

The relationship between extrinsic motivation, job satisfaction and life satisfaction amongst employees in a public organisation

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Orientation: There is much research on extrinsic motivation, job satisfaction and life satisfaction in organisations. However, empirical evidence on how such factors affect employees in public organisations in developing countries is lacking.

Research purpose: To examine the relationships between extrinsic motivation, job satisfaction and life satisfaction amongst employees in a public organisation.

Motivation for the study: Labour strife is an endemic phenomenon in South Africa's public sector as evidenced by the high incidences of industrial action and labour turnover. This study contributes to this subject by identifying the extrinsic factors that could be optimised with a view to enhancing job and life satisfaction amongst government employees.

Research approach, design and method: The study used the quantitative research survey approach: a questionnaire was administered to 246 employees in a South African public organisation. Extrinsic motivation factors were identified using principal components analysis. Mean score ranking was used to compare the relative importance of all factors. The conceptual framework was tested using Spearman's rank correlation analysis and linear regression analysis.

Main findings: Statistically significant relationships were observed between job satisfaction and four extrinsic motivation factors: remuneration, quality of work life, supervision and teamwork. The relationship with promotion was insignificant, but a statistically significant relationship was established with life satisfaction.

Practical/managerial implications: The findings may be used to implement strategies for enhancing employee performance and industrial relations within public organisations.

Contribution/value-add: The study provides evidence of the interplay between extrinsic motivation, job satisfaction and life satisfaction for public servants in developing countries.

Introduction

The South African public sector has been characterised by inefficiency and ineffectiveness in terms of meeting its mandate of providing quality service delivery (Luddy, 2005). In contrast, the private sector in the same country is reputed for its world-class services. It has been suggested that such discrepancies may, in part, be attributed to the fact that public sector employees are often faced with a number of adverse factors that impact on their overall well-being. These factors include, inter alia, a lack of motivation as well as low levels of job and life satisfaction (Barbie, 2010). Dissatisfied and demoralised employees tend to have low levels of commitment at work, which, in turn, impacts negatively on performance and the achievement of organisational goals (Saari & Judge, 2004). To avert such results, it is important to study and understand the interaction of motivation and job satisfaction factors amongst employees in public organisations.

In the post-apartheid era, the South African government has been faced with frequent salvos of labour unrest, with many civil servants expressing disgruntlement with their jobs (Van der Heijden & Mlandi, 2005). It is logical for one to expect this, since government employees experience pressure and anxiety as a result of the expectations of employers, the community (local and international) and media, amongst other stakeholders (Hornbaek, 2006). This poses a number of challenges, frustrations and tensions, the enormity of which is often underestimated (Nilsson, 2010). Consequently, public sector employees tend to have low levels of job satisfaction and life satisfaction; this has been found to be the leading determinant of poor-quality service delivery amongst government departments (Burke, 2001).

It is notable that despite the availability of extensive literature on extrinsic motivation, job satisfaction and life satisfaction (e.g. Lam, 1995; Li-Ping Tang & Talpade, 1999; Oshagbemi, 2000),

most studies have focused on private sector employees only. Other scholars have focused on single countries (e.g. Bernhard & O'Driscoll, 2011), cross-cultural contexts (e.g. Loscocco & Bose, 1998; Wang & Lee, 2009) as well as different levels of jobs in different industry sectors (e.g. Lentz & Allen, 2009; Ting, 1997). This far-reaching attention that management and research practitioners alike have devoted to this subject testifies that extrinsic motivation, job satisfaction and life satisfaction are important constructs in organisational behaviour. This sheer prominence implies that continued research centred on the interplay between these factors is merited, so that more current information is found to update what is already known. In addition, the fact that empirical evidence on the relationship between these factors is based on contexts other than the South African public sector is also worth mentioning. It would be remarkable then to examine this structural relationship within this previously disregarded geo-spatial context.

This article is structured as follows: in the next section, a theoretical background is provided on job satisfaction, life satisfaction and extrinsic motivation. The subsequent section presents the conceptual framework and hypotheses. This is then followed by a discussion on the methodology that was followed, the measurement scales that were used, data analysis as well as the conclusions for the study. Finally, managerial implications, limitations and implications for future research are discussed.

Review of related literature

Life satisfaction: There is a general lack of consensus regarding the definition of life satisfaction amongst researchers. Some scholars (e.g. Judge, Locke, Durham & Kluger, 1998; Judge & Watanabe, 1993), in defining this concept, tend to focus on the employee's global assessment of their life in positive terms. Diener, Suh, Lucas & Smith (1999) conceptualise this construct within the ambit of feelings and attitudes about one's life at a particular point in time ranging from the negative to the positive. In terms of its attributions, Buetell (2006) links life satisfaction to a family of personality, genetic and social-cognitive factors such as goal-directed activity. However, Lucas-Carrasco and Salvador-Carulla (2012) attribute life satisfaction to self-efficacy, whilst Bastug and Duman (2010) associate it with outcome expectations and environmental support and Koohsar and Bonab (2011) relate it to intellectual abilities. Life satisfaction may also be centred on specific domains of life, such as physical health, wealth, mental health, social relationships and a general sense of accomplishment (Ye, Yu & Li, 2012). With reference to its impact, it has been reported that life satisfaction is related to a number of personal and organisational factors such as self esteem (Rode, 2004), personality traits (Zhang & Howell, 2011), work and family roles (Zhao, Qu & Ghiselli, 2011), job satisfaction (Nickerson & Nagle, 2005) as well as employee performance (Ghiselli, La Lopa & Bai, 2001). In this study, the conceptualisation by Ye *et al.* (2012) is adopted since it provides an employee's perceptions of their subjective well-being using holistic contextual variables that are directly congruent to the social situations related to work-life.

Job satisfaction: A comprehensive definition given by Locke (1969) states that job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Agho, Mueller and Price (1993) also define job satisfaction as a personal evaluation of conditions present in the job, or outcomes that arise as a result of having a job. Job satisfaction further relates to the extensive magnitude in which people enjoy being at their jobs, doing their work as well as being rewarded for their efforts (Hirschfield, 2000). This suggests that job satisfaction has to do with an individual's perception and evaluation of their job and this perception is influenced by unique circumstances such as needs, values and expectations (Buitendach & De Witte, 2005).

Overall job satisfaction focuses on the internal state of gratification or discontentment about one's job (Thompson & Phua, 2012). Positive experiences in terms of friendly colleagues, good remuneration, compassionate supervisors and attractive jobs create high levels of job satisfaction (Giannikis & Mihail, 2011). Simply stated, the more a person's work environment fulfils their needs, values or personal characteristics, the greater the degree of job satisfaction (Yee, Yeung & Cheng, 2010). Satisfied employees tend to be more committed to their work, participate more robustly, positively and effectively in work-related activities and are less likely to leave the organisation (Agarwal & Ferratt, 2001). As such, it is vital for organisations to strive to enhance the levels of job satisfaction amongst their employees, as this has a positive stimulus effect on the prosperity of the organisation (Price, 2001).

Extrinsic motivation: Work motivation may be defined as the individual's willingness to exert high levels of effort toward organisational goals, conditioned by the individual's ability to satisfy some need (Robbins, 2003). The two-factor theory of motivation (Herzberg, 1966, cited in Kanungo, 1979) distinguishes between intrinsic motivation (e.g. recognition, responsibility, autonomy, ability utilisation, etc.) and extrinsic motivation (e.g. remuneration, working conditions, promotion, prestige, etc.) which may be linked to job satisfaction and dissatisfaction. The theory further postulates that intrinsic factors are motivators whereas extrinsic (hygiene) factors are essential but do not necessarily motivate employees (Hennessey & Amabile, 2005). Consequently, extrinsic motivation factors simply ensure that some external goal or some externally imposed constraint is met (Ryan & Deci, 2000).

Results from contemporary organisational behaviour research have challenged and revolutionised the traditional proposition that extrinsic factors do not motivate employees. For example, it has been found that extrinsic motivation has an impact on a number of aspects such as employee commitment (Kinicki & Kreitner, 2003), organisational citizenship behaviour (Kavanaugh, Duffy & Lilly, 2006), personal accomplishments (Crompton, 2003) and low turnover intentions (Wegge, Van Dick, Fisher, Wecking & Moltzen, 2006). A number of researchers (Hoole &

Vermeulen, 2003; Moynihan & Pandey, 2007; Thompson 2003) also found positive connections between extrinsic motivation and job satisfaction. It appears then, that extrinsic behavioural contingencies as well as extrinsic motivation are both powerful determinants of motivated employee behaviour.

Proposed relationships and hypothesis formulation for the study: Research demonstrates that a plethora of extrinsic motivation determinants have an influence on job satisfaction and life satisfaction. The first scholars to explore this research area were Brayfield, Wells and Strate (1957), who investigated the relationship between job satisfaction and extrinsic and intrinsic motivation through a review of various motivational theories. A notable suggestion by these scholars is that continued research was needed to explore the relationship between motivational factors and job satisfaction. In this regard, a number of extrinsic motivational factors were considered in the formulation of the research hypotheses that reinforce a theoretical foundation for this study.

