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Causes and consequences of lack of control over work – analyzing correlates of the LCWS of the Working Excessively Questionnaire (WEQ)

Abstract

This article presents the results of correlation studies on the Lack of Control Over Work Scale (LCWS) of the Working Excessively Questionnaire (WEQ), developed by Hornowska and Paluchowski (2007). LCWS consists of items indicating a lack of control over the work sphere, in the cognitive, behavioral and social dimension. The results of the LCWS Scale may be applied to research with the use of WEQ questionnaire as a screening tool allowing to differentiate the individuals addicted to work from those who are not in danger of becoming addicted or those who are in the risk group. The aim of our study was to investigate the psychological correlates of the lack of control over work. We formulated hypotheses con-

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cerning the relationship between the LCWS and constructs like self-esteem, locus of control, temperamental traits, and sense of mission. We also tested hypothesis concerning demographic factor and the LCWS.

Streszczenie

W niniejszym artykule zaprezentowano wyniki badań korelacyjnych nad skalą Utrata Kontroli nad Pracą (UKP) Kwestionariusza Objawowego Nadmiernego Obciążania się Pracą (KONOP) autorstwa Hornowskiej i Paluchowskiego (2007). UKP to skala obejmująca te pozycje kwestionariusza, których treść wskazuje na utratę kontroli nad sferą związaną z pracą w wymiarze poznawczym, behawioralnym i społecznym. Wyniki UKP mogą być traktowane w badaniach z wykorzystaniem kwestionariusza KONOP jako narzędzie przesiewowe, pozwalające na odróżnienie osób uzależnionych od pracy od tych, którym to zjawisko nie grozi lub znajdują się w grupie ryzyka. Celem przeprowadzonych badań było określenie psychologicznych korelatów utraty kontroli nad pracą. Sformułowano i testowano hipotezy dotyczące związków UKP z miarami: samooceny, poczucia umiejscowienia kontroli, wymiarów temperamentu oraz poczucia misyjności wykonywanego zawodu. Jedna hipoteza dotyczyła także czynnika demograficznego.

The Working Excessively Questionnaire (WEQ) is an instrument measuring the excessive workload. The content of its items includes causes and risk factors, as well as potential consequences of this phenomenon. The final version of the questionnaire is a result of research carried out in the years 2001-2013 (Hornowska, Paluchowski, 2007, 2013; Paluchowski, Hornowska, 2003, 2013).

Based on the results of the factor analysis and the content of individual items, we have proposed the following four scales of the Working Excessively Questionnaire:

1. Lack of Control Over Work Scale – LCWS
2. Perfectionist Working Style Scale – PWSS
3. General Beliefs About Work Scale – GBWS
4. Perceived Oppressiveness of the Organization Scale – POOS

The Lack of Control Over Work Scale consists of those items of the questionnaire that indicate a lack of control over the work sphere, in the cognitive, behavioral and social dimension. In its final form, the scale consists of 16 items regarding the consequences of excessive workload, including a declared neglect of other

areas of life, work-to-family conflicts, as well as the inability to plan the time-off and to distance oneself from work cognitively and behaviorally. The LCWS scale is based on symptoms and applies to the psychophysical, emotional and social consequences of excessive workload, which are most commonly associated with pathological work addiction.

As it has been shown in previous analyses, the results of the LCWS scale correlate positively with the accepted criteria of addiction from ICD-10. Consequently, we can suggest that the results of the LCWS may be applied to the research using WEQ as a screening tool, which allows the to differentiate individuals addicted to work from those who are not in danger of becoming addicted or those who are in the risk group.

During the previously conducted a content analysis of individual scales (see: Hornowska, Paluchowski, 2013), we have differentiated three clusters for the Lack of Control Over Work Scale (see: Figure. 1):

