

**Crossover of engagement and life satisfaction
among dual-earner parents**

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COMMENTS

The reader is reminded of the following:

- The editorial style as well as the references referred to in this mini-dissertation follow the format prescribed by the Publication Manual (5th edition) of the American Psychological Association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom) to use APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the South African Journal of Industrial Psychology (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing tables.

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ABSTRACT

Title:

Crossover of engagement and life satisfaction among dual-earner parents.

Key terms:

Crossover, job resources, work engagement, life satisfaction, dual-earner parents.

An individual has the ability to project feelings and emotions onto someone else, to the extent that the other person reacts to them, whether in a similar or opposite manner. These are known as crossover effects. Crossover research investigates the influential relationship and behavioural changes between partners. It sheds light on the occurrence of similar reactions that develop across work and home domains because of interpersonal relations between partners. However, previous crossover research primarily focused on negative symptoms, disregarding the positive. This one-sided approach caused a disparity in crossover research, because one can only gain a holistic understanding of the significance and effects of working if research is extended to include positive aspects.

The general objective of this study was to test a structural model of job resources, work engagement and life satisfaction, and to determine the crossover effects of work engagement and life satisfaction among dual-earner parents in South Africa. A cross-sectional survey design was used. A convenience sample of 125 couples ($N = 250$) was taken in the North West and Gauteng Provinces. A job resources questionnaire, the '*Utrecht Work Engagement Scale*' (UWES) and the '*Satisfaction with Life Scale*' (SWLS) were administered. Cronbach alpha coefficients, Pearson product-moment correlations, and structural equation modelling were used to analyse the data.

Results indicated positive relationships between job resources (autonomy, support and development), work engagement and life satisfaction for both partners. Job resources explained variances of 62% for males and 72% for females in work engagement. A variance of 12% with regard to life satisfaction of males was explained by their work engagement, whilst a combination of female work engagement and their spouse's life satisfaction explained 10% of the variance in female life satisfaction. Unfortunately, expectations about

crossover effects of work engagement between partners were not met. The final structural model only confirmed a crossover effect of life satisfaction between partners from male to female.

Recommendations were made for the organisation and for future research.

OPSOMMING

Titel:

Oordrag van werksbegeestering en lewenstevredenheid tussen ouers wat beide 'n inkomste verdien.

Sleuteltermes:

Oordrag, werkshulpbronne, werksbegeestering, lewenstevredenheid, ouers wat beide 'n inkomste verdien.

'n Individuele vermoë om gevoelens en emosies op iemand anders te projekteer – dermate dat die ander persoon daarop reageer, hetsy op 'n soortgelyke of teenoorgestelde wyse. Dit staan bekend as oordrageffekte. Oordragnavorsing bestudeer die beïnvloedende verhouding en gedragsveranderinge tussen lewensmaats. Dit werp lig op die voorkoms van soortgelyke reaksies wat tussen die werk- en die huisdomein ontstaan as gevolg van interpersoonlike verhoudings tussen lewensmaats. Vorige oordragnavorsing het primêr op negatiewe simptome gefokus terwyl die positiewe verontagsaam is. Hierdie eensydige benadering het aanleiding gegee tot 'n dispariteit in oordragnavorsing aangesien 'n holistiese begrip van die belangrikheid en gevolge van werk slegs verkry kan word indien positiewe aspekte ingesluit word in navorsing.

Die algemene doelstelling van hierdie studie was om 'n strukturele model van werkshulpbronne, werksbegeestering en lewenstevredenheid te toets, en om die oordraggevolge te bepaal van werksbegeestering en lewenstevredenheid onder werkende ouers in Suid-Afrika wat beide 'n inkomste verdien. 'n Dwaarsnee-opnameontwerp is gebruik. 'n Gerieflikheidsteekproef van 125 pare ($N = 250$) is in die Noordwes- en Gautengprovinsies geneem. 'n Werkshulpbronnevraelys, die '*Utrecht Work Engagement Scale*' (UWES) en die '*Satisfaction with Life Scale*' (SWLS) is afgeneem. Daar is gebruik gemaak van Cronbach-alfakoëffisiënte, Pearson-produktmomentkorrelasies en strukturele vergelyking-modellering om die data te ontleed.

Die resultate het gedui op positiewe verhoudings tussen werkshulpbronne (outonomie, ondersteuning en ontwikkeling), werksbegeestering en lewenstevredenheid vir beide

lewensmaats. Wat werksbegeestering betref, het werkshulpbronne variansies van 62% vir mans en 72% vir vrouens verklaar. 'n Variansie van 12% ten opsigte van lewenstevredenheid van mans is deur hul werksbegeestering verklaar, terwyl 'n kombinasie van vrouens se werksbegeestering en hul lewensmaat se lewenstevredenheid 10% van die variansie in vrouens se lewenstevredenheid verklaar het. Ongelukkig is daar nie voldoen aan verwagtinge oor oordrageffekte van werksbegeestering tussen lewensmaats nie. Die finale strukturele model het slegs 'n oordrageffek van lewenstevredenheid tussen lewensmaats van man na vrou bevestig.

Aanbevelings is gemaak vir die organisasie en vir verdere navorsing.

CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on testing a structural model to examine the relationship between job resources, work engagement, and life satisfaction, and to determine the crossover effects of work engagement and life satisfaction between dual-earner parents.

Chapter one discusses the problem statement and indicates the research objectives. The research method is also described and an overview of the following chapters is given.

1.1 PROBLEM STATEMENT

In modern society, dual-earner couples have become the rule rather than the exception. The contemporary women's role has evolved from that of nurturer, caretaker and educator of children to that of a professional in the modern workplace – which has until fairly recently been the exclusive domain of men. This phenomenon leads to numerous questions regarding partners' responsibilities and their behaviour towards each other. Studies concerning dual-earner couples are becoming increasingly popular. Grounds are being established to determine relevant consequences of crossover effects on partners. For this reason, crossover studies are increasing in popularity as a field of research (Westman, 2001).

It is important not to confuse crossover with spillover. Westman (2001, 2006) researched spillover as well as crossover in much detail and agrees with the definitions presented by Bolger, DeLongis, Kessler, and Wethington (1989), as do numerous other researchers (Stevens, Kiger, & Riley, 2006). When spillover occurs, it focuses only on the individual. Therefore, the experiences (whether positive or negative) in one domain will influence the individual's performance and behaviour in the second domain. Spillover differs from crossover in the sense that multiple people are involved. Conversely, crossover will occur when one person's experience in one domain influences and affects individuals in another domain. These domains are the work environment versus the home environment. Spillover is thus an intra-individual, inter-domain contagion of the symptom while crossover is a dyadic, inter-individual and inter-domain contagion of the symptom constitute. Since crossover

concerns couples, the effect thereof and the influence it has on the partners are of particular importance.

In an attempt to explain the crossover process, the literature revealed three possible explanations. Firstly, crossover may occur directly through empathy. The relationship between partners reflects a high level of intimacy that allows partners to share each other's feelings and emotions (Starcevic & Pointek, 1997). Secondly, crossover could be an effect of an indirect process. This entails that mediating or moderating effects influence the outcome, and that these effects could result in crossover. However, the deciding factor would be the specific variable (e.g. stress or happiness) that is carried over (Coyne & Downey, 1991). Thirdly, spurious or imitative effects might be a contributing factor to the crossover process. This is explained by facial expressions and non-verbal communication between partners that influence the way in which the partners react to one another. In an experimental study, viewers watched a speech of an authoritative figure. The results illustrate this process very appropriately. When the authoritative figure said something funny, the viewers smiled, and when he spoke of sadness, they mirrored the sadness in their facial expressions (Lanzetta, Sullivan, Masters, & Mchugo, 1985).

Previous crossover studies carried out on couples included crossover effects from the work to home domain as well as vice versa. These studies also showed that variables could cross over either unidirectionally (one-way) or bidirectionally (two-way) (Bakker et al., 2005; Demerouti et al., 2005). In other words, in some cases, both partners influenced each other, while in other studies only one path of crossover was found. Variables that crossed over were distress (Barnett, Raudenbush, Brennan, Pleck, & Marshall, 1995), work mood (Chan & Margolin, 1994), work-family conflict (Hammer, Allen, & Grigsby, 1997; Parasuraman, Greenhaus, & Granrose, 1992), work stress (Jones & Fletcher, 1993a; Jones & Fletcher, 1993b; Westman, 2001, 2006), depression (Vinokur, Price, & Caplan, 1996; Westman & Vinokur, 1998) and burnout (Westman & Etzion, 1995).

Even though the above-mentioned studies do not include all research done on crossover, it is obvious that the focus were on negative influences. This is also true for research on the crossover of burnout. However, recent studies indicated that a need also exists to investigate the crossover of work engagement (Bakker, Demerouti, & Schaufeli, 2005) and life satisfaction (Demerouti, Bakker, & Schaufeli, 2005).

Verifying the ingredients that comprise work engagement, Schaufeli, Salanova, González-Romá and Bakker (2002) define engagement as an optimistic, rewarding and work-related mentality. The enjoyment of one's work causes vigour, dedication and absorption – also known as the dimensions of engagement. The Utrecht Work Engagement Scale (UWES) is a reliable and effective measuring instrument for work engagement (Schaufeli et al., 2002). However, in a few South African studies, the dimension of absorption caused difficulties due to low internal consistency or poor loadings (Rothmann, 2003). In addition, two studies confirmed that work engagement consisted of two factors (vigour and dedication) (Naudé & Rothmann, 2004; Rothmann, 2003), while one study found a one-dimensional construct of work engagement in South Africa (Bosman, Rothmann, & Buitendach, 2005).

In order to arrive at engagement as an outcome, it has to be influenced by certain variables at work. According to Bakker et al. (2005), work engagement is the result of the resources available in the organisation. Job resources are contained in physical, psychological, social and organisational aspects of the job (Bakker et al., 2005; Jones & Fletcher, 1996). In order to determine the influence of job resources on work engagement, the Job Demands-Resources (JD-R) model was used. This model assumes two processes, namely energy and motivation. The energetic process compels high job demands which exhaust the individual's energy, whereas the motivational process sanctions dealing with high job demands through ample job resources (Bakker, Demerouti, De Boer, & Schaufeli, 2003). These sufficient resources will cause the lessening of physiological and/or psychological costs while simultaneously stimulating personal growth and advancement (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

The right combination of job resources provided by the organisation will result in work engagement for the employee. The consequence of being engaged does not only apply to attitude or feelings towards work, but is also an essential shaping factor of one's life satisfaction in general (Bundy, 1993; Wilcock, 2001). Employees who experience life satisfaction tend to be more productive at work and inspire others who come in contact with them (Donovan & Halpern, 2002). These "others" do not only implicate work colleagues, but also refer to significant others and spouses. Due to crossover effects, these feelings – or mindset – are now promoted in others, who consequently embody the same behaviour towards their work colleagues or significant others, causing a positive ripple effect. At least

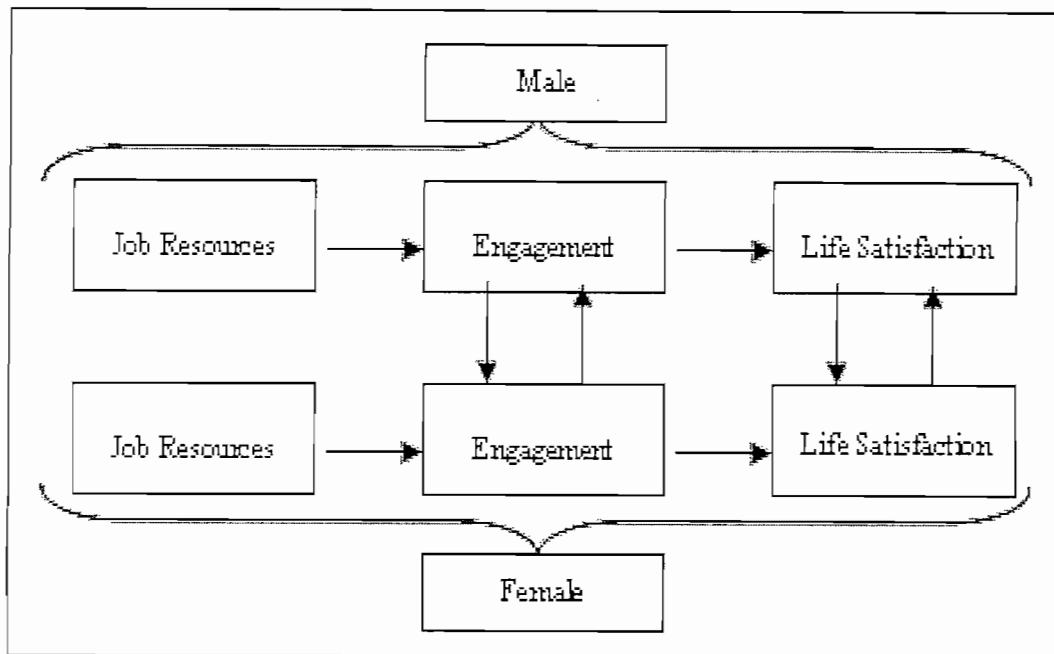
one study confirmed crossover effects of life satisfaction between Dutch partners, but also concluded that it was unidirectional from husbands to wives (Demerouti et al., 2005).

Investigating previous research, it became clear that positive crossover studies needed to be explored further (Bakker et al., 2005; Demerouti et al., 2005; Westman, 2001, 2006). As yet, only five studies focused on positive crossover (Bakker, 2005; Bakker & Demerouti, 2009; Bakker, Demerouti, & Schaufeli, 2005; Demerouti, Bakker, & Schaufeli, 2005; Westman, Etzion, & Shoshi, 2009). The limited research currently available indicates the immense and very valuable contributions of a study on positive crossover between dual-earner couples, not only for the organisation but also in terms of research knowledge for South Africa in general. Organisations will own the power of knowledge on how to optimise the working environment and provide efficient resources to their employees, which will enhance the positive experiences at work and at home since they are mutually related (Bakker et al., 2005). Furthermore, positive actions can result in additional optimised outcomes and consequently work engagement – aspects not necessarily taken into account by management. As Westman (2001) states, a positive study like this will enhance theoretical thinking and make enormous practical contributions to crossover literature.

