
Job Satisfaction Scale of Warr, Cook and Wall (1979): The psychometric properties of the Portuguese version

Joana Vieira dos Santos, Cátia Sousa, Gabriela Gonçalves

Psychology Research Centre (CIP), University of Algarve

jcsantos@ualg.pt

✎ **ABSTRACT.** La *Job Satisfaction Scale* di Warr, Cook e Wall (1979) è ampiamente utilizzata negli studi di psicologia dell'organizzazione ma la struttura fattoriale non è stata sufficientemente esplorata. Il presente studio, composto da 632 partecipanti, si propone di analizzare l'adattamento di questa scala alla lingua portoghese. L'analisi fattoriale confermativa supporta un modello gerarchico a tre fattori di soddisfazione lavorativa, in termini di coefficienti di adeguatezza del modello. Disporre di uno strumento validato in lingua portoghese ne consente un uso molto diffuso.

✎ **SUMMARY.** The *Job Satisfaction Scale of Warr, Cook and Wall (1979)* is widely used in studies within the scope of organizational psychology. However, the factor structure was not sufficiently explored (solutions: one factor, two factors, three factors). The present study aims to analyse the adaptation of this scale to the Portuguese language. The sample of the present study consists of 632 participants. Confirmatory factor analysis supports a hierarchical model of three factors of job satisfaction, in terms of adequacy coefficients of the model. The results support the use three factor model. Job satisfaction is widely important concept commonly used by investigators in different scientific areas. It's important to have a very used questionnaire available in Portuguese language, that could be practically used by Portuguese native speakers. A way to empirically have a real notion of job satisfaction levels of the employees is measuring it; having a validated instrument allow its use in Portuguese language.

Keywords: Professional satisfaction, Validation, Factorial structure, Psychometric

INTRODUCTION

Professional satisfaction is one of the most studied concepts in the field of organizational behavior since it is one of the most important human results of the work. Some studies pointed out a strong connection between being satisfied at work and performance (Bota, 2013; Gu & Siu, 2009; Wening & Choerudin, 2015). In other ways, there are studies in which no significant relationship was apparent (Mohr & Puck, 2007). Theoretical and practical studies have not guaranteed an unambiguous answer to the nature and strength of the connection between job satisfaction and organizational performance (Bakotic, 2016). Although, organizations with more satisfied employees tended to be more effective than organizations with dissatisfied employees (Ostroff, 1992). So, the real importance of professional satisfaction is reiterated empirically, as well as the relevance of its relation (antecedent or result) to other concepts, namely absenteeism (Schaumberg, & Flynn, 2017), turnover (Lusine, Jianfang, Jingjing & Thomas, 2017; Romeo, Yepes-Baldó & Lins, 2020; Sainju, Hartwell & Edwards, 2021), organizational citizenship behaviors (Lavi & Littman-Ovadia, 2017; Saxena, Tomar & Tomar, 2019), physical and mental health of the worker (burnout, self-esteem, anxiety, depression) (Faragher, Cass & Cooper, 2005; Kim, Ra, Park & Kwon, 2017), organizational commitment (Eliyana, Ma'arif & Muzakki, 2019; Meyer & Allen, 1991; Meyer, Allen & Smith, 1993), organizational culture (Bellou, 2010; Mesfin, Woldie, Adamu & Bekele, 2020), or workaholism (McMillan, Brady, O'Driscoll & Marsh, 2002).

The study of job satisfaction has presented several definitions over time, considering the theoretical framework in which it falls. According to Judge and Klinger (2000), the most popular definition of job satisfaction, and the one that offers a greater comprehensiveness and theoretical coherence, was promoted by Locke (1976), who defined it as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences and professional dissatisfaction is the unpleasant emotional state resulting from the evaluation of the work itself as frustrating or blocking the realization of the values of the individual, related to the work. In this way, job satisfaction and dissatisfaction are a function of the perceived relationship between what the individual wants from his work and his perception of what he is receiving.

