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# Regulatory Resources for Work Engagement and Overcoming Professional Deformations in the Context of Human Well-being in the Work Environment

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## Abstract

Introduction. This paper focuses on the search for regulatory resources for a person's professional well-being. The authors theoretically demonstrate that professional well-being can be characterized by work engagement and serious professional deformations. They consider conscious selfregulation as a meta-level of an integral system of psychic self-regulation, including cognitive regulatory and personal regulatory resources for achieving goals. These resources contribute to solving various types of problems in human activity. Methods. Sample: 119 marine flotilla employees aged 19 to 54 years. Assessment tools: (a) Self-regulation Profile Questionnaire, SRPQM 2020, (b) Russian-language modification of the Utrecht Work Engagement Scale, UWES, and (c) the Personality and Behavior Deformations scale of the Integral Diagnostics and Correction of Professional Stress, IDCPS. **Results**. The results of structural modeling demonstrated that with the increase in conscious self-regulation for achieving goals, the work engagement of employees increases and the probability of professional deformations decreases. The study revealed that the personal regulatory characteristics of self-regulation (reliability and flexibility) not only predict work engagement and overcoming professional deformations, but also mediate the influence of cognitive regulatory processes on them. Thus, the development of conscious self-regulation for achieving goals can serve as a regulatory resource for work engagement, overcoming professional deformations, and achieving professional well-being in the work environment. Discussion. The data obtained reveal the prospects of a resource approach to the study of conscious selfregulation in solving the problem of human well-being in various environments. The results of the study can be used to develop programs to support mental health and human well-being in the professional environment.

## **Keywords**

conscious self-regulation, resources, resource approach, cognitive regulatory resources, personal regulatory resources, professional well-being, work engagement, professional deformations

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## **Highlights**

▶ Professional well-being is characterized by work engagement and the severity of professional deformations.

▷ Conscious self-regulation is a meta-level of an integral system of mental self-regulation, including cognitive regulatory and personal regulatory resources.

▶ With the increase in conscious self-regulation for achieving goals, the work engagement of a person increases and the probability of professional deformations decreases.

> Personal regulatory resources (reliability and flexibility) are not only predictors of work engagement and overcoming professional deformations, but also act as mediators of the influence of cognitive regulatory resources on them.

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## Introduction

Self-regulation, which is seen as the most important psychological resource for the effectiveness and self-development of individuals in all areas of their lives, has become an actual trend of psychological research at the turn of the 20th and 21st centuries.

V. I. Morosanova proposed a resource approach to the study of conscious self-regulation for achieving goals, which has shown its effectiveness in contemporary psychological research in the fields of education, professional, and sporting activities, in various situations of human interaction with the world (Morosanova, 2014, 2021). In the context of this approach, conscious self-regulation is considered as a meta-level of an integral system of psychic self-regulation, providing cognitive regulatory and personal regulatory resources for achieving goals. Depending on the scale of the tasks and goals of activity, it is proposed to distinguish between special and universal regulatory resources that ensure success in achieving goals and solving life problems (Morosanova, 2014, 2021). The most important indicator of individual regulatory resources is the general level of self-regulation, characterizing the development of a general ability for conscious self-regulation, which contributes to solving various types of problems in human activity (Morosanova, 2021).

The general ability for conscious self-regulation is manifested in the readiness and ability of a person not only to use the regulatory resources already accumulated in experience, but also to create the new ones, either in the presence of significant changes in the normal conditions of existence, the emergence of new activity requirements, or in the discipline of unknown/unlikely types of activity (Konopkin, 2011; Morosanova & Bondarenko, 2016). In other words, when we talk about the general ability for self-regulation, we mean the "general activity potential of a person" (Konopkin, 2006) and a universal regulatory resource that provides productive aspects of voluntary activity (Morosanova, 2014). In general, as demonstrated in the numerous studies within the framework of the resource approach, the higher level of conscious self-regulation development determines higher success in achieving objectives in different types of professional activity, as well as greater educational opportunities (Morosanova, 2021).