In this study, a structural model was designed and tested. Recently, Bakker et al.'s (2005) investigation confirmed crossover of engagement between work and home as well as between partners. This crossover of work engagement even contributed to the well-being of partners, which confirmed the positive impact of crossover between partners. As a result, not only affecting work and each other, it also created a positive twirl of achievement at work and at home (Llorens, Salanova, Bakker, & Schaufeli, 2007). However, it is believed that life satisfaction may cross over as well. Demerouti et al. (2005) found that wives' life satisfaction depended on the positive well-being of their husbands. Thus, their husbands' life satisfaction was a precondition for their own. This statement of differencing crossover effects may be yielded to gender role socialisation. Men are said to base their life satisfaction more on work-related matters, whereas women tend to be more sensitive to their social world and more affected by nerve-racking life events of significant others (Block, 1973; Demerouti et al., 2005; Galambos & Silbereisen, 1989). A structural model has made it possible to examine the relationship between job resources, work engagement and life satisfaction, as well as to test for crossover effects of work engagement and life satisfaction between partners. This model is illustrated in Figure 1.

Figure 1

A Crossover Model



The following research questions can be formulated based on the above-mentioned description of the research problem:

- Does a relationship exist between job resources, work engagement, and life satisfaction for dual-earner partners?
- Can a structural model be tested of job resources, work engagement, and life satisfaction for dual-earner partners?
- Is there a crossover effect of work engagement and life satisfaction between dual-earner partners?
- What future recommendations can be made regarding crossover studies?

In order to answer the above research questions, the following research objectives are set:

1.2 RESEARCH OBJECTIVES

The research objectives are divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this research is to test a structural model of the crossover effect of work engagement and life satisfaction between partners.

1.2.2 Specific objectives

The specific objectives of this research are:

- To determine the relationship between job resources, work engagement, and life satisfaction for dual-earner partners.
- To test a structural model of job resources, work engagement, and life satisfaction for dual-earner partners.
- To test a crossover effect of work engagement and life satisfaction between dual-earner partners.
- To make future recommendations regarding crossover studies.

1.3 RESEARCH METHOD

This research, pertaining to the specific objectives, consists of two phases, namely a literature review and an empirical study.

1.3.1 Literature review

In completion of phase one a complete review regarding job resources, work engagement, life satisfaction and crossover effects were done. The sources consulted included books and research journals. The results obtained are presented in the form of a research article in chapter two.

1.3.2 Empirical study

The empirical study consists of the research design, participants and procedure, measuring battery and statistical analysis.

1.3.2.1 Research design

The aim of the research design is to enable data collected to be expressed in numbers as this study gathers quantitative data. As defined by Struwig and Stead (2001), research designs are strategies that can be implemented to address research questions. A cross-sectional design will be used to obtain the data and research objectives of this study. This design is most appropriate because multiple samples can be drawn from the population at a particular point in time (Shaughnessy, Zechmeister, & Zechmeister, 2003). It also aids to make predictions because it allows comparisons of differences and characteristics between two or more populations.

1.3.2.2 Participants and procedure

The convenience sampling technique will be used to gather information among South African dual-earner couples with small children. Initially, only nursery schools will be approached, as they offer easy access to the target population. Nursery schools in the North West and Gauteng Provinces will be phoned, visited and asked for permission to distribute questionnaires to the children's parents. After consent is obtained by approximately 80 nursery schools, each will receive between 10 and 80 envelopes, depending on the size of the nursery. Each envelope will contain the following: a letter containing information about the research and ethics and a request to participate in the study; and two identical questionnaires (code-numbered in order to match the partners afterwards). The teachers will collect the completed questionnaires; each couple's sealed separately within an envelope. The questionnaires will then be collected from the nursery in the same manner as they were distributed. Provision will be made to include primary schools and particular organisations in the event of poor response. Questionnaires will be distributed either by hand, post or e-mail. The data gathering will extend over a period of 12 months and approximately 2 000 questionnaires (in effect 1 000 couples) will be distributed in this time and manner.

1.3.2.3 Measuring battery

The following measuring instruments will be used in this empirical study:

Job resources. *Autonomy* will be measured with a three-item scale developed by Bakker, Demerouti, and Verbeke (2004). Items will be rated on a five-point frequency rating scale varying from 1 (*never*) to 5 (*always*), with an example item being “Do you have freedom in carrying out your duties?”. *Social support* will also be measured with a three-item scale developed by Bakker et al. (2004). Items will be scored on the same five-point frequency rating scale as *Autonomy*, with “Can you, if necessary, ask your colleagues for help?” as an example. *Job development possibilities* will be assessed with three items on a five-point frequency rating scale varying from 1 (*never*) to 5 (*always*), developed by Bakker, Demerouti, Taris, Schaufeli, and Schreurs (2003). An example item: “My work offers me the opportunity to learn new things”. Cronbach alpha coefficients ranged between 0,68 and 0,74 for *Autonomy* and between 0,81 and 0,85 for *Social support* (Bakker et al., 2004; Bakker, Demerouti, & Euwema, 2005). Bakker et al.’s (2003) results revealed a cronbach alpha coefficient of 0,90 for *Job development possibilities*.

Work engagement. The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) will be used to measure work engagement. The dimensions of work engagement as proposed by the UWES comprise vigour, dedication and absorption. However, exclusive to the South African context, three studies confirmed each three different, yet valid and reliable dimensional constructs for work engagement with the UWES. These are: Storm and Rothmann’s (2003) three-factor structure; Naudé and Rothmann’s (2004) two-factor structure; and Bosman et al.’s (2005) one-factor structure. An alpha coefficient of 0,94 was obtained for the one-factor structure of work engagement in a sample of 297 employees in government offices in the Gauteng Province (Bosman et al., 2005). In this study, the UWES will be scored on a seven-point frequency rating scale varying from 1 (*never*) to 7 (*always*). Five items will be used to measure the one-factor structure of work engagement, which includes items such as “At work I feel bristling with energy” and “I’m enthusiastic about my job”.

Life satisfaction. The *Satisfaction with Life Scale (SWLS)* will be used to measure life satisfaction. It was developed by Diener, Emmons, Larsen and Griffin (1985) and constitutes a five-item measure of overall life satisfaction. The items will be scored on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Typical items include “I am satisfied with my life” and “So far, I have gotten the important things I want in life”. The higher the sum of the item scores, the more life satisfaction the participant will experience.

The SWLS shows internal consistency ($\alpha = 0,87$), test-retest reliability ($\alpha = 0,82$) as well as scale validity (see Diener et al., 1985).

1.3.2.4 Statistical analysis

The statistical analysis will be carried out by means of the SPSS program (SPSS Inc., 2008) and the Amos program (Arbuckle, 2006). Descriptive statistics (means and standard deviations) and inferential statistics will be used to analyse the data. The relationships between the variables will be specified using Pearson product-moment correlations. A 95% confidence interval with $p \leq 0,05$ will be used to determine statistical significance. Effect sizes (Steyn, 1999) will be used to decide on the practical significance of the findings. The practical significance of correlation coefficients are set with a medium effect ($r \geq 0,30$) and a large effect ($r \geq 0,50$).

Structural equation modelling (SEM) will be used to test competing structural models. The goal of SEM is to create linear combinations of observed and latent independent variables to predict linear combinations of observed and latent dependent variables. Maximum likelihood estimation methods will be used with the covariance matrix of the scales as input for the analysis. The goodness-of-fit of the model will be evaluated using absolute and relative indices. The χ^2 goodness-of-fit statistic and the Root Mean Square Error of Approximation (RMSEA) will be used as absolute indices. The following goodness-of-fit-indices will be used as adjuncts to the χ^2 statistics: a) χ^2/df ratio; b) the Incremental Fit Index IFI; c) the Tucker-Lewis Index (TLI); and d) the Comparative Fit Index (CFI). Values smaller than 0,08 for RMSEA are indicative of an acceptable fit, while values greater than 0,10 should lead to model rejection (Cudeck & Brown, 1993). For CFI, TLI and IFI, as a rule of thumb, a value greater than 0,90 is considered as indicating a good fit (Hoyle, 1995) and $\chi^2/\text{df} < 5,00$ (Bentler & Bonett, 1980). Squared Multiple Correlations Index will be used to determine percentage variances.

1.4 OVERVIEW OF CHAPTERS

This mini-dissertation comprises three chapters, this being chapter one. Chapter two presents the results of the study in article format while chapter three will discuss limitations and recommendations regarding the study.

1.5 CHAPTER SUMMARY

This chapter discussed the problem statement and relevant literature as well as the research objectives derived from the problem statement. It argued why research was needed and described the research method that was used. The following chapter, containing the results of the research, will be presented in article format.

REFERENCES

- Arbuckle, J. L. (2006). *Amos 7.0 User's Guide*. Chicago, IL: SPSS Inc.
- Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior*, 66, 26-44.
- Bakker, A. B., & Demerouti, E. (2009). The crossover of work engagement between working couples. *Journal of Managerial Psychology*, 24(2), 220-236.
- Bakker, A. B., Demerouti, E., De Boer, E. & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior*, 62, 341-356.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2003). Dual processes at work in a call centre: An application of the Job Demands-Resources model. *European Journal of Work and Organizational Psychology*, 12, 393-417.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2005). The crossover of burnout and work engagement among working couples. *Human Relations*, 58(5), 661-689.
- Bakker, A. B., Demerouti, E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. G. (2003). A multigroup analysis of the Job Demands-Resources model in four home care organizations. *International Journal of Stress Management*, 10(1), 16-38.
- Barnett, R. C., Raudenbush, S. W., Brennan, R. T., Pleck, J. H., & Marshall, N. L. (1995). Changes in job and marital experience and change in psychological distress: A longitudinal study of dual-earner couples. *Journal of Personality and Social Psychology*, 69, 839-889.
- Barnes, B. L. (1984). Mental health dimensions and ego-strength potential. *Indian Journal of Clinical Psychology*, 11, 61-65.
- Bentler, P. & Bonett, D. (1980). Significance tests and goodnesses of fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.
- Block, J. H. (1973). Conceptions of sex role: Some cross-cultural and longitudinal perspectives. *American Psychologist*, 28, 512-526.
- Bolger, N., DeLongis, A., Kessler, R., & Wethington, E. (1989). The contagion of stress across multiple roles. *Journal of Marriage and the Family*, 51, 175-83.
- Bosman, J., Rothmann, S., & Buitendach, J. H. (2005). Job insecurity, burnout and work engagement: The impact of positive and negative affectivity. *SA Journal of Industrial Psychology*, 31(4), 48-56.

- Bourland, S. L., Stanley, M. A., Snyder, A. G., Novy, D. M., Beck, J. G., Averill, P. M., & Swann, A. C. (2000). Quality of life in older adults with generalized anxiety disorder. *Aging and Mental Health*, 4, 315-323.
- Bundy, A. C. (1993). Assessment of play and leisure: Delineation of the problem. *The American Journal of Occupational Therapy*, 47, 217-222.
- Chan, C. J., & Margolin, G. (1994). The relationship between dual-earner couples' daily work mood and home affect. *Journal of Social and Personal Relationships*, 11, 573-659.
- Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology*, 42, 401-426.
- Cudeck, R., & Browne, M. W. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. Scott Long (Eds.), *Testing structural equation models* (pp. 1-9). Newbury Park, CA: Sage.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.
- Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2005). Spillover and crossover of exhaustion and life satisfaction among dual-earner parents. *Journal of Vocational Behavior*, 67, 266-289.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Donovan, N., & Halpern, D. (2002). *Life satisfaction: The state of knowledge and implications for government*. A report retrieved online on May 26, 2009, at <http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/paper.pdf>.
- Galambos, N. L., & Silbereisen, R. K. (1989). Role strain in West Germany dual-earner households. *Journal of Marriage and Family*, 51, 385-389.
- Geurts, S. A. E., Taris, T. W., Kompier, M. A. J., Dijkers, J. S. E., Van Hooff, M. L. M., & Kinnunen, U. M. (2005). Work-home interaction from a work psychological perspective: Development and validation of the SWING. *Work & Stress*, 19(4), 319-339.
- Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.
- Hammer, L. B., Allen, E., & Grigsby, T. D. (1997). Work-family conflict in dual-earner couples: Within individual and crossover effects of work and family. *Journal of Vocational Behavior*, 50, 185-203.
- Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. In: *Structural equation modeling: Concepts, issues, and applications*, Hoyle RH (Ed.), 1-15, Sage, Thousand Oaks, CA.

- Jones, F., & Fletcher, B. (1993a). An empirical study of occupational stress transmission in working couples. *Human Relations*, 46, 881-902.
- Jones, F., & Fletcher, B. (1993b). Transmission of occupational stress: A study of daily fluctuations in work stress and strain and their impact on marital partners. In H. Schroder, K. Rescke, M. Johnston, & S. Maes (Eds.), *Health Psychology: Potential in diversity* (pp. 328-366). Regensburg: Roderer Verlag,
- Jones, F., & Fletcher, B. (1996). Job control and health. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *Handbook of work and health psychology* (pp. 33-50). Chichester: Wiley.
- Lanzetta, J. T., Sullivan, D. G., Masters, R. D., & Mchugo, G. J. (1985). Viewers' emotional and cognitive responses to televised images of political leaders. In S. Kraus & R. Perloff (Eds.), *Mass media and political thought* (pp. 85-116). Beverly Hills, CA: Sage.
- Llorens, S., Salanova, M., Bakker, A. B., & Schaufeli, W. B. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior*, 23, 825-841.
- Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. Drenth, H. Thierry, & C. J. de Wolff (Eds.), *Handbook of work and organizational psychology* (pp. 5-33), Hove, England: Psychology Press Ltd.
- Naudé, J. L. P., & Rothmann, S. (2004). The validation of the Utrecht Work Engagement Scale for emergency health technicians in Gauteng. *South African Journal of Economic and Management Sciences*, 7(3), 459-468.
- Organ, D. W., & Paine, J. B. (1999). A new kind of performance for industrial and organizational psychology: Recent contributions to the study of organizational citizenship behaviour. In C. L. Cooper, & I. T. Robertson (Eds.), *International review of industrial and organizational psychology*, (pp. 337-405). Chichester: Wiley.
- Paolini, L., Yanez, A. P., & Kelly, W. E. (2006). An examination of worry and life satisfaction among college students. *Individual Differences Research*, 4(5), 331-339.
- Parasuraman, S., Greenhaus, J. H., & Granrose, C. S. (1992). Role stressors, social support and well-being among two-career couples. *Journal of Organizational Behavior*, 13, 339-395.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *SA Journal of Industrial Psychology*, 29(4), 16-25.

- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25, 293-315.
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies*, 3, 71-92.
- Shaughnessy, J. J., Zechmeister, E. B., and Zechmeister, J.S. (2003). *Research Methods in Psychology* (6th ed). McGraw-Hill.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behaviour. A new look at the interface between non-work and work. *Journal of Applied Psychology*, 88, 518-546.
- SPSS Inc. (2008). *SPSS 16.0 for Windows*. Chicago, IL: SPSS Inc.
- Starcevic, V., & Pointek, C. M. (1997). Empathic understanding revisited: Conceptualization, controversies and limitations. *American Journal of Psychotherapy*, 51, 317-328.
- Stevens, D. P., Kiger, G., & Riley, P. J. (2006). His, hers, or ours? Work-to-family spillover, crossover, and family cohesion. *The Social Science Journal*, 43, 425-436.
- Steyn, H. S. (1999). *Praktiese betekenisvolheid: Die gebruik van effekgroottes*. Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr. 17. Potchefstroom: PU vir CHO.
- Storm, K., & Rothmann, S. (2003). A psychometric analysis of the Utrecht Work Engagement Scale in the South African Police Service. *South African Journal of Industrial Psychology*, 29(4), 62-70.
- Struwig, F. W., & Stead, G. B. (2001). *Planning, designing and reporting research*. SA, Cape Town, Pinelands: Pearson Education.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*, (4th ed.). Boston, MA: Allyn & Bacon.
- Vinokur, A., Price, R. H., & Caplan, R. D. (1996). Hard times and hurtful partners: How financial strain effects depression and relationship satisfaction of unemployed persons and their spouses. *Journal of Personality and Social Psychology*, 71, 166-245.
- Westman, M. (2001). Stress and strain crossover. *Human Relations*, 54(6), 717-751.
- Westman, M. (2006). Crossover of stress and strain in the work-family context. In F. Jones, R. J. Burke., & M. Westman (Eds.), *Work-life balance: A psychological perspective* (pp. 163-184). New York: Psychology Press.
- Westman, M., & Etzion, D. (1995). Crossover of stress, strain and resources from one spouse to another. *Journal of Organizational Behavior*, 16, 169-250.

- Westman, M., Etzion, D., & Shoshi, C. (2009). Crossover of positive experiences from business travellers to their spouses. *Journal of Managerial Psychology*, 24(3), 269-284.
- Westman, M., & Vinokur, A. (1998). Unraveling the relationship of distress levels within couples: Common stressors, empathic reactions, or crossover via social interactions? *Human Relations*, 51, 137-193.
- Wilcock, A. A. (2001). *Occupation for health: A journey from self-health to prescription* (Vol. 1). Southwark, London: British Association and College of Occupational Therapists.

CHAPTER 2

RESEARCH ARTICLE

CROSSOVER OF ENGAGEMENT AND LIFE SATISFACTION AMONG DUAL-EARNER PARENTS

ABSTRACT

The objective of this study was to test a structural model of job resources, work engagement and life satisfaction, and to determine the crossover effects of work engagement and life satisfaction among dual-earner parents in South Africa. A convenience sample of 125 couples ($N = 250$) was taken in the North West and Gauteng Provinces. It was hypothesised that work engagement and life satisfaction would exhibit bidirectional crossover between life partners. This hypothesis was tested with structural equation modelling. Findings confirmed positive relationships between job resources, work engagement and life satisfaction – for each gender separately. Job resources explained variances of 62% for males and 72% for females in work engagement. A variance of 12% with regard to life satisfaction of males was explained by their work engagement, whilst a combination of female work engagement and their spouse's life satisfaction explained 10% of the variance in female life satisfaction. The results verified a small unidirectional crossover of life satisfaction from males to females.

OPSOMMING

Die doelstelling van hierdie studie was om 'n strukturele model van werkshulpbronne, werksbegeestering en lewenstevredenheid op die proef te stel, en om die oordraggevolge van werkstevredenheid en lewenstevredenheid te bepaal onder Suid-Afrikaanse ouers wat beide 'n inkomste verdien. 'n Gerieflikheidsteekproef van 125 pare ($N = 250$) is in die Noordwes- en Gautengprovinsie geneem. Die hipotese was dat werksbegeestering en lewenstevredenheid wedersyds tussen lewensmaats sal oordra. Hierdie hipotese is getoets met behulp van strukturele vergelyking-modellering. Die bevindinge het positiewe verhoudings tussen werkshulpbronne, werksbegeestering en lewenstevredenheid bevestig – vir beide geslagte. Wat werksbegeestering betref, het werkshulpbronne variansies van 62% vir mans en 72% vir vrouens verklaar. 'n Variansie van 12% ten opsigte van lewenstevredenheid van mans is deur hul werksbegeestering verklaar, terwyl 'n kombinasie van vrouens se werksbegeestering en hul lewensmaat se lewenstevredenheid 10% van die variansie in vrouens se lewenstevredenheid verklaar het. Die resultate het 'n diminutiewe eenrigting-oordrag van lewenstevredenheid van man na vrou bevestig.

Change in the dynamics of family life and workforce amalgamation is noticeable worldwide. Amongst other changes, precedents of gender-role expectations are constantly being changed. In South Africa, an increase in the number of dual-career couples – as well as increased gender integration in organisations – is evident. This is mainly due to legislation (Employment Equity Act, Act No. 55 of 1998; Skills Development Act, Act No. 97 of 1998), increased demand for labour, and the financial yoke exacerbated by young children (Van der Westhuizen, Goga, & Oosthuizen, 2007). As a result, it is expected that the traditional roles of men and women in society should also adapt in response to these changes. However, research has shown that women still execute the majority of domestic chores and accept primary responsibility for child rearing and other family activities despite the proliferation of dual-career couples and the endorsement of egalitarian relationships (Cooper, Dewe, & O'Driscoll, 2001; Doucet, 2000; Windebank, 2001).

The question then arises: if change (due to dual-career couples and gender integration in organisations) is not visible in traditional gender roles, where is it located? The answer may be found in the individual's internal and external interaction processes and relationships. For instance, if one experiences job stress, the negative consequences of the underlying symptoms will remain within the individual when he or she returns home, causing stress at home. According to Bolger, DeLongis, Kessler and Wethington (1989), this process is known as spillover and refers to transmission of emotions and feelings from one domain to the next in the same individual. Similar to spillover, another type of transference was identified, termed crossover. This entails that one has the ability to project one's feelings and emotions onto someone else, to the extent that the other person reacts to it, whether in a similar or opposite manner. Reflect for a moment on how the atmosphere at work changes when one's supervisor is in a foul mood. It has either a direct or an indirect impact on his or her subordinates' behaviour. Similarly, feelings or attitudes of an employee could be transferred to his or her spouse when returning home from work, influencing the spouse's feelings or attitudes in the home domain. Crossover research therefore investigates the influential relationship and behavioural changes between spouses. It sheds light on the occurrence of similar reactions that develop across work and home domains because of interpersonal relations between partners (Westman, 2001).

Earlier research conducted on couples concluded that crossover of symptoms such as distress, work-family conflict, depression and burnout occurs between partners (Barnett, Raudenbush,

Brennan, Pleck, & Marshall, 1995; Hammer, Allen, & Grigsby, 1997; Vinokur, Price, & Caplan, 1996; Westman & Vinokur, 1998; Westman & Etzion, 1995). However, the directionality of crossover effects differed. In a longitudinal study of 210 dual-earner couples, results showed bidirectional crossover effects of distress between spouses (Barnett et al., 1995). Other bidirectional crossover effects of burnout were confirmed between spouses in a cross-sectional study of 101 dual-earner couples (Westman & Etzion, 1995). However, it seems that earlier studies dating back to the 1980s primarily researched (negative) crossover effects specifically from husbands to wives, and not vice versa (Jackson & Maslach, 1982; Jackson, Zedeck, & Summers, 1985; Long & Voges, 1987). This might be due to traditional expectations of the husband being the sole breadwinner (Giddens, 2006). However, modern society reflects an increase in dual-earner couples, which means that both partners oscillate between work and home domains and have the ability to influence the other. This shifted prominence to both spouses, thus stressing the importance of conducting studies of dual-earner couples.

In the field of psychology, researchers and other theorists uttered a great deal of criticism towards the primary focus on negative symptoms rather than wellness attributes (Seligman & Csikszentmihalyi, 2000). This precedent was deemed to be responsible for gaps in literature, because one can only gain a comprehensive understanding of the significance and effects of working if research is extended to include positive aspects (Turner, Barling, & Zacharatos, 2002). As a result, crossover research is shifting its focus from negative influences to crossover effects of a positive nature. This is also true for research on the crossover of burnout, where two recent studies indicated the need to also investigate the crossover of work engagement (Bakker, Demerouti, & Schaufeli, 2005; Bakker & Demerouti, 2009).

Work engagement is defined as a constructive, rewarding, work-related mindset characterised by vigour, dedication and absorption (Schaufeli et al., 2002). An engaged worker is motivated and productive and has a positive influence on others (Roberts & Davenport, 2002; Sonnentag, 2003). The crossover of engagement between spouses is therefore important to study, as it may initiate a positive spiral of success that is communicated to others at work and at home (Llorens et al., 2007). Work engagement may be transferred to spouses with diverse jobs and dissimilar work environments if the vigour and dedication expressed by the partners bring forth enthusiasm regarding one's own work. This transference can occur either consciously or unconsciously, with three possible reasons for it. Firstly, crossover may occur

through an empathic reaction shown during interpersonal communication which enables partners to place themselves psychologically in each other's circumstances (Starcevic & Pointek, 1997). Secondly, positive emotions may cross over between partners through an automatic process of emotional contagion (Hatfield, Cacioppo, & Rapson, 1994). Lastly, research results confirmed that positive work-related states have positive influences on private life (Bakker & Geurts, 2004). This implies that a cheerful husband returning home from work might be more willing to help his wife in child rearing or home duties, simultaneously providing her with opportunities for recovery that will promote her own work engagement the next day (Sonnentag, 2003).

Evidently, the benefits for work engagement research are compelling and will be insightful for organisations. It will enable them to put systems in place that foster a workforce of positive energy instead of muddling, an atmosphere of challenge and stimulation instead of pressure, and employees who enjoy work and bear positive consequences to those in contact with them. Rather than focusing solely on the prevention of burnout, one can be actively pursuing work engagement.

Apart from the positive consequences that an engaged employee generates for the organisation, work engagement is also an important determining factor of one's overall life satisfaction (Bundy, 1993; Wilcock, 2001). Benefits of life satisfaction may include tendencies to be happier, more productive and living with a greater passion for life (Donovan & Halpern, 2002). These feelings and particular mindset of an individual can have a ripple effect and inspire not only his or her colleagues, but also his or her partner's feelings and mindset. This results in an increase in the partner's overall life satisfaction, promoting his or her cheerfulness, and embodying the same behaviour in his or her organisation. At least one study confirmed crossover effects of life satisfaction between Dutch partners, but also concluded that it was unidirectional from husbands to wives (Demerouti, Bakker, & Schaufeli, 2005).

In conclusion, Westman (2001) confirmed the insufficiency of knowledge regarding positive experience transference, and stressed the need for it to be researched more extensively. Furthermore, the only studies with regard to positive crossover effects such as work engagement and life satisfaction have been done in the Netherlands. Since South Africa differs vastly in terms of culture, language, legislation, ethnicity, etc., the results of crossover

studies cannot necessarily be generalised to the South African context. Also, since South Africa's readmission to the international arena, comparative studies shed more light on intercultural differences and similarities, with the emphasis on dual-earner couples. Therefore, in order to address these voids, this study aims to test a crossover model of work engagement and life satisfaction among dual-earner parents.

Crossover

According to Bolger et al. (1989), there are two processes in which job stress can be transferred, namely spillover and crossover. In spillover, the focus is of an individualistic nature. This entails that if one experiences job stress, these feelings and state of mind are carried over to home, which influences the same individual's behaviour and conduct in this domain. Crossover on the other hand includes behavioural changes of significant others, i.e. stress experienced by one partner at the work place, increases stress levels of the spouse at home. Thus, crossover investigates occurrences of similar reactions that develop across work and home domains because of interpersonal relations between partners. However, it is not easy to investigate this phenomenon, since it has not yet been established exactly how the crossover process works (Westman, 2001).

The literature concludes three main possibilities to explain the crossover process: direct effects (empathy), indirect effects (mediators and/or moderators), or spurious effects (common stressors). Crossover can occur directly between partners through empathy, because of the emotional relationship between them. Empathy is an emotional form of dyadic communication that enables one to experience and be affected by one's partner's state, whether positive or negative (Starcevic & Pointek, 1997). It implies an understanding and acknowledgment of an individual's views and feelings, enabling the partner to share these feelings, therefore also experiencing it and carrying it over to another domain. Crossover as an indirect process might be explained by speculating as to which possible mediating or moderating effects influence the variable being carried over. For example, coping mechanisms mediate stress, whilst positive work-home interaction mediates work engagement (Coyne & Downey, 1991; Mostert, Cronje, & Pienaar, 2006). Therefore, it depends on the variable that crosses over. Spurious or imitative effects may also cause a crossover effect. Automatic imitation is the aligning of facial expressions and non-verbal communication between partners. Lanzetta, Sullivan, Masters, and Mchugo (1985) illustrated

this effect with their experimental study in which individuals' reactions were filmed while listening to a speech of an authoritative person. When he shared something painful, they responded with similar facial expressions, a similar reaction occurred when he talked about something happy.