Remuneration and job satisfaction: According to Ting (1997), remuneration has a significant influence on job satisfaction amongst government employees. Similarly, Robbins (2003) emphasises that equitable rewards, which refer to compensation systems that are perceived as fair and in line with employee expectations, are a strong determinant of job satisfaction. In another study conducted by Kebriael and Moteghedhi (2009), public employees attributed the dissatisfaction with their jobs to low benefits and salaries. Additionally, Naeemllham, Hadi, Shishi & Piarala (2011) also found significant positive relationships between job satisfaction and remuneration amongst civil servants in the Republic of Maldives. This demonstrates that when employees perceive that their remuneration is fair, they are most likely to experience a feeling of satisfaction. This is because income helps individuals to meet certain universal needs and, therefore, income, at least at lower levels, is an antecedent to job satisfaction and subjective well-being. Based on the foregoing literature discourse the following hypothesis is formulated for this study:

Hypothesis 1 (H_1): There is a positive and significant relationship between remuneration and job satisfaction.

Quality of work life and job satisfaction: Quality of work life has been described as the strengths and weaknesses in the total work environment (Koonmee, Singhapakdi, Virakul & Lee, 2010). This comprises specific characteristics such as the adequacy and the quality of facilities within the organisation, organisational features such as policies and procedures, leadership style that is employed, operations and general contextual factors within the organisation (Noor & Abdullar, 2012). The determination of staff perceptions about quality of work life is an important consideration for employers interested in improving employee job satisfaction because such perceptions play an important role in employee decisions to enter, stay with or leave an organisation (Bagtasos, 2011). A study conducted by Lee, Singhapakdi and Sirgy (2007)

reveals that quality of work life has a positive impact on job satisfaction, organisational commitment and comradeship. Estryn-Behar *et al.* (2004) also concludes that quality of work life is considerably correlated with job satisfaction factors such as physical working environment, psychological support at work and time to devote to sport and lifestyle. It is expected then that there would be a positive association between quality of work life and job satisfaction. Therefore, the following hypothesis is formulated for the study:

Hypothesis 2 (H_2): There is a positive and significant relationship between quality of work life and job satisfaction.

Promotion and job satisfaction: It has been suggested that self-actualisation in the workplace can only be accomplished through the creation of opportunities for employee promotion (Ting, 1997). This view is supported by Ellickson and Logsdon (2002) who conclude that satisfaction with promotional opportunities is positively and significantly related to the job satisfaction of municipal workers. A number of scholars (McCausland, Pouliakas & Theodossiou, 2000; Saari & Judge, 2004) suggest that there is a direct and positive association between promotional opportunities and job satisfaction. When employees perceive that there are high chances for promotion, they feel motivated to work harder to achieve organisational goals with a view to attaining elevated job designations and higher ranks (Dessler, 2008). By contrast, employees who are dissatisfied with the available promotional opportunities in their organisation usually demonstrate a greater intention to leave the organisation (Shields & Ward, 2001). In light of the literature discussed in this section, a positive association between promotion and job satisfaction can be envisaged. It is against this background that the following hypothesis is formulated for the study:

Hypothesis 3 (H_3): There is a positive and significant relationship between promotion and job satisfaction.

Supervision and job satisfaction: Research demonstrates that a positive relationship exists between job satisfaction and supervision (Peterson, Puia & Suess, 2003; Smucker, Whisenant & Pedersen, 2003). Supervision forms a pivotal role relating to job satisfaction in terms of the supervisor's ability to provide emotional and technical support and guidance on work-related tasks (Robbins, 2003). This implies that supervisors contribute to high or low morale in the workplace (Ramsey, 1997). Similarly, the supervisor's attitude and behaviour towards employees may also be a contributing factor to job-related complaints (Sherman & Bohlander, 1992). In a study conducted by Ladebo (2008), it was also found that supervision is a predictor of job satisfaction, which in turn determines job performance and organisational citizenship behaviours. Based on the aforementioned conceptualisations, one would expect a positive relationship between supervision and job satisfaction. It is against this background that the following hypothesis is formulated for the study:

Hypothesis 4 (H_4): There is a positive and significant relationship between supervision and job satisfaction.

Teamwork and job satisfaction: For many public service employees, social interactions at work are a critical factor in job satisfaction. As such, synergy and departmental members' cohesion yields enhanced job satisfaction amongst employees (Buitenbach & De Witte, 2005). Empirical results from a study conducted by Acuna, Gomez and Juristo (2009) reveal that working in a team is closely associated with the possibility to learn new things as well as job enlargement elements which have been found to be positively associated with job satisfaction. Having friendly and helpful colleagues also contributes towards increased satisfaction on the job (Kreitner, Kinicki & Cole, 2003). A study conducted by Viswesvaran, Deshpande and Joseph (1998) further corroborates previous findings in suggesting that there is a positive correlation between job satisfaction and teamwork. Based on the foregoing discussion, it appears that the existence of a positive association between teamwork and job satisfaction amongst public service employees may not be contestable. In this regard, the following hypothesis is formulated for the study:

Hypothesis 5 (H₅): There is a positive and significant relationship between teamwork and job satisfaction.

Job satisfaction and life satisfaction: As suggested by Zhang and Howell (2011), job satisfaction is a key indicator of the overall life satisfaction amongst employees because it climaxes when jobs meet people's expectations. This implies that job satisfaction would be a subordinate (component) of life satisfaction, an observation made by Sirgy, Efraty, Siegel and Lee (2001). Kinicki, McKee-Ryan, Schriesheim & Carson (2002) also concur that the two concepts are more strongly and positively correlated than what is perceived by many researchers.

One of the most widely acknowledged theories that attempt to address the relationship between job satisfaction and life satisfaction is Chacko's (1983) spillover model. This model suggests that satisfaction in one domain of an individual's life automatically extends into other areas of life such that a positive relationship between life and job satisfaction is implied (Ignat & Clipa, 2012). Invariably so, an individual may bring to the job a level of dissatisfaction with life that can manifest itself as dissatisfaction with the job (Buetell, 2006). However, the direction of the association between job satisfaction and life satisfaction is subject to extensive debate. For example, Rode (2004) suggests that there is a general spillover of affective life satisfaction to the work situation. Mount, Ilies and Johnson (2006) contend that job satisfaction is an antecedent to overall life satisfaction amongst employees such that employees who are not happy in their non-work activities will not be happy in their work activities. In addition, Heller, Judge and Watson (2002) also acknowledge that job satisfaction has a positive influence on life satisfaction. Based on the aforementioned insights, the following hypothesis is formulated for the study:

Hypothesis 6 (H₆): There is a positive and significant relationship between job satisfaction and life satisfaction.

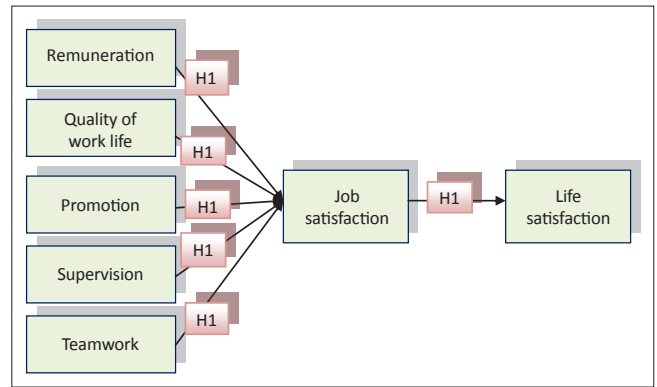


FIGURE 1: Proposed conceptual framework.

Conceptual framework

In line with the aforementioned hypotheses, this study suggests that remuneration, quality of work life, promotion, supervision and teamwork are the salient extrinsic motivation factors that positively influence job satisfaction. Additionally, overall job satisfaction is a crucial mediating variable that positively enhances life satisfaction amongst public service employees. Figure 1 depicts the conceptual framework that is proposed for the current study.

Research design

In the present study, a quantitative research approach was adopted in which a survey questionnaire was distributed to employees within a designated South African public organisation. The survey method was considered to be appropriate for this study because it easily facilitates the collection of data from large populations, making it easier to develop and administer the research questionnaire whilst generalising the research findings (Malhotra, 2010).

Research method

Participants and sampling

A total of 246 respondents were recruited using the simple random sampling technique. This sampling technique ensures that all the population elements have an equal chance of being selected (Churchill & Iacobucci, 2002). All respondents were based in a government department in Gauteng province, South Africa, and were available to voluntarily participate in the study. The size of the sample was determined using Green's (1991) rule of thumb which prescribes that no less than 50 participants are suitable for a correlation or regression analysis procedure with the number increasing with larger numbers of independent variables (IVs).

Data collection procedure and measuring instruments

Primary data were collected using a four-section questionnaire. Section A of the questionnaire measured different demographic attributes of the respondents. These included age, gender, race, education levels and job position. The demographic questions were structured on dichotomous, multiple choice, interval and range response formats. Section B was composed of questions that elicited

information on extrinsic motivation factors. The teamwork sub-scale was adapted from a study by Buitendach and De Witte (2005), whilst the quality of life sub-scale was adapted from the scale used by Feldt, Kinnunen & Maunao (2000). The remuneration, promotion and supervision sub-scales were adapted from the job description index scale that was developed by Smith, Kendall and Hulin (1969).