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From our point of view, the regulatory approach opens up the possibilities to address the issues of maintaining individuals' mental health, including maintaining their well-being, either in the educational environment (Morosanova & Fomina, 2019; Morosanova, Bondarenko, & Fomina, 2019; Fomina, Burmistrova-Savenkova, & Morosanova, 2020; Stefansson, Gestsdottir, Birgisdottir, & Lerner, 2018), at work (Rasskazova & Ivanova, 2019; Bakker & Oerlemans, 2019; Simon & Durand-Bush, 2015), or in relation to life itself and the diversity of its aspects (Wrosch & Scheier, 2020; Reinecke, Gilbert, & Eden, 2021).

With regard to well-being at work or professional well-being, it is worth noting the following. First, researchers traditionally distinguish two phenomena associated with it – work engagement and 'burnout' syndrome (Polunina, 2009; Maricuțoiu, Sulea, & Iancu, 2017; Schaufeli & Bakker, 2010; Leiter & Maslach, 2017). Engagement is one of the positive states associated with work that reflects individuals' well-being in the work environment. Meanwhile, burnout syndrome is, on the contrary, considered to be a disfunctional state.

Secondly, in recent years, there has been an increase in research on the relationship between self-regulation and positive/negative indicators of professional well-being. At the same time, self-regulation is considered a significant predictor that largely determines individuals' passion for work (Rasskazova & Ivanova, 2019; Bakker & Oerlemans, 2019; Bouckenooghe, Raja, & Abbas, 2014). The role of self-regulation in the recovery of occupational stress syndromes is also being studied, ranging from acute and chronic stress reactions to the negative consequences of stress at the level of persistent personality and behavior deterioration (Fomina, 2016; Evans & Kim, 2013; Morosanova, Kondratyuk, Gaidamashko, & Voytikova, 2019).

Thirdly, with regard to professional deformations, it is well noted that in the field of labour psychology and related fields special attention is paid to 'classical' deformations, such as burnout syndrome and type A behavior. Other deformations become the subject of study much less often (Barabanshchikova, 2019).

This *study aims* to reveal the resource role of conscious self-regulation in ensuring professional well-being, including such aspects as work engagement and professional deformations. In addition to professional burnout syndrome, our empirical study focuses on the following forms of delayed stress consequences: type A behavior, behavioral risk factors, and neurotic reactions.

## Methods

### Sample

The study involved 119 marine flotilla employees (29 % women) aged 19 to 54 years (M = 30.97, SD = 9.79). The professionals who participated in the study worked in the same organization but differed in their job responsibilities. We consider this professional group just as a model sample to solve certain general psychological problems.

#### Assessment tools

The level of development of the general ability for conscious self-regulation and its individual characteristics, which are consistently manifested in various types of voluntary activity and life situations, were measured by the Morosanova Self-regulation Profile Questionnaire, SRPQM-2020 (Morosanova & Kondratyuk, 2020). The questionnaire includes 28 statements grouped into the following 7 scales: 'Goal planning', 'Modeling important conditions', 'Programming actions', 'Results evaluation', 'Flexibility', 'Reliability', and 'Insistency', which, by summing up, give an integrative

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scale indicator – 'General level of self-regulation'. The agreement with the statements was assessed using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Two methods were used to measure professional well-being. First, the Utrecht Work Engagement Scale, UWES (Schaufeli & Bakker, 2004), in its Russian-language version modified by D. A. Kutuzova (Kutuzova, 2006). The questionnaire consists of 17 statements that make up 3 scales: vigor, dedication, and absorption. All statements were rated using a 7-point scale from 0 (never) to 6 (always). The overall indicator of the three scales is considered as an integrative parameter of work engagement reflecting an individuals' well-being in professional life. Secondly, the Personality and Behavior Deformations scale of the Integral Diagnostics and Correction of Professional Stress, IDCPS (Leonova, 2006). The scale includes 22 statements and describes the phenomenology of professional deformations, that is, delayed consequences of stress manifested in the type A behavior, burnout syndrome, neurotic reactions, and behavioral risk factors. Each statement was rated using a 4-point scale from 1 (strongly agree) to 4 (strongly disagree), which helped us measure the correspondence of each item with the subjective experience of the survey participants.