Several experimental studies have shown that positive and negative emotions may cross over from one person to another (Hatfield et al., 1994). However, other researchers suggest that crossover effects might be the result of common stressors, since many stressors in a shared environment make simultaneous demands on both individuals in a dyad (Burke, Weir, & DuWors, 1980; Hobfoll & London, 1986; Westman & Etzion, 1995). Similarly, mood-lifting factors might provide resources to both individuals in a shared environment, also resulting in crossover effects. In conclusion, processes of crossover have not yet been determined. Therefore, it is necessary to investigate crossover findings in more detail.

The examination of previous crossover research led to five conclusions:

Firstly, it is evident that ample studies regarding crossover effects exist, some of these dating back to the 1980s. However, the focus was primarily on negative variables, e.g. work mood, job and home stress, job dissatisfaction, negative events and strains, occupational demands, and distress (Bolger et al., 1989; Burke et al., 1980; Chan & Margolin, 1994; Jackson & Maslach, 1982; Mitchell, Cronkite, & Moos, 1983; Riley & Eckenrode, 1986).

Secondly, *participants* (employed vs. unemployed) and *research designs* (cross-sectional vs. longitudinal) differed between studies, adding in difficulty to generalise results (Bolger et al., 1989; Burke et al., 1980; Chan & Margolin, 1994; Jackson & Maslach, 1982). Further investigations of *crossover results* confirmed crossover to be either unidirectional or bidirectional (Bakker et al., 2005; Demerouti et al., 2005; Jones & Fletcher, 1993; Westman & Etzion, 1995). Unidirectional only allows one path of crossover, whilst bidirectional signifies a crossover from one partner to the other, and vice versa. Assessing the directionality of crossover begets another quest to determine the role of gender in the crossover process. Differences between men and women vary in regards to traditional role demands and expectations, as well as relevancy of family events (Johnson & Jackson, 1998; Lambert, 1990). In addition, men and women differ in the way they interpret others' emotions, resulting in possible emotional contagion (Haviland & Malatesta, 1981). For

women, feelings of vulnerability are more likely to occur, whilst men are more likely to offer strong resistance to emotional contagion. However, previous findings differ to such an extent that gender differences in the crossover process are incongruent (Westman, 2006). These multiple differences in research results make it impossible to make assumptions or to draw conclusions about the functioning of the crossover process. This is currently the most pressing research need (Westman, 2001).

Thirdly, it is noteworthy that only five studies have investigated crossover of positive experiences, four of which focused on dual-earner couples. The first study to investigate crossover of positive emotions at work was done by Bakker (2005). The participants comprised 178 music teachers and 605 students from different music schools, and findings confirmed that peak experiences of flow (intrinsic motivation, enjoyment, and absorption) transferred from music teachers to their students. However, it should be noted that although this study confirmed crossover, it is not the same as crossover between spouses, because marital relationships differ from other interpersonal relations. The following four studies focused on dual-earner couples and corroborated these positive crossover results. Bakker et al. (2005) investigated crossover effects of work engagement in a study of highly educated employed couples ($N = 323$ couples). They found bidirectional crossover effects for vigour and dedication among partners. In Demerouti et al. (2005), findings presented robust crossover effects of life satisfaction from husbands to wives. Their study included 191 dual-earner parents in the Netherlands, and offered insights into why the life satisfaction of wives depends so strongly on that of their husbands. Westman, Etzion and Shoshi (2009) researched crossover of positive experiences, specifically vigour, from 275 business travellers to their working spouses. Findings concluded that positive relationships existed between a traveller's demands and resources, and his or her vigour. In turn, as hypothesised, business travellers' vigour crossed over to their spouses' vigour. The most recent study examined crossover of work engagement from 175 Dutch women to their working spouses, also including the role of empathy in the crossover process (Bakker & Demerouti, 2009). It was found that men who revealed empathy towards their wives were more acquiescent to their wives' work engagement, which resulted in behavioural change towards their own job. In other words, if he could place himself psychologically in her circumstances, he could experience a greater deal of what she was feeling, which would in turn influence the way in which he approached his own work. While all of the above concluded that positive experiences can cross over, only one study found bidirectional crossover effects (Bakker et al., 2005).

Fourthly, before this study no attempt has been made to examine possible crossover effects among dual-earner couples in South Africa. Finally, the need for positive crossover research is becoming more apparent, as researchers agree that more studies should focus on it (Bakker et al., 2005; Demerouti et al., 2005; Westman, 2001, 2006). This is also true for research on the crossover of burnout, where two recent studies pointed out the necessity to examine the crossover of work engagement (Bakker et al., 2005; Bakker & Demerouti, 2009).

Work Engagement

Work engagement is defined as a dynamic, fulfilling, work-related mindset typified by three dimensions, namely *vigour* (e.g. energy & mental resilience), *dedication* (e.g. commitment & enthusiasm) and *absorption* (e.g. concentration & engrossed in work) (Schaufeli et al., 2002). The stimulus behind work engagement research stemmed from victims suffering from burnout (Bakker, Schaufeli, Leiter, & Taris, 2008). This resulted in the conclusion that burnout and work engagement's dimensions are directly opposite of each other, i.e. (1) exhaustion – vigour, (2) cynicism – dedication, and (3) low personal efficacy – absorption. However, work engagement has been elevated into a sphere justifying it to be defined in its own right, since the absence of burnout does not necessarily mean that the individual enjoys a working state of euphoria (Schaufeli & Bakker, 2004).

A measuring instrument was introduced to assess work engagement as an independent state, namely the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002). The UWES is established as a reliable and valid instrument, and is most often used and widely validated through confirmatory factor analysis in several countries, including South Africa (Rothmann & Storm, 2003; Naudé, 2003). However, the Absorption scale of the UWES was found to be problematic in South African studies, due to either low internal consistency or poor loadings, along with a two-factor (vigour & dedication) structure confirmation in two recent studies (Naudé & Rothmann, 2004; Rothmann, 2005). In addition, Bosman, Rothmann and Buitendach (2005) confirmed a one-dimensional construct of work engagement in their South African study of 297 government employees in Gauteng. Moreover, this outcome was also formerly suggested by a number of researchers as a great possibility, because of the high correlations between the dimensions (Naudé, 2003; Rothmann & Storm, 2003).

Several findings have concluded that work engagement is mainly the result of job resources available in the organisation (see literature review by De Lange, De Witte, & Notelaers, 2008). The Job-Demands Resources Model (JD-R) is based on the belief that job resources are a prerequisite for work engagement (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job resources refer to physical, psychological, social and organisational aspects of the work that offer a practical manner in which to reach objectives, reduce job demands, and provide prospects for personal growth and development (Bakker et al., 2005; Jones & Fletcher, 1996). Resources may be situated at four different levels: a) organisation (e.g. salary, job security); b) interpersonal and social relations (e.g. support, team climate); c) work classification (e.g. role clarity, partaking in decision-making), and d) tasks (e.g. performance feedback, autonomy). Furthermore, the JD-R model stipulates that job resources' motivational role can be either intrinsic (such as encouragement towards learning and development) or extrinsic (such as an active approach towards goal accomplishment) (Bakker et al., 2003; Demerouti et al., 2001).

Work engagement derived from sufficient job resources yields multiple benefits for the individual as well as for others. Bakker (2008) offers four reasons why being engaged in one's work is better: an individual (1) enjoys frequent experiences of positive emotions; (2) has better psychological and physical health; (3) is more likely to generate personal resources; and (4) has the ability to influence others' work engagement levels. Thus, if one experiences work engagement, it may cross over to other people who are in contact with the individual. Two studies confirmed this. The first attempt to test whether experiences of work engagement may cross over was done by Bakker et al. (2005). They found equally strong bidirectional crossover effects of work engagement (vigour & dedication) between partners in a study among Dutch working couples ($N = 323$) in various occupations. Another study was conducted amongst 175 Dutch women and their partners in different working sectors (Bakker & Demerouti, 2009). Although this study only examined whether work engagement would cross over from female to male, it included the role of empathy. The results confirmed crossover effects to be strongest when men revealed high levels of psychological perspective taking (showing empathy) towards their spouses. In other words, when males showed high levels of empathy towards their partners, they were more receptive of their wives' influences on their own work engagement, which consequently led to behavioural change at their workplace. Therefore, a convincing presumption stems from the relational behavioural change that one person develops due to influences of another. Therefore, if these influences

remain positive and escalate, it will most likely affect one's overall attitude and feelings towards life itself.

Life Satisfaction

Life satisfaction is one of three components associated with subjective well-being and is defined as a cognitive evaluation of satisfaction with life in broad (Andrews & Withey, 1976; Hart, 1999). This evaluation or cognitive judgemental process stems from internal judgement within an individual that determines his or her level of satisfaction in present circumstances (Diener, 1984; Shin & Johnson, 1978). In addition, a positive spiral is set in motion where the increase of positive benefits enhances life satisfaction, since fulfilled people tend to be more cheerful, creative, flexible and able to manage work-related problems head-on in an effective and productive manner (Donovan & Halpern, 2002; Pasupuleti, Allen, Lambert, & Cluse-Tolar, 2009). Thus, work and family life are most definitely influenced by this positive state of mind.

The manner in which work and family life are linked and the influence of the work environment on the employee can be explained by three theories, i.e. the spillover theory, the compensatory theory and the segmentation theory (Kantak, Futrell, & Sager, 1992; Piotrkowski, 1979; Wilensky, 1960). The spillover theory suggests that the work environment of an adult, whether pleasant or unpleasant, has a direct impact on his or her level of life satisfaction. Conversely, the compensatory theory suggests a negative relation between work and life satisfaction. For instance, a dissatisfied worker might find satisfaction in non work-related areas, which could increase the individual's satisfaction with life in general (Wilensky, 1960). The segmentation theory asserts that no relationship exists between work and life satisfaction, implying that the work environment will have no influence whatsoever on the worker's life satisfaction (Dubin, 1973; Kantak et al., 1992). These theories focus solely on the individual and do not incorporate possible behaviour changes in people who are in contact with the individual on a daily basis. However, crossover incorporates the theories with the additional dyad. Therefore, it will be more valuable to examine crossover results concerning couples – specifically in relation to life satisfaction – than to investigate these theories more in-depth.

The examination of life satisfaction research rendered two studies worth mentioning. The first study was done in 1985 on a sample of 1 515 American husbands who were divided in two groups relating to the wife's employment or lack thereof (Staines, Pottick, & Fudge, 1985). This study found a negative association between the life satisfaction of employed wives and their husbands. However, as mentioned before, societal expectations were different in the past; therefore, recent studies will be more relevant due to the modern society in which we find ourselves. For that reason, the second study completed in 2005 in the Netherlands deserves prominence (Demerouti et al., 2005). The participants consisted of 191 married couples, all of whom were dual-earner parents. The results confirmed unidirectional crossover of life satisfaction from husband to wife, stating a woman's sensitivity to the positive well-being of her husband as prerequisite for her own satisfaction. A possible explanation for this finding might be the effect of gender role socialisation, which implies men's work-related focus as contributor to life satisfaction, while women's more complicated combination of their social surroundings and significant others' experiences captures the essence of their life satisfaction (Block, 1973; Demerouti et al., 2005; Galambos & Silbereisen, 1989). Demerouti et al.'s (2005) results opened up new possibilities for crossover studies in the realm of life satisfaction and the reflection of it on spouses. Since determination of possible crossover of life satisfaction in South Africa has not been attempted before, this may serve as the stepping-stone for further research into this phenomenon.

A structural model

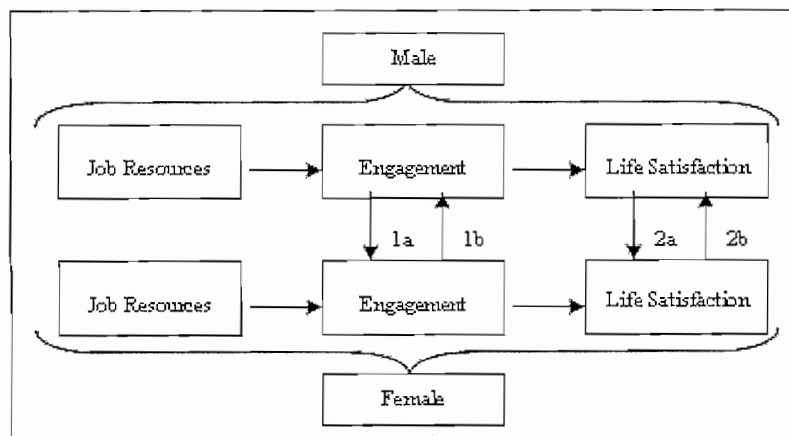
Researchers agree that negative crossover effects have been the focal point for too long and that attention should shift to crossover effects of a positive nature (Bakker et al., 2005; Demerouti et al., 2005; Westman, 2001; 2006). For this purpose, a crossover model will be the most appropriate way to determine if positive crossover effects occur between partners. Westman (2001) made valuable contributions in the crossover field with her crossover model of stress. Even though they are based on negative crossover effects, the underlying theories are applicable to this study's model. The crossover model incorporates work-family models (segmentation, compensation and spillover) that explain the process by which work and family life are linked, with an additional level of analysis that focuses on the intra-individual level and dyad. The proposed model starts with the individual and moves to the dyad. It is sensible to anchor the model in role theory in view of its usefulness for crossover research (Kahn et al., 1964). Role theory emphasises interrelations between a focal person and his or

her role senders in various settings. In other words, this theory concerns both the person and his or her role senders to such an extent that it encompasses spouses and co-workers' expectations as well as the interaction between them. This theory further implies that a complicated exchange of work and family settings occurs with spouses' social surroundings over time. Kahn et al.'s (1964) role theory thus conceptualises the intimate connection between family members and others in the workplace, which is paramount in the determination of crossover effects. This study will mirror the same principles of the stress crossover model, but with positive variables to determine crossover effects. Hence, the compilation of a multifaceted structural model designed to incorporate job resources, work engagement and life satisfaction.

