

The Role of Psychological Capital and Sense of Coherence in the Work Engagement of Iranian Psychologists and Counselors (A National Online Study)

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Abstract

Aim: Psychologists and counselors need Psychological Capital and a Sense of Coherence to effectively engage in their professional roles in prevention and intervention. The purpose of this study was to investigate the role of psychological capital and a sense of coherence in the work engagement of Iranian psychologists and counselors. **Method:** In 2021, 1156 psychologists and counselors from different regions of Iran were selected using a web-based sampling method and completed the Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2003), the Psychological Capital Questionnaire (PCQ: Luthans, 2002), and the Sense of Coherence Scale (SOC: Flensburg-Madsen et al., 2017). SPSS 26 was used to analyze the data using the Pearson correlation coefficient and stepwise multiple regression. **Findings:** The results indicated a positive and significant relationship between the components of psychological capital (self-efficacy, resilience, hope, and optimism) and the feeling of psychological cohesion with job desire. ($P < 0.001$). The regression analysis also showed that self-efficacy, optimism, and hope could predict the participants' work engagement ($P < 0.001$). However, resilience and a sense of psychological cohesion could not predict work engagement ($P < 0.05$). **Discussion** The findings highlighted the role of psychological capital and a sense of coherence in the work engagement of Iranian psychologists and counselors and its place supports them in preventive and intervention activities. **Conclusion:** Based on the results of the current research, psychological capital and Sense of Coherence are important and influential variables in work engagement among mental health professionals, and it is suggested that these variables be given more attention in the empowerment programs of mental health professionals.

Keywords: Self-efficacy, Resilience, work engagement, Iranian psychologists and counselors

Introduction

Psychologists and counselors can significantly contribute to the prevention and improvement of people's psychological well-being, leading to improved community health. Psychology and counseling are, in fact, beneficial to public health and community health (Ellington et al., 2023; Cuijpers, 2019).

For many years, Iranian psychologists and counselors have provided psychological services in various fields in private clinics and public institutions, especially during the crisis of the COVID-19 epidemic, in the form of virtual counseling activities via the 4030 platforms to improve community mental health in quarantine days. However, psychologists in Iran and other countries have been confronted with the challenges of COVID-19 and challenging psychological services to society, which, in turn, has affected their psychological health and job performance. (Kaur et al., 2022). Accordingly, studying factors contributing to their work performance, including work engagement, appears essential.

Occupational experts consider work engagement as a positive psychological concept that can be used to evaluate well-being and psychological health in the workplace (Bakker & Albrecht, 2018). It is also a measure of energy, work attachment, and career effectiveness, which are directly related to positive outcomes such as work performance, strengthening organizational citizenship behaviors, and job satisfaction but are negatively related to employees' intention to quit. (Oubibi et al., 2022; Putri & Setianan, 2019). Given the nature of psychology and counseling jobs, research has shown that counselors and psychologists who spend their lives trying to help others are the first potential victims of stress (Khakhpour, 2020). Moreover, counselors and psychotherapists who spend more time coping with clients' stress are more vulnerable to stress, which can negatively affect their mental health as well as their work functions, including decreasing their motivation and increasing their burnout (Smout et al., 2021). In this regard, Khakpour and Birashk (1999) reported that about 27% of psychologists and counselors in Tehran (Iran) experienced various burnout symptoms. The data from another study indicated that 80.6% of healthcare professionals were experiencing psychological distress, and those who were distressed showed a significantly lower level of work engagement (Gómez-Salgado et al., 2021).

Based on the research background, it can be found that work engagement is an important variable that contributes to psychologists' and counselors' performance improvement; it is, therefore, essential to study the factors that affect work engagement. In addition to environmental factors affecting employee engagement, psychological factors, commonly known as Psychological Capital, make psychologists more capable of providing top-notch performance. According to previous research, psychological capital and work engagement capital are positively correlated, and people with better psychological capital are more likely to be engaged at work (Wardani & Anwar, 2019). Similarly, Peng and Chen (2022) showed that Psychological capital directly and indirectly affects work engagement.