Locke (1976) points out three phases of the evolution of the concept of satisfaction: the psycho-economic one,

in which the professional satisfaction is translated by the salary obtained in function of the work performed; the psycho-sociological, where the professional satisfaction is analyzed taking into account both the personality of the individual and his relation to work as the external variables; the developmentalist, values the work situation taking into account the effort expended by the individual at work to obtain the desired rewards. Thus, job satisfaction is a variable of an affective nature and is a mental process for the evaluation of work experiences, which results in a pleasant or unpleasant state. It can be influenced by the individual's various mental contents, such as beliefs, values, morality, and the possibility of development at work (Levin & Stocks, 1989; Staw & Ross, 1985; Staw, Bell & Clausen, 1986).

Herzberg and colleagues proposed the Two Factor Theory (Herzberg, Mausner & Snyderman, 1959) which is considered one of the first theories proposed to explain job satisfaction. It proposed the existence of two groups of factors, responsible, separately, for job satisfaction - the motivators - such as work itself, performance, promotion and recognition for the work performed: and by job dissatisfaction - hygienic factors - such as supervision, interpersonal relationships at work, and organizational policies. One of the major contributions of Herzberg and colleagues (1959) was to identify the importance of psychological growth as a necessary condition for job satisfaction and to demonstrate that this growth comes from work itself. For Hackman and Oldham (1974), satisfaction would be determined by critical psychological states, caused by five central characteristics of the work: variety, identity, meaning, task autonomy and feedback received. This ratio would, according to them, be moderated by the need for employee growth. However, for Staw and Ross (1985) the concepts of social information processing, job characteristics can be subjective and perceptually flexible, and attitudes at work can be determined by both situational factors and relatively stable dispositional aspects of the individual through the time.

Job satisfaction is one of the most used constructs in industrial and organizational psychology (Heritage, Pollock & Roberts, 2015), for their relationships with individual and organizational dimensions in the workplace, as well as with working conditions (Dormann & Zapf, 2001). It can be considered as the passive acceptance of a satisfactory situation (Warr & Inceoglu, 2012), and can be based on intrinsic (e.g., affective bond) or extrinsic (e.g., payment) aspects (Warr, Cook & Wall, 1979). A meta-analysis developed by Faragher

et al. (2005) concluded that depression, anxiety, burnout, and self-esteem were all associated with job satisfaction. Thus, the conceptual and operational integrity of this concept has relevance both to the academic context and to applied valence.

Job Satisfaction Scale

Warr et al. (1979) developed a scale of 15 items indicative of intrinsic/extrinsic factors related to job satisfaction. The scale also includes a 16th item, which evaluates the overall satisfaction of the participant. In 2015, Heritage and colleagues reported that, up to that time, the study by Warr et al. had more than 650 citations, according to the records of the web of knowledge, and that this scale continued to be frequently used in the academic context, but also applied. The original two- and three-factor structures provided by Warr et al. (1979) were based on cluster analysis: an exploratory technique. These results are still quoted in contemporary literature (e.g., Falkum & Vaglum, 2005; Mohd Dahlan, Mearns & Flin, 2010; Ose et al., 2010; Solberg et al., 2012; Turner, Ross & Ibbetson, 2011). More often, reference is made to the two-factor solution (intrinsic/extrinsic). Magnavita, Fileni and Bergamaschi (2009) demonstrated a two-factor solution in an Italian translation scale study, although the solution did not accurately reflect the same items as those presented by Warr et al. (1979).

In addition to the studies of two and three factors of previous research, there are still studies that choose an one-dimensional solution. As an illustration, with the exploratory factorial analysis, Morrison (2004) found a solution of a single factor that best represented the structure of the underlying factor of the scale. Hills, Joyce and Humphreys (2012) observed a single factor solution through exploratory techniques.

It should be noted that all the investigations studied used exploratory and non-factorial confirmatory analyzes. There is limited consensus in the research literature on the factor structure of this scale. By 2015, Heritage and colleagues pointed out that to date the use of confirmatory factor analysis (CFA) has not been used to validate the factorial structure of the measure. These authors present a hierarchical model of three factors, in which there is a latent factor that represents the general professional satisfaction and that has high correlations with the three factors.