Section C of the questionnaire elicited the respondents' job satisfaction using the global job satisfaction sub-scale that was adapted from the Minnesota Satisfaction Questionnaire long-form designed by Spector (1985). Section D of the study used the satisfaction with life scale developed by Diener, Emmons, Larsen and Griffin (1985) to elicit information on the life satisfaction of the respondents. A Likert scale from 1 (strongly disagree) to 5 (strongly agree) was used to structure questions under sections B, C and D of the questionnaire. The Likert scale was used because it is relatively easy to construct and makes data easy to collect and analyse, which makes it suitable for surveys (Kothari, 2008).

The research instrument was administered to the participants in September 2012. In order to randomise the data collection procedure, data were collected from different units within the public service department. In addition, data were also collected during different days and times. A trained employee of the department assisted in the collection of data. Furthermore, permission to collect data was granted by management before the research project was launched. Ethical considerations such as the participants' right to anonymity, confidentiality, privacy or non-participation, informed consent and protection from discomfort, harm and victimisation were adhered to during the administration of the questionnaire. Out of the 400 questionnaires that were initially distributed, 246 were eventually used in the actual data analysis, giving a 62% response rate.

Reliability and validity of the measurement scale

Assessing the validity and reliability of measuring instruments is integral in validating an instrument's usefulness (Alumran, Hou & Hurst, 2012). Cronbach's alpha values for the sub-scales ranged between 0.703 and 0.874, indicating adequate reliability of the sub-scales (Nunnally & Bernstein, 1994). Additionally, the Cronbach's alpha coefficient for the entire scale was 0.859. Therefore, these results confirm the competence of the scale in capturing the factors examined in the study. The reliabilities of the scales used in the study are reported in Table 1.

Content and face validity of the instrument were ascertained through pre-testing the questionnaire with a conveniently selected sample of 50 respondents in the public organisation. In addition, the questionnaire was also reviewed by three academics who are experts in the field of organisational behaviour. Based on the feedback from the pre-test and the expert reviews, a number of minor revisions were made to the questionnaire with a view to enhancing its validity in addressing the research questions (Radhakrishna, 2007). Construct validity of the scale was assessed through

TABLE 1: Reliability values for the extrinsic motivation, job satisfaction and life satisfaction sub-scales.

Dimension or Construct	N	Number of items	Cronbach's alpha
Remuneration	246	4	0.816
Quality of work life	246	3	0.863
Teamwork	246	5	0.785
Promotion	246	4	0.814
Supervision	246	5	0.703
Job satisfaction	246	7	0.874
Life satisfaction	246	5	0.726

Overall Cronbach's alpha for the entire scale = 0.859

exploratory factor analysis. The results indicated that there were no cross-loadings amongst constructs; hence, five extrinsic motivational factors were identified as being salient towards the satisfaction of civil service employees on their jobs.

Additionally, convergent validity was assessed through the computation of Spearman's correlations between the five extrinsic motivation sub-scales, job satisfaction and life satisfaction. The results of the correlation analysis (refer to Table 3) revealed that there were positive and significant relationships between all factors that were analysed, which provides evidence of factor convergence. Moreover, convergent validity was indirectly assessed through an analysis of the Cronbach's alpha values. The high alpha values (≥ 0.70) reflect the degree of cohesiveness amongst the scale items serving as an indicator of convergent validity (Maxwell & Moores, 2007). Predictive validity was measured through regression analysis. Causality was explained by four of the five extrinsic motivation factors with job satisfaction (refer to Table 4). Similarly, the findings of the study demonstrated causality between job satisfaction and life satisfaction (refer to Table 5), thereby confirming the existence of acceptable levels of predictive validity in the current study.

Data analysis

The aim of this study was to determine the relationships between extrinsic motivation, job satisfaction and life satisfaction in a public organisation. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS version 21.0).

Sample composition

Amongst the respondents, 65% ($n = 160$) were male and 35% ($n = 86$) were female. In terms of age in years, 59% ($n = 145$) of the respondents were aged under 35 years. Approximately 41% ($n = 101$) of the respondents had been employed in the public organisation for less than five years. With regard to racial group, 81% ($n = 199$) of the respondents were black, 11% ($n = 27$) were white, 7% ($n = 17$) were Indian and 2% ($n = 5$) were mixed-race; this is representative of the racial composition within the majority of the public service departments in South Africa. Approximately 47% ($n = 116$) of the respondents held a first degree, 13% ($n = 32$) held a postgraduate degree and 23% ($n = 57$) were in possession of a diploma. Furthermore, approximately 67% ($n = 165$) of the respondents occupied professional positions within the public organisation whilst 29% ($n = 71$) occupied clerical and general positions and 4% ($n = 10$) held management positions.

Extraction of extrinsic motivation factors

In the study, exploratory factor analysis using the principal components analysis method and Varimax rotation was applied in order to identify extrinsic motivation factors. Scale purification was conducted during which low factor loadings, cross-loadings and low communalities were eliminated with a view to enhance 'interpretability of the factor structure' (Malhotra, 2010, p. 643). A minimum cut-off of 0.50 was used on the variable loadings. This is consistent with Hair *et al.* (2010) who suggested that factor loadings greater than 0.30 meet the minimum levels, loadings of 0.40 are considered important, and loading of 0.50 and greater are considered more important.

The Bartlett's test was significant at $p < 0.000$ inferring that the data set is not an identity matrix with zero correlations (i.e. variables are correlated); this confirmed that a factor analysis procedure could be applied in the study. Furthermore, the Bartlett's test produced a chi square value (χ^2) of 4228.079 and a Kaiser-Meyer-Olkin value of 0.769 (> 0.50), further confirming the appropriateness of the data set for factor analysis. The total variance explained by the extracted factors

was 71.9% indicating that the other 28.1% is accounted for by extraneous variables that do not constitute part of this study. The results of the rotated component matrix, percentage of variance explained by each factor, cumulative percentage of variance and the eigenvalue criterion were assessed. Finally, a five-factor solution was developed, as the items were plausibly associated with the underlying factors. The rotated factor loading matrix, psychometric properties as well as the mean score values are reported in Table 2.

Factor one, labelled *remuneration*, comprised four items and accounted for 23.16% of the variance. The items that loaded onto the factor relate mainly to the total compensation that an employee receives in exchange for the services that were performed for the employer. Examples include monetary rewards (salary), vacation or leave and fringe benefits (Lewis & Frank, 2002). Furthermore, the remuneration dimension was ranked third, with a mean score value of 4.314, providing some indication of the high level of agreeability of employees' attitudes towards remuneration as a salient extrinsic motivational variable that may ultimately influence job and life satisfaction amongst government workers.

TABLE 2: Rotated factor-loading matrix: Extrinsic motivation factors, scale psychometric properties and mean score rankings.

Scale items	Factor 1: Remuneration	Factor 2: Quality of work life	Factor 3: Teamwork	Factor 4: Promotion	Factor 5: Supervision
I am happy with my pay and the amount of work I do	0.681	0.016	0.040	0.074	0.184
I am happy with the benefits package accruing to me on my job	0.933	0.099	0.013	0.235	0.241
I am happy about my job's vacation/leave policy	0.785	0.043	0.123	0.008	0.287
The pay policy on my job is fair	0.867	0.148	0.081	0.021	0.128
I am happy about the adequacy of facilities for my job	0.011	0.873	0.069	0.047	0.109
I am happy about the employment conditions in my organisation	0.339	0.601	0.223	0.239	0.102
I am happy with the quality of my work life	0.265	0.707	0.057	0.141	0.259
There is good teamwork in the organisation	0.114	0.028	0.737	0.245	0.377
I can always talk with workmates if I have a work-related problem	0.198	-0.109	0.645	0.209	0.196
My relationships with members of my work group are friendly and professional	0.085	0.156	0.839	0.189	-0.077
I have established the relationships that I need to do my work properly	0.116	-0.105	0.875	0.065	0.145
Other work units are helpful to my work unit whenever assistance is required	-0.147	0.231	0.753	0.197	0.099
I am happy about the chances for advancement on my job	0.268	0.137	0.300	0.615	0.037
There are regular opportunities for professional development on my job	0.112	0.161	0.122	0.774	0.225
My organisation will promote me to a higher job rank based on my working abilities	0.034	0.433	0.292	0.535	0.267
Chances for promotion on my job motivate me to perform better at my job	0.281	0.115	-0.170	0.708	0.184
I am happy about the competence of my superior in making decisions	0.109	0.475	0.257	0.158	0.581
I have faith in the quality of leadership of my superiors	0.193	0.009	0.130	-0.127	0.691
My leaders give me positive feedback on my work	-0.106	0.183	0.061	0.034	0.738
My leaders reward me when I do well	0.014	0.269	0.207	-0.069	0.889
My leaders give me personal attention when I feel rejected	0.028	0.359	0.092	0.246	0.840
Eigenvalues	13.47	2.61	2.12	1.58	1.18
Percentage of variance	23.16	18.91	11.03	9.55	9.25
Cumulative percentage of variance	23.16	42.07	53.10	62.65	71.90
Mean scores of each sub-scale	4.314	4.642	4.134	3.592	4.649

Extraction method: Principal component analysis.
Rotation method: Varimax with Kaiser normalisation.
Loadings of 0.50 and more were considered significant.