## Procedure of statistical data analysis

Data analysis was processed using the IBM SPSS Statistics-26 program (George & Mallery, 2019) and the R programming language environment ('psych' and 'lavaan' packages). Before the main statistical procedures, we calculated descriptive statistics and checked the normality of the empirical data distribution (based on skewness and kurtosis), which revealed moderate and high skewness for most indicators. The presence of statistically significant correlations between the components of conscious self-regulation, work engagement, and professional deformation was tested using the analysis of the R-Spearman rank correlation coefficient. Structural modeling methods were used to study the contribution of conscious self-regulation to professional well-being.

## Results

Before analyzing the correlation and causal relationship among indicators of conscious selfregulation, work engagement, and professional deformations, we calculated their descriptive statistics (minimum/maximum, mean, standard deviation, skewness, kurtosis) and decided to use nonparametric methods (Table 1).

Table 1 Descriptive statistics of indicators of conscious self-regulation, work engagement, and professional deformations Standard Scales Min Max Asymmetry Kurtosis Mean Deviation Self-regulation Profile, SRPQM 2020 Goal planning 4 20 16.1 4.44 -1.05 0.35 Modelling important 8 20 15.02 2.71 -0.911.16 conditions

3.61

17.26

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2.6

-1.57

Programming actions

4

20

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Table 1						
Descriptive statistics of indicators of conscious self-regulation, work engagement, and professional						
Scales	Min	<u>Max</u>	Mean	<u>Standard</u> Deviation	Asymmetry	<u>Kurtosis</u>
Results evaluation	4	20	15.34	5.04	-0.83	-0.33
Flexibility	8	20	17.14	3.96	-1.28	0.5
Reliability	4	20	15.15	5.19	-0.76	-0.62
Insistency	4	20	14.21	3.25	-0.32	0.13
Utrecht Work Engagement Scale, UWES						
Vigor	10	42	27.43	5.62	-0.04	1.26
Dedication	9	35	24.62	4.73	-0.35	1.14
Absorption	12	35	22.33	3.94	0.21	0.91
Personality and Behavior Deformations Scale, IDCPS						
Type A behavior	6	17	9.8	2.01	0.51	0.65
Burnout syndrome	5	16	6.34	1.76	2.33	8.1
Neurotic reactions	5	15	6.21	1.69	2.44	8.09
Behavioral risk factors	5	15	7.28	1.77	1.42	3.19

The analysis of rank correlation coefficients by R-Spearman (Table 2) showed a stable positive relationship between conscious self-regulation and work engagement and, on the contrary, negative correlations between conscious self-regulation and professional deformations. This applies to both system-forming cognitive regulatory processes (goal planning, modeling important conditions, programming actions, and results evaluation) and personal regulatory characteristics of flexibility and reliability, except for the insistence, where no significant correlations were found.

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Table 2									
Correlation coefficients among indicators of conscious self-regulation, work engagement, and									
professional deformations									
	Self-Regulation Profile (SRPQM-2020)								
<u>Scales</u>	PI	Pr	М	RE	F	R	I	GL	
Utrecht Work Engagement Scale, UWES									
Vigor	0.05	0.32**	0.23*	0.3**	0.29**	0.33**	0.04	0.42**	
Dedication	0.05	0.23*	0.17	0.31*	0.24*	0.32**	-0.04	0.37**	
Absorption	-0.04	0.16	0.12	0.22*	0.16	0.23*	0.01	0.24*	
Personality and Behavior Deformations Scale, IDCPS									
Type A behavior	0.13	-0.04	0.17	-0.09	0.01	-0.2*	0.04	-0.02	
Burnout syndrome	-0.21*	-0.23*	-0.12	-0.2*	-0.23*	-0.38**	-0.18	-0.39**	
Neurotic reactions	0.01	-0.29**	-0.2*	-0.17	-0.29**	-0.48**	-0.05	-0.39**	
Behavioral risk factors	-0.09	-0.27**	0.05	-0.13	-0.09	-0.39**	0.03	-0.28**	
Note: $PI$ – goal planning, $Pr$ – programming actions, $M$ – modeling important conditions, $RE$ – results									