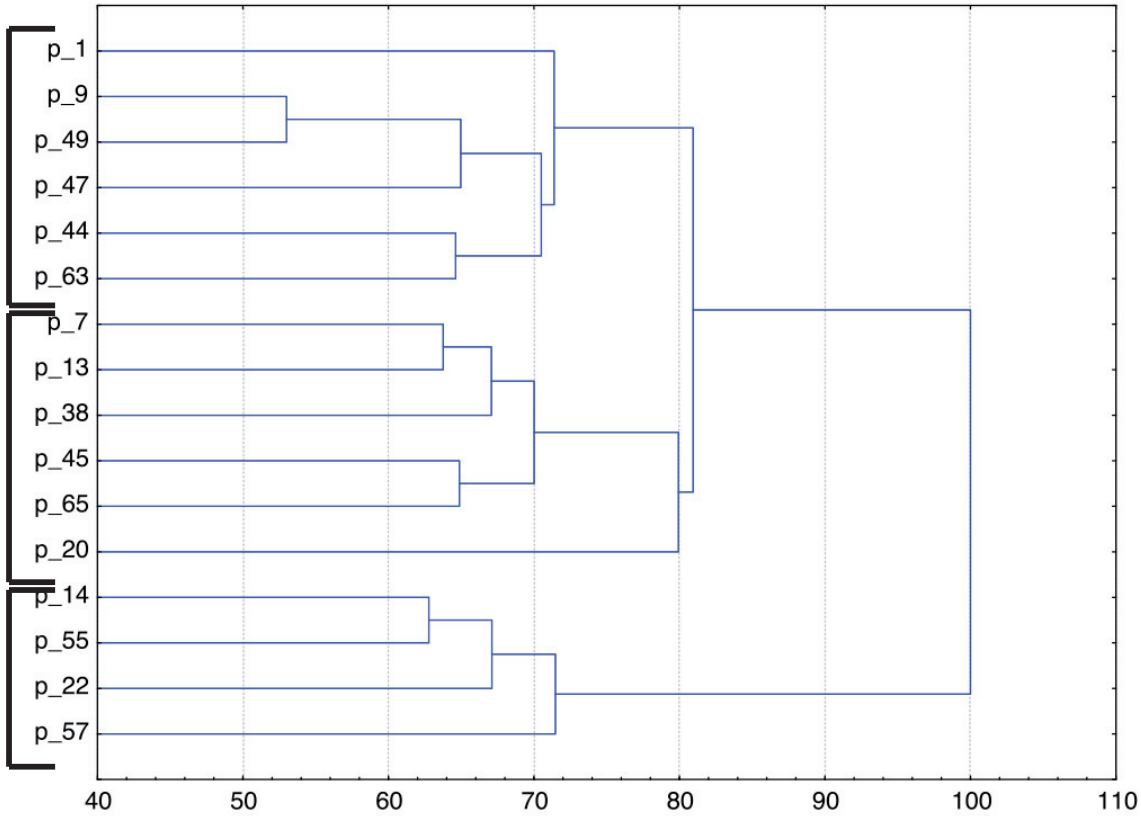

Figure 1. Horizontal Hierarchical Tree Plot of Euclidian Distances between items in Lack of Control Over Work Scale (linkage rule: unweighted pair-group method average)

LCWS_1 External indices of work overload

LCWS_2 Work-to-family conflict

LCWS_3 Lack of work-leisure conflict

Therefore, it could be said that individuals who have lost control over work are aware that they devote the majority of their thoughts to work and that they lead an extremely limited social and family life. Additionally, despite receiving signals about their excessive workload from their external environment, they cannot resist this way of working.

In research carried out on a sample of 2658 individuals, the results of the LCWS showed a satisfactory level of internal consistency (Cronbach's $\alpha = 0.89$). Correlations of individual items with the total score ranged between 0.43 and 0.67.

Hypotheses

To investigate the psychological correlates of the lack of control over work, we formulated the following hypotheses:

H.1: Individuals who are losing, or have lost, control over their work are characterized by their external locus of control.

Locus of control is a result of one's perception of a causal relationship between one's actions and their direct or indirect consequences (Rotter, 1966). Individuals with an internal locus of control are characterized by a sense that, through their genuine influence on their environment and conscious decision-making, they are able to direct their own lives. Therefore, we can assume that internal LOC is associated with a decidedly lower tendency to lose control over undertaken activities, including work. External locus of control will be associated with a tendency to lose control, which is perceived to be the basis of both substance and non-substance addiction (see: e.g. Chak, Leung, 2004; Christo, Franey, 1995; Iskender, Akin, 2010). Research on work addiction has demonstrated its relationship with an external locus of control (Robinson, Carroll, Flowers, 2001).

Previously, the formulated hypothesis was tested with the use of an older version of the Working Excessively Questionnaire,[5] as well as the Delta Questionnaire, that measures sense of control (Drwal, 1979). However, the analysis of the results did not confirm this hypothesis (Hornowska, Paluchowski, 2007).

[5] then the Work Overload Questionnaire

H.2: Individuals who are losing, or have lost, control over their work are characterized by their internal conflicts and low self-control

Lack of control over work is a result of excessive workload in its quantitative and qualitative aspects, which exceeds the optimal level for the functioning of an individual. The LCWS scale describes the consequences of overburdening oneself with work activities, which can lead directly to work addiction[6]. As individuals addicted to work begin to ever more clearly neglect other areas of life, they often experience work-to-family conflict as well as family-to-work conflict (e.g. Bonebright, Clay, Ankemann, 2000; Robinson, Flowers, Ng, 2006; Robinson, 2001; Shimazu, Demerouti, Bakker, Shimada, Kawakami, 2011). These conflicts may also be internal in character as they may relate to fulfilling social roles of a mother, wife, husband or father. The experience of internal conflicts should be reflected in low identity integration. In turn, low self-control will refer to the inability to control impulses and discontinue work-related activities, despite a person's awareness of the negative consequences of one's actions.

H.3: Individuals who are losing, or have lost, control over their work are characterized by greater work seniority than those individuals, who do not experience lack of control over work.

