inherently real” are likely to generate an inner sense of tranquillity and satisfaction. They are likely to evaluate their work surroundings as more resourceful and hence overcome the debilitating effects of excessive demands. In return, they are likely to establish better rapport, which facilitates a reciprocal cycle of exchanges that can vary from commitment, citizenship behaviour and other salient outcomes. This positive exchange relationship generates high degrees of positive feelings and it is known that people feel more positive with others who offer pleasant interactions (Buunk & Shaufeli, 1993). The results also reasonably suggest that lower perceptions of authentic leadership are also likely to be related to lower SWB and to an extent lower flow. Hence the first set of results is consistent with previous studies (e.g. Arthur, et al., 2007; Bono & Ilies, 2006; Nielsen et al., 2008).

With regard to meaningfulness at work, findings are also consistent with previous studies on charismatic-driven leadership like transformational leadership (e.g. Arnold et al., 2007). The results in this specific study also point in the direction that authentic leadership and well-being can be further explained through the influence of third variables such that one's perception of authentic leadership is likely to be associated to better connection with one's work and hence impacts better well-being. Interestingly, in the case of SWB, the mediation effect was partial while in the case of flow it was a full mediation. In many ways, this pattern of results is consistent with the notion that while flow is an index of well-being, this is generated from the task or activity itself rather than directly from sole personal meaningful interactions. In other words, the mediation results suggest that meaningfulness of work accounts for a lot of the co-variance shared between authentic leadership and flow. Because meaningfulness represents the extent a person is connected with what one does (Baumeister, 1991), it is understandable that meaningfulness is likely to impact flow more forcefully than it will with SWB. In fact, the indirect effect was much higher in the case of flow and full mediation only occurred in the case of flow. Authentic leadership generates a more positive work environment that allows people to attach more positively with their work and their duties (Baumeister, 1991; Baumeister & Vohs, 2005) thus revealing more inherent interest in what they do (c.f. Fredrickson & Branigan, 2005; Nakamura & Csikszentmihalyi, 2005). In the case of SWB however, meaningfulness of work does not seem to be a strong enough mediator to fully explain the leadership-well being relationship plausibly suggesting that perceptions of well-being encompasses one's connectivity with the work. Authentic leadership therefore relates to SWB in a broader sense (c.f. Diener et al., 1998).

6.2 Implications

The results suggest both theoretical and practical implications. The first theoretical implication is that different aspects of well-being may relate differently to authentic leadership. Well-being is a multi-dimensional phenomenon. Affective well-being may function differently than indices of well-being that are more eudaimonic in nature and it is felt that researchers in work psychology may need to make this distinction in the future. Secondly, given that other forms of charismatic leadership relate to well-being, it is necessary to explain the contributory power of authentic leadership as it compares to other forms of leadership.

6.3 Limitations

Results should be interpreted within the study's limitations. Firstly, this study is cross-sectional thus limiting one's interpretation of causal mechanisms. Employing a longitudinal design would have provided us with an opportunity to examine not only if authentic leadership affects well-being but also whether followers' well-being impacts improved perceptions of authentic leaders. It is not unnatural to think that people who are more optimistic or satisfied are also more likely to perceive others as genuine, etc. Secondly, this study employed a self-report measure. Self-report measures are always subject to common-method variance. Attempts were made to limit this by priming respondents to respond sincerely and honestly as possible. However, it is not excluded that common-method variance may have inflated some of the results although the correlations obtained are comparable to other studies. Thirdly, this study examined only followers' perceptions of authentic leadership and well-being. Had it investigated the leaders' responses, a better understanding of the reciprocal exchange relationship would have emerged. . Finally, the sample may be considered small to provide solid conclusions even though the results are similar to previous studies and also follow the hypothetical arguments provided. In addition, the mediating analysis was consistent, whether with the bootstrap sample or without, thus providing some validity to the results obtained.

7. Conclusion

Authentic leadership represents a domain of people-oriented leadership that is relevant because it has a relationship with how followers feel and think about their work. The findings reported here underscore the need to re-evaluate leadership from a more intrinsic perspective and to generate a development agenda that looks first and foremost at the person's internal sense-making processes of who he or she is as a leader before even attempting to change behaviours.