Factor two, labelled *quality of work life*, comprised three items and accounted for 18.91% of the variance. The items that loaded onto the factor relate mainly to the extent to which employees can acquire well-being through the quality of their work lives as well as the availability of facilities for the performance of work-related tasks (Noor & Abdullar, 2012). Furthermore, the quality of life dimension was ranked second, with a mean score value of 4.642. This indicates the moderate degree to which the respondents agreed that quality of work life was a very important variable in achieving high levels of motivation amongst public service employees.

Factor three, labelled *teamwork*, comprised five items and accounted for 11.03% of the variance. The items that loaded onto the factor relate mainly to the extent to which the respondents felt that the collaborative efforts, synergy and team-building capacity of departmental units contributed immensely towards extrinsically motivating employees in the achievement of organisational goals. Furthermore, the teamwork dimension was ranked fourth, with a mean score value of 4.134. This demonstrates the moderate degree to which the respondents agreed that teamwork was instrumental in achieving high levels of extrinsic motivation and, ultimately, job and life satisfaction amongst public service employees.

Factor four, labelled *promotion*, comprised four items and accounted for 9.55% of the variance. The items that loaded onto the factor relate mainly to the formal level of employee advancement within specific hierarchical job rankings, job tasks or other designations. Surprisingly, the promotion dimension was ranked lowest (fifth) amongst the extrinsic motivation constructs, with a mean score value of 3.592. This indicates that the respondents' perceptions of the contribution of promotion in enhancing extrinsic motivation are restricted.

Factor five, labelled *supervision*, comprised five items and accounted for 9.25% of the variance. Additionally, the supervision dimension was ranked third, with a mean score value of 4.649. This indicates the moderate degree to which the respondents agreed that the quality of managerial leadership, supervisor competence, feedback reports and supervisor support was a very important variable in extrinsically directing them to achieve organisational goals.

Correlation analysis: Extrinsic motivation, job satisfaction and life satisfaction: Spearman non-parametric correlation analysis was used to establish the possible existence of a relationship amongst the sub-scales. This procedure is applied with a view to assessing the degree to which quantitative variables are linearly related in a sample (Maxwell & Moores, 2007). These results are reported in Table 3.

The correlation matrix shows that there were positive and significant relationships between the five extrinsic motivation variables and job satisfaction ($0.179 \leq r \leq 0.643$). Similarly, positive correlation coefficients were established between the five extrinsic motivation dimensions and life satisfaction

($0.341 \leq r \leq 0.624$). This suggests that an increase in remuneration, quality of life, teamwork, promotion and supervision can stimulate job satisfaction and, ultimately, life satisfaction amongst public service employees. Furthermore, an analysis of the relationship between the mediating variable (job satisfaction) and the outcome variable (life satisfaction) in the proposed conceptual framework for this study revealed positive, strong and statistically significant associations ($r = 0.637$; $p < 0.01$).

Regression analysis: Extrinsic motivation and job satisfaction: In this study, Malhotra's (2010) conceptualisation of linear regression analysis was adopted: an inferential statistical technique that is performed to identify the variables that predict or provide the best explanation for the portion of the total variance in the scores of the dependent variables. Four principal assumptions were made that justify the use of linear regression analysis for purposes of predicting the existence of relationships amongst the variables. These are sufficient conditions for the least-squares estimator to possess desirable properties; in particular, these assumptions imply that the parameter estimates will be unbiased, consistent and efficient in the class of linear unbiased estimators.

Initially, normality was not violated in that the normal probability curve, which plotted residuals against predicted values, depicted limited outliers. This suggests that the estimation of coefficients and the calculation of confidence intervals were not compromised in the study, making it feasible to fit a linear model. Such an exercise was deemed fit during the initial stages of the procedure as non-normally distributed data has the potential to distort relationships and significance tests.

Secondly, the sample was considered to be representative of the population for the inference predictions based on the normal distribution curve. Thirdly, the Durbin-Watson test statistic was used to test for variable independence through an inspection of the autocorrelation in the regression residuals (Durbin & Watson, 1950). As a rough rule of thumb, if Durbin-Watson is very small ($d \leq 1$) there may be cause for alarm whereas small values ($1 < d < 2$) indicate that successive error terms are close in value to one another or positively correlated and large values ($d > 2$) suggest that successive error terms are very different in value from one another (i.e. negatively correlated). From the sample data, most of the residual autocorrelations fell within the 95% confidence bands around zero ($0.287 < \text{autocorr} < 0.305$). Similarly, a Durbin-Watson autocorrelation test statistic of 1.725 was established, indicating positive autocorrelation or a perfect estimation of the level of statistical significance in the model.

Finally, the positive correlation coefficients shown in Table 3 pinpoint the existence of linearity between extrinsic motivation and job satisfaction ($0.179 \leq r \leq 0.643$). The correlation matrix was examined for the existence of multicollinearity, to test whether the predictor variables correlated too highly ($r > 0.9$) with each other (Field, 2005). None of the correlations in Table 3 reached a value of greater

TABLE 3: Correlation analysis: Extrinsic motivation factors, job satisfaction and life satisfaction.

Dimension	Remuneration	Quality of work life	Teamwork	Promotion	Supervision	Job satisfaction	Life satisfaction
Remuneration	1.000	0.620**	0.511**	0.217*	0.302*	0.562**	0.523**
Quality of work life	-	1.000	0.304*	0.612**	0.416**	0.643**	0.445*
Teamwork	-	-	1.000	0.296*	0.362*	0.513**	0.624**
Promotion	-	-	-	1.000	0.379*	0.179**	0.341**
Supervision	-	-	-	-	1.000	0.461**	0.477*
Job satisfaction	0.562**	0.643**	0.513**	0.179*	0.461**	1.000	0.637**
Life satisfaction	0.523**	0.445*	0.624**	0.341**	0.477*	0.637**	1.000
Standard deviation	0.783	0.758	0.847	0.709	0.789	0.927	0.769

*, correlation is significant at the 0.05 level (two-tailed); **, correlation is significant at the 0.01 level (two-tailed)

TABLE 4: Regression model 1: Extrinsic motivation factors and job satisfaction.

Independent variables: Extrinsic motivation factors		Dependent variable: Job satisfaction			
	Standardised coefficients (Beta)	t	Sig.	Collinearity statistics	
				Tolerance	VIF
Remuneration	0.270	4.240	0.000	0.571	1.847
Quality of work life	0.268	5.825	0.021	0.682	1.828
Promotion	-0.105	1.959	0.406	0.595	2.132
Supervision	0.216	2.137	0.001	0.709	1.936
Teamwork	0.184	3.445	0.009	0.639	1.615

t, obtained t-value; Sig., significance; VIF, variance inflation factor.

Model summary: multiple correlation (R) = 0.498; proportion variance explained (Adjusted R^2) = 0.558; F -value = 12.727; Standard error of the estimate = 0.94386

TABLE 5: Regression model 2: Job satisfaction and life satisfaction.

Independent variables: Job satisfaction		Dependent variable: Life satisfaction			
	Standardised coefficients (Beta)	t	Sig.	Collinearity statistics	
				Tolerance	VIF
Job satisfaction	.335	5.412	.000	.604	1.733

t, obtained t-value; Sig., significance; VIF, variance inflation factor.

Multiple correlation (R) = 0.534; proportion variance explained (Adjusted R^2) = 0.613; F -value = 46.216

than 0.9; hence, the data were considered suitable for linear regression analysis using the enter method with a view to establishing whether or not causality exists between these predictors (extrinsic motivation factors) and their relative measurement response (job satisfaction). Table 4 reports on these results.

The five extrinsic motivation factors accounted for approximately 56% ($R^2 = 0.558$) of the variance explained in job satisfaction. Collinearity statistics for the five extrinsic motivation factors were within acceptable values, indicating that multicollinearity was not a problem in the present study as the independent variables were not highly correlated. In accordance with the recommendation by O'Brien (2007), all tolerance values fell above the prescribed value of 0.5. Similarly, the rule of thumb observed by Pan and Jackson (2008) was satisfied with all the five dimensions demonstrating variance inflation factor (VIF) values ranging between 1.0 and 4.0.

Regression analysis: Job satisfaction and life satisfaction

The possible existence of a predictive relationship between job satisfaction (independent variable) and life satisfaction (outcome variable) was assessed through the computation of a second linear regression procedure. Upon checking the possible violation of linear regression assumptions, a positive correlation coefficient was established between job satisfaction and life satisfaction ($r = 0.637$). Additionally, a

small Durbin-Watson autocorrelation test statistic of 1.694 (i.e. $1 < d < 2$) was established, suggesting a near perfect estimation of the level of statistical significance in the model. Table 5 reports on the results of the second regression model.