While analyzing the ICD-10 criteria (Hornowska, Paluchowski 2013), we have shown that the profile with the highest scores, which indicates addiction, was obtained by individuals whose years of work were relatively longer than in the case of individuals who obtained profiles with the lowest scores (total years of work: 11.5 versus 8.97; years of work in the current workplace: 6.6 versus 4.9). Similar results were obtained by Golińska (2011, p. 36) in a study using the Work-BAT questionnaire (Spence, Robbins, 1992), on a sample of N=208 women and men: the relatively greatest work seniority was declared by individuals who at the same time felt compelled to work and were highly engaged in their work, so called enthusiastic workaholics.

Therefore, it was assumed that lack of control over work is an effect of a long-term process, leading eventually to addiction.

H.4: Individuals who have a sense of mission in their profession more often experience lack of control.

A sense of social mission related to one's profession can be briefly defined as a conviction about an exceptional character of one's work activities, the necessity

[6] This is indicated by the fact that of all WEQ scales LCWS correlates most highly with the ICD-10 criterion of addiction (see: Hornowska, Paluchowski, 2013).

of high engagement and fulfilling other people's needs, as well as undertaking activities that are beneficial to other people but come at a personal cost to the provider (Czerw, Borkowska, 2010; Bajcar, Borkowska, Czerw, Gąsiorowska, 2011). We should also add the awareness of the genuine influence of the undertaken work on life and health of others. Often, this sense of mission is associated with working in a helping profession. However, these notions are not identical.

It could be said that individuals with a sense of mission will to a large degree abandon the fulfillment of their own needs and will excessively engage in work, which can be associated with excessive, qualitative and quantitative overburdening oneself with duties, as well as a progressive annexation of psychological life space by work. This can result in dysfunctions both in and outside of the work environment and can indicate work addiction.

H.5: Individuals who are losing, or have lost, control over their work are characterized by their own arousal threshold and low impulse inhibition.

In a study using an older version of the WEQ (Hornowska, Paluchowski, 2007), we tested hypotheses concerning the relationship between work addiction and temperamental dimensions. It has been shown that addicted individuals are characterized by high arousability (Grey, 1964 in: Hornowska, Paluchowski, 2007), which means that workaholics tend to limit the amount of stimuli that comes from their environment, to maintain an optimal level of arousal. They also tend to react with strong, negative emotional reactions in difficult situations. Activity in areas not related to work is one of the avoided stressors, which causes a gradual withdrawal from social and family life. High emotionality, and thus a low arousal threshold and inability to lower tension quickly, facilitate further alienation. Research has found significant positive correlations between work addiction and Perseverance scale[7] ($r = 0.37$, $p \leq 0.001$) and negative ones with the scales of Activity ($r = -0.29$, $p \leq 0.05$) and Briskness ($r = -0.26$, $p \leq 0.05$) of the FCB-TI, as well as a positive correlation with the Emotionality-Distress Scale ($r = 0.33$, $p \leq 0.05$) of the EAS questionnaire. Thus, we may expect to find a similar temperamental configuration in the research using the newer version of the questionnaire.

Participants

A total of 252 individuals were tested, 76 of whom did not provide complete demographic data. There were 65.5% women and 34.5% men in the sample.

[7] In her research, Golińska (2011, p. 48) has shown that perseverance plays a role in the explanation of work compulsion.

The maximum age difference was 65 years (the youngest participant was 19, the oldest - 84 years old); the majority of participants fell within the age range of 24-30 years.

Regarding education, the majority of participants (75.1%) had higher education, 8.5% held a bachelor's degree, 14.2% had high school diploma and 2.25% had elementary or vocational education.

The majority (66.1%) of participants was in a permanent relationship. The majority (68.9%) had no children, 15.2% had two children, and 13% had one child.

All participants were employed. Total years of work in the sample ranged between 1 to 34 years; the majority (69%) of participants declared the length of work experience between 1 and 10 years. The median length of work experience ranged between 0 to 5 years (57.6%). In their current workplace, the majority of participants (65.5%) worked normative hours.

As many as 58.2% perceived their occupation as a helping profession. The degree, to which their work is helping others, was described as high by 61.6% of the participants, 23.7% saw it as low, and 30.5% as average. Nearly one third of the sample (29.9%) reported that their work required average engagement, 52.5% said it require d above-average engagement and 17.5% saw their work as requiring low engagement. A different pattern emerged in the case of an evaluation of the degree, to which one's current work influences life or health of other people - 45.8% of participants believe that this influence is small, 25.4% see their work's influence on other people's lives as average, and for 28.8% of participants their influence is high. Within the sample, 65% of participants see their work as useful, 22.6% consider it to be moderately useful, and 12.4% view their work as not useful at all. A similar pattern emerged for the evaluation of importance of the participants' work – 14.1% describe their work as unimportant, 22% estimate its importance as average, and 63.8% see it as very important.

When it comes to whether current work fulfills professional interests of the participants, 69.5 % believe their work agrees with their interests. 58.8% of participants predicted that their economic situation would improve, in comparison to their financial situation from a year before (answers of "much better" and "somewhat better"). 11.3% of the group expected their situation to worsen (answers of "somewhat worse" and "much worse") while 29.9% of participants expected it to stay the same. Therefore, it could be said that the majority of participants demonstrated economic optimism.