Findings suggest that efficient job resources contribute to work engagement, which in turn bolsters one's overall satisfaction with life, since engaged workers generate positive consequences for their organisation, for themselves and for others (Bakker & Demerouti, 2008; Organ & Paine, 1999; Schaufeli & Bakker, 2004; Schaufeli & Salanova, 2007; Sonnentag, 2003). The structural model attempts to facilitate crossover of engagement and life satisfaction between spouses, and is illustrated in Figure 1.

Figure 1

A Crossover Model



The central aim of the present study is to examine whether work engagement and life satisfaction of South Africans may cross over between partners. Since positive crossover research has not been done in South Africa, the crossover assumptions in this study are based

on the crossover findings of two other studies done in the Netherlands (Bakker et al., 2005; Demerouti et al., 2005). The research hypotheses are as follows:

Hypothesis 1: There is crossover of engagement from male to female (H1a).

There is crossover of engagement from female to male (H1b).

Hypothesis 2: There is crossover of life satisfaction from male to female (H2a).

There is crossover of life satisfaction from female to male (H2b).

The rationale behind a bidirectional crossover prediction is derived from the participants of the particular study consisting of dual-earner parents. Even though the majority of findings suggest a unidirectional crossover from male to female, numerous studies confirmed bidirectional crossover of negative effects between partners (Demerouti et al., 2005; Hammer, Bauer, & Grandey, 2003; Jones & Fletcher, 1993; Westman & Etzion, 1995; Westman & Vinokur, 1998). Nevertheless, there is no reason why females should not have a positive influence on their partners' engagement and life satisfaction.

METHOD

Research design

A cross-sectional survey design was used to acquire the data and research objectives of this study. The design fitted well for the gathering of data since multiple samples were drawn from the population at specific points in time (see Shaughnessy, Zechmeister, & Zechmeister, 2003).

Participants and procedure

The convenience sampling technique was used to gather information among South African dual-earner couples with small children. Initially, only nursery schools were approached, as they offered easy access to the target population. Nursery schools in the North West and Gauteng Provinces were phoned, visited and asked for permission to distribute questionnaires to the children's parents. After consent was given by approximately 80 nursery schools, each received between 10 and 80 envelopes, depending on the size of the nursery. Each envelope

contained the following: a letter containing information about the research and ethics and a request to participate in the study; and two identical questionnaires (code-numbered in order to match the partners afterwards). The teachers collected the completed questionnaires; each couple's sealed separately within an envelope. The questionnaires were collected from the nursery in the same manner as they were distributed. However, the response rate was very low. Therefore, primary schools and particular organisations were also included. Questionnaires were distributed either by hand, post or e-mail. The data gathering extended over a period of 19 months, and approximately 2 000 questionnaires (in effect 1 000 couples) were distributed in this time and manner. Ultimately, the extent of participants concluded to 125 useable couples ($N = 250$). Many questionnaires were unusable due to the fact that they were completed by only one spouse or because they were never retrieved. The characteristics of the participants can be viewed in Table 1 below.

As can be seen in Table 1, the majority of participants (67%) were between the ages of 30 and 39 years. Approximately 51% held either a high school diploma (25,6%) or a college degree (25,6%), while 30,4% had a university degree. Years of work experience ranged from 1 to 36 years, with the most participants presented in the category of 10-19 years (65,2%). Most of the participants specialised in working with people (64%), while others worked with either information (19,2%) or things (14,4%). Focusing on the working sector, a greater fraction of participants worked in various industries (25,6%), in teaching/education (16%), or in government departments (10%), whilst the fewest were employed in communication (1,2%). Of all the participants, 7,2% were of the opinion that their working sectors were not listed. These included sectors such as legal, mining, and information technology.

Table 1

Characteristics of Participants (N = 250)

Item	Category	Frequency	Percentage
Gender	Male	125	50,0
	Female	125	50,0
Age (in years)	21-29	27	10,8
	30-39	168	67,2
	40-49	45	18,0
	50-55	8	3,2
	Missing values	2	0,8
Education	High school	64	25,6
	College	64	25,6
	University degree	76	30,4
	Postgraduate studies	28	11,2
	Master's degree	15	6,0
	Doctoral degree	3	1,2
Work Experience (in years)	1-9	43	17,2
	10-19	163	65,2
	20-29	34	13,6
	30-36	9	3,6
	Missing values	1	0,4
Speciality	People	160	64,0
	Things	36	14,4
	Information	48	19,2
	Missing values	6	2,4
Work Sector	Industry	64	25,6
	Building sector	10	4,0
	Trade	10	4,0
	Hotel and catering	5	2,0
	Transport	6	2,4
	Financial institution	15	6,0
	Business services	19	7,6
	Communication	3	1,2
	Government department	25	10,0
	Teaching/Education	40	16,0
	Health care & social work	21	8,4
	Agriculture	11	4,4
	Other	18	7,2
	Missing values	3	1,2

Measuring instruments

Job resources. *Autonomy* was measured with a three-item scale developed by Bakker, Demerouti, and Verbeke (2004). Items were rated on a five-point frequency rating scale that varied from 1 (*never*) to 5 (*always*), with an example item being “Do you have freedom in carrying out your duties?”. *Social support* was also measured with a three-item scale developed by Bakker et al. (2004). Items were also rated on a five-point frequency rating scale, with “Can you, if necessary, ask your colleagues for help?” as an example item. *Job development possibilities* will be assessed with three items on a five-point frequency rating scale varying from 1 (*never*) to 5 (*always*), developed by Bakker, Demerouti, Taris, Schaufeli, and Schreurs (2003). An example item: “My work offers me the opportunity to learn new things”. Cronbach alpha coefficients ranged between 0,68 and 0,74 for *Autonomy* and between 0,81 and 0,85 for *Social support* (Bakker et al., 2004; Bakker, Demerouti, & Euwema, 2005). Bakker et al.’s (2003) results revealed a cronbach alpha coefficient of 0,90 for *Job development possibilities*.

Work engagement. The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) was used to measure work engagement. The dimensions of work engagement as proposed by the UWES comprise vigour, dedication and absorption. However, exclusive to the South African context, three studies confirmed three different, yet valid and reliable dimensional constructs for work engagement with the UWES. These are: Storm and Rothmann’s (2003) three-factor structure, Naudé and Rothmann’s (2004) two-factor structure, and Bosman et al.’s (2005) one-factor structure. An alpha coefficient of 0,94 was obtained for the one-factor structure of work engagement in a sample of 297 employees in government offices in the Gauteng Province (Bosman et al., 2005). In this study, the UWES was scored on a seven-point frequency rating scale that varied from 1 (*never*) to 7 (*always*). Five items were used to measure the one-factor structure of work engagement, and included items such as “At work I feel bristling with energy” and “I’m enthusiastic about my job”.

Life satisfaction. The *Satisfaction with Life Scale (SWLS)* was used to measure life satisfaction. It was developed by Diener, Emmons, Larsen and Griffin (1985) and constitutes a five-item measure of overall life satisfaction. The items were scored on a seven-point Likert scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Typical items included “I am satisfied with my life” and “So far, I have gotten the important things I want in life”. The

higher the sum of the item scores, the more life satisfaction the participant experienced. The SWLS shows internal consistency ($\alpha = 0,87$), test-retest reliability ($\alpha = 0,82$) as well as scale validity (see Diener et al., 1985).

Statistical analysis

The statistical analysis was carried out with the SPSS program (SPSS Inc., 2008) and the Amos program (Arbuckle, 2006). Descriptive statistics (means, standard deviations) and inferential statistics were used to analyse the data. The relationships between the variables were specified using Pearson product-moment correlations. A 95% confidence interval with $p \leq 0,05$ was used to determine statistical significance. Effect sizes (Steyn, 1999) were used to decide on the practical significance of the findings. The practical significance of correlation coefficients were set with a medium effect ($r \geq 0,30$) and a large effect ($r \geq 0,50$).

Structural equation modelling (SEM) was used to test competing structural models. The goal of SEM is to create linear combinations of observed and latent independent variables to predict linear combinations of observed and latent dependent variables. Maximum likelihood estimation methods were used with the covariance matrix of the scales as input for the analysis. The goodness-of-fit of the model was evaluated using absolute and relative indices. The χ^2 goodness-of-fit statistic and the Root Mean Square Error of Approximation (RMSEA) were used as absolute indices. The following goodness-of-fit-indices were used as adjuncts to the χ^2 statistics: a) χ^2/df ratio; b) the Incremental Fit Index IFI; c) the Tucker-Lewis Index (TLI); and d) the Comparative Fit Index (CFI). Values smaller than 0,08 for RMSEA are indicative of an acceptable fit, while values greater than 0,10 should lead to model rejection (Cudeck & Brown, 1993). For CFI, TLI and IFI, as a rule of thumb, a value greater than 0,90 is considered as indicating a good fit (Hoyle, 1995) and $\chi^2/df < 5,00$ (Bentler & Bonett, 1980). Squared Multiple Correlations Index was used to determine percentage variances.

RESULTS

Descriptive statistics

The mean, standard deviation, Cronbach alpha and product-moment correlations of the study variables are reported in Table 2. All of the scales showed acceptable and good internal consistency ($\alpha \geq 0,70$). It is of note that all the statistical and practical significant relationships between the variables are positive. Within each gender group, autonomy is related to *work support* (male: $r = 0,36$, practically significant with a medium effect; female: $r = 0,26$), *work development* (male: $r = 0,40$, practically significant with a medium effect; female: $r = 0,27$), *engagement* (male: $r = 0,40$ practically significant with a medium effect; female: $r = 0,41$ practically significant with a medium effect), and *life satisfaction* (male: $r = 0,25$; female: $p = 0,19$). Male and female autonomy ($r = 0,26$), engagement ($r = 0,28$) and life satisfaction ($r = 0,19$) are statistically significantly related to one another. Other statistically significant correlations exist between females' engagement and life satisfaction ($r = 0,24$) and males' engagement and life satisfaction ($r = 0,35$ practically significant with a medium effect). The highest and only correlation being statistically and practically significant with a large effect ($r = 0,64$) is between engagement and work development of males.

Next, structural equation modelling methods were used to test the hypotheses in a path model. Errors were allowed to correlate between male and female resources. The hypothesised model included paths between job resources, engagement and life satisfaction of males; job resources, engagement and life satisfaction of females; crossover paths between male and female engagement; and crossover paths between male and female life satisfaction. The results are presented in Table 3.

The results of the SEM analyses show that the hypothesised model fits adequately to the data ($\chi^2 = 44,52$; IFI, TLI and CFI $\geq 0,90$; RMSEA $\leq 0,08$). However, inspection of the regression weights showed that the following paths were insignificant and removed: female engagement to male engagement ($r = 0,40$); male engagement to female engagement ($r = 0,71$); and female life satisfaction to male life satisfaction ($r = 0,73$).

Table 3

Results of the Goodness-of-Fit Indices

Model	χ^2	χ^2/df	IFI	TLI	CFI	RMSEA
Hypothesised model	44,52	1,48	0,94	0,91	0,94	0,06
Final model	45,42	1,38	0,95	0,93	0,95	0,06

The results of the fit of the second model was not significantly better compared to the fit of the first model ($\Delta \chi^2 = 91,55$ ($N = 250$), $df = 3,00$, $r < 0,001$). However, since the paths mentioned above were insignificant, they had to be deleted from the first model. After these modifications were made, model fit was still adequate ($\chi^2 = 45,42$, IFI, TLI and CFI $\geq 0,90$; RMSEA $\leq 0,08$). An inspection of the modification indices also revealed that the overall fit of the re-specified model could not be substantially improved by releasing any of the remaining paths that were constrained to equal zero. Since this model fit was adequate, no further modifications of the model were contemplated. Parameter estimates for the final model are shown in Figure 2.

All relationships in the model were significant and in the expected direction. However, these results authenticate only Hypothesis 2a, namely a crossover effect from the life satisfaction of males to the life satisfaction of females.