Luthans and Youssef (2004) define *psychological capital* as a combination of self-efficacy, hope, optimism, and resilience concepts that allow people to establish a reasonable rapport with an organization. Psychological capital is the positive evaluation of an individual's ability or ability to overcome obstacles through effort and perseverance. People often assess this by their current position on hope, efficiency, flexibility, and optimism (Luthans et al., 2007). Self-efficacy is the belief that one is capable of doing the job successfully. Hope refers to the belief that one can accomplish a goal. Resilience is the ability to cope with obstacles positively and actively and adjust to them as they arise. *Optimism* is creating positive documents about events and believing things will turn out well. Although other aspects of personality (such as wisdom or courage) may increase a person's psychological capacity to cope, almost all psychological capacity literature has focused exclusively on these four dimensions. (Harms et al., 2017).

In examining the contribution of these components to work engagement, Erbas and Ozbek (2016) found that resilience, hope, and optimism were significant predictors, while self-efficacy was not. Also, the research indicated that resilience was the psychological capital component that predicted work engagement and the effect of psychological capital dimensions. On each dimension of work engagement, stated hope, resilience, and optimism predict the vigor dimension; aside from that, self-efficacy, hope, resilience, and optimism predict the concentration dimension.

However, according to some models related to job satisfaction, such as Hackman and Oldham's JCM (Job Characteristics Model) (1975), positive emotions towards work are linked, among other things, to the perception of work's sensibility, which in turn is linked to Antonovsky's important concept of the Sense of coherence (Antonovsky, 1993).

The Sense of Cohesion (SOC) is a fundamental structure and the core of the salutogenic model of health developed by Antonovsky (1993). This model has several loopbacks; however, the theoretical core of this model is the Sense of cohesion, which can handle stress and help people stay healthy. The Sense of coherence consists of three components. Two of them are based on a rational assessment of stimuli. The two are comprehensibility, which relates to perceptual judgment, predictability, and structure of stimuli, and manageability, which relates to assessing the availability of resources needed to address the stimuli's demands. The third component involves feelings. It is essential to evaluate the meaning of life, the feeling of effort, and participation that requires specific challenges. Serving as the emotional equivalent of comprehension, it organizes the motivational functions of the Sense of coherence (Derbis & Jasiński, 2018).

The Sense of coherence seems to be associated with work engagement. Grabowski and Rachwaniec-Szczecińska (2019) reported that components of the Sense of coherence explain around 28% of work gratification, and the most significant share is the Sense of meaningfulness. By examining 94 independent workers of Polish branches of international corporations, Derbis and Jasiński (2018) also found a positive and significant relationship between the Sense of coherence and engagement at work.

Generally speaking, the research background indicates that psychological capital and Sense of coherence are the variables that can be associated with a wide range of variables related to job performance, including work engagement. However, most of the studies conducted by researchers in this field occurred when regular times prevailed and without challenges, such as the COVID-19 pandemic. The results of previous research may not apply to a time when society is in an unusual state, considering the changes brought about by COVID-19. Additionally, previous research has been conducted on groups other than psychologists and counselors, so the results of studies in other groups cannot be generalized to psychologists and counselors. Moreover, considering the job burden created by the Covid 19 pandemic on mental health professionals, especially psychologists, and counselors, it is vital to conduct research to identify factors that can improve work engagement and, consequently, job satisfaction. Accordingly, using an online national study, this study explores the role of psychological capital and coherence in the work engagement of Iranian psychologists and counselors.

You must explain the results, for example, why self-efficacy can and resilience can not predict work engagement.

Methods

The participants in this study were all Iranian psychologists and counsellors working in psychological clinics and government centres in the spring of 2021. Due to the constraints created by the COVID-19 epidemic and the impossibility of collecting data in person and using the capacity of cyberspace, the questionnaires were distributed on the web. They were first prepared online, and their links were distributed to psychologists through reputable channels.

The participants voluntarily filled out the questionnaires on the website. A total of 1184 questionnaires were obtained, and 1156 people were selected for the study after initial screening and elimination of participants in fields unrelated to psychology and counselling.