Note: PI – goal planning, Pr – programming actions, M – modeling important conditions, RE – results evaluation, F – flexibility, R – reliability of self-regulation, I – insistency, GL – general level of conscious self-regulation; \* p < 0.05; \*\* p < 0.01.

Table 3 shows the correlations among the indicators of work engagement and various professional deformations. All statistically significant correlations found were negative. In the scientific literature, work engagement and, for example, burnout syndrome (one of the most studied indicators of professional deformations) are often considered to be opposites. However, there is a debate about the contradictory nature of the relationship between these two phenomena, which are closely related to work-related psychological well-being. (Maricuțoiu et al., 2017). The analysis of the relationship between work engagement and professional deformations was not directly included in the objectives of this article. It only had its task to explore the contribution of conscious self-regulation to occupational well-being. However, these data can guide future research to investigate the reciprocity among self-regulation, work engagement, and professional deformations.

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Table 3 Correlation coefficients among the indicators of work engagement and professional deformations					
	Utrecht Work Engagement Scale, UWES				
Personality and Benavior Deformations Scale, IDCPS	Vigor	Dedication	Absorption		
Type A behavior	-0.1	-0.2*	-0.12		
Burnout syndrome	-0.18	-0.28**	-0.15		
Neurotic reactions	-0.35**	-0.33**	-0.22*		
Behavioral risk factors	-0.16	-0.24*	-0.16		
Note: * p < 0.05; ** p < 0.01.					

To answer the main empirical question about the predictability of conscious self-regulation in relation to phenomena related to human well-being in the professional environment, we compared several alternative models using structural modeling methods. To calculate the model parameters, we implemented the MLR (maximum likelihood robust) estimator; this method is used when it is assumed that the normality of distribution can be moderate or significantly disturbed (Li, 2016). The degree of conformity of the model with empirical data was assessed using the following indicators: the ratio of degrees of  $\chi^2$  to the number of freedom degrees ( $\chi^2/df$ )  $\leq$  2, the level of p for  $\chi^2$  (p)  $\geq$  0.05, Comparative Fit Indices, CFI  $\geq$  0.95, Root Mean Square Error of Approximation, RMSEA  $\leq$  0.05, and Standardized Root Mean Square Residual, SRMR  $\leq$  0.05. Taking into account our theoretical assumptions, the structure of the analyzed constructions, and the objectives of the research, we compared models with three ('self-regulation', 'work engagement', 'deformations') and four ('cognitive regulatory resources', 'personal regulatory resources', 'work engagement', 'deformations') latent factors, differing in the presence/absence of correlations. Indicators of the subscales of the questionnaires were used as indicator variables. For the model with four latent factors, the best-fit indices were obtained. The resulting structural model is presented in Fig. 1.

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Figure 1. Structural model of the contribution of conscious self-regulation to professional well-being

In the resulting structural model, conscious self-regulation forms two latent factors. The first factor is 'cognitive regulatory resources', including goal planning, programming actions, modeling conditions important for achieving goals, and results evaluation. The second factor is 'personal regulatory resources', including flexibility and reliability. The regulatory characteristic of 'insistency' was not included in the model, because the introduction of this indicator variable results in a deterioration of the compliance index and the loading factor of this parameter is interpreted as insignificant. According to the results of the correlation analysis, 'insistency' also has no statistically significant correlation with any of the engagement and deformation parameters analyzed. The third factor includes indicators of 'work engagement', and the fourth one – indicators of 'deformations'.