8. References

- Arbuckle J. L. (1996). Full information estimation in the presence of incomplete data. In G. A. Marcoulides & R. E. Schumaker (Eds.), *Advanced structural equation modeling: Issues and techniques* (pp. 243-278). Mahwah, NJ: Erlbaum.
- Arnold, K. A., Turner, N., Barling, J., Kelloway, E. K. & McKee, M. C. (2007). Transformational leadership and psychological well-being: The mediating role of meaningful work. *Journal of Occupational Health Psychology, 12* (3), 193-203.
- Avolio, B. J., Bass, B. M. & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72*, 441-462.
- Avolio, B. J. & Chan, A. (2008). The dawning of a new era for genuine leadership development. In G. P. Hodgkinson & J. Kevin Ford (Eds.), *International review of industrial and organizational psychology* (pp. 197-238). Chichester: John Wiley.
- Avolio, B. J. & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*, 315-338.
- Avolio, B. J., Gardner, W., & Walumbwa, F. O. (2005). Preface. In W. Gardner, B. J. Avolio, & F. O. Walumbwa (Eds.), *Authentic leadership theory and practice: Origins, effects and development* (pp 11-19). San Francisco, CA: Elsevier.
- Bakker, A.B. (2008). The work-related flow inventory: Construction and initial validation of the WOLF. *Journal of Vocational Behavior, 72*, 400-414.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology, 51*, 1173-1182.
- Bass, B. M. (1990). Editorial: An ancient subject. *Leadership Quarterly, 1* (3), 145-146.
- Bass, B. M. (1999). Two decades of research and development in Transformational Leadership. *European Journal of Work & Organizational Psychology, 8* (1), 9-32.
- Baumeister, R. F. (1991). *Meanings of life*. New York: Guildford.
- Baumeister, R. F. & Vohs, K. D. (2005). The pursuit of meaningfulness in life. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 608-618). Oxford: Oxford University Press.
- Bhattacharjee, A., & Sanford, C. (2006). Influence processes for Information Technology acceptance: An elaboration likelihood model. *MIS Quarterly, 30*, 805-825.
- Bono, J. E. & Ilies, R. (2006). Charisma, positive emotions and mood contagion. *The Leadership Quarterly, 17*, 317-334.
- Brief, A. P. & Weiss, H. M. (2002). Organizational behaviour: Affect in the workplace. *Annual Review of Psychology, 53*, 279-307.
- Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long, J. S. (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Buunk, B. P. & Schaufeli, W. B. (1993). Professional burnout: A perspective from social comparison theory. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 53-69). New York: Hemisphere.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS*. NJ: Lawrence Erlbaum Associates, Publishers.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: HarperCollins
- Cameron, K. S., Dutton, J. E. & Quinn, R. E. (2003). Foundations of positive organizational scholarship. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 3-13). San Francisco, CA.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist, 55* (1), 34-43.
- Diener, E., Emmons, R. A., Larsen, R. J. & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49* (1), 71-75.
- Diener, E. & Lucas, R. E. (1999). Personality and subjective-well-being. In D. Kahneman, E. Diener, & N. Schwarz, N. (Eds.), *Well-Being: The foundations of hedonic psychology* (pp. 213-229). New York: Russell Sage Found.

- Diener, E., Sapyta, J., & Suh, E. (1998). Subjective well-being is essential to well-being. *Psychological Inquiry*, 9, 33-37.
- Dierendonck, D., Haynes, C., Borrill, C., & Stride, C. (2004). Leadership behaviour and subordinate well-being. *Journal of Occupational Health Psychology*, 9 (2), 165-175.
- Epitropaki, O. & Martin, R. (2005). From ideal to real: A longitudinal study of the role of implicit leadership theories on leader-member exchanges and employee outcomes. *Journal of Applied Psychology*, 90, 659-676.
- Fineman, S. (2006). On being positive: Concerns and counterpoints. *Academy of Management Review*, 31 (2), 270-291.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist*, 56 (3), 218-226.
- Fredrickson, B. L. (2005). Positive emotions. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 106-119). Oxford: Oxford University Press.
- Fredrickson, B. L. & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion*, 19 (3), 313-332.
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., Walumbwa, F. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16, 343-372.
- Gilbreath, B. & Benson, P. G. (2004). The contribution of supervisor behaviour to employee psychological well-being. *Work and Stress*, 18 (3), 255-266.
- Graen, G. B. & Cashman, J. F. (1975). A role-making model of leadership in formal organizations: A developmental approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers* (pp.143-165). Kent,OH: Kent State University Press.
- Hackman, J. R. (2009). The perils of positivity. *Journal of Organizational Behavior*, 30, 309-319.
- Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.
- Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. NJ: Pearson Prentice Hall.
- Harter, S. (2005). Authenticity. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 382-394). Oxford: Oxford University Press.
- Iacobucci, D. (2010). Structural equations modeling: Fit Indices, sample size, and advanced topics. *Journal of Consumer Psychology*, 20, 90-98.
- Judge, T. A. & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89 (5), 755-768.
- Kahneman, D., Diener, E. & Schwarz, N. (eds) (1999). *Well-Being: The foundations of hedonic psychology*. New York: Russell Sage Found.
- Kark, R., Shamir, B. & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology*, 88 (2), 246-255.
- Kelloway, K. E., Turner, N., Barling, J. & Loughlin, C. (2012). Transformational leadership and employee psychological well-being: The mediating role of employee trust in leadership. *Work & Stress*, 26 (1), 39-55.
- Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, 14, 1-26.
- Keyes, C. L. M. & Lopez, S. J. Lopez. (2005). Toward a science of mental health: Positive directions in diagnosis and interventions. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 45-62). Oxford: Oxford University Press.
- Lord, R. G. (1985). An information processing approach to social perceptions, leadership and behavioral measurement in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, (pp. 87-128). Greenwich, CT : JAI Press.
- Luthans, F. & Avolio, B. J. (2009). The “point” of organizational behaviour. *Journal of Organizational Behaviour*, 30, 291-307.
- Luthans, F. & Youssef, C M. (2007). Emerging positive organizational behaviour. *Journal of Management*, 33 (3), 321-349.
- Macik-Frey, M., Quick, J. C. & Cooper, C. L. (2009). Authentic leadership as a pathway to positive health. *Journal of Organizational Behavior*, 30 (3), 453-458.
- Mäkikangas, A., Bakker, A. B., Aunola, K. & Demerouti, E. (2010). Job resources and flow at work: Modelling the relationship via latent growth curve and mixture model methodology. *Journal of Occupational and Organizational Psychology*, 83 (3), 795-814.