Two categories of participants provided psychological services, namely, psychologists and counselors. Eight hundred eighty-one people were in the first category, including members of various fields of psychology (general psychology, clinical psychology, child and adolescent psychology, exceptional child psychology, Health Psychology, Educational Psychology, Personality Psychology, Positive Psychology, Cognitive Psychology, Sports Psychology, Psychometrics, and Organizational and Industrial Psychology), and 275 people were in the second category which included members of the counselling fields (academic counselling, family counselling, social work, and midwifery counselling).

Among the participants, 257 (22.2%) were single, 857 (74.1%) were married, and 42 (3.6%) were divorced. As far as educational status goes, 105 (9.1%) people had a bachelor's degree, 815 (70.5%) held a master's degree, and 236 (20.4%) had a doctorate.

It is worth mentioning that this study respected the ethical principles of knowledge of the research objectives, confidentiality, and protection of the participants' data. Moreover, this research was approved by the Ferdowsi University of Mashhad's ethics committee through number 5136721. It is noteworthy that during the COVID-19 epidemic, the tendency to participate in online surveys increased in Iran.

Instruments

The Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2003)

The UWES designed by Schaufeli & Bakker (2003). The UWES is a 17-item instrument. Theoretically, six items measure vigour (1, 4, 8, 12, 15, 17), five indicate dedication (2, 5, 7, 10, 13), and six more assess absorption (3, 6, 9, 11, 14, 16). Examples of vigour are: "At my work, I feel bursting with energy" or "At my job, I am very resilient, mentally". The dedication includes items such as "I find the work that I do full of meaning and purpose" and "I am proud of the work that I do". Finally, the absorption is tapped by items such as "Time flies when I'm working" or "It is difficult to detach myself from my job"—a Likert-type one, ranging from one (*completely disagree*) to five (*completely agree*). The range of questionnaire scores is between 17 and 85. The reliability of this scale was .93 for the total score, ranging from .79 to .89 for the subscales (Schaufeli & Bakker, 2003). The current study employed the Persian version, demonstrating good psychometric properties (Torabinia et al., 2017). The reliability of the questionnaire in the present study using Cronbach's alpha was .78 for the vigour component, .86 for the dedication component, 0.80 for absorption, and 0.92 for the total questionnaire.

Psychological Capital Questionnaire (PCQ; Luthans, 2002)

The PCQ was designed by Luthans (2002) and consists of 24 questions and four subscales: self-efficacy, hopefulness, resilience, and optimism. Self-efficacy is measured by questions 1-6, hopefulness by questions 7-12, resilience by questions 13-18, and optimism by questions 19-24 (Luthans, 2002). Each subscale has six items that are answered on a 6-point Likert scale (1=totally disagree; 6=totally agree). The range of questionnaire scores is between 24 and 144. Correlational studies have indicated that the scores of this instrument are highly correlated with the scores of the Snyder Hope Scale (1996), Wagnild and Young Resilience Scale (1993), Schier and Carver Optimism Scale (1985), and Parker Self-efficacy Scale (1998) (Cited by Soleimani & Dhghni, 2017). Luthans reported that this test had a validity of 0.90. He also reported the validity of self-efficacy, hopefulness, resilience, and optimism as 0.82, 0.81, 0.78, and 0.65, respectively (Luthans et al., 2007). The Persian version of the scale has demonstrated good psychometric properties (Shokri et al., 2020). The reliability of the questionnaire in the present study using Cronbach's alpha was .85 for the Self-efficacy component, .82 for the hopefulness component, .85 for optimism, .80 for optimism, and .89 for the total questionnaire.

Sense of Coherence Scale (SOC: Flensburg-Madsen et al., 2006)

The SOC designed by Flensburg-Madsen et al. (2006). This is a 35-item questionnaire with three or five options. Options are scored using three degrees on a scale of one to

three. Antonovsky designed the 29-item and 13-item versions of the questionnaire; however, In this study, the revised version of the Sense of Coherence Scale (Flensborg-Madsen et al., 2006) was employed. The minimum score in this questionnaire is 29, and the maximum score is 87. It has been shown that this instrument is valid and reliable in various languages (Eriksson & Lindström, 2005; Ferguson et al., 2015; Rajesh et al., 2016). Rohani et al. (2010) reported that the questionnaire is also valid and reliable in the Persian language, with a Cronbach's alpha greater than .70 In the present study, Cronbach's alpha was used to measure the reliability of the questionnaire, which was .92 for the total questionnaire. SPSS 26 was used to analyze data using the Pearson correlation coefficient and stepwise multiple regression.