Regression model 2 showed an R^2 value of 0.613, which depicts that approximately 61.3% of the variation of the life satisfaction amongst employees in the public organisation can be explained by job satisfaction. Further examination of the collinearity statistics established a tolerance value of 0.64 (i.e. > 0.50) as well as a VIF value of 1.733 (i.e. $1.0 \leq \text{VIF} \leq 4.0$), thus providing evidence of the absence of a multicollinearity problem within the regression model.

Discussion

A positive and strong association was established between remuneration and job satisfaction ($r = 0.562$; $p < 0.01$). The results of the regression analysis also revealed that remuneration is a statistically significant predictor of job satisfaction ($\beta = 0.270$; $t = 4.240$; $p < 0.01$). These results suggest that H_1 is supported and is therefore accepted in this study. This demonstrates that the job satisfaction of public employees increases when their remuneration increases. Consistent with this finding, a number of previous studies (Lewis & Frank, 2002; Omar & Ogenyi, 2006; Sargent & Hannum, 2003) concur that remuneration is strongly and positively related to job satisfaction. A comparative study of both public and private sector organisations conducted by Buelens and Broeck (2007) revealed that civil servants were less extrinsically motivated and satisfied with their work because their remuneration

was significantly lower than that of their counterparts in the private sector. An evaluation of job satisfaction in the extended public sector in Greece showed that public administrators administered extrinsic motivational instruments, more specifically the provision of fair wages, as an effective tool to improve productivity of employees (Manolopoulos, 2008). Similar conclusions were drawn by Luddy (2005) in a study that examined the job satisfaction of public service employees in South Africa. It appears, then, that remuneration remains an important extrinsic motivation factor that positively impacts job satisfaction amongst public service employees.

A positive and strong association was established between quality of work life and job satisfaction ($r = 0.643$; $p < 0.01$). The quality of work life factor emerged as a statistically significant predictor of job satisfaction ($\beta = 0.268$; $t = 5.825$; $p < 0.05$). These results suggest that H_2 is supported and is therefore, accepted in this study. These findings imply that job satisfaction increases with and is dependent on the quality of work life amongst public employees. Feldt *et al.* (2000) also observe that a high quality of work life leads to higher levels of both job and life satisfaction. Estryn-Behar *et al.* (2004) also conclude that quality of work life was significantly associated with job satisfaction factors such as physical working environment, psychological support at work and time to devote to sport and lifestyle. Additionally, Koonmee *et al.* (2010) establish that quality of work life has a positive impact on the three employee job-related outcomes: job satisfaction, organisational commitment and team spirit. Moreover, Noor and Abdullar (2012) observed a positive interconnection between quality of work life and job satisfaction. It is important then for managers in public organisations to ensure that high levels of quality of work life exist in order to increase the satisfaction of employees at work.

A positive but weak association was established between promotion and job satisfaction ($r = 0.179$; $p < 0.05$). The regression model further revealed that promotion is not a statistically significant predictor of job satisfaction ($\beta = -0.105$; $t = 1.959$; $p > 0.05$). These results suggest that H_3 is not supported and is therefore rejected in this study. These findings illustrate that promotion of public employees does not solely trigger any significant increases in their job satisfaction. Synchronous with the findings of Naveed, Usman and Bushra (2011), weak correlations were found between promotion and job satisfaction. Moen and Rosen (2005) also confirm that there are instances where promotion is not a major factor in determining job satisfaction. But be that as it may, the findings of the present study seem to contradict the established relationship between promotion and job satisfaction from previous studies (McCausland *et al.*, 2005; Saari & Judge, 2004; Shields & Ward, 2001). This discrepancy is puzzling. However, these findings could be attributed to the fact that generally, there are limited opportunities for promotion in the public sector (Gupta & Pannu, 2013). Public sector organisations tend to be hierarchical in nature, with most of the appointments to higher positions being driven

by either internal or external politics (MANforum, 2009). This is especially true in the case of South African civil service designations. Most employees in public organisations understand these dynamics and inadvertently accept the status quo in terms of their positions (Re'em, 2011). In such cases, the employees remain gratified with their job ranks and promotion ceases to act as a motivational factor.

A positive and moderate association was established between supervision and job satisfaction ($r = 0.461$; $p < 0.01$). The supervision factor emerged as a statistically significant predictor of job satisfaction ($\beta = 0.216$; $t = 2.137$; $p < 0.01$). These results suggest that H_4 is supported and is therefore accepted in this study. These findings imply that job satisfaction amongst public service employees increases with and is dependent upon the quality of supervision that is received. This is congruent with previous research. Abd-El-Fattah (2010) found that the majority of resignations in public institutions can be attributed to disappointment with the immediate supervisor or the line manager, which suggests that there is an established positive association between supervision and job satisfaction. Furthermore, supervisory behaviour was found to have a significant relationship with job satisfaction and turnover intention amongst Nigerian police officers (Adebayo & Ogunsina, 2011). Satisfaction with supervisors was also found to be amongst the top four factors that influence job satisfaction amongst public university educators (Boreham, Gray & Blake, 2006). Roelen, Koopmans and Groothoff (2008) also add that quality of supervision has emerged as the impeding challenge to the development and success of organisations (both public and private) in any country because it determines the extent to which employees are satisfied with and motivated to achieve organisational goals.

A positive and strong association was established between teamwork and job satisfaction ($r = 0.513$; $p < 0.01$). Teamwork emerged as a statistically significant predictor of job satisfaction ($\beta = 0.184$; $t = 3.445$; $p < 0.01$). These results suggest that H_5 is supported and is therefore accepted in this study. These findings express that job satisfaction amongst public employees is dependent on teamwork. In a corresponding manner, previous research suggests that working in a team empowers people and helps them to develop autonomy, which provides the basis for satisfaction on the job and reduced work stress (Sewell, 2005). Survey results from a study conducted by Dackert, Lööv and Mårtensson (2004) also indicate a positive correlation between teamwork and job satisfaction. Fröbel and Marchington (2005) confirm a correlation between autonomous task groups or self-managing teams and a better attitude towards one's work and company. The impact of teamwork on job satisfaction is so important for the attainment of overall organisational goals that most recruiting employers advertise teamwork as a prerequisite for job candidates even though very often the actual work displays no such features (White, Hill, McGovern, Mills & Smeaton, 2003). Thus, it appears that organisations that make the use of teamwork are characterised by higher levels of employee satisfaction than companies that do not make use of teamwork.

The results in regression model 2 depict a positive and strong association between job satisfaction and life satisfaction ($r = 0.637$; $p < 0.01$). The job satisfaction variable emerged as a statistically significant predictor of life satisfaction amongst public service employees ($\beta = 0.335$; $t = 5.412$; $p < 0.01$). These results suggest that H_6 is supported and is therefore accepted in this study. These findings are contrary to the segmentation theory, which posits that there is no linkage between job and life satisfaction as represented by a zero correlation between the two constructs (Loscocco & Roschelle, 1991). As such, based on findings from the current study, life satisfaction amongst public employees increases with and is dependent upon their levels of job satisfaction. Most contemporary research tends to consistently support the existence of a positive association between job satisfaction and life satisfaction (Ilies, Wilson & Wagner, 2009). In support, Mafini, Surujlal & Dhurup (2011) conclude that a strong correlation exists between job satisfaction and life satisfaction amongst municipal sports officers. Georgellis, Lange and Tabvuma (2012) found a positive correlation between job satisfaction and life satisfaction, with work-family conflict playing the role of a mediating variable. Additionally, job satisfaction is observed to have a stronger effect on life satisfaction than vice versa (Iverson & Maguire, 2000; Rode, 2004). It is an important supposition, then, that the life satisfaction of public employees may be enhanced by improving their job satisfaction.

Summary of findings

The study tested a conceptual framework through an examination of the relationships between extrinsic motivation, job satisfaction and life satisfaction amongst public employees within a South African public service organisation. Five extrinsic motivation factors, namely remuneration, quality of work life, promotion, supervision and teamwork, were identified. The findings confirm the existence of positive, statistically significant and predictive associations between four extrinsic motivation factors (remuneration, quality of work life, supervision and teamwork) and job satisfaction. Therefore, H_1 , H_2 , H_4 and H_5 were accepted in this study. However there was no statistically significant relationship between promotion and job satisfaction; hence, H_3 was rejected. In addition, the mediating role of the variables in the conceptual model was further confirmed by a positive and statistically significant relationship between job satisfaction and life satisfaction; thus, H_6 was accepted in this study.

Limitations and suggestions for further research

Despite efforts by the researchers to ensure that the present study is without flaws, it has to be acknowledged that this study is not immune to limitations. Firstly, a small sample size of 246 public employees who were based in only one province (Gauteng) was used. It becomes necessary, then, to exercise caution when generalising the findings of the present study to other populations and contexts. Secondly, there are limitations associated with the modified instrument, which was adapted from previous research and originally designed with aims that could be different to those of this study. As such, the issue of context should not be disregarded when

adopting the conclusions drawn in this study. Additionally, it is necessary to recognise the influence of the general limitations that are associated with quantitative data collection techniques.