In view of the importance of the construct and due to the happy-productive worker hypothesis has most often been examined in organizational research by correlating job satisfaction to performance (Wright & Cropanzano, 2000) is our main goal of this study to contribute to the adaptation of a widely used measure to the Portuguese language. Despite the widely used of this measure, only with few studies of analysis to its psychometric characteristics, namely using structural equation models, the present study seeks to respond to this need. Thus, it is our objective to contribute to the adaptation of the scale of Warr and colleagues (1979) to the Portuguese population, as well as to explore its factorial structure.

METHOD

Sample

A total of 632 individuals participated in this study, 252 men and 379 women, aged between 18 and 68 years. Most of the participants are married ($n = 369$, 58.4%), or single ($n = 258$, 40.8%). The educational qualifications range from the 1st cycle of basic education ($n = 7$, 1.1%), the 2nd and 3rd cycles of basic education ($n = 60$, 9.5%); ($n = 201$, 31.8%) and higher ($n = 361$, 57.15%). The employment situation is mainly employed ($n = 550$, 87.0%).

Questionnaire

Professional satisfaction was evaluated using the *Job Satisfaction Scale* of Warr et al. (1979). This is constituted by fifteen items, all of them in the positive sense, where they refer to various aspects of the work, where the participants indicate how satisfied or dissatisfied, they are in relation to each of the presented work characteristics. There is still a sixteenth item that refers to overall job satisfaction. The response scale is 7 points (1 = extremely unsatisfied to 7 = extremely satisfied). The internal consistency of the scale in the original study is .89.

The scale translation process, to maintain the equivalence between the original measure in English and the version translated into Portuguese, followed the method proposed by Brislin (1970): 1) back-translation method; 2) bilingual technique; 3) committee approach; and 4) pre-test procedure. For the pre-test, the translated version into Portuguese was applied to 15 participants, and the value of internal

consistency was acceptable. These participants were not included in the final sample.

A questionnaire was also applied with sociodemographic questions regarding the age, gender, marital status, literacy, employment status and type of employment contract.

Data collection procedure

Participants completed the questionnaire, which took about 10 minutes to complete. The paper and pencil questionnaires were completed in the presence of the investigator, in companies, universities, and public places. Participants were guaranteed the anonymity of data, as well as voluntary and free participation.

Data analysis procedure

To analyze the data, the SPSS (version 20.0) and SPSS Amos (version 20.0) programs were used. To carry out the adaptation and validation of the scale for the Portuguese population, descriptive statistics of the items, confirmatory factor analysis and internal consistency analysis were performed.

The following indicators were calculated based on the recommendations of Byrne (2010): The χ^2 (chi-square); χ^2/df (which must range between 2 and 5); CFI (which can vary between 0 and 1); RMSEA (values between .05 and .08 indicate a good fit); and SRMR (an appropriate adjustment of the model is indicated by values lower than .05; Hu & Bentler, 1999). To analyze the internal consistency, Cronbach's alpha (α) and coefficient omega (ω) were performed.

The maximum likelihood estimation method was used, which assumes the multivariate normal distribution and is robust when this assumption is not attended (Schermelleh-Engel, Moosbrugger & Müller, 2003), which is the case for the data in this study (Kolmogorov-Smirnov $\leq .01$).

RESULTS

Analysis of items

As can be seen in Table 1, the data have an asymmetric distribution and do not meet the assumption of normality according to the results of the Kolmogorov-Smirnov test.

Confirmatory factor analysis

In the accomplishment of the confirmatory factorial analysis the several solutions found in previous studies were tested: (i) one-factor (16 items); (ii) one-factor (15 items); (iii) bifactorial (extrinsic satisfaction and intrinsic satisfaction) (15 items); (iv) trifactorial (extrinsic satisfaction, intrinsic satisfaction, and satisfaction with professional relations - subordinated to a general factor: general professional satisfaction) (see Table 2).

The model of the three factors, ensured a better adjustment (see Figure 1).