Results

The participants of this research were 1156 people (female = 884, male = 272; age range 21-63 years, $M = 38.59$, $SD = 8.08$). Table 1 presents the descriptive indicators of the research variables and their correlations. Table 1 shows a positive and significant relationship between the psychological capital and the Sense of coherence with the work engagement (<0.001). Furthermore, the psychological capital and the Sense of coherence are positively correlated.

Table 1: Mean, standard deviation, Skew, Kurtosis and correlation between variables, $N=1156$ ($***<.001$)

Variable	1	2	3	4	5	6	7	8	9	10
1. Vigor	1									
2. Dedication	.79***	1								
3. absorption	.86***	.80***	1							
4. Work engagement	.95***	.90***	.95***	1						
5. Self-efficacy	.59***	.63***	.62***	.65***	1					
6. Hope	.56***	.58***	.60***	.62***	.72***	1				
7. Resilience	.43***	.35***	.42***	.43***	.47***	.52***	1			
8. Optimism	.51***	.47***	.53***	.54***	.50***	.57***	.53***	1		
9. Psychological capital	.64***	.62***	.66***	.69***	.83***	.87***	.78***	.77***	1	
10. Sense of coherence	.11***	.15***	.11***	.13***	.14***	.13***	.13***	.11***	.08***	1
Mean	23.42	21.06	23.14	67.90	29.77	28.03	24.88	25.57	108.26	79.60
Standard deviation	3.73	2.74	3.62	9.48	3.81	4.06	3.88	3.30	12.32	4.41
Skew	-.46	-.95	-.44	-0.59	-0.67	-0.55	0.10	-0.08	-0.27	-0.39

Kurtosis .15 .27 .26 0.76 1.29 0.90 0.08 0.08 1.12 0.87

The following results from the regression analysis for predicting work engagement through psychological capital and the Sense of coherence. Prior to presenting the results, it is essential to note that the variance inflation factor (VIF) and tolerance for the Collinearity default test did not indicate a value greater than 10 for the predictor variables. It should also be noted that the variance inflation factor (VIF) and tolerance for the Collinearity assumption check indicated that none of these values were greater than 10 for the predictor variables. Additionally, all tolerance values for these variables fall within zero and one, confirming this assumption. Furthermore, the Durbin-Watson value was 2.01, supporting the assumption of autocorrelation for the above variables. These results suggest the establishment of multiple linear regression analysis assumptions, as illustrated in Tables 2 and 3.

Table 2: multiple linear regression predicting work engagement based on Psychological capital & Sense of coherence, N=1156

	MODEL	SS	df	MS	F	p	R	R ²	S.E
1	Regression	44094.375	1	44094.375	849.754	.000	.651	.424	7.202
	Residual	59881.905	1154	51.891					
2	Regression	50578.587	2	25289.294	546.064	.000	.697	.486	6.805
	Residual	53397.693	1153	46.312					
3	Regression	52526.780	3	17508.929	392.041	.000	.711	.505	6.682
	Residual	51449.493	1152	44.661					

Predictors (3): (Constant), Self-efficacy, Optimism, Hope

Table 3: unstandardized and standardized regression coefficients, N=1156

Predictors	B	Std. Error	β	t	P
(Constant)	8.858	1.775	-	4.492	.000
Self-efficacy	.950	.076	.382	12.549	.000
Optimism	.663	.073	.231	9.024	.000
Hope	.493	.075	.211	6.605	.000

Multiple linear regression was calculated to predict work engagement based on psychological capital and the Sense of coherence. A significant regression equation was identified ($F(3, 1156) = 392.041, p < .000$) with an R^2 of .505. The participants' predicted work engagement was equal to 8.858 (Self-efficacy: -.950, Optimism: +.663, Hope: +.493). Self-efficacy, optimism, and hope all predicted work engagement significantly. The Sense of coherence did not predict work engagement ($p > .000$).