Participants completed different sets of questionnaires in paper version. Each set consisted of a WEQ questionnaire and additional measures, which were matched according to the number of items, as well as time and cognitive effort required to complete them. This procedure was strictly followed to prevent any

potential artifacts, stemming from the characteristics of the tested sample; each person was allocated their set randomly[8].

Measures

Apart from the Working Excessively Questionnaire, the study used the following measures.

Multidimensional Self-esteem Inventory – (MSEI)

MSEI was developed by E. J. O'Brien and S. Epstein (1988) and adapted to Polish by Fecenec (2008); it is a multidimensional questionnaire that measures self-esteem, understood here as evaluative, affectively saturated beliefs about oneself. It consists of 116 items in 11 scales (O'Brien, Epstein, 1988; Fecenec, 2008):

Global Self-esteem Scale (10 items): global self-concept, constituting self-description on a meta-level

Components of self-esteem (eight particular areas):

(a) Competence (10 items) – evaluation of one's skills and efficacy

(b) Lovability (10 items) – evaluation regarding forming intimate relationships

(c) Likability (10 items) – evaluation of being liked by others

(d) Personal Power (10 items) – evaluation of one's ability to direct people and influence their behavior

(e) Self-control (10 items) – evaluation of one's perseverance and ability to control impulses and emotions

(f) Moral Self-Approval (10 items) – evaluation of the level of agreement between one's professed values and their application in life

(g) Body Appearance (10 items) – evaluation of one's appearance and sexual attractiveness

(h) Body Functioning (10 items) – evaluation of one's health and physical fitness

(i) Identity Integration (10 items) – sense of coherence, of having control over one's life in different areas, and the effectiveness of self-esteem

(j) Defensive Self-Enhancement (10 items) – tendency to worry excessively about one's image in the society, combined with frequently presenting oneself in a self-aggrandizing way and seeking acceptance from others

[8] The sizes of the samples tested for individual hypotheses will differ, due to the followed procedure.

Subject responds on a the five-point scale. Raw score is computed by summing up points for every answer. Fifty-seven items are reversed – result must be converted by the formula (1 = 5, 2 = 4, 3 = 3, 4 = 2, 5 = 1). In ten scales, s core range from 10 to 50, in DSE scale minimal score is 16 and maximal is 80. We used raw score in our study, however, for diagnostic purposes one should convert it into the sten scale.

High score on Global Self-Esteem Scale and in each component of Self-Esteem Scale indicates that individuals have positive feelings about their competencies. Low score, on the other hand, suggests negative self-evaluation in each of these areas.

High score on Identity Integration Scale indicates consistent identity and a sense of control over life. Individuals with low scores have problems with defining their own identity, do not always know what they aim for and have difficulty with decision making.

High score on Defensive Self-Enhancement Scale indicates a tendency to seek social approval and show one's self in a positive light. Low scores suggest that individuals do not succumb to social influence, are independence and show no tendency to defensive self-enhancement.

Internal-External Locus of Control at Work Scale

Gliszczyńska's (1984, 1990) questionnaire measures locus of control, a construct introduced by J. Ratter (1966) and associated with a skill situation (internal locus of control) or a chance situation (external locus of control). Rotter's assumption "that the influence of generalized experiences decreases, as the number of experiences in a particular given situation increases" (Gliszczyńska, 1984) was the conceptual principle for the construction of the two scales. That is why locus of control associated with the work situation may differ from general locus of control. Scale consists of two sub-scales:

- General Beliefs (GB)
- Work Situation (WS)

GB scale consists of 12, and WS scale of 13 items. Every item contains 2 opposite statements that refer to Rotter's established predictions regarding the particular situation (WS) and the general situation (GB); both are based on life experience. Sub-scale score is computed by summing up points for every answer (0-12 for GB, 0-13 for WS); answers are scored towards internal locus of control. In the study, we used raw score for both sub-scales.

High score on GB scale indicates the person's beliefs that the world is righteous, understandable, easy, orderly and simple. Low score indicates quite the opposite.

Score on WS scale is associated with beliefs regarding self-efficacy at work. High score indicates an individual perceiving efficacy as high and sharing an opinion that satisfying results come from hard work. Low score is associated with an opinion that success does not arise from hard work, an individual has no influence on the organization, its climate or superiors' judgement what eventually results in person's submission to others.

Temperament Survey for Adults (EAS-TS)

A questionnaire developed by Arnold H. Buss and Robert Plomin, (1984) and adapted to Polish by Włodzimierz Oniszczenko (1997), measures temperament that is understood as a complex of genetically inherited traits, which already manifest in early childhood. The instrument measures three basic traits: Emotionality (and its components - distress, fear, and anger), Activity and Sociability. Emotionality is linked to arousal of autonomic nervous system - responsiveness of sympathetic nervous system and the speed of inducing a physiological response, regardless of what type of emotion it applies to: distress, fear, anger. Activity is associated with behavior, physical energy and motor activities (on a continuum from stillness to energetic behavior). The components of activity are tempo (of activity - fast walking, running, speaking) and vigor (strength and intensity of reactions - loud laughter, loud walk, strong push while opening the door). Sociability is a tendency to seek contact with other people - organizing activities in a manner allowing the individual to be surrounded by as many people as possible and to keep establishing social interactions. A desire to be around people and avoid loneliness is the main motivation here.