The observed χ^2/df of 6.127 ($p = .000$) approached the desired values. The CFI of .914 is a benchmark for good adjustment (Byrne, 2010; Joreskog, 1966). Regarding the SRMR and RMSEA should have values lower than .05 to be considered a good fit, although values close to .08 are considered a reasonable adjustment (MacCallum, Browne & Sugawara, 1996). Thus, the SRMR value of .047 and the RMSEA of .089 are indicative of a reasonable adjustment.

Analysis of internal consistency

The scale reliability analysis was performed using the Cronbach's alpha and omega coefficient. The value of reliability with all items was very good ($\alpha = .933$; $\omega = .934$). The elimination of item 15 maintain the value.

The following internal consistency values were observed: intrinsic satisfaction - $\alpha = .866$, $\omega = .868$; extrinsic satisfaction - $\alpha = .707$, $\omega = .710$; satisfaction with professional relationships - $\alpha = .877$, $\omega = .878$. In any of the dimensions no item should be eliminated, otherwise the internal consistency will be reduced.

DISCUSSION, IMPLICATIONS AND FUTURE DIRECTIONS

The present study had as main objective to analyze the factorial structure of the scale of Warr et al. (1979), in a sample of Portuguese population. Based on the theoretical description of Warr et al. (1979), it would be expected to observe a factorial structure that expresses two factors (intrinsic satisfaction and extrinsic satisfaction) or a unifactorial solution. A three-factor hierarchical model presented the best model adjustment indices.

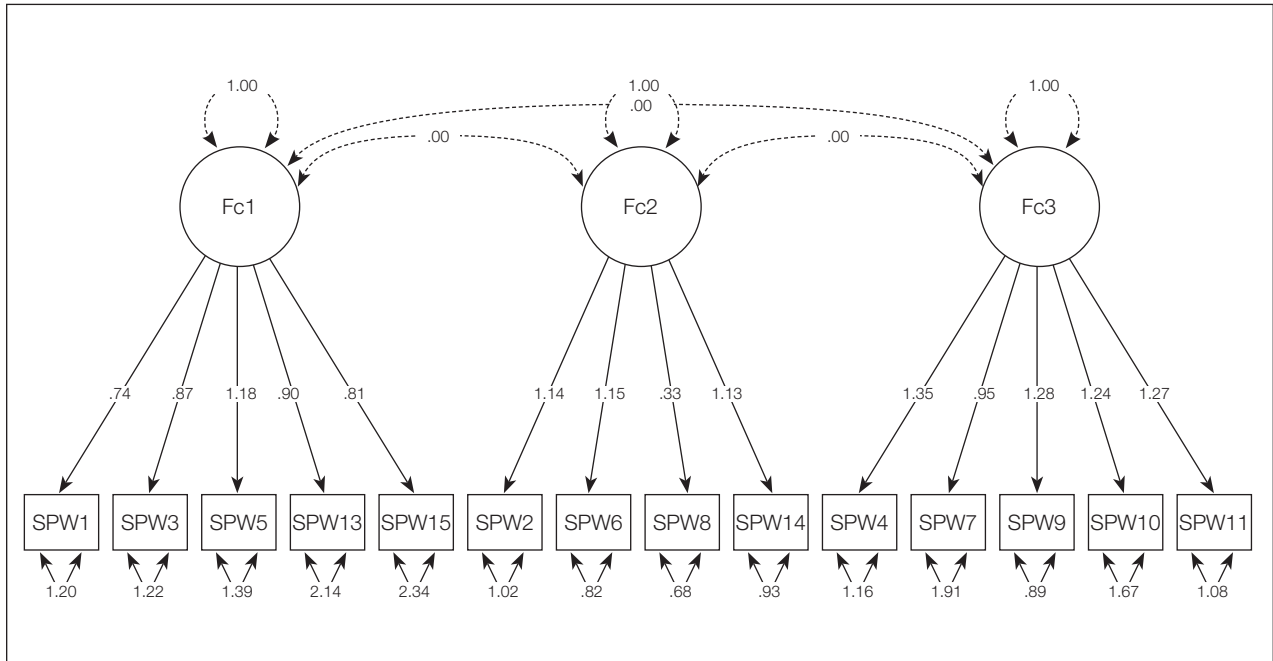
Table 1 – Location, normality, and asymmetry of the data