Figure 2

A Final Crossover Model with Maximum Likelihood Estimates

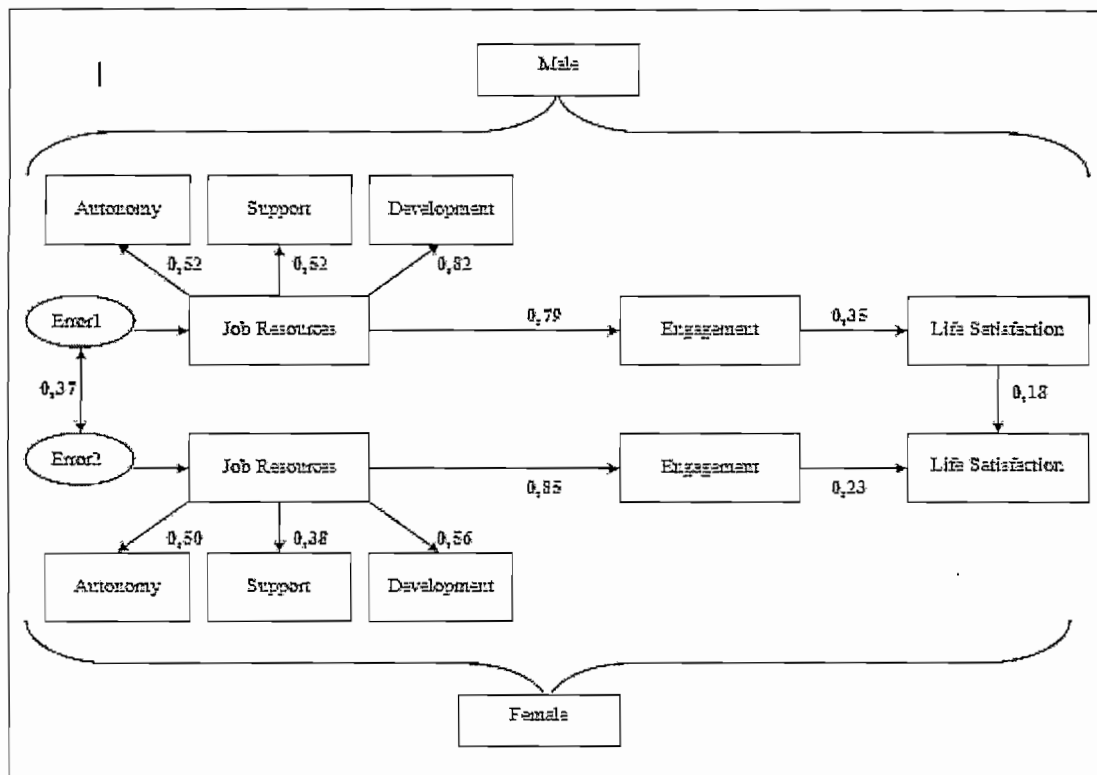


Table 2

Descriptive Statistics, Reliability and Product-Moment Correlations

	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8	9
1 Male work autonomy	3,96	0,87	0,78	--	--	--	--	--	--	--	--	--
2 Male work support	3,50	1,01	0,81	0,36* ⁺	--	--	--	--	--	--	--	--
3 Male work development	3,93	0,77	0,81	0,40* ⁺	0,44* ⁺	--	--	--	--	--	--	--
4 Male engagement	4,77	1,23	0,88	0,40* ⁺	0,39* ⁺	0,64* ⁺⁺	--	--	--	--	--	--
5 Male life satisfaction	4,82	1,13	0,83	0,25*	0,11	0,28*	0,35* ⁺	--	--	--	--	--
6 Female work autonomy	3,92	0,86	0,78	0,26*	-0,09	0,17	0,19*	0,16	--	--	--	--
7 Female work support	3,47	1,06	0,84	0,10	-0,11	0,14	0,10	0,12	0,26*	--	--	--
8 Female work development	3,95	0,79	0,84	0,08	0,10	0,15	0,20*	-0,06	0,27*	0,17	--	--
9 Female engagement	4,82	1,20	0,86	0,14	0,03	0,27*	0,28*	0,02	0,41* ⁺	0,33* ⁺	0,49* ⁺	--
10 Female life satisfaction	4,94	1,25	0,88	-0,08	-0,16	0,02	0,11	0,19*	0,19*	0,16	0,01	0,24*

* Statistically significant ($p < 0,05$)+ Correlation is practically significant $r \geq 0,30$ (medium effect)++ Correlation is practically significant $r \geq 0,50$ (large effect)

DISCUSSION

The objective of this study was to test a structural model of job resources, work engagement and life satisfaction, and to determine the crossover effects of work engagement and life satisfaction among dual-earner parents in South Africa.

The first step was to determine if relationships existed between job resources, work engagement and life satisfaction for both spouses. Job resources such as work autonomy, social support and job development possibilities were measured and based on the conceptual framework of the JD-R model (Bakker et al., 2003; Demerouti et al., 2001). Confirming previous research results, definite positive relationships existed between job resources and engagement. In fact, Squared Multiple Correlations Index showed that job resources predicted 62% of the variance in engagement of males, and 72% of the variance in engagement of females. Other factors that might comprise the residual variance of work engagement might be job resources that were not included, such as advancement and job security (Rothmann & Jordaan, 2006), or individual strengths which have the ability to influence one's engagement, such as a sense of coherence, generalised self-efficacy, locus of control, optimism and life satisfaction (for an overview, see Rothmann, 2003). It is evident that men's and especially women's level of engagement is substantially influenced by their job resources. Therefore, in order to improve work productivity, the engagement of employees needs to be surpassed by the provision of resourceful, effective and sufficient job resources.

Work engagement and life satisfaction are connected due to the belief that people have a tendency to identify with their work to such an extent that the job figuratively moulds them (Pasupuleti et al., 2009). For some, their work becomes their sense of self, their being, their life. In spite of this, this study's findings confirm that only 12% of the variance in life satisfaction could be explained by work engagement of males, whilst females' life satisfaction was explained by only 10% variance of the combination of work engagement and their partner's life satisfaction. Previous studies corroborated these findings of work engagement's small influence in life satisfaction, with a variance of 12% in the life satisfaction among elderly individuals (Nilsson et al., 2007). It is possible that the general belief in a strong relationship between life satisfaction and work engagement is indeed

fictitious, as also argued by Nilsson et al. (2007). If this is the case: what determines life satisfaction?

An analysis of previous research presented seven possible determinants for life satisfaction that are remarkably parallel across countries (Bjørnskov, Dreher, & Fischer, 2008). These are: (1) higher income or social-economic status; (2) higher levels of education; (3) employment; (4) age; (5) social capital; (6) religion or spirituality; and (7) family status (Bjørnskov, 2003; Diener & Seligman, 2004; Frey & Stutzer, 2006; Hayo, 2004). It thus seems that life satisfaction of an individual is extremely multifaceted, which provides a possible explanation for the small influence that work engagement portrays in the individual's life satisfaction for this study.

With regard to the crossover effects of work engagement, and contrary to expectations, work engagement did not cross over between partners as hypothesised in this study and as established in two recent studies (Bakker et al., 2005; Bakker & Demerouti, 2009). In fact, regression weights showed that the paths between engagement of males and females were insignificant, and were therefore removed from the hypothesised model. The only plausible explanation for this unexpected finding might be the fact that crossover research is still associated with deficiencies concerning systematic studies of the individual and societal conditions under which one or another form of crossover is more likely to surface (Westman, 2001). It is suggested that the typology of mediating and moderating variables should also first be specified and researched within the South African context.

Regarding the crossover effect of life satisfaction between partners, SEM analyses revealed that regression weights showed an insignificant path from female life satisfaction to male life satisfaction, and were therefore also removed from the hypothesised model. Thus, the final model only confirmed crossover of life satisfaction between partners from male to female with 18%. This result strengthened the belief that life satisfaction may cross over between partners, or at least from husbands to wives, as also found in Demerouti et al. (2005). Possible explanations for the unidirectional crossover may be situated in gender role socialisation – the process by which children progressively internalise social norms and expectations as they observe to be congruent to the society's gender dichotomy through channels of socialisation such as the media (Giddens, 2006). The resulting socialisation patterns signify that females associate with more intense orientations and behaviours towards

relationships, whilst emphasis on autonomy, differentiation and instrumental behaviours are representative of males (Kessler & McLeod, 1984). Gender role socialisation encourages women to attend to the health of their families, and to accept the predominant responsibility for the management of the home and family matters (Neal, Ingersoll-Dayton, & Starrels, 1997; Umberson, 1992). It also provides credible possibilities as to why women tend to be more receptive of, and easier affected by their husband's life satisfaction. However, contrary to previous findings, the percentage of crossover from male to female in this study was very low.

Due to a lack of evidence, possible explanations for the findings are based upon speculation. Firstly, culture and gender differences earn merit. Westman (2006) gave credence to the influence of a country's culture on cohabitating couples. Whereas a strong unidirectional crossover of marital dissatisfaction was found from Russian officers to their wives (Westman, Vinokur, Hamilton, & Roziner, 2004), Finnish studies could not validate the same findings (Mauno & Kinnunen, 1999). Bem (1993) is of the opinion that people are taught to direct their personal opinions and activities according to cultural prescriptions. For this reason, it is expected that results will differ between countries, since culture and customs differ. For instance, South African laws regarding gender equality and discrimination are of great significance, and result in continuous socio-economic and cultural changes. Secondly, an aspect of influence in the crossover results might be the fact that not all couples lived together in the same dwelling or city. Consequently, previous findings suggested a decrease in life satisfaction when spouses did not share the same residence due to one spouse working in another town or country (Bunker, & Zubek, 1992). However, a recent study contradicted these previous findings and confirmed that absence due to business travel also had positive effects on several marital relationships, such as an increase in communication and problem solving by means of technology (Stewart & Donald, 2006). Thus, the final conclusion is that further crossover research is a necessity.

LIMITATIONS AND RECOMMENDATIONS

This study was not without its limitations. Firstly, the use of a cross-sectional research design restricted findings in the sense that data reflected the individual's state of mind at a particular point in time. A second limitation stemmed from the exclusive use of self-report questionnaires for obtaining data, which may result in common-method variance. Thirdly, the

results are limited due to the use of only three job resources, while the JD-R model has the capacity to incorporate many more. Fourthly, the findings of this study cannot be generalised to all South Africans because of three main contributing factors, namely (a) participants of only two of the nine provinces were included, (b) the convenience sampling method that was used to gather data, and (c) the sample size. Lastly, culture was not included in the personal particulars of the questionnaire. This caused a barrier in the sense that generalisations and comparisons between particular ethnic groups within South Africa were impossible.

Despite the limitations of this study, the present findings have important implications for future research and practice. A good starting place is to analyse the relationships that surfaced in the results. Positive relations occurred between work engagement and job resources (i.e. autonomy, support and development) for both spouses. This means that when an employee's work autonomy and/or social support and/or job development opportunities in the workplace increase, his or her engagement levels will increase as well. Consequently, the organisation will benefit greatly if it could provide access to job resources that are not only sufficient, but also flexible and pleasing. It is further advised that future research should include a greater variety of job resources to provide a more holistic view to enable organisations to adapt processes for optimising maximum potential.

Additional positive relationships exist between work engagement and life satisfaction, entailing that the increase in work engagement will contribute to a slight increase in the employee's overall life satisfaction. It is therefore advised that organisations should not only seek ways in which to optimise their own employees' work functioning, but should also introduce alternative options (e.g. flexibility or innovative ventures) to enable them to improve their well-being. The justification for this is that we live in a world with diversity and complexity, which in turn might produce valued benefits if approached from an unconventional perspective.

Finally, this study broke the grounds for positive crossover research in South Africa and provided the first stepping-stone for future studies. A new positive wave of occupational psychology research has emerged and is empowering couples and organisations with insights into factors influencing well-being and productiveness. Numerous researchers have already drawn attention to the disparity in positive crossover research and literature (Bakker & Demerouti, 2009; Bakker, Westman, & Van Emmerik, 2009; Westman, 2006; Westman,

Etzion, & Shoshi, 2009). Therefore, it is recommended that this fertile field be explored further in order to enhance theoretical thinking and to offer practical insights into the literature.

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REFERENCES

- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: America's perception of life quality*. New York: Plenum.
- Arbuckle, J. L. (2006). *Amos 7.0 User's Guide*. Chicago, IL: SPSS Inc.
- Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior*, 66, 26-44.
- Bakker, A. B. (2008). Building engagement in the workplace. In C. Cooper & R. Burke (Eds.), *The peak performing organization* (pp. 1-44). London: Routledge.
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22, 309-328.
- Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13, 209-223.
- Bakker, A. B., & Demerouti, E. (2009). The crossover of work engagement between working couples. *Journal of Managerial Psychology*, 24(2), 220-236.
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10(2), 170-180.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2003). Dual processes at work in a call centre: An application of the Job Demands-Resources model. *European Journal of Work and Organizational Psychology*, 12, 393-417.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2005). The crossover of burnout and work engagement among working couples. *Human Relations*, 58(5), 661-689.
- Bakker, A. B., Demerouti, E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. G. (2003). A multigroup analysis of the Job Demands-Resources model in four home care organizations. *International Journal of Stress Management*, 10(1), 16-38.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43, 83-104.
- Bakker, A. B., & Geurts, S. A. E. (2004). Toward a dual-process model of work-home interference. *Work and Occupations*, 31(3), 345-366.
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22, 187-200.
- Bakker, A. B., Westman, M., & Van Emmerik, I. J. H. (2009). Advancements in crossover theory. *Journal of Managerial Psychology*, 24(3), 206-219.

- Barnett, R. C., Raudenbush, S. W., Brennan, R. T., Pleck, J. H., & Marshall, N. L. (1995). Changes in job and marital experience and change in psychological distress: A longitudinal study of dual-earner couples. *Journal of Personality and Social Psychology*, 69, 839-888.
- Bem, S. L. (1993). *The lenses of gender*. New Haven, CT: Yale University Press.
- Bentler, P. & Bonett, D. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.
- Bjørnskov, C. (2003). The happy few: Cross-country evidence on social capital and life satisfaction. *Kyklos*, 56, 3-16.
- Bjørnskov, C., Dreher, A., & Fischer, J. A. V. (2008). Cross-country determinants of life satisfaction: Exploring different determinants across groups in society. *Soc Choice Welfare*, 30, 119-173.
- Block, J. H. (1973). Conceptions of sex role: Some cross-cultural and longitudinal perspectives. *American Psychologist*, 28, 512-526.
- Bolger, N., DeLongis, A., Kessler, R., & Wethington, E. (1989). The contagion of stress across multiple roles. *Journal of Marriage and the Family*, 51, 175-83.
- Bosman, J., Rothmann, S., & Buitendach, J. H. (2005). Job insecurity, burnout and work engagement: The impact of positive and negative affectivity. *SA Journal of Industrial Psychology*, 31(4), 48-56.
- Bundy, A. C. (1993). Assessment of play and leisure: Delineation of the problem. *The American Journal of Occupational Therapy*, 47, 217-222.
- Bunker, B. B., & Zubek, J. M. (1992). Quality of life in dual-career families: Commuting versus single-residence couples. *Journal of Marriage and the Family*, 54, 399-407.
- Burke, R. J., Weir, T., & DuWors, R. E. (1980). Work demands on administrators and spouse well-being. *Human Relations*, 33, 253-331.
- Chan, C. J., & Margolin, G. (1994). The relationship between dual-earner couples' daily work mood and home affect. *Journal of Social and Personal Relationships*, 11, 573-659.
- Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organisational stress: A review and critique of theory, research and applications*. Thousand Oaks, CA: Sage.
- Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology*, 42, 401-426.
- Cudeck, R., & Browne, M. W. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. Scott Long (Eds.), *Testing structural equation models* (pp. 1-9). Newbury Park, CA: Sage.