- Maddux, J. E. (2005). Stopping the “madness”: Positive psychology and the deconstruction of the illness ideology and the DSM. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 13-25). Oxford: Oxford University Press.
- Maslow, A. (1968). *Toward a psychology of being* (2nd ed.). New York: Van Nostrand.
- Morgan Roberts, L. (2006). Shifting the lens on organizational life: The added value of positive scholarship. *Academy of Management Review*, 31 (2), 292-305.
- Nakamura, J. & Csikszentmihalyi, M. (2005). The concept of flow. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 89-105). Oxford: Oxford University Press.
- Nelson, D. L. & Cooper, C. L. (Eds) (2007). *Positive organizational behaviour*. London: Sage
- Nielsen, K., Randall, R., Yarker, J. & Brenner, S. (2008). The effects of transformational leadership on followers’ perceived work characteristics and psychological well-being: A longitudinal study. *Work & Stress*, 22 (1), 16-32.
- Nielsen, K. & Daniels, K. (2012). Does shared and differentiated leadership predict followers’ working conditions and well-being? *The Leadership Quarterly*, 23 (3), 383-397.
- Norman, S., Luthans, B. & Luthans, K. (2005). The proposed contagion effect of hopeful leaders on the resiliency of employees and organizations. *The Journal of Leadership and International Studies*, 12 (2), 56-64.
- Offermann, L. R. & Hellmann, P. S. (1996). Leadership behaviour and subordinate stress: a 360 degree view. *Journal of Occupational Health Psychology*, 1 (4), 382-390.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers*, 36, 717-731.
- Quick, J. C., Cooper, C. L., Gibbs, P. C., Little, L. M. & Nelson, D. L. (2010). Positive organizational behaviour at work. In G. P. Hodgkinson & J. K. Ford (Eds.), *International review of industrial and organizational psychology* (pp. 253-292). Chichester: John Wiley.
- Rodriguez-Sanchez, A., Schaufeli, W., Salanova, M., Cifre, E., & Sonnenschein, M. (2011). Enjoyment and absorption An electronic diary study on daily flow patterns. *Work and Stress*, 25 (1), 75-92.
- Rogers, C. R. (1963). Toward a science of the person. *Journal of Humanistic Psychology*, 3 (2), 72-92.
- Rogers, C. R. (1990 – 13th reprint). *On becoming a person: A therapist’s view of psychotherapy*. Wiltshire: Redwood Press.
- Ryan, R. M. & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.
- Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Ryff, C. & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9 (1), 1-28.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology. *American Psychologist*, 55, 5-14.
- Shondrick, S. J. & Lord, R. G. (2010). Implicit leadership and followership theories: Dynamic structures for leadership perceptions, memory and leader-follower processes. In G. P. Hodgkinson & J. Kevin Ford (Eds.), *International review of industrial and organizational psychology* (pp. 1-34). Chichester: John Wiley.
- Sosik, J. J. & Godshalk, V. M. (2000). Leadership styles, mentoring functions received, and job-related stress: a conceptual model and preliminary study. *Journal of Organizational Behavior*, 21, 365-390.
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38 (5), 1442-1465.
- Sy, T., Cote, S. & Saavedra, R. (2005). The contagious leader: Impact of the leader’s mood on the mood of group members, group affective tone, and group processes. *Journal of Applied Psychology*, 90 (2), 295-305.
- Tabachnick, B. G. & Fidell, L. S. (2001). *Using multivariate statistics* (4th edition). Boston: Allyn & Bacon.
- Walumbwa, F.O., Avolio, B. J., Gardner, W. L., Wernsing, T. S. & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34 (1), 89-126.
- Warr, P. B. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational Psychology*, 63, 193-210.
- Warr, P. B. & Clapperton, G. (2010). *The joy of work?* London: Routledge.
- Waterman AS. 1993. Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678-91.