- Emotionality - distress
- Emotionality - fear
- Emotionality - anger
- Activity
- Sociability

Instrument contains 20 items (4 per each scale) concerning a person's behavior. Answers are scored from 1 to 5 (1 for "totally disagree" and 5 for "totally agree"), towards, and sometimes away from higher level of trait (in the latter case one should reverse the score). Scale score is computed by summing up points for every answer (from 4 to 20). We used raw score in our study, however, for diagnostic purposes one should convert it into the sten scale.

High score on the sub-scales of Emotionality is connected to high responsiveness of sympathetic nervous system and high speed of inducing physiological

response to stimuli. Additionally, high score on E-D, E-F, or E-A scale indicates the tendency to response with distress, fear, or anger in most situation. Low score indicates low emotional responsiveness.

High score on the Activity Scale indicates a high level of behavioral arousal (tempo and vigor) while performing daily activities. It can also indicate high need for tension release. Low score is linked to individuals who reduce their range and speed of activity.

High score on the Sociability Scale indicates a tendency to seek contact with others, strong perception of social reinforcements, and low tolerance to loneliness. Individuals with high sociability tend to seek stimulation. Low on the S scale is linked to stimulation avoidance.

The Formal Characteristics of Behavior - Temperament Inventory (FCB-TI)

Inventory FCB, developed by Bogdan Zawadzki i Jan Strelau (1997), measures temperament. It is conceptually based on the Regulative Theory of Temperament (RTT) which presents temperament as a set of relatively stable personality traits that manifest mostly through the formal characteristics of behavior in its temporal and energetic aspects (Strelau, Zawadzki, 1993; Zawadzki, Strelau, 1997, p.12). The energetic aspects include Sensory Sensitivity - the sensitivity to environmental stimuli, including the emotional stimuli and perceptiveness; Emotional Reactivity - that indicates emotional arousability, responsiveness of sympathetic nervous system and the level of tolerance to distress; Endurance - the ability to adapt to adverse circumstances and to continue the undertaken activity in highly stimulating environment; Activity - tendency to seek stimulation and to take on highly involving and stimulating tasks. The temporal aspects include: Briskness - tendency to react quickly and maintain a high tempo of activity; Perseverance - tendency to relive stimuli which no longer affects the person.

Inventory FCB contains 6 scales corresponding to aspects of temperament described above:

- Sensory Sensitivity
- Emotional Reactivity
- Endurance
- Activity
- Briskness
- Perseverance

Instrument consists of 120 items (20 per scale) concerning formal aspects of behavior, to which every individual responds either "yes" or "no." Every scale score ranges from 0 to 20. The items are positively and negatively keyed. We used raw score in our study, however, for diagnostic purposes one should convert it into the stanine scale.

High score on the Sensory Sensitivity Scale indicates high responsiveness to sensory and emotional stimuli and high alertness. Low score is linked to low levels of these abilities. High score on the Emotional Reactivity Scale is linked to low arousal threshold and low inhibition of impulses. Individuals with a high level of ER tend to manifest uncontrolled, emotional reactions, and experience severe tension in stressful situations. Low score indicates lower excitability and higher stability. High score on the Endurance Scale is affiliated with the ability to adapt to highly demanding and stimulating environment. Individuals with high endurance tend to work excessively and efficiently under adverse conditions. Low score indicates low ability to endure high stimulation. High score on the Activity Scale indicates that person seeks high stimulation, has the tendency to take a risk, and shows impulsive behavior. Individuals obtaining a high score on AC scale are searching for sources of stimuli to maintain an optimal level of arousal while having a high level of impulse inhibition. Low score is connected to a decreasing tempo and range of person's activity. High score on the Briskness Scale is linked to adaptiveness and resiliency at a high tempo activity. It is also associated with high impulse control. Low score indicates a low level of the abilities described above.

Individuals who obtain a high score on the Perseverance Scale tend to relive stimuli which no longer affects them. It is associated with parasympathetic nervous system and low level of impulse inhibition. High score indicates that a person keeps looking back and ruminates over past events, is hesitant and emotionally unstable. Low score is linked to stability and optimal level of impulse inhibition.

Results and discussion

H.1 Individuals who are losing, or have lost, control over their work are characterized by their external locus of control.

To test the hypothesis about the relationship of lack of control over work with the locus of control, we calculated correlations of the WEQ LCWS and its subscales with the results of the General Beliefs and Work Situation sub-scales of the Internal-External Locus of Control at Work Scale.

The results were obtained from a sample of women and men (N=89) in the age range of 19 to 59 years (M = 31, SD = 7.62). However, similarly to previous

research with the use of an older version of the WEQ, we found no linear relationship between LOC and lack of control over work, both in the case of General Beliefs and Work Situation (see: Table 1).