	Percentiles							Central Tendency		Normality	Asymmetry
	5	10	25	50	75	90	95	Mean	SD	Kolmogorov-Smirnov	
Item 1	2.00	3.00	4.00	5.00	6.00	6.00	7.00	4.74	1.323	KS = .191, $p = .000$	-.453
Item 2	2.00	3.00	4.00	5.00	6.00	7.00	7.00	4.88	1.523	KS = .175, $p = .000$	-.531
Item 3	3.00	3.00	4.00	5.00	6.00	7.00	7.00	5.22	1.408	KS = .189, $p = .000$	-.595
Item 4	1.00	2.00	3.00	4.00	6.00	6.00	7.00	4.24	1.728	KS = .141, $p = .000$	-.236
Item 5	1.65	2.00	4.00	5.00	6.00	7.00	7.00	4.81	1.668	KS = .157, $p = .000$	-.538
Item 6	2.00	3.00	4.00	5.00	6.00	7.00	7.00	4.96	1.465	KS = .158, $p = .000$	-.547
Item 7	1.00	1.00	2.00	3.00	5.00	5.00	6.00	3.29	1.679	KS = .135, $p = .000$.260
Item 8	2.00	2.00	4.00	5.00	6.00	6.00	7.00	4.50	1.564	KS = .155, $p = .000$	-.361
Item 9	1.00	2.00	4.00	5.00	6.00	7.00	7.00	4.56	1.589	KS = .171, $p = .000$	-.427
Item 10	1.00	1.00	2.00	3.00	4.00	6.00	7.00	3.20	1.790	KS = .145, $p = .000$.388
Item 11	1.00	2.00	3.00	4.00	5.00	6.00	7.00	4.04	1.645	KS = .149, $p = .000$	-.159
Item 12	1.00	2.00	3.00	4.00	5.00	6.00	7.00	4.29	1.557	KS = .154, $p = .000$	-.282
Item 13	1.00	2.00	3.00	5.00	6.00	7.00	7.00	4.52	1.720	KS = .162, $p = .000$	-.408
Item 14	2.00	3.00	4.00	5.00	6.00	7.00	7.00	4.69	1.489	KS = .159, $p = .000$	-.421
Item 15	1.00	2.00	4.00	5.00	6.00	7.00	7.00	4.58	1.733	KS = .150, $p = .000$	-.502
Item 16	2.00	3.00	4.00	5.00	6.00	6.00	7.00	4.68	1.421	KS = .174, $p = .000$	-.489

Table 2 – Confirmatory factorial structures tested

	χ^2/df	CFI	TLI	RMSEA	SRMR
1. One-factor (16 items)	7.323	.889	.872	.100	.052
2. One-factor (15 items)	7.655	.884	.865	.103	.054
3. Bifactorial(15 items)	7.692	.885	.864	.103	.054
4. Trifactorial (15 items)	6.127	.914	.896	.089	.047

Legenda. df = degree of freedom; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Squared Residual.

Figure 1 – Factorial confirmatory structure

The original article by Warr et al. (1979) have correlations between the subscale scores ($r = .58 - .72$), but not between latent factors. When strongly correlated latent factors of the scale are considered, then one-dimensionality can be guaranteed for practical issues. This further validates some exploratory results from previous studies (e.g., Hills et al., 2012; Morrison, 2004) reiterating a one-dimensional solution was the best representative of the scale. Our results are consistent to those observed by Heritage et al. (2015), in a study developed with an Australian active population sample. Thus, by the similarity of results, we believe that the factorial solution of three factors, subordinated to a general factor of job satisfaction, allows its use, global or by dimensions, in the Portuguese population.

In terms of internal consistency, it should be noted that the observed results are very satisfactory, above those of the original study and some adaptations (e.g., Heritage et

al., 2015). In the future we consider that the sample can be expanded achieving people who have managerial jobs and people who don't. Miao, Humphrey and Qian (2017) find that job satisfaction is higher in non-managerial jobs than in managerial jobs.