The consistency indices showed an acceptable fit between the model and the empirical data: chi-square (df = 58) = 67.667; CFI = 0.96; RMSEA = 0.044; SRMR = 0.066 (90 % range from 0.000 to 0.072). All factor loadings and regression coefficients turned out to be significant, and their signs corresponded to theoretical assumptions. The model indicates that the variable of 'cognitive regulatory resources' determines the variables of 'work engagement' and 'professional deformations' through 'personal regulatory resources'. In other words, this study demonstrated the specificity of the determination of phenomena associated with professional well-being (work engagement and professional deformations) through conscious self-regulation. This effect is achieved due to the high development of all cognitive regulation processes and their stability and flexibility.

## Discussion

The results of the study demonstrated that conscious self-regulation makes a significant contribution to work engagement of an individual. The obtained data are supported by the coherence of the content contained in the work engagement structure proposed by V. Schaufeli and A. Bakker, and theoretical ideas about the general ability for conscious self-regulation.

Thus, the 'vigor' scale is characterized by a high level of energy, concentration, readiness to work hard, perseverance in a situation of interference; the 'dedication' scale diagnoses involvement in work, a sense of the importance of individual activity, and readiness to accept challenges

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and overcome difficulties. As far as the 'absorption' scale is concerned, we are talking here about the experience of happiness, the perception of time peculiarities in the work process, and the lack of desire to distract from work and/or stop working. This emphasizes the understanding of work engagement as a characteristic of professional well-being (Kutuzova, 2006; Schaufeli & Bakker, 2010).

Considering the concept of the general ability to self-regulate consciously, it should be noted that "it is directly manifested in the initiative-creative mode, in the ease and success of mastering new types of purposeful activity, in the ability to independently solve non-standard tasks, to carry out activities under changed conditions" (Konopkin, 2011, p. 274) and includes an obligatory emotional component as a specific sense of 'subjectivity', which is realized in a feeling of confidence in the ability to achieve success (Konopkin, 2011; Morosanova & Bondarenko, 2016). It is easy to notice and draw parallels when correlating the components of 'vigor' and 'dedication' with the initiative-creative mode of the general ability for self-regulation.

We should recognize that the validity of correlation between conscious self-regulation and work engagement (as a positive state) also follows from the already classical works related to the study of emotion as an obligatory and significant factor in self-regulation of various types and forms of voluntary human activity (Konopokin, 2006; Prokhorov & Chernov, 2019; Kryukova, 2010). Associations of self-regulation with positive indicators of professional well-being (including work engagement and positive emotions) were recorded in the samples of specialists involved in a wide variety of activities (Rasskazova & Ivanova, 2019; Fomina, 2016). The results of the study carried out in a sample of teachers in schools of general education demonstrated that conscious self-regulation is not only a predictor of work engagement but can also act as a feedback mediator between work engagement and professional burnout, that is, reduces the likelihood of professional burnout manifestations in teachers with a high level of engagement in educating activities (Fomina, 2016).

However, in our opinion, the greatest interest in explaining the predictive value of self-regulation in relation to engagement is connected with research on the resources of work engagement. The idea of exploring resources for work engagement has been of interest to scientists for decades and is considered from the standpoint of different approaches (Halbesleben, 2010). All of these theories have one thing in common: There are some resources that can increase work engagement (Halbesleben, 2010). Our results confirm and develop these assumptions.

Work engagement has been shown to be positively associated with important performance outcomes, including job performance (Halbesleben & Wheeler, 2008) and financial results (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009, etc.). Considering the problem of engagement resources described above, we should note that it is fundamental to raise the question of finding not only resources contributing to the increase in work engagement and, as a result, the activity outcomes. It is not less important to find resources that contribute to the effectiveness of activities, even with a low level of work engagement. The prospects of an approach based on resources to conscious self-regulation of the achievement of goals are fairly obvious in answer to both questions.

Regarding the role of conscious self-regulation as a factor that prevents the development of professional deformations, this result is consistent with the data available in the literature on a significant relationship between conscious self-regulation and emotional states of a person (Vets' & Bondarenko, 2021; Konopkin, 2006; Kryukova, 2010; Prokhorov & Chernov, 2019; Baumeister,

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Vohs, DeWall, & Zhang, 2007; Dawson & Golijani-Moghaddam, 2020), as well as its central role in coping with various forms of stress (Morosanova et al., 2019).