- Cutler, N. (1979). Age variations in the dimensionality of life satisfaction. *Journal of Gerontology*, 34, 573-578.
- De Lange, A. H., De Witte, H., & Notelaers, G. (2008). Should I stay or should I go? Examining longitudinal relations among job resources and work engagement for stayers versus movers. *Work & Stress*, 22(3), 201-223.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.
- Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2005). Spillover and crossover of exhaustion and life satisfaction among dual-earner parents. *Journal of Vocational Behavior*, 67, 266-289.
- Demerouti, E., Bakker, A. B., & Voydanoff, P. (2009). Does home life interfere with or facilitate job performance? *European Journal of Work and Organizational Psychology*, 0(00), 1-22.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Diener E. D., & Seligman M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5, 1-31.
- Dhooper, S., & Byars, L. (1989). Stress and the life satisfaction of black social workers. *Affilia*, 4, 70-78.
- Donovan, N., & Halpern, D. (2002). *Life satisfaction: The state of knowledge and implications for government*. A report retrieved online on May 26, 2009, at <http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/paper.pdf>.
- Doucet, A. (2000). There's a huge gulf between me as a male carer and woman. Gender, domestic responsibility and the community as an institutional arena. *Community, Work and Family*, 3(2), 163-184.
- Dubin, R. (1973). Work and nonwork: Institutional perspectives. In M.D. Dunnette (Eds.), *Work and nonwork in the year 2001* (pp. 53-68). Belmont, CA: Wadsworth.
- Frey B., & Stutzer, A. (2006). Mispredicting utility and the political process. In McCaffery E.J., Slemrod J. (Eds.), *Behavioral public finance* (pp. 113-140). New York: Russell Sage Foundation.
- Galambos, N. L., & Silbereisen, R. K. (1989). Role strain in West Germany dual-earner households. *Journal of Marriage and Family*, 51, 385-389.
- Giddens, A. (2006). *Sociology* (5th ed.). Cambridge: Polity Press

- Hammer, L. B., Allen, E., & Grigsby, T. D. (1997). Work-family conflict in dual-earner couples: Within individual and crossover effects of work and family. *Journal of Vocational Behavior*, 50, 185-203.
- Hammer, L. B., Bauer, T., & Grandey, A. (2003). Work-family conflict and work-related withdrawal behaviors. *Journal of Business and Psychology*, 17, 419-436.
- Hart, P. (1999). Predicting employee life satisfaction: A coherent model of personality, work and nonwork experiences, and domain satisfactions. *Journal of Applied Psychology*, 84, 564-584.
- Hatfield, E., Cacioppo, J., & Rapson, R. (1994). *Emotional contagion*. New York: Cambridge University Press.
- Haviland, J. M., & Malatesta, C. Z. (1981). The development of sex differences in nonverbal signals: Fallacies, facts and fantasies. In C. Mayo & N.M. Henley (Eds.), *Gender and nonverbal behavior* (pp. 183-208). New York: Springer-Verlag.
- Hayo, B. (2004). Happiness in Eastern Europe. Working Paper 12/2004, Phillips Universität Marburg.
- Hobfoll, S. E., & London, M. (1986). The relationship of self concept and social support to emotional distress among women during war. *Journal of Social Clinical Psychology*, 12, 87-100.
- Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. In: Structural equation modeling: Concepts, issues, and applications, Hoyle RH (Ed.), 1-15, Sage, Thousand Oaks, CA.
- Jackson, S. E., & Maslach, C. (1982). After-effects of job-related stress: Families as victims. *Journal of Occupational Behavior*, 3, 63-77.
- Jackson, S. E., Zedeck, S., & Summers, E. (1985). Family life disruptions: Effects of job-induced structural and emotional interference. *Academy of Management Journal*, 28, 574-660.
- Johnson, A., & Jackson, P. (1998). A longitudinal investigation into the experience of male managers who have re-entered the workforce after redundancy, and their families. In *Proceedings of the International Work Psychology Conference*, Sheffield, July.
- Jones, F., & Fletcher, B. (1993). An empirical study of occupational stress transmission in working couples. *Human Relations*, 46, 881-902.
- Jones, F., & Fletcher, B. (1996). Job control and health. In M.J. Schabracq, J.A.M. Winnubst, & C.L. Cooper (Eds.), *Handbook of work and health psychology* (pp. 33-50). Chichester: Wiley.

- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 692-724.
- Kahn, W. A. (1992). To be fully there: Psychological presence at work. *Human Relations*, 45, 321-349.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational Stress*. New York: Wiley.
- Kantak, D., Futrell, C., & Sager, J. (1992). Job satisfaction and life satisfaction in a sales force. *Journal of Personal Selling and Sales Management*, 12, 1-7.
- Kessler, R. C., & McLeod, J. D. (1984). Sex differences in vulnerability to undesirable life events. *American Sociological Review*, 49, 620-631.
- Lambert, S. (1990). Processes linking work and family: A critical review and research agenda. *Human Relations*, 43, 239-257.
- Lanzetta, J. T., Sullivan, D. G., Masters, R. D., & Mchugo, G. J. (1985). Viewers' emotional and cognitive responses to televised images of political leaders. In S. Kraus & R. Perloff (Eds.), *Mass media and political thought* (pp. 85-116). Beverly Hills, CA: Sage.
- Levenson, R., & Reuf, A. (1992). Empathy: A physiological substrate. *Journal of Personality and Social Psychology*, 63, 234-246.
- Llorens, S., Salanova, M., Bakker, A. B., & Schaufeli, W. B. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior*, 23, 825-841.
- Long, N. R., & Voges, K. E. (1987). Can wives perceive the source of their husbands' occupational stress? *Journal of Occupational Psychology*, 60, 235-277.
- Maslach, C., Jackson, S. E., & Leiter, M. (1996). *Maslach Burnout Inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., & Leiter, M. P. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco, CA: Jossey-Bass.
- Mauno, S., & Kinnunen, U. (1999). The effects of job stressors on marital satisfaction among Finnish dual-earner couples. *Journal of Organizational Behavior*, 20, 879-895.
- McGuinn, K. K., & Mosher-Ashley, P. M. (2000). Participation in recreational activities and its effect on perception of life satisfaction in residential settings. *Activities, Adaptation and Aging*, 25(1), 77-87.
- Mitchell, R., Cronkite, R., & Moos, R. (1983). Crossover effects of communal coping. *Journal of Social and Personal Relationships*, 14, 263-333.

- Mostert, K., Cronje, S., & Pienaar, J. (2006). Job resources, work engagement and the mediating role of positive work-home interaction of police officers in the North West province. *Acta Criminologica*, 19(3), 64-87.
- Naudé, J. L. P. (2003). *Occupational stress, coping, burnout and work engagement of emergency workers in Gauteng*. Unpublished doctoral thesis, PU for CHE, Potchefstroom.
- Naudé, J. L. P., & Rothmann, S. (2004). The validation of the Utrecht Work Engagement Scale for emergency health technicians in Gauteng. *South African Journal of Economic and Management Sciences*, 7(3), 459-468.
- Neal, M. B., Ingersoll-Dayton, B., & Starrels, M. E. (1997). Gender and relationship differences in care-giving patterns and consequences among employed caregivers. *Gerontologist*, 37, 804.
- Nilsson, I., Bernspång, B., Fisher, A. G., Gustafson, Y., & Löfgren, B. (2007). Occupational engagement and life satisfaction in the oldest-old: The Umeå 85+ study. *Occupation, Participation and Health*, 27(4), 131-139.
- Organ, D. W., & Paine, J. B. (1999). A new kind of performance for industrial and organizational psychology: Recent contributions to the study of organizational citizenship behaviour. In C. L. Cooper, & I. T. Robertson (Eds.), *International review of industrial and organizational psychology*, (pp. 337-405). Chichester: Wiley.
- Pasupuleti, S., Allen, R. I., Lambert, E. G., & Cluse-Tolar, T. (2009). The impact of work stressors on the life satisfaction of social service workers: A preliminary study. *Administration in Social Work*, 33, 319-339.
- Piotrkowski, C. (1979). *Work and the family system: A naturalistic study of the working-class and lower-middle-class families*. New York: Free Press.
- Rapoport, R., & Rapoport, R. N. (1971). *Dual-career families*. London: Penguin.
- Rice, R., Near, J., & Hunt, R. (1980). The job satisfaction/life satisfaction relationship: A review of empirical research. *Basic and Applied Social Psychology*, 1, 37-64.
- Riley, D., & Eckenrode, J. (1986). Social ties: Costs and benefits within different subgroups. *Journal of Personality and Social Psychology*, 51, 770-778.
- Roberts, D. R., & Davenport, T. O. (2002, Autumn). Job engagement: Why it's important and how to improve it. *Employment Relations Today*, 21-29.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *SA Journal of Industrial Psychology*, 29(4), 16-25.

- Rothmann, S., & Jordaan, G. M. E. (2006). Job demands, job resources and work engagement of academic staff in South African higher education institutions. *SA Journal of Industrial Psychology*, 32(4), 87-96.
- Rothmann, S., & Storm, K. (2003, May). *Engagement in the South African Police Services*. Poster session presented at the 11th European Congress and Work and Organizational Psychology. Lisbon, Portugal.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25, 293-315.
- Schaufeli, W. B., & Salanova, M. (2007). Work engagement: An emerging psychological concept and its implications for organizations. In S. W. Gilliland, D. D. Steiner & D. P. Skarlicki (Eds.), *Research in social issues in management: Vol. 5. Managing social and ethical issues in organizations*. Greenwich, CT: Information Age Publishers.
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies*, 3, 71-92.
- Schutte, N., Toppin, S., Kalimo, R., & Schaufeli, W. B. (2000). The factorial validity of the Maslach Burnout Inventory – General Survey (MBI – GS) across nations and occupations. *Journal of Occupational and Organizational Psychology*, 73, 53-66.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14.
- Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2003). *Research Methods in Psychology* (6th ed). McGraw-Hill.
- Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, 5, 475-492.
- Smith, N., Kielhofner, G., & Watts, J. (1986). The relationships between volition, activity pattern, and life satisfaction in the elderly. *The American Journal of Occupational Therapy*, 40, 278-283.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behaviour. A new look at the interface between non-work and work. *Journal of Applied Psychology*, 88, 518-546.
- SPSS Inc. (2008). *SPSS 16.0 for Windows*. Chicago, IL: SPSS Inc.
- Staines, G. L., Pottick, K. G., & Fudge, D. A. (1985). The effects of wife's employment on husbands' job and life satisfaction. *Psychology of Women Quarterly*, 9(3), 419-424.

- Starcevic, V., & Pointek, C. M. (1997). Empathic understanding revisited: Conceptualization, controversies and limitations. *American Journal of Psychotherapy*, 51, 317-328.
- Stewart, M., & Donald, F. M. (2006). Spouses' experiences of their partners' absences due to frequent business travel. *South African Journal of Psychology*, 36(1), 103-125.
- Steyn, H. S. (1999). *Praktiese betekenisvolheid: Die gebruik van effekgroottes*. Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr. 17. Potchefstroom: PU vir CHO.
- Storm, K., & Rothmann, S. (2003). A psychometric analysis of the Utrecht Work Engagement Scale in the South African Police Service. *South African Journal of Industrial Psychology*, 29(4), 62-70.
- Turner, N., Barling, J., & Zacharatos, A. (2002). Positive psychology at work. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 715-728). Oxford: Oxford University Press.
- Umberson, D. (1992). Gender marital status and the social control of health behavior. *Social Science and Medicine*, 34, 907-914.
- Van der Westhuizen, C., Goga, S., & Oosthuizen, M. (2007). *Women in the South African labour market: 1995-2005*. DPRU Working Paper 07/118. Cape Town: Development Policy Research Unit.
- Vinokur, A., Price, R. H., & Caplan, R. D. (1996). Hard times and hurtful partners: How financial strain effects depression and relationship satisfaction of unemployed persons and their spouses. *Journal of Personality and Social Psychology*, 71, 166-245.
- Westman, M. (2001). Stress and strain crossover. *Human Relations*, 54, 557-591.
- Westman, M. (2006). Crossover of stress and strain in the work-family context. In F. Jones, R. J. Burke., & M. Westman (Eds.), *Work-life balance: A psychological perspective* (pp. 163-184). New York: Psychology Press.
- Westman, M., & Etzion, D. (1995). Crossover of stress, strain and resources from one spouse to another. *Journal of Organizational Behavior*, 16, 169-250.
- Westman, M., Etzion, D., & Shoshi, C. (2009). Crossover of positive experiences from business travellers to their spouses. *Journal of Managerial Psychology*, 24(3), 269-284.
- Westman, M., & Vinokur, A. (1998). Unraveling the relationship of distress levels within couples: Common stressors, empathic reactions, or crossover via social interactions? *Human Relations*, 51, 137-193.

- Westman, M., Vinokur, A. D., Hamilton, V. L., & Roziner, I. (2004). Crossover of marital dissatisfaction during military downsizing among Russian army officers and their spouses. *Journal of Applied Psychology, 89*(5), 769-779.
- Wilcock, A. A. (2001). *Occupation for health: A journey from self health to prescription* (Vol. 1). Southwark, London: British Association and College of Occupational Therapists.
- Wilensky, H. (1960). Work, careers, and social integration. *International Social Sciences Journal, 12*, 543-560.
- Windebank, J. (2001). Dual-earner couples in Britain and France: Gender divisions of domestic labour and parenting work in different welfare states. *Work Employment and Society, 15*(2), 269-290.

CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

In this chapter, conclusions are presented regarding the specific objectives of this study. The limitations of the research are discussed, followed by recommendations for the organisation and future research.