This study presents some limitations. For future research could be interesting to analyze the temporal stability. As previously discussed by Molina and colleagues (Molina, Moliner, Martínez-Tur, Cropanzano & Peiró, 2016) for the assessment of justice climate, we believed that in case of job satisfaction, a longitudinal assessment could have allowed to test possible variability over the time. So, although this study contributes to a better understanding of the *Job Satisfaction Scale*, namely through the performance of factorial validity and assessment of different structures, one of the limitations was to apply only one instrument, which did not allow us to observe, for example, the temporal stability of the measure.

This study has also some methodological limitations, for example sample doesn't guarantee a normal distribution and the invariance wasn't tested.

To have more evidence of psychometric properties of this questionnaire it would be interesting to develop studies considering other validities (e.g., convergent; divergent;

content), as also suggested by van Beveren et al. (2017) in a study of psychometric properties of *Global Transformational Leadership Scale*.

Funding. This work was funded by national funds through FCT - Fundação para a Ciência e a Tecnologia - as part the project CIP/UAL - Ref^a UID/PSI/04345/2020

References

- BAKOTIC, D. (2016). Relationship between job satisfaction and organisational performance. *Economic Research-Ekonomska Istraživanja*, 29 (1), 118-130. doi.org/10.1080/1331677X.2016.1163946
- BELLOU, V. (2010). Organizational culture as a predictor of job satisfaction: The role of gender and age. *Career Development International*, 15, 4-19. doi.org/10.1108/13620431011020862
- BOTA, O.A. (2013). Job satisfaction of teachers. *Procedia - Social and Behavioral Sciences*, 83, 634-638. doi.org/10.1016/j.sbspro.2013.06.120
- BRISLIN, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1 (3), 185-216. doi.org/10.1177/135910457000100301
- BYRNE, B.M. (2010). *Structural equation modeling with AMOS. Basic concepts, applications, and programming (2nd ed.)*. Routledge Taylor & Francis Group.
- DORMANN, C. & ZAPF, D. (2001). Job satisfaction: A meta-analysis of stabilities. *Journal of Organizational Behavior*, 22, 483-504. doi.org/10.1002/job.98
- ELIYANA, A., MAARIF, S. & MUZAKKI, M. (2019). Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. *European Research on Management and Business Economics*, 25 (3), 144-150. doi.org/10.1016/j.iedeen.2019.05.001
- FALKUM, E. & VAGLUM, P. (2005). The relationship between interpersonal problems and occupational stress in physicians. *General Hospital Psychiatry*, 27, 285-291. doi.org/10.1016/j.genhosppsych.2005.03.006
- FARAGHER, E.B., CASS, M. & COOPER, C.L. (2005). The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine*, 62, 105-112. doi.org/10.1136/oem.2002.006734
- GU, Z. & SIU, R.C. (2009). Drivers of job satisfaction as related to work performance in Macao casino hotels: An investigation based on employee survey. *International Journal of Contemporary Hospitality Management*, 21 (5), 561-578. doi.org/10.1108/09596110910967809
- HACKMAN, J.R. & OLDFHAM, G.R. (1974). *Motivation through the design of work: Test of a theory*. Yale University.
- HERITAGE, B., POLLOCK, C. & ROBERTS, L. (2015). Confirmatory analysis of Warr, Cook, and Wall's (1979) Job Satisfaction Scale. *Australian Psychologist*, 50, 122-129. doi.org/10.1111/ap.12103
- HERZBERG, F., MAUSNER, B. & SNYDERMAN, B. (1959). *The motivation to work*. Wiley.
- HILLS, D., JOYCE, C. & HUMPHREYS, J. (2012). Validation of a job satisfaction scale in the Australian clinical medical workforce. *Evaluations & the Health Professions*, 35, 47-76. doi.org/10.1177/0163278710397339
- HU, L. & BENTLER, P. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55. doi.org/10.1080/10705519909540118