Discussion

Using an online national study, this study investigated the role of psychological capital and the Sense of coherence in work engagement among Iranian psychologists and counselors. Specifically, it explained the relationship between the variables of psychological capital and the Sense of coherence with work engagement, as well as the relationship of these variables with each other and their role in predicting the work engagement of psychologists and counselors.

First, it was established that psychological capital is positively and significantly related to work engagement. The findings are consistent with those of previous studies demonstrating psychological capital's active and dynamic role in promoting work engagement (e.g., Costantini et al., 2017; Erbasi & Ozbek, 2016). It appears that, as employees' resources increase, they are better able to deal with job demands and more engaged in the workplace. Indeed, increasing work engagement through improvements made to individual psychological capital is a unique contribution to our systematic intervention, which was successfully carried out in terms of stated intervention goals. Psychological capital is the type of traits that employees need to possess to exhibit positive organizational behaviours in their environment (Wardani & Anwar, 2019). Similarly, a literature review reveals that psychological capital positively correlates with organizational behaviours such as performance, job satisfaction, and organizational commitment. Undoubtedly, employees with high self-sufficiency, hope, resistance to adverse conditions, and optimism are more likely to contribute to an organization's success. (Erbasi & Ozbek, 2016).

Additionally, the second result indicated that the Sense of coherence was related to work engagement in a positive and significant way. Previous studies have reported similar findings (Derbis & Jasiński, 2018; Grabowski & Rachwaniec-Szczecińska, 2019; Mitonga-Monga & Mayer, 2020).

Researchers have suggested that work engagement depends on the organization's health and personal factors (García-Sierra et al., 2016; Keyko et al., 2016; Wojdylo et al., 2014). A sense of coherence has also been identified as a factor influencing the occupational health of professionals (Basińska et al., 2011). Based on our results, the Sense of coherence of psychologists and counsellors could explain part of their dedication to their jobs, which is the emotional component of engagement; hence, its more significant association with psychologists and counsellors (Malagon-Aguilera et al., 2019). A high sense of coherence can help psychologists and counsellors deal with stressful situations more effectively and utilize their resources and workplace. The result could be more extraordinary dedication, greater vigor, and, ultimately, greater engagement at work. Also, mental health professionals experience different levels of stress and anxiety due to facing clients with different psychological problems. In the meantime, the Sense of coherence can act as a shield against psychological pressures and

improve people's performance Because the Sense of coherence is a person's optimistic worldview regarding his ability and the significance of events (González-Siles et al., 2022). On the other hand, the strength of this structure evaluates the power of reasoning and the use of available resources, and by choosing the right strategy and balancing the use of strategies, it reduces the pressure imposed on the body and mind of a person (Malagon-Aguilera et al., 2019). Therefore, the pressures of the work environment have less effect on these people, and their work engagement also increases.

According to the third result, self-efficacy, optimism, and hope were significant predictors of work engagement, while resilience and coherence were not. There is some similarity here with the results of Erbasi and Ozbek (2016), who showed that psychological capital components can predict work engagement. In this regard, it can be stated that Self-efficacy is the Sense of a person's belief in his abilities to find the necessary solutions for the successful execution of jobs, which is a very important expectation element for improving people's performance in the workplace. This promotion makes the process of the implementation of the employees' jobs successful, which in turn causes a feeling of satisfaction and work engagement (Peng & Chen, 2022). Hope in the Sense of a cognitive state that enables people to set accurate and predictable goals and achieve these goals through perceived will and energy also makes employees define achievable goals within the framework of their duties and move towards them. This feature reduces the possibility of failing to perform tasks and having a negative experience (Wardani & Anwar, 2019). Optimism means an interpretation style that attributes positive events to permanent, personal and comprehensive causes and adverse events to external, temporary causes and special conditions, and can successfully be used to deal with crises, risks and problems; they make employees not feel defeated and depressed in the complex and stressful work environment and do not lose their passion for work and performing their duties (Costantini et al., 2017). Therefore, employees with high psychological capital can be more engaged in their work and organization than their colleagues and show up at their workplace with more engagement.