Table1. Coefficients of correlation between LCWS and I-E Scale

		LCWS	LCWS_1	LCWS_2	LCWS_3
General Beliefs	Coefficients *r*	-0,048	-0,062	-0,025	-0,023
	p values	0,65	0,56	0,82	0,83
Work Situation	Coefficients *r*	-0,039	-0,001	-0,063	-0,041
	p values	0,71	0,99	0,56	0,71

Consequently, we tested a hypothesis about a non-linear relationship between lack of control and locus of control. To that end we divided the results of the GB and WS sub-scales into high and low (relative to the 25th and 75th percentile), describing extremely external and extremely internal locus of control. We then conducted Levene's test of homogeneity of variance for all groups (see Table 2).

Table 2. Values of the Levene's Homogeneity of Variance Test

GB	Levene's *F*	df	*p* values
LCWS	0,11	88	0,74
LCWS_1	1,62	88	0,21
LCWS_2	0,26	88	0,61
LCWS_3	0,42	88	0,52
WS			
LCWS	1,82	88	0,18
LCWS_1	0,31	88	0,58
LCWS_2	2,07	88	0,15
LCWS_3	0,81	88	0,37

The conducted one-way ANOVA did not confirm the hypothesis about a non-linear relationship between lack of control over work and locus of control, both in the case of general beliefs and work situation.

H.2 Individuals who are losing, or have lost, control over their work are characterized by their internal conflicts and low self-control

To test the hypothesis about the relationship between lack of control over work and identity integration and self-control, we calculated correlations between

the results of the WEQ LCWS and the Identity Integration and Self-control scales of the MSEI questionnaire. In addition, we calculated correlations of the LCWS sub-scales with MSEI.

The sample size was N=68. Participants were in the age range of 21 to 58 years (M = 30, SD = 8.3). The predicted relationships were not confirmed. The obtained correlations were found to be statistically insignificant. Significant correlations were found between the total LCWS score and the results of the Competence scale ($r = 0.27$, $p = 0.02$), as well as between the results of the LCWS_1 and Competence scale ($r = 0.25$, $p = 0.03$) and the Body Appearance scale ($r = 0.24$, $p = 0.04$).

Further analysis examined whether individuals who scored high on the LCWS and its sub-scales differ significantly in their identity integration and self-control from the remaining participants. Thus, we tested a hypothesis about a nonlinear relationship between these self-esteem measures with lack of control over work scale. To this end, we dichotomized the results (into "low" and "high") for the LCWS, LCWS_1, LCWS_2 and LCWS_3 scales, relative to seventy-fifth percentile. We then conducted a one-way analysis of variance, preceded by a homogeneity test. Statistically significant differences regarding the results of the LCWS scale were noted[9] for the Global Self-esteem ($F_{68} = 5.07$, $p = 0.028$), Competence ($F_{68} = 15.84$, $p < 0.001$) and Personal Power ($F_{68} = 4.80$, $p = 0.032$) scales. We also found a statistically significant difference in the results of the competence scale, as to the results of the LCWS_1 sub-scale ($F_{68} = 7.73$, $p = 0.007$).

A hypothetical explanation for the relationship between lack of control and self-control – the ability to control one's impulses and emotions may be found through examination of the content of the S scale. After analyzing the items, we can conclude that this scale refers rather to the ability of (and satisfaction from) planning and completing activities (e.g. "I often put off the moment of starting a difficult task" or "How often do you feel proud of the fact that you grapple with a given task for as long as it takes to complete it?"), as well as composure in the face of stress ("In stressful situations I find it hard to compose myself"). The items of the questionnaire were also formulated in a highly general way (e.g. "I feel that I lack self-discipline," "Sometimes I worry about my lack of self-control"), which can lead to increased variance in the way questions are understood by individual participants. In our study, the results of the S scale were additionally characterized by low internal consistency $\alpha = 0.28$.

Furthermore, the predicted relationship between lack of control over work and identity integration was not confirmed. We predicted that individuals who lost control over work areas experience internal conflicts in their life, which reflect

[9] The results of the Levene's test were as follows: LCWS*OS $F_{68} = 0.96$, $p = 0.33$; LCWS*K $F_{68} = 1.58$, $p = 0.21$; LCWS*ZP $F_{68} = 3.36$, $p = 0.07$; LCWS_1*K $F_{68} = 1.70$, $p = 0.19$

a lack of harmonious functioning in several areas of life, as well as their inability to fulfill several social roles (e.g. an employee and a spouse or a parent). We also assumed that a declared lack of life plans and goals will be conducive to strong engagement in work. In our study, the results of the S scale were additionally characterized by low internal consistency $\alpha = 0.38$.