The present study has implications for future academic endeavours. Similar studies could be conducted using larger sample sizes and different contexts, in order to refine the results. Furthermore, other selected factors (e.g. intrinsic factors, demographic, environmental) could be added with a view to either extending or revising the model used in the current study. This could facilitate a comparison of the findings, which further creates room for future meta-analysis on the proposed relationships. Finally, longitudinal research should also be considered to further understand trends in the relationships examined in the present study over an extended period of time, which will effectively refine the results.

Managerial implications

The findings of the study are useful in empowering managers in public organisations to motivate and satisfy the needs of their employees. By optimising the extrinsic motivation factors identified in this study, managers may be able to enhance the job satisfaction as well as the life satisfaction of public service employees. This could lead to a reduction in dysfunctional actions by public employees, such as absenteeism, high turnover, industrial action and unsatisfactory work performance. This has a ripple effect on the attainment of organisational goals, since both job and life satisfaction are positively associated with organisational performance (Chandrasaker, 2011).

Conclusion

The purpose of the current study was to examine the underlying relationship between extrinsic motivation factors, job satisfaction and life satisfaction of public service employees in South Africa. Five factors, remuneration, quality of work life, promotion, supervision and teamwork, that influence the extrinsic motivation of public service employees were extracted using exploratory factor analysis. The application of Spearman's rank correlation analysis procedure revealed that with the exception of promotion, there were moderate to strong correlations between the extrinsic motivation factors and job satisfaction. A positive association between job satisfaction and life satisfaction was also observed, which implies that these two factors either increase or decrease in parallel with each other. The application of the regression analysis procedure showed that remuneration, quality of work life, supervision and teamwork are the extrinsic motivation factors that predict job satisfaction. Additionally, job satisfaction emerged as a predictor of life satisfaction.

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Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

C.M. (Vaal University of Technology), the project leader, was responsible for the research methodology, data analysis and interpretation. N.D. (Vaal University of Technology) was responsible for the literature review, designing the conceptual framework and hypotheses, data collection as well as language additions.

References

- Abd-El-Fattah, S.M. (2010). Longitudinal effects of pay increase on teachers' job satisfaction: A motivational perspective. *The Journal of International Social Research*, 3(10), 11–21.
- Acuna, S., Gomez, M., & Juristo, N. (2009). How do personality, team processes and task characteristics relate to job satisfaction and software quality? *Information and Software Technology*, 51, 627–639. <http://dx.doi.org/10.1016/j.infsof.2008.08.006>
- Adebayo, S.O., & Ogunsina, S.O. (2011). Influence of supervisory behaviour and job stress on job satisfaction and turnover intention of police personnel in Ekiti state. *Journal of Management and Strategy*, 2(3), 13–20. <http://dx.doi.org/10.5430/jms.v2n3p13>
- Agarwal, R., & Ferratt, T.W. (2001). Crafting an HR strategy to meet the need for IT workers. *Communications of the ACM*, 44(7), 58–64. <http://dx.doi.org/10.1145/379300.379314>
- Agho, A., Mueller, C., & J. Price. (1993). Determinants of employee job satisfaction: An empirical test of a causal model. *Human Relations*, 46(1), 1007–1027. <http://dx.doi.org/10.1177/001872679304600806>
- Alumran, A., Hou, X., & Hurst, C. (2012). Validity and reliability of instruments designed to measure factors influencing the overuse of antibiotics. *Journal of Infection and Public Health*, 5, 221–232. <http://dx.doi.org/10.1016/j.jiph.2012.03.003>, PMID:22632596
- Bagtasos, M.R. (2011). Quality of work life: A review of literature. *Business & Economics Review*, 20(2), 1–8.
- Barbie, J. (2010). South Africa, civil service strike. *Global Post*. 4 September. Retrieved June 16, 2013, from <http://www.globalpost.com/dispatch/south-africa/100903/south-africastrikegrinds-ountryhalt>
- Bastug, G., & Duman, S. (2010). Examining life satisfaction level depending on physical activity in Turkish and German societies. *Procedia - Social and Behavioral Sciences*, 2(2), 4892–4895. <http://dx.doi.org/10.1016/j.sbspro.2010.03.790>
- Bernhard, F., & O'Driscoll, M.P. (2011). Psychological ownership in small family owned businesses: Leadership style and non-family employees' work attitudes and behaviours. *Group & Organization Management*, 36(1), 345–384. <http://dx.doi.org/10.1177/1059601111402684>
- Boreham, N., Gray, P., & Blake, A. (2006). *Job satisfaction among newly qualified teachers in Scotland*. Stirling, Scotland: Institute of Education, University of Stirling.
- Brayfield, A.H., Wells, R.V., & Strate, M.W. (1957). Interrelations among measures of job satisfaction and general satisfaction. *Journal of Applied Psychology*, 41(1), 201–205. <http://dx.doi.org/10.1037/h0048095>
- Buelens, M., & Broeck, H.V. (2007). An analysis of differences in work motivation between public and private sector organisations. *Public Administration Review*, 67(1), 65–74. <http://dx.doi.org/10.1111/j.1540-6210.2006.00697.x>
- Buetell, N. (2006). Life satisfaction, a Sloan Work and Family Encyclopedia entry. In *Sloan Work-Family Encyclopedia*. Boston, MA: Boston College.
- Buitendach, J.H., & De Witte, H. (2005). Job insecurity, extrinsic and intrinsic job satisfaction and affective organizational commitment of maintenance workers in a parastatal. *South African Journal of Business Management*, 36(2), 27–37.
- Burke, R.J. (2001). Managerial women's career experiences, satisfaction and well-being: A five country study. *Cross Cultural Management*, 8(3), 117–133. <http://dx.doi.org/10.1108/13527600110797254>
- Chacko, T.I. (1983). Job and life satisfaction: A causal analysis of their relationships. *Academy of Management Journal*, 26(1), 163–169. <http://dx.doi.org/10.2307/256143>, PMID:10260567
- Chandrasakar, K. (2011). Workplace environment and its impact on organisational performance in public sector organisations. *International Journal of Enterprise Computing and Business Systems*, 1(1), 1–16.
- Churchill, G.A. Jr, & Iacobucci, D. (2002). *Marketing research: Methodological foundations*. (8th edn.). Fort Worth, TX: Harcourt College Publishers.
- Crompton, J.L. (2003). Adapting Herzberg: a conceptualization of the effects of hygiene and motivator attributes on perceptions of event quality. *Journal of Travel Research*, 41(3), 305–327. <http://dx.doi.org/10.1177/0047287502239039>
- Dackert, I., Lööv, L., & Mårtensson, M. (2004). Leadership and climate for innovations in teams. *Economic and Industrial Democracy*, 25(2), 301–318. <http://dx.doi.org/10.1177/0143831X04042488>
- Dessler, G. (2008). *Human resource management*. (11th edn.). Upper Saddle River, NJ: Pearson, Prentice Hall.
- Diener, E.D., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75. http://dx.doi.org/10.1207/s15327752jpa4901_13
- Diener, E., Suh, E.M., Lucas, R.L., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276–302. <http://dx.doi.org/10.1037/0033-2909.125.2.276>
- Durbin, J., & Watson, G.S. (1950). Testing for serial correlation in least-squares Regression. I. *Biometrika*, 37, 409–428. <http://dx.doi.org/10.1093/biomet/37.3-4.409>
- Ellickson, M.C., & Logsdon, K. (2001). Determinants of job satisfaction of municipal government employees. *State and Local Government Review*, 33(1), 173–184. <http://dx.doi.org/10.1177/0160323X0103300302>
- Estryn-Behar, M., Kreutz, G., Le Nezet, O., Mouchot, L., Ben-Brik, E., Kuerten de Salles, R. et al. (2004). *Promotion of work ability among French health care workers*. Oral presentation for the European NEXT-study group, Verona, Italy, 18–20 October. Retrieved May 5, 2012, from <http://www.next.uni-wuppertal.de/>
- Feldt, T., Kinnunen, U., & Maunao, S. (2000). A mediational model of sense of coherence in the work context: A one-year follow-up study. *Journal of Organizational Behavior*, 21, 461–476. [http://dx.doi.org/10.1002/\(SICI\)1099-1379\(200006\)21:4%3C461::AID-JOB11%3E3.0.CO;2-T](http://dx.doi.org/10.1002/(SICI)1099-1379(200006)21:4%3C461::AID-JOB11%3E3.0.CO;2-T)
- Field, A. (2005). *Discovering statistics using SPSS (and sex and drugs and rock 'n' roll)*. Los Angeles, CA: Sage.
- Fröbel, P., & Marchington, M. (2005). Team working structures and worker perceptions: A cross-national study in pharmaceuticals. *International Journal of Human Resource Management*, 16(2), 256–276. <http://dx.doi.org/10.1080/0958519042000311435>
- Georgellis, Y., Lange, T., & Tabvuma, V. (2012). The impact of life events on job satisfaction. *Journal of Vocational Behavior*, 80, 464–473. <http://dx.doi.org/10.1016/j.jvb.2011.12.005>
- Ghiselli, R.E., La Lopa, J.M., & Bai, B. (2001). Job satisfaction, life satisfaction, and turnover intent among food-service managers. *Cornell Hotel and Restaurant Administration Quarterly*, 42(2), 28–37. [http://dx.doi.org/10.1016/S0010-8804\(01\)80036-7](http://dx.doi.org/10.1016/S0010-8804(01)80036-7)
- Giannakis, S.K., & Mihail, D.M. (2011). Modeling job satisfaction in low-level jobs: Differences between full-time and part-time employees in the Greek retail sector. *European Management Journal*, 29(2), 129–143. <http://dx.doi.org/10.1016/j.emj.2010.12.002>
- Green, S.B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research*, 26, 499–510. http://dx.doi.org/10.1207/s15327906mbr2603_7
- Gupta, S., & Pannu, H. (2013). A comparative study of job satisfaction in public and private sector. *Indian Journal of Arts*, 1(1). Retrieved June 14, 2013, from http://www.discovery.org.in/PDF_Files/IJA_20130102.pdf
- Hair, J.F., Black, B., Babin, B., Anderson, R.E., Tatham, R.L., & Black, W.C. (2010). *Multivariate data analysis: A global perspective*. New York, NY: Pearson Education Inc. <http://dx.doi.org/10.1016/j.jmva.2009.12.014>
- Heller, D., Judge, T.A. & Watson, D. (2002). The confounding role of personality and trait affectivity in the relationship between job and life satisfaction. *Journal of Organizational Behavior*, 23, 815–835. <http://dx.doi.org/10.1002/job.168>
- Hennessey, B.A., & Amabile, T.M. (2005). Extrinsic and intrinsic motivation. *Blackwell Encyclopedic Dictionary of Organizational Behavior*, 1(1), 3–23.
- Hirschfeld, R.R. (2000). Validity studies. Does revising the intrinsic and extrinsic subscales of the Minnesota satisfaction questionnaire short form make a difference? *Educational Psychological Measurement*, 60(1), 255–270. <http://dx.doi.org/10.1177/00131640021970493>
- Hoole, C., & Vermeulen, L.P. (2003). Job satisfaction among South African pilots. *South African Journal of Industrial Psychology*, 29(1), 52–57.
- Hornbaek, K. (2006). Current practice in measuring usability: Challenges to usability studies and research. *International Journal of Human-Computer Studies*, 11(2), 35–46.
- Ignat, A.A., & Clipa, O. (2012). Teachers' satisfaction with life, job satisfaction and their emotional intelligence. *Procedia - Social and Behavioral Sciences*, 33, 498–502. <http://dx.doi.org/10.1016/j.sbspro.2012.01.171>
- Ilies, R., Wilson, K.S., & Wagner, D.T. (2009). The spillover of daily job satisfaction onto employees' family lives: the facilitating role of work-family integration. *Academy of Management Journal*, 52(1), 87–102. <http://dx.doi.org/10.5465/AMJ.2009.36461938>
- Iverson, R., & Maguire, C. (2000). The relationship between job and life satisfaction: Evidence from a remote mining community. *Human Relations*, 53(6), 807–839. <http://dx.doi.org/10.1177/0018726700536003>
- Judge, T.A., & Watanabe, S. (1993). Another look at the job satisfaction-life satisfaction relationship. *Journal of Applied Psychology*, 78(6), 939–948. <http://dx.doi.org/10.1037/0021-9010.78.6.939>
- Judge, T.A., Locke, E.A., Durham, C.C., & Kluger, A.N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83(1), 17–34. <http://dx.doi.org/10.1037/0021-9010.83.1.17>, PMID:9494439
- Kanungo, R.N. (1979). The concepts of alienation and involvement revisited. *Psychological Bulletin*, 86(1), 119–138. <http://dx.doi.org/10.1037/0033-2909.86.1.119>
- Kavanaugh, J., Duffy, J.A., & Lilly, J. (2006). The relationship between job satisfaction and demographic variables for healthcare professionals. *Management Research News*, 29(6), 304–325. <http://dx.doi.org/10.1108/01409170610683842>
- Kebriael, A., & Moteghedhi, M.S. (2009). Job satisfaction among community workers in Zahedan District Islamic Republic of Iran. *Eastern Mediterranean Health Journal*, 15 (5), 1156–1163.
- Kinicki, A., & Kreitner, R. (2003). *Organizational behavior: Key concepts, skills and best practices*. (International edn.). New York, NY: McGraw-Hill.