This result, however, is contrary to Grabowski and Rachwaniec-Szczecińska's (2019) and Derbis and Jasiński (2018) findings. In their study, they found that the Sense of coherence could predict employee job satisfaction and work engagement, but in this study, the Sense of coherence was not a significant predictor. These differences may be explained in part by the differences in research samples. In the present study, psychologists and counselors constituted the sample, while previous studies examined other employees or workers. In addition, these results may differ due to geographical and cultural differences among the research samples; this study was conducted in Iran, whereas the other research was conducted in Poland, which has a very different culture. The third possible reason for the differences in results could be the nature of the data

collection; in this study, data were collected online, and through the web, but in other studies, data were collected in person.

The following are some limitations of this study. In light of the study being conducted only with adults 21–63 years of age, generalizing the findings to those over the age of 64 should be done with caution. In addition, since the study was conducted using a cross-sectional design, causal relationships could not be established; only correlations could be identified. Direct relationships have been studied in this research, and indirect results cannot be inferred from the findings. The results of this study were also gathered online and may have limitations related to online samplings, such as the inability to receive direct feedback from participants. This suggests the use of structural equation methods as well as face-to-face sampling in future studies.

Conclusion

Overall, this study found that psychological capital and Sense of cohesion are variables related to work engagement among Iranian psychologists and counselors; however, psychological capital contributed significantly more to work engagement than Sense of cohesion. Considering the components of psychological capital, it seems that job feedback to psychologists and counselors about psychological services from the community in covid -19, has played a role in increasing psychological capital and consequently increasing work engagement, while in the Sense of coherence, research and implementation of programs Empowerment of consultants remains. Therefore, the Psychology and Counseling Organization of the Islamic Republic of Iran (PCOIRAN) and institutions providing mental health services should pay more attention to the psychological capital of psychologists and counselors to increase work engagement and consider appropriate training courses and support programs.

Disclosure Statements

The authors declare no conflict of interest

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References

- Antonovsky, A. (1993). The structure and properties of the Sense of coherence scale. *Social science & medicine*, 36(6), 725-733. [https://doi.org/10.1016/0277-9536\(93\)90033-Z](https://doi.org/10.1016/0277-9536(93)90033-Z)
- Bakker, A. B., & Albrecht, S. (2018). Work engagement: current trends. *Career Development International*, 23(1), 4–11. <https://doi.org/10.1108/CDI-11-2017-0207/FULL/HTML>
- Basińska, M. A., Andruszkiewicz, A., Basińska, M. A., & Grabowska, M. (2011). Nurses' Sense of coherence and their work-related patterns of behaviour. *Springer*, 24(3), 256–266. <https://doi.org/10.2478/S13382-011-0031-1>