However, we noted significant relationships between lack of control over work and general self-esteem, sense of competence, evaluation of personal power and body appearance (weak correlation). Therefore, we can conclude that individuals who work excessively and devote a lot of time and energy to work, neglect other spheres of life, and evaluate themselves higher in the areas of self-esteem in which a person's functioning relates mostly to work. It is possible that the perception of self as a competent person who effectively performs allocated and planned tasks, learns quickly and possesses personal power and ability to direct people, are the causes of their belief that they are indispensable at their work. This, in turn, may lead to taking on such an excessive workload, that they become unable to stop working[10]. The described connections could also constitute hypothetical rationalizations for lack of control and neglect of family and social life.

H.3 Individuals who are losing, or have lost, control over their work are characterized by greater work seniority than those individuals who do not experience lack of control over work.

Next, we tested a hypothesis about a relationship between lack of control over work and work seniority. We assumed that lack of control would affect individuals with longer work experience and fewer changes of employers. Thus, we calculated correlations between the results of the LCWS and its sub-scales and the work seniority, declared in an attachment to WEQ, as well as work seniority in the current workplace.

The analysis was done on the whole sample. After excluding participants with incomplete data, the size of the sample equaled N=236. The results of the correlations are presented in Table 3:

In fact, the obtained results do not allow a definite conclusion that individuals who have been working longer do become addicted to work more often as the correlations coefficients were found to be particularly low. However, it is essential to note the significant correlation for the LCWS_1 sub-scale. This would mean that individuals with greater work seniority more often notice the external indices of excessive workload, they usually come in the form of comments from people in their close environment.

[10] Those would be people who feel internal compulsion to work and are at the same time satisfied with their work (see: Golińska, 2011, p. 36-41).

Table 3. Coefficients of correlation between LCWS and work seniority

		LCWS	LCWS_1	LCWS_2	LCWS_3
total years of work	Coefficients *r*	0,14	0,13	0,10	0,10
	p values	0,03	0,04	0,13	0,11
in current work-place	Coefficients *r*	0,15	0,14	0,08	0,15
	p values	0,02	0,02	0,23	0,02

H.4: Individuals who have a sense of mission in their profession experience lack of control over work more often.

In the WEQ, we created an index of the sense of mission in a person's profession that was based on the answers to six items, comprising one of the forms at the beginning of the questionnaire. Five of them were answered on a Likert-type scale (from 1 to 5). They were phrased as follows:

- *To what degree is your current work helpful to other people?*
- *To what degree, does your current work require an above-average engagement?*
- *To what degree does your current work influence other people's health or life?*
- *To what degree do you evaluate your work to be important?*
- *To what degree do you evaluate your work to be useful?*

One item had a form of a statement. The participants answered it by checking either "yes" or "no." It was phrased as follows:

- *My occupation can be perceived as a helping profession.*

We began the creation of the index of the sense of mission in one's profession by analyzing the distribution of the obtained results. In the collected data, 60% of participants (136) indicated working in a helping relationship. Confronting the obtained results with the "occupational position" item, we found that a declaration of working in a helping relationship is not related to the objective description of one's occupational position. Additionally, we found that individuals employed in the same position (e.g. phone consultant), would sometimes make different declarations about working in a helping profession. Therefore, we decided to exclude this item from the index of the sense of mission in one's profession.

The remaining five items were included in a factor analysis, which was conducted to further our understanding of the phenomenon and to note possible relationships between these items. Its results indicated the existence of a single factor

(the factor loadings for each item were higher than 0.5), which may be interpreted as a sense of mission in one's profession.

However, analysis of the distribution of results for each particular item showed that only the distribution of results for the question about "influence on health and life of others" was right-skewed (see: Table 4). The distributions for the four remaining items were similar.

Table 4. Descriptive statistics for 'Sense of mission' items

		Helping people	Engagement	Influence on others	Socially needed	Socially important
N		238	237	235	238	238
Mean		3,22	3,51	2,65	3,75	3,76
Median		3	4	3	4	4
Mode		4	4	1	4	4
Standard Deviation		1,21	1,11	1,34	1,08	1,12
Skewness		-0,32	-0,51	0,25	-0,70	-0,73
Percentiles	25	2	3	1	3	3
	50	3	4	3	4	4
	75	4	4	4	5	5

Therefore, we concluded that the key item for the sense of mission is: "To what degree does your current work influence other people's health or life?". We decided to multiply this item's results by 2, in order to increase its role in the sense of mission index. To increase the discriminatory power, we reduced the remaining items according to the following pattern: from 1 to 2 = 1; 3 and 4 = 3.; 5 = 5 for items: "To what degree is your current work helpful to other people?" and "To what degree does your current work require an above-average engagement?" and from 1 to 3 = 1; 4 = 3; 5 = 5 for items: "To what degree do you judge your work to be important?" and "To what degree do you evaluate your work to be useful?". The results were recoded and then summed up, to create the sense of mission index for each participant. Its descriptive statistics are presented in Table 5:

To test the hypothesis about the relationship between lack of control over work and a sense of mission, we used Pearson's r correlations, as well as a one-way analysis of variance. The correlation coefficients for the results of the LCWS and its sub-scales and the sense of mission index were: for LCWS $r = 0.27$, $p < 0.001$; for LCWS_1 $r = 0.25$, $p < 0.001$; for LCWS_2 $r = 0.16$, $p = 0.014$; for LCWS_3 $r = 0.24$, $p < 0.001$.