- Kinicki, A.J., McKee-Ryan, F.M., Schriesheim, C.A., & Carson, K.P. (2002). Assessing the construct validity of the job descriptive index: A review and meta-analysis. *Journal of Applied Psychology*, 87(1), 14–32. <http://dx.doi.org/10.1037/0021-9010.87.1.14>, PMID:11916208
- Koohsar, A.K.H., & Bonab, B.H. (2011). Relation between quality of attachment and life satisfaction in high school administrators. *Procedia - Social and Behavioral Sciences*, 30, 954–958. <http://dx.doi.org/10.1016/j.sbspro.2011.10.185>
- Koonmee, K., Singhapakdi, A., Virakul, B., & Lee, D. (2010). Ethics institutionalization, quality of work life, and employee job-related outcomes: A survey of human resource managers in Thailand. *Journal of Business Research*, 63(1), 20–26. <http://dx.doi.org/10.1016/j.jbusres.2009.01.006>
- Kothari C.R. (2008). *Research methodology: Methods and techniques*. (2nd edn.). New Delhi, India: New Age International.
- Kreitner, R., Kinicki, A., & Cole, N. (2003). *Fundamentals of organizational behavior: Key concept, skills, & best practices*. Toronto, Canada: McGraw-Hill.
- Ladebo, O.J. (2008). Perceived supervisory support and organisational citizenship behaviours: Is job satisfaction a mediator? *South African Journal of Psychology*, 38, 479–488. <http://dx.doi.org/10.1177/008124630803800303>
- Lam S.K. (1995). Quality management and job satisfaction: an empirical study. *International Journal of Quality and Reliability Management*, 12(1), 72–78. <http://dx.doi.org/10.1108/02656719510087337>
- Lee, D.J., Singhapakdi, A., & Sirgy, M.J. (2007). Further validation of a need-based quality-of-work-life measure: Evidence from marketing practitioners. *Applied Research in Quality of Life*, 2, 273–287. <http://dx.doi.org/10.1007/s11482-008-9042-x>
- Lentz, E., & Allen, T.D. (2009). The role of mentoring others in the career plateauing phenomenon. *Group & Organization Management*, 34(1), 358–384. <http://dx.doi.org/10.1177/1059601109334027>
- Lewis, G. B., & Frank, S.A. (2002). Who wants to work for the government? *Public Administration Review*, 62(4), 395–404. <http://dx.doi.org/10.1111/0033-3352.00193>
- Li-Ping Tang, T., & Talpade, M. (1999). Sex differences in satisfaction with pay and co-workers. *Public Personnel Management*, 28(3), 345–348.
- Locke, E.A. (1969). What is job satisfaction? *Organisational Behavior and Human Performance*, 4, 309–336. [http://dx.doi.org/10.1016/0030-5073\(69\)90013-0](http://dx.doi.org/10.1016/0030-5073(69)90013-0)
- Loscocco, K.A., & Bose, C.E. (1998). Gender and job satisfaction in urban China: The early Post-Mao period. *Social Science Quarterly*, 79(1), 91–109.
- Loscocco, K.A., & Roschelle, A.R. (1991). Influence on the quality of work and non-work life: Two decades in review. *Journal of Vocational Behaviour*, 39(1), 182–225. [http://dx.doi.org/10.1016/0001-8791\(91\)90009-B](http://dx.doi.org/10.1016/0001-8791(91)90009-B)
- Lucas-Carrasco, R., & Salvador-Carulla, L. (2012). Life satisfaction in persons with intellectual disabilities. *Research in Developmental Disabilities*, 33(4), 1103–1109. <http://dx.doi.org/10.1016/j.ridd.2012.02.002>, PMID:22502835
- Luddy, N. (2005). Job satisfaction among employees at a public health institution in the Western Cape. Cape Town, South Africa: University of the Western Cape.
- Mafini, C., Surujlal, J., & Dhurup, M. (2011). Factors affecting the job satisfaction of municipal sports officers. *African Journal for Physical, Health Education, Recreation & Dance*, September (Supplement 1), 145–156.
- Malhotra, N.K. (2010). *Marketing research: An applied orientation*. Eaglewood Cliffs, NJ: Prentice-Hall.
- MANforum. (2009). It's always about the boss, *The Man Group Magazine*, 03, 10–13. Retrieved June 16, 2013, from man-magazines.digstar.com/
- Manolopoulos, D. (2008). An evaluation of employee motivation in the extended public sector in Greece. *Employee Relations*, 30 (1), 63–85. <http://dx.doi.org/10.1108/01425450810835428>
- Maxwell, J.P., & Moores, E. (2007). The development of a short scale measuring aggressiveness and anger in competitive athletes. *Psychology of Sport and Exercise*, 8, 179–193. <http://dx.doi.org/10.1016/j.psychsport.2006.03.002>
- McCausland, W., Pouliakas, K., & Theodossiou, I. (2005). Some are punished and some are rewarded: A study of the impact of performance pay on job satisfaction. *International Journal of Manpower*, 26, 636–659. <http://dx.doi.org/10.1108/01437720510628112>
- Moen, E.R., & Rosen, A. (2005). Performance pay and adverse selection. *Scandinavian Journal of Economics*, 107, 279–98. <http://dx.doi.org/10.1111/j.1467-9442.2005.00408.x>
- Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology*, 59, 591–622. <http://dx.doi.org/10.1111/j.1744-6570.2006.00048.x>
- Moynihan, D.P., & Pandey, S.K. (2007). Finding workable levers over work motivation: Comparing job satisfaction, job involvement, and organizational commitment. *Administration & Society*, 39(7), 803–832. <http://dx.doi.org/10.1177/00953997070305546>
- NaeemIham, H., Hadi, S., Shishi, N., & Piarala, K. (2011). Job satisfaction of civil servants: Evidence from the republic of Maldives. In *Proceedings of the 2nd International Conference on Business and Economic Research*. Retrieved June 15, 2013, from http://www.academia.edu/919310/job_satisfaction_of_civil_servants_anevidence_from_the_republic_of_maldives
- Naveed, A., Usman, A., & Bushra, A. (2011). Promotion: A predictor of job satisfaction a study of glass industry of Lahore (Pakistan). *International Journal of Business and Social Science*, 2(16), 301–305.
- Nickerson, A., & Nagle, R.J. (2005). Parent and peer attachment in late childhood and early adolescence. *Journal of Early Adolescence*, 25, 223–249. <http://dx.doi.org/10.1177/0272431604274174>
- Nilsson, J. (2010). What's the problem? Local officials' conceptions of weaknesses in their municipalities' crisis management capabilities. *Journal of Contingencies and Crisis Management*, 18(2), 83–95. <http://dx.doi.org/10.1111/j.1468-5973.2010.00607.x>
- Noor, S.M., & Abdullah, M.A. (2012). Quality work life among factory workers in Malaysia. *Procedia - Social and Behavioral Sciences*, 35, 739–745. <http://dx.doi.org/10.1016/j.sbspro.2012.02.144>
- Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory*. (3rd edn.). New York, NY: McGraw-Hill.
- O'Brien, R.M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity*, 41, 673–690. <http://dx.doi.org/10.1007/s11135-006-9018-6>
- Omar, O.E., & Ogenyi, V.O. (2006). Determinants of pay satisfaction of senior managers in the Nigerian Civil Service. *International Journal of Public Sector*, 19(7), 687–701. <http://dx.doi.org/10.1108/09513550610704707>
- Oshagbemi, T. (2000). Job satisfaction and dissatisfaction in higher education. *Education and Training*, 39(9), 354–359. <http://dx.doi.org/10.1108/00400919710192395>
- Pan, Y., & Jackson, R.T. (2008). Ethnic difference in the relationship between acute inflammation and serum ferritin in US adult males. *Epidemiology and Infection*, 136, 421–431. <http://dx.doi.org/10.1017/S095026880700831X>, PMID:17376255
- Peterson, D., Puia, G., & Suess, F. (2003). Yo tengo la camiseta puesta [I have the shirt on]: An exploration of job satisfaction and commitment among workers in México. *Journal of Leadership and Organizational Studies*, 10(2), 73–88. <http://dx.doi.org/10.1177/107179190301000208>
- Price, J.L. (2001). Reflections on the determinants of voluntary turnover. *International Journal of Manpower*, 22(7), 600–624. <http://dx.doi.org/10.1108/EUM000000006233>
- Radhakrishna, R.B. (2007). Tips for developing and testing questionnaires/instruments. *Journal of Extension*, 45(1). Retrieved January 21, 2013, from <http://www.joe.org/joe/2007february/tt2.php>
- Ramsey, R.D. (1997). Employee morale: Does it matter anymore? *Supervision*, 58(9), 6–8.
- Re'em, Y. (2011). *Motivating public employees*. Hertie School of Governance Working Paper No. 60. Retrieved June 14, 2013, from http://www.hertie-school.org/fileadmin/images/Downloads/working_papers/60.pdf
- Robbins, S.P. (2003). *Essentials of organizational behaviour*. (7th edn.). Upper Saddle River, NJ: Pearson Education.
- Rode, J.C. (2004). Job satisfaction and life satisfaction revisited: A longitudinal test of an integrated model. *Human Relations*, 57(9), 1205–1230. <http://dx.doi.org/10.1177/0018726704047143>
- Roelen, C.A., Koopmans, P.C., & Groothoff, J.W. (2008). Which work factors determine job satisfaction? *IOS Press*, 30, 433–439.
- Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <http://dx.doi.org/10.1037/0003-066X.55.1.68>, PMID:11392867
- Saari, M.L., & Judge, A.T. (2004). Employee attitude and job satisfaction. *Human Resource Management*, 43(4), 395–407. <http://dx.doi.org/10.1002/hrm.20032>
- Sargent, T., & Hannum, E. (2003). *Keeping teachers happy: Job satisfaction among primary school teachers in rural China*. New York, NY: International Sociology Association Research Committee on Social Stratification and Mobility.
- Sewell, G. (2005). Doing what comes naturally? Why we need a practical ethics of teamwork. *International Journal of Human Resource Management*, 16(2), 202–218. <http://dx.doi.org/10.1080/0958519042000311408>
- Sherman, A.W., & Bohlander, G.W. (1992). *Managing human resources*. Winfield, KS: College Division, South-Western.
- Shields, M.A., & Ward, M. (2001). Improving nurse retention in the National Health Service in England: The impact of job satisfaction on intention to quit. *Journal of Health Economics*, 20, 677–701. [http://dx.doi.org/10.1016/S0167-6296\(01\)00092-3](http://dx.doi.org/10.1016/S0167-6296(01)00092-3)
- Sirgy, M.J., Efraty, D., Siegel, P., & Lee, D. (2001). A new measure of quality of work life (QWL) based on satisfaction and spill-over theories. *Social Indicators Research*, 55, 241–302. <http://dx.doi.org/10.1023/A:1010986923468>
- Smith, P.C., Kendall, L.M., & Hulin, C.L. (1969). *The Measurement of satisfaction in work and retirement*. Chicago, IL: Rand McNally.
- Smucker, M.K., Whisenant, W.A., & Pedersen, P.M. (2003). An investigation of job satisfaction and female sports journalists. *Sex Roles: A Journal of Research*, 49(7/8), 401–407. <http://dx.doi.org/10.1023/A:1025120406343>
- Spector, P.E. (1985). Measurement of human service staff satisfaction: Development of the job satisfaction survey. *American Journal of Community Psychology*, 13(6), 1–24. <http://dx.doi.org/10.1007/BF00929796>
- Thompson, E.R., & Phua, F.T.T. (2012). A brief index of affective job satisfaction. *Group & Organization Management*, 37(3), 275–307. <http://dx.doi.org/10.1177/1059601111434201>
- Ting, Y. (1997). Determinants of job satisfaction of federal government employees. *Public Personnel Management*, 26(3), 313–318.
- Van der Heijden, T., & Mlandi, M. (2005). Organisational success and failure in the public sector. *Journal of Public Administration*, 6(4), 20–22.