- Costantini, A., De Paola, F., Ceschi, A., Sartori, R., Meneghini, A. M., & Di Fabio, A. (2017). Work engagement and psychological capital in the Italian public administration: A new resource-based intervention programme. *SA Journal of Industrial Psychology*, 43(1), 1–10. <http://dx.doi.org/10.4102/sajip.v43i0.1413>
- Cuijpers, P. (2019). Targets and outcomes of psychotherapies for mental disorders: an overview. *World Psychiatry*, 18(3), 276–285. <https://doi.org/10.1002/wps.20661>
- Derbis, R., & Jasiński, A. M. (2018). Work satisfaction, psychological resiliency and Sense of coherence as correlates of work engagement. *Cogent Psychology*, 5(1), 1451610. <https://doi.org/10.1080/23311908.2018.1451610>
- González-Siles, P., Martí-Vilar, M., González-Sala, F., Merino-Soto, C., & Toledano-Toledano, F. (2022). Sense of Coherence and Work Stress or Well-Being in Care Professionals: A Systematic Review. *Healthcare (Basel, Switzerland)*, 10(7), 1347. <https://doi.org/10.3390/healthcare10071347>
- Ellington, B., Dunbar, A., & Wachter-Morris, C. (2023). Elevating and Expanding School Counselors' Roles and Voices in the Prevention of School Violence. *Professional School Counseling*, 27(1), <https://doi.org/10.1177/2156759X221150003>.
- Erbasi, A., & Ozbek, M. C. (2016). The Effect of Psychological Capital on Work Engagement. *Australian Academy of Business and Economic Review*, 2(4), 276–284.
- Eriksson, M., & Lindström, B. (2005). Validity of Antonovsky's Sense of coherence scale: A systematic review. *Journal of Epidemiology and Community Health*, 59(6), 460–466. <https://doi.org/10.1136/jech.2003.018085>
- Ferguson, S., Davis, D., Browne, J., & Taylor, J. (2015). Examining the Validity and Reliability of Antonovsky's Sense of Coherence Scale in a Population of Pregnant Australian Women. *Evaluation and the Health Professions*, 38(2), 280–289. <https://doi.org/10.1177/0163278715578558>
- Flensburg-Madsen, T., Ventegodt, S., & Merrick, J. (2006). Sense of coherence and physical health. A cross-sectional study using a new scale (SOC II). *Hindawi.Com*, 6, 2200–2211. <https://doi.org/10.1100/tsw.2006.350>
- García-Sierra, R., Fernández-Castro, J., & Martínez-Zaragoza, F. (2016). Work engagement in nursing: An integrative review of the literature. *Journal of Nursing Management*, 24(2), E101–E111. <https://doi.org/10.1111/jonm.12312>
- Gómez-Salgado, J., Domínguez-Salas, S., Romero-Martín, M., Romero, A., Coronado-Vázquez, V., & Ruiz-Frutos, C. (2021). Work engagement and psychological distress of health professionals during the COVID-19 pandemic. *Journal of Nursing Management*, 29(5), 1016–1025. <https://doi.org/10.1111/jonm.13239>
- Grabowski, D., & Rachwaniec-Szczecińska, Ż. (2019). THE SENSE OF COHERENCE AND WORK ETHIC AS PREDICTORS OF JOB SATISFACTION. *Rozprawy Społeczne*, 9(3), 61–67.
- Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60(2), 159–170. <https://doi.org/10.1037/h0076546>

- Harms, P. D., Vanhove, A., & Luthans, F. (2017). Positive Projections and Health: An Initial Validation of the Implicit Psychological Capital Health Measure. *Applied Psychology, 66*(1), 78–102. <https://doi.org/10.1111/apps.12077>
- Kaur, V., Lindinger-Sternart, S., & Grey, B. (2022). Public Policy Issues Affecting Integrated Health Care: Challenges, Opportunities, and Implications for Clinical Mental Health Counselors. *Journal of Mental Health Counseling, 44*(1), 49–67. <https://doi.org/10.17744/mehc.44.1.05>
- Keyko, K., Cummings, G. G., Yonge, O., & Wong, C. A. (2016). Work engagement in professional nursing practice: A systematic review. *International Journal of Nursing Studies, 61*, 142–164. <https://doi.org/10.1016/j.ijnurstu.2016.06.003>
- Khakhpour, R. (2020). Negative and positive effects of psychotherapy profession on life and family and social relationships Clinical psychologists, counselors and psychiatrists. *Thoughts and Behavior in Clinical Psychology, 15*(55), 77–86. <https://www.sid.ir/en/Journal/ViewPaper.aspx?ID=777166>
- Khakpour, R., & Birashk, B. (1999). Epidemiology of job Burnout syndrome among counselors and psychotherapists. *Iran J Psychiatr and Clin Psychol (Andeesheh Va Raftar), 4*(15), 22–14.
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior, 23*(6), 695–706. <https://doi.org/10.1002/job.165>
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive Psychological Capital: Measurement and Relationship with Performance and Satisfaction Part of the Management Sciences and Quantitative Methods Commons. *Personnel Psychology, 60*(3), 541–572.
- Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics, 33*(2), 143–160. <https://doi.org/10.1016/j.orgdyn.2004.01.003>
- Lutthans, F., Youssef, M., & Avolio, J. (2007). *Psychological capital developing the human competitive edge*. Oxford University Press.
- Malagon-Aguilera, M. C., Suñer-Soler, R., Bonmatí-Tomas, A., Bosch-Farré, C., Gelabert-Vilella, S., & Juvinyà-Canal, D. (2019). Relationship between Sense of coherence, health and work engagement among nurses. *Journal of Nursing Management, 27*(8), 1620–1630. <https://doi.org/10.1111/JONM.12848>
- Mitonga-Monga, J., & Mayer, C. H. (2020). Sense of coherence, burnout, and work engagement: The moderating effect of coping in the Democratic Republic of Congo. *International Journal of Environmental Research and Public Health, 17*(11), 1–16. <https://doi.org/10.3390/ijerph17114127>
- Oubibi, M., Fute, A., Xiao, W., Sun, B., & Zhou, Y. (2022). Perceived Organizational Support and Career Satisfaction among Chinese Teachers: The Mediation Effects of Job Crafting and Work Engagement during COVID-19. *Sustainability (Switzerland), 14*(2), 623. <https://doi.org/10.3390/su14020623>
- Peng, J. C., & Chen, S. W. (2022). Learning climate and innovative creative performance: Exploring the multi-level mediating mechanism of team psychological capital