- JORESKOG, K.G. (1966). Testing a simple structure hypothesis in factor analysis. *Psychometrika*, 31, 165-178.
- JUDGE, T.A. & KLINGER, R. (2000). Promote job satisfaction through mental challenge. *Handbook of principles of organizational behavior*, 3 (1), 75-89.
- KIM, W., RA, Y.-A., PARK, J. & KWON, B. (2017). Role of burnout on job level, job satisfaction, and task performance. *Leadership & Organization Development Journal* 38 (5), 630-645. doi.org/10.1108/LODJ-11-2015-0249
- LAVY, S. & LITTMAN-OVADIA, H. (2017). My better self: Using strengths at work and work productivity, organizational citizenship behavior, and satisfaction. *Journal of Career Development*, 44, 95-109. doi.org/10.1177/08948453166634056
- LEVIN, I. & STOCKS, J.P. (1989). Dispositional approach to the job satisfaction: Role of negative affectivity. *Journal of Applied Psychology*, 74, 752-758. doi.org/10.1037/0021-9010.74.5.752
- LOCKE, E.A. (1976). The nature and causes of job satisfaction. In M.D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*. Rand McNally College Publishing Company.
- LUSINE, P., JIANFANG, L., JINGJING, S. & THOMAS, D. (2017). Practice environments and job satisfaction and turnover intentions of nurse practitioners: Implications for primary care workforce capacity. *Health Care Management Review*, 42, 162-171. doi.org/10.1097/HMR.0000000000000094
- MacCALLUM, R.C., BROWNE, M.W. & SUGAWARA, H.M. (1996). Power analysis and determination of size sample for covariance structure modeling. *Psychology Methods*, 1, 130-149.
- MAGNAVITA, N., FILENI, A. & BERGAMASCHI, A. (2009). Satisfaction at work among radiologists. *La Radiologia Medica*, 114, 1330-1344. doi.org/10.1007/s11547-009-0461-z
- McMILLAN, L.H.W., BRADY, E.C., O'DRISCOLL, M.P. & MARSH, N.V. (2002). A multifaceted validation study of Spence and Robbins' (1992) workaholism battery. *Journal of Occupational and Organizational Psychology*, 75, 357-368. doi.org/10.1348/096317902320369758
- MESFIN, D., WOLDIE, M., ADAMU, A. & BEKELE, F. (2020). Perceived organizational culture and its relationship with job satisfaction in primary hospitals of Jimma zone and Jimma town administration, correlational study. *BMC Health Services Research*, 20 (438), 1-9. doi.org/10.1186/s12913-020-05319-x
- MEYER, J.P. & ALLEN, N.J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61-98. doi.org/10.1016/1053-4822(91)90011-z
- MEYER, J.P., ALLEN, N.J. & SMITH, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78, 538-551. doi.org/10.1037/0021-9010.78.4.538
- MIAO, C., HUMPHREY, R. & QIAN, S. (2017). A meta-analysis of emotional intelligence effects on job satisfaction mediated by job resources, and test of moderators. *Personality and Individual Differences*, 116, 281-288. doi.org/10.1016/j.paid.2017.04.031
- MOHD DAHLAN, A.M., MEARNNS, K. & FLIN, R. (2010). Stress and psychological well-being in UK and Malaysian fire fighters. *Cross Cultural Management*, 17, 50-61. doi.org/10.1108/13527601011016907
- MOHR, A.T. & PUCK, J.F. (2007). Role conflict, general manager job satisfaction and stress and the performance IJVs. *European Management Journal*, 25 (1), 25-35. doi.org/10.1016/j.emj.2006.11.003
- MOLINA, A., MOLINER, C., MARTÍNEZ-TUR, V., CROPANZANO, R. & PEIRÓ (2016). Validating justice climate and peer justice in a real work setting. *Journal of Work and Organizational Psychology*, 32, 191-205. doi.org/10.1016/j.rpto.2016.09.002
- MORRISON, R. (2004). Informal relationships in the workplace: Associations with job satisfaction, organisational commitment and turnover intentions. *New Zealand Journal of Psychology*, 33, 114-128.
- NUNNALLY, J. (1978). *Psychometric theory (2nd ed.)*. McGraw-Hill.
- OSE, D., FREUND, T., KUNZ, C.U., SZECSENYI, J., NATANZON, I., TRIESCHMANN, J. & MIKSCH, A. (2010). Measuring organizational attributes in primary care: A validation study in Germany. *Journal of Evaluation in Clinical Practice*, 16, 1289-1294. doi.org/10.1111/j.1365-2753.2009.01330.x
- OSTROFF, C. (1992). The relationship between satisfaction, attitudes, and performance: An organizational level analysis. *Journal of Applied Psychology*, 77 (6), 963-974. doi.org/10.1037/0021-9010.77.6.963
- ROMEO, M., YEPES-BALDÓ, M. & LINS, C. (2020). Job satisfaction and turnover intention among people with disabilities working in special employment centers: The moderation effect of organizational commitment. *Frontiers in Psychology*, 11, 1035. doi.org/10.3389/fpsyg.2020.01035
- SAINJU, B., HARTWELL, C. & EDWARDS, J. (2021). Job satisfaction and employee turnover determinants in Fortune 50 companies: Insights from employee reviews from Indeed.com. *Decision Support Systems*, 113582. doi.org/10.1016/j.dss.2021.113582
- SAXENA, S., TOMAR, K. & TOMAR, S. (2019). Impact of job satisfaction on organizational citizenship behavior. *Proceedings of 10th International Conference on Digital Strategies for Organizational Success*. doi.org/10.2139/ssrn.3323753
- SCHAUMBERG, R.L. & FLYNN, F.J. (2017). Clarifying the link