3.1 CONCLUSIONS

The main objective of this study was to test a structural model of the crossover effect of work engagement and life satisfaction between dual-earner parents. The first objective was to determine the relationship between job resources, work engagement, and life satisfaction for dual-earner partners. In order to achieve this objective, the relationships between the variables were determined separately for each partner. With regard to both partners, positive relationships were found between job resources (autonomy, support, and development), work engagement, and life satisfaction. This implies that when job resources are increased, work engagement and life satisfaction will also increase. In fact, job resources predicted 62% of the variance in engagement of males, and 72% of the variance in engagement of females. This emphasises the importance of the relationship between job resources and work engagement, and highlights why sufficient job resources are vital. On the other hand, a suspected strong relationship between work engagement and life satisfaction was proven fictitious. Although a relationship exists, only 12% of the variance in life satisfaction could be explained by work engagement of males, while females' life satisfaction was explained by only 10% variance of the combination of work engagement and their partners' life satisfaction.

The second objective was to test a structural model of job resources, work engagement and life satisfaction for dual-earner partners. A structural model was compiled on the basis that relationships exist between job resources, work engagement and life satisfaction for each partner, as confirmed by objective one. Structural equation modelling methods were used to test the model. Errors were allowed to correlate between male and female resources. The hypothesised model included paths between job resources, engagement and life satisfaction

of males; and job resources, engagement and life satisfaction of females. The structural model further included bidirectional crossover paths between male and female engagement as well as bidirectional crossover paths between male and female life satisfaction. These paths were necessary in achieving the third specific objective in this study. The results of the SEM analyses showed that the hypothesised model fitted adequately to the data. However, inspection of the regression weights showed that the following paths were insignificant: female engagement to male engagement; male engagement to female engagement; and female life satisfaction to male life satisfaction. These paths were subsequently removed. Although the results of the fit of the second model were not significantly better compared to the fit of the first model, the paths had to be removed because of their insignificance. After these modifications were made, model fit was still adequate. An inspection of the modification indices also revealed that the overall fit of the re-specified model could not be substantially improved by releasing any of the remaining paths that were constrained to equal zero. Since this model fit was adequate, no further modifications of the structural model were contemplated.

The third objective was to test a crossover effect of work engagement and life satisfaction for dual-earner partners. The results of the previous objective paved the way in achieving this objective. The final structural model included paths between job resources, work engagement and life satisfaction for each partner, with a singular crossover path from male to female life satisfaction. Expectations about crossover effects of work engagement between partners were not confirmed. The only plausible explanation for this is the fact that crossover research is still associated with deficiencies concerning systematic studies of the individual and societal conditions under which one or another form of crossover is more likely to surface (Westman, 2001). However, concerning life satisfaction, the final model confirmed crossover effects between partners, from male to female with 18%. This result strengthened the belief that life satisfaction may cross over between partners, or at least from husbands to wives, as also found in Demerouti et al. (2005). Possible explanations for the unidirectional crossover may be situated in gender role socialisation. Women tend to be more receptive of – and easier affected by – their husbands' life satisfaction, because they primarily attend to the health and care of their families (Neal, Ingersoll-Dayton, & Starrels, 1997).

To conclude, a structural model of job resources, work engagement and life satisfaction confirmed a unidirectional crossover effect, albeit small, of life satisfaction between partners, from male to female.

3.2 LIMITATIONS OF THIS RESEARCH

The first limitation can be attributed to the research design used in this study. The cross-sectional research design restricted findings in the sense that data reflected the particular state of mind that the individual experienced at that moment. A second limitation concerns the exclusive use of self-report questionnaires for obtaining data, which may result in a predicament referred to as “common-method variance” or “nuisance”. Questionnaires also contribute to difficulties concerning ethics and research results. If the questionnaires were completed jointly by both partners – despite the request that they be completed separately – the results might reflect greater crossover effects than in reality (Bakker et al., 2005). Furthermore, the questionnaire presented language difficulties. This is due to South Africa’s diverse cultures and languages. In addition, the UWES administered in South Africa tends to be associated with difficult item wording and positive response sets (Rothmann, 2003).

Thirdly, the results are limited due to the use of only three job resources, while the JD-R model possesses the capacity to incorporate a lot more. Other resources that were not included in this study can predict engagement (Brown, 1996). Fourthly, spouses working in different geographical locations is not an uncommon phenomenon in this day and age, and since employment directs living arrangements, this aspect could influence the crossover results. It is not certain to what extent the results are influenced by these living arrangements, since findings from studies are contradictory. For instance, Bunker and Zubek (1992) found that life satisfaction decreased when spouses did not live together, while another study indicated positive effects due to increased communication as a result of these living arrangements (Stewart & Donald, 2006). It is therefore difficult to determine the influence on the resulting life satisfaction of partners in this study.

Fifthly, Demerouti et al. (2005) also suggested the possibility of crossover effects being merely co-variation and similarity between partners’ ratings. It is difficult to either agree with or oppose this statement. It does, however, present a possibility that most definitely affects

findings. Sixthly, the findings of this study cannot be generalised to all South Africans because of three main contributing factors, namely (a) participants of only two of the nine provinces were included, (b) the convenience sampling method that was used to gather data, and (c) the sample size.. It would be neither reasonable nor accurate to generalise findings, since people in different provinces differ from each other with regard to culture, language, affiliation, custom, etc. Also contributing to the difficulty of generalisations is the fact that this study focused on families with one or more small child or children. Thus, the family structure and results would differ for couples with no children or with grown-up children.

The last limitation presented in this study arises from the lack of participants' information concerning culture. This caused a barrier in the sense that generalisations and comparisons between particular ethnic groups within South Africa were impossible. It also influences the research results, because people from different cultures may have different opinions towards relationships and work.

3.3 RECOMMENDATIONS

Notwithstanding these limitations, the current study has important implications for organisations and future research.

3.3.1 Recommendations for the organisation

Organisations will benefit if their employees experience work engagement, since engaged workers tend to experience work as challenging. This stimulates commitment and a positive attitude towards one's work (Bakker et al., 2005). It is evident from this study's findings that engagement of men and women is substantially influenced by job resources (work autonomy, social support and job development opportunities). This means that when an employee's work autonomy and/or work support and/or development opportunities in the workplace increase, his or her engagement levels will increase as well. Thus, the organisation needs to provide employees with job resources that are not only resourceful and effective, but that also address the employees' specific needs. As a result, the organisation will benefit greatly if these flexible and pleasing job resources result in engaged employees.

A minor positive relationship exists between work engagement and life satisfaction. This implies that organisations that value and promote their employees' work engagement would also directly contribute to their general life satisfaction. Even though this contribution is small, a ripple effect is set in motion because positive employees inspire their colleagues and spouses (Donovan & Halpern, 2002). Thus, from an organisational perspective, the benefits of positive engaged employees are numerous. It is therefore recommended that organisations seek and implement ways in which to optimise their workforce. This can be achieved by providing alternative possibilities such as flexible working hours, innovative ventures, and self-development opportunities. The organisation should determine the specific needs of the employees and implement strategies to address these. In addition, organisations can take a head-on approach towards positive psychology by implementing programmes that train couples to improve, for example, their ability to cope with difficult circumstances or their work-life balance.

In conclusion, a new positive wave of occupational psychology research has emerged and is empowering organisations and couples with insight regarding factors influencing life satisfaction and work engagement. Both the organisation and the employee should embrace it.

3.3.2 Recommendations for future research

Recommendations for future research are threefold; data collection, work engagement and life satisfaction, and – finally, but most importantly – crossover.

Recommendations with regard to data collection refer specifically to the research design, self-report questionnaires and locality. The cross-sectional research design that was used in this study should be replicated in order to compare similar studies to each other. However, it is also recommended that a longitudinal design be used in future studies, because this design enables more control over certain variables. It also allows a more in-depth and comprehensive exploration of the crossover process and its effects. With regard to self-report questionnaires, two recommendations surfaced from the limitations of this study. First, language barriers can be overcome by translating the questionnaire into different languages. Alternatively, a new questionnaire adapted to South African conditions can be developed to

better assess crossover effects. This might be very challenging because of the diversity of cultures present in South Africa. It will nevertheless have functional value for future research. Finally, it is recommended that research be extended to all nine provinces to enable researchers to generalise crossover results to the entire South African context. In addition, future research should also be directed to cross-national comparative studies.

The following recommendations involve work engagement and life satisfaction. Work engagement is caused by job resources (confirmed in this study: autonomy, support, and development), and influenced by certain individual strengths (i.e. sense of coherence, generalised self-efficacy, locus of control, optimism, and life satisfaction) (Brown, 1996; Rothmann, 2003). Future research should include a greater variety of job resources to provide a more holistic view to enable organisations to adapt processes for optimising maximum potential. Individual strengths should be measured in order to determine the extent of their influence on work engagement. Although crossover of engagement was not found in this study, it is recommended that future studies attempt to prove this, since previous research confirmed crossover of work engagement between dual-earner couples (Bakker et al., 2005; Bakker & Demerouti, 2009). Suggestions with reference to future research in life satisfaction are also derived from this study's results, which provided good reason to investigate the multifaceted compilation of an individual's life satisfaction, since work engagement is only a small influential factor. It will be valuable to determine other contributing factors to an individual's life satisfaction and to include these factors in future studies, specifically with regard to crossover studies. This will enable researchers to measure and control determinants of life satisfaction in order to specify crossover effects in much more detail.

Finally, recommendations concerning positive crossover research are the following:

The newness associated with crossover research into the crossover process, crossover effects and positive experiences relates to numerous future research possibilities. One of the most pressing needs is to explain in more detail how the crossover process occurs (Westman, 2006). The possible processes or mechanisms (i.e. empathy, mediators/moderators, and spuriousness) that cause crossover effects should be studied extensively. These should also be included separately in future studies so as to enable the replication of findings and to compare different mechanisms with each other. Bakker and Demerouti's (2009) study included the role of empathy in the crossover process, and found significant crossover effects of work

engagement from wives to their spouses, if their spouses revealed empathy towards their work situation. Further studies should attempt to replicate these findings, to elaborate on them, and to establish whether other mechanisms influence the process.

Crossover research is still associated with deficiencies concerning systematic studies of the individual and societal conditions under which one or another form of crossover is more likely to surface (Westman, 2001, 2006). It is suggested that the typology of mediating and moderating variables should first be specified and researched, specifically within the South African context. Subsequently, research should focus on different positive factors that cross over and therefore influence the individual as well as the family structure. Such factors may include positive experiences, work engagement, life satisfaction, marital satisfaction, family cohesion, etc. It may also be interesting to shift crossover from spouses and dual-earner couples to also include crossover effects to children. However, much research is still needed concerning crossover of dual-earner couples.

Several researchers have suggested that culture as well as gender role ideology should be considered in research on cohabitating couples since both differ vastly between countries (Mauno & Kinnunen, 1999). Westman (2006) gave credence to the influence of a country's culture on cohabitating couples. It is expected that crossover results will differ between countries, since culture and customs differ. It is therefore recommended that culture be included in all future research in South Africa regarding crossover. More attention should also be given to gender role beliefs and principles within the field of crossover research. Further elements that can be included in future crossover research are occupation, living arrangements, breadwinners' roles, traditional gender ideologies, work status, home resources, and work-life interaction (Westman, Etzion, & Horovitz, 2004).

In summary, this study provided the first stepping-stone for future studies in South Africa with regard to positive crossover effects of dual-earner partners. Several researchers have already expressed the disparity in positive crossover research and literature (Bakker & Demerouti, 2009; Bakker, Westman, & Van Emmerik, 2009; Westman, 2006; Westman, Etzion, & Shoshi, 2009). Therefore, the recommendation is consistent with other researchers: the subject of positive crossover effects should be explored further in order to enhance theoretical thinking and to offer practical insight within the literature.

REFERENCES

- Bakker, A. B., & Demerouti, E. (2009). The crossover of work engagement between working couples. *Journal of Managerial Psychology*, 24(2), 220-236.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2005). The crossover of burnout and work engagement among working couples. *Human Relations*, 58(5), 661-689.
- Bakker, A. B., Westman, M., & Van Emmerik, I. J. H. (2009). Advancements in crossover theory. *Journal of Managerial Psychology*, 24(3), 206-219.
- Brown, S. P. (1996). A meta-analysis and review of organizational research on job involvement. *Psychological Bulletin*, 120, 235-290.
- Bunker, B. B., & Zubek, J. M. (1992). Quality of life in dual-career families: Commuting versus single-residence couples. *Journal of Marriage and the Family*, 54, 399-407.
- Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2005). Spillover and crossover of exhaustion and life satisfaction among dual-earner parents. *Journal of Vocational Behavior*, 67, 266-289.
- Donovan, N., & Halpern, D. (2002). *Life satisfaction: The state of knowledge and implications for government*. A report retrieved online on May 26, 2009, at <http://www.cabinetoffice.gov.uk/media/cabinetoffice/strategy/assets/paper.pdf>.
- Mauno, S., & Kinnunen, U. (1999). The effects of job stressors on marital satisfaction among Finnish dual-earner couples. *Journal of Organizational Behavior*, 20, 879-895.
- Neal, M. B., Ingersoll-Dayton, B., & Starrels, M. E. (1997). Gender and relationship differences in care-giving patterns and consequences among employed caregivers. *Gerontologist*, 37, 804.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *SA Journal of Industrial Psychology*, 29(4), 16-25.
- Stewart, M., & Donald, F. M. (2006). Spouses' experiences of their partners' absences due to frequent business travel. *South African Journal of Psychology*, 36(1), 103-125.
- Westman, M. (2001). Stress and strain crossover. *Human Relations*, 54, 557-591.
- Westman, M. (2006). Crossover of stress and strain in the work-family context. In F. Jones, R. J. Burke., & M. Westman (Eds.), *Work-life balance: A psychological perspective* (pp. 163-184). New York: Psychology Press.
- Westman, M., Etzion, D., & Horovitz, S. (2004). The toll of unemployment does not stop with the unemployed. *Human Relations*, 57, 823-867.

Westman, M., Etzion, D., & Shoshi, C. (2009). Crossover of positive experiences from business travellers to their spouses. *Journal of Managerial Psychology*, 24(3), 269-284.