- and work engagement. *Current Psychology*, 1–19. <https://doi.org/10.1007/s12144-021-02617-3>
- Putri, W. H., & Setianan, A. R. (2019). Job enrichment, organizational commitment, and intention to quit: The mediating role of employee engagement. *Problems and Perspectives in Management*, 17(2), 518–526. [https://doi.org/10.21511/ppm.17\(2\).2019.40](https://doi.org/10.21511/ppm.17(2).2019.40)
- Rajesh, G., Eriksson, M., Pai, K., Seemanthini, S., Naik, D. G., & Rao, A. (2016). The validity and reliability of the Sense of Coherence scale among Indian university students. *Global Health Promotion*, 23(4), 16–26. <https://doi.org/10.1177/1757975915572691>
- Rohani, C., Khanjari, S., Abedi, H. A., Oskouie, F., & Langius-Eklöf, A. (2010). Health index, Sense of coherence scale, brief religious coping scale and spiritual perspective scale: Psychometric properties. *Journal of Advanced Nursing*, 66(12), 2796–2806. <https://doi.org/10.1111/J.1365-2648.2010.05409.X>
- Schaufeli, W. B., & Bakker, A. B. (2003). Utrecht work engagement scale: Preliminary manual. *Occupational Health Psychology Unit, Utrecht University, Utrecht*, 26(1), 64–100.
- Shokri, O., Mahdavian, P., & Khodaei, A. (2020). Factor Structure, Reliability and Measurement Invariance of the Psychological Capital Questionnaire for Iranian Male and Female Teachers. *Iranian Journal of Research in School and Virtual Learning*, 8(1), 21–34. <https://doi.org/10.30473/etl.2020.52725.3215>
- Smout, M., Simpson, S., Stacey, F., & Reid, C. (2021). The influence of maladaptive coping modes, resilience, and job demands on emotional exhaustion in psychologists. *Clinical Psychology & Psychotherapy*, 1–14. <https://doi.org/10.1002/cpp.2631>
- Soleimani, L., & Dhghni, Y. (2017). Relationship between developmental assets and academic achievement: Mediating role of psychological capital. *Iranian Journal of Psychological Achievements*, 24(1), 127–150. https://psychac.scu.ac.ir/article_13173_00.html?lang=en
- Torabinia, M., Mahmoudi, S., Dolatshahi, M., & Abyaz, M. R. (2017). Measuring engagement in nurses: The psychometric properties of the Persian version of Utrecht Work Engagement Scale. *Medical Journal of the Islamic Republic of Iran*, 31(1), 83–89. <https://doi.org/10.18869/mjiri.31.15>
- Wardani, L. M. I., & Anwar, M. S. (2019). The role of quality of work life as mediator: Psychological capital and work engagement. *Humanities and Social Sciences Reviews*, 7(6), 447–463. <https://doi.org/10.18510/hssr.2019.7670>
- Wojdylo, K., Baumann, N., Fischbach, L., & Engeser, S. (2014). Live to work or love to work: Work craving and work engagement. *PLoS ONE*, 9(10). <https://doi.org/10.1371/journal.pone.0106379>