An important result of this study is not only the conclusions on the significant contribution of conscious self-regulation to professional engagement and the prevention of deformation. The results obtained clearly demonstrate the hierarchical and multilevel nature of the structure of conscious self-regulation, which includes the basic level of regulatory processes and the level of regulatory properties.

In this respect, we can concentrate on two points relating to such personal regulatory resources as reliability and flexibility.

First, it was previously shown on the model samples of professionals, students, and athletes that regulatory reliability, understood as the stability of self-regulation of psychic activity and practice, serves as a special predictor of stress relief in emergency situations of professional activity (Morosanova, Kondratyuk, & Gaidamashko, 2020), under tense conditions of competitive sporting activity (Morosanova, 2001), and while passing exams (Morosanova & Filippova, 2019). In studies related to self-regulation of human behavior in situations of uncertainty (using the example of the COVID-19 pandemic in the world), it is possible to demonstrate the importance of flexibility in ensuring the stability of human life and preserving individuals' mental health (Morosanova, Bondarenko, & Kondratyuk, 2021; Zinchenko, Morosanova, Kondratyuk, & Fomina, 2020; Dawson & Golijani-Moghaddam, 2020; Kroska, Roche, Adamowicz, & Stegall, 2020). Thus, for example, psychological flexibility, the ability to stay in the present moment and participate in value-oriented activities even in the presence of negative emotions, in a pandemic situation, turned out to be a positive factor (Kroska et al., 2020). Regulatory flexibility, being one of the indicators characterizing the adaptive capabilities of self-regulation in specific conditions of activity, is responsible for the possibility of making corrections to the functioning of various regulatory blocks when the conditions of activity require it. As many authors understand that professional deformations are the result of adaptation to certain characteristics of the profession (for a review, see Bakker & Leiter, 2010), the plasticity of individual adaptation can contribute to the appropriateness of the reaction to the situation from the point of view of the restructuring of the conscious selfregulation system of a person.

Secondly, regulatory reliability and flexibility are not only direct predictors of work engagement and overcoming professional deformations, but also act as mediators of the influence of cognitive regulatory resources on them, thereby confirming the strict hierarchy and sequence of implementation of the conscious self-regulation process.

Finally, although the study is limited by the specificity of the sample, which consists of marine flotilla employees who work in the same organization and have different professional responsibilities, there is all reason (theoretical and empirical) to believe that the results obtained are of general psychological significance and can be applied to a wide range of professions regardless of the specifics of the activity.

#### Conclusion

This article presents the results of the study on the role of conscious self-regulation in ensuring professional well-being. It is proven that it can be characterized by work engagement and the severity of professional deformations.

Using structural modeling methods, the study demonstrated that conscious self-regulation

development makes a significant contribution to work engagement and prevents the appearance of professional deformations. At the same time, regulatory flexibility and reliability are also of great importance. These personal regulatory resources not only directly impact professional wellbeing, but also mediate the influence of cognitive regulatory resources, such as goal planning, modeling important conditions, programming actions, and results evaluation.

The data obtained confirm the broad prospects of a resource approach to the consideration of conscious self-regulation in exploring the problems of human well-being in various environments, including the inevitably increasing anthropogenic burden on the environment, that requires the development of human subjectivity and consciousness to maintain activity and to realize the need for communication and self-realization in life in general.

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## **Author Contributions**

**N. G. Kondratyuk** wrote the Introduction section, collected empirical data, analyzed, interpreted, and discussed the results, formulated the main conclusions.

V. I. Morosanova, author and curator of the study, made an important contribution to the planning and preparation of the manuscript, to the interpretation of the results and their discussion, made a critical revision of the content of the manuscript, discussed the results and conclusions of the study.

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#### The authors declare no conflicts of interest.