- Viswesvaran, C., Deshpande, S.P., & Joseph, J. (1998). Job satisfaction as a function of top management support for ethical behavior. *Journal of Business Ethics*, 17(4), 365–371. <http://dx.doi.org/10.1023/A:1017956516324>
- Wang, G., & Lee, P.D. (2009). Psychological empowerment and job satisfaction: An analysis of interactive effects. *Group & Organization Management*, 34(1), 271–296.
- Wegge, J.R., Van Dick, R., Fisher, G.K., Wecking, C., & Moltzen, K. (2006). Work motivation, organisational identification, and well-being in call centre work. *Work & Stress*, 20(1), 60–83. <http://dx.doi.org/10.1080/02678370600655553>
- White, M., Hill, S., McGovern, P., Mills, C., & Smeaton, D. (2003) High performance management practices, working hours and work-life balance. *British Journal of Industrial Relations*, 41, 175–195. <http://dx.doi.org/10.1111/1467-8543.00268>
- Ye, S., Yu, L., & Li, K. (2012). A cross-lagged model of self-esteem and life satisfaction: Gender differences among Chinese university students. *Personality and Individual Differences*, 52(4), 546–551. <http://dx.doi.org/10.1016/j.paid.2011.11.018>
- Yee, R.W.Y., Yeung, A.C.L., & Cheng, T.C.E. (2010). An empirical study of employee loyalty, service quality and firm performance in the service industry. *International Journal of Production Economics*, 124(1), 109–120. <http://dx.doi.org/10.1016/j.ijpe.2009.10.015>
- Zhang, J., & Howell, R.T. (2011). Do time perspectives predict unique variance in life satisfaction beyond personality traits? *Personality and Individual Differences*, 50(8), 1261–1266. <http://dx.doi.org/10.1016/j.paid.2011.02.021>
- Zhao, X.R., Qu, H., & Ghiselli, R. (2011). Examining the relationship of work–family conflict to job and life satisfaction: A case of hotel sales managers. *International Journal of Hospitality Management*, 30(1), 46–54. <http://dx.doi.org/10.1016/j.ijhm.2010.04.010>