- between job satisfaction and absenteeism: The role of guilt proneness. *Journal of Applied Psychology*, 102, 982-992. doi.org/10.1037/apl0000208
- SCHERMELLEH-ENGEL, K., MOOSBRUGGER, H. & MÜLLER, H. (2003). Evaluating the fit of structural equation models: Test of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research - Online*, 8, 23-74.
- SOLBERG, I., AASLAND, O., GUDE, T., MOUM, T., VAGLUM, P. & TYSSEN, R. (2012). The impact of change in a doctor's job position: A five-year cohort study of job satisfaction among Norwegian doctors. *BMC Health Services Research*, 12, 1-7. doi.org/10.1186/1472-6963-12-41
- STAW, B.M., BELL, N.E. & CLAUSEN, J.A. (1986). The dispositional approach to job attitudes: A Lifetime Longitudinal Test. *Administrative Science Quarterly*, 31, 56-77. doi: 10.2307/2392766
- STAW, B.M. & ROSS, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, 70, 469-480. doi.org/10.1037/0021-9010.70.3.469
- TURNER, S., ROSS, M.K. & IBBETSON, R.J. (2011). Job satisfaction among dually qualified hygienist-therapists in UK primary care: a structural model. *British Dental Journal*, 210, 166-167. doi.org/10.1038/sj.bdj.2011.50
- VAN BEVEREN, P., DIMAS, I., LOURENÇO, P. & REBELO, T. (2017). Psychometric properties of the Portuguese version of the Global Transformational Leadership (GTL) scale. *Journal of Work and Organizational Psychology*, 33, 109-114. doi.org/10.1016/j.rpto.2017.02.004
- WARR, P., COOK, J. & WALL, T. (1979). Scales for measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52, 129-148. doi.org/10.1111/j.2044-8325.1979.tb00448.x
- WARR, P. & INCEOGLU, I. (2012). Job engagement, job satisfaction, and contrasting associations with person-job fit. *Journal of Occupational Health Psychology*, 17, 129-138. doi.org/10.1037/a0026859
- WENING, N. & CHOERUDIN, A. (2015). The influence of religiosity towards organizational commitment, job satisfaction, and personal performance. *Polish Journal of Management Studies*, 11 (2), 181-191.
- WRIGHT, T.A. & CROPANZANO, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5 (1), 84-94. doi.org/10.1037/1076-8998.5.1.84