Table 5. Descriptive statistics for 'Sense of mission' index

N		238
Mean		16,83
Median		16
Mode		14
Standard Deviation		6,17
Skewness		0,29
Percentiles	25	12
	50	16
	75	22

To analyze it further, we assumed that individuals scoring above the seventy-fifth percentile (22 points) are characterized by a sense of mission in their profession. Individuals scoring below 21 points were classified as not showing a sense of mission. To conduct an analysis of variance, we first tested the homogeneity of variance in each group, using Levene's test: for LCWS Levene's $F_{237} = 1.82$; $p = 0.18$; for LCWS_1 Levene's $F_{237} = 5.41$; $p = 0.021$; for LCWS_2 Levene's $F_{237} = 0.04$; $p = 0.85$; for LCWS_3 Levene's $F_{237} = 3.47$; $p = 0.06$. In the case of the LCWS_1, the variance was found to be heterogeneous, and so we used the Brown-Forsythe test for this sub-scale. In the case of the results of the LCWS_2 scale, the difference in means was found to be statistically insignificant ($F_{237} = 1.75$, $p = 0.18$). For the remaining two sub-scales and the total score we noted significant differences[11]: LCWS $F_{237} = 7.37$, $p = 0.007$; LCWS_1 $F_{98,29} = 6.25$, $p = 0.014$; LCWS_3 $F_{237} = 6.1$, $p = 0.014$.

After interpreting the above results, we can conclude that there is a correlation between a sense of mission in one's profession and lack of control over work, albeit it is small. Taking into consideration the fact that high scores on the LCWS scale indicate the consequences of excessive workload, that is, work compulsion, pathological addiction and lack of cognitive and behavioral control over this sphere of life, we conclude that the results confirm our predictions. By definition, working in a helping profession requires an above-average engagement, which is associated with, among other things, a readiness to devote more time to work (both in the workplace and at home). Therefore, it is not surprising that no significant difference was found for the LCWS_2 sub-scale, which describes the work-to-family conflict. Therefore, we can say that participants working in helping

[11] Analogous results were obtained using the Student's t-test: for LCWS $t = -2.71$, $p = 0.007$; for LCWS_1 $t = -2.5$, $p = 0.014$ (without the equality of variance assumption); for LCWS_2 $t = -1.32$, $p = 0.18$; for LCWS_3 $t = -2.48$, $p = 0.014$.

professions receive support and acceptance from their loved ones. It is possible that the understanding of the expectations, imposed on the "missionary" workers, as well as the awareness of the consequences of undertaking this type of work, help to maintain relative stability and harmonious functioning within two areas: work and family.

Low, but significant correlation coefficients may indicate an emerging trend. Signals from the environment about excessive workload (communications from family and friends), as well as the inability to stop working, indicate a direction towards lack of control. On the other hand, lack of conflict within family life suggests acceptance and support. Thus, the obtained results should not be interpreted as work addiction since workaholics very often cannot function effectively in their families (see: e.g. Robinson, Post, 1995; Robinson, 1996; 2001). In this case, excessive workload, similarly to addiction, has an internal cause; however, it does not stem from an obsessive need to neutralize negative tension, but rather comes from a desire to help other people.

It could be said that individuals with a sense of mission belong to risk group for their lack of control over work. However, the family support, which serves as a stabilizing factor here (73% of participants with a sense of mission are in a permanent relationship), allows them to function effectively in both areas (see e.g. Ferguson, Carlson, Zivnuska, Whitten, 2012) as participants with a sense of mission declared satisfaction from work more often.[12] (as much as 95% vs. 60%)[13].

H.5 Individuals who are losing, or have lost, control over their work are characterized by a low arousal threshold and low impulse inhibition.

In the examination of the predicted relationships between lack of control over work and temperamental traits, we used two experimental groups. The first group filled out, apart from the WEQ, also the EAS questionnaire (N = 109) while the second group filled out the FCB-TI[14] (N = 60). Participants in the first group ranged from 22 to 55 years old (M = 31.8; SD = 7.81), in the second group - from 22 to 62 years old (M = 34.7; SD = 9.03).

In the group that filled out the FCB-TI we found the following significant correlations: LCWS and Perseverance r = 0.31, p = 0.015; LCWS_2 and Persever-

[12] Grzywacz and Butler (2012) have shown that in regards of the individuals whose work requires social competence (and some helping professions fall in this category), work-to-family facilitation exists.

[13] Statistically significant difference χ^2 (1, N = 233) = 27.7, p < 0.001

[14] Results for this group were collected by Ilona Gniadek-Czaińska, as a part of her Master's Thesis (2013).

ance r = 0.32, p = 0.012; LCWS_3 and Perseverance r = -0.33, p = 0.011. Correlations from the EAS group are presented in Table 6.

Table 6. Coefficients of correlation between LCWS and EAS Scales

		LCWS	LCWS_1	LCWS_2	LCWS_3
Emotionality-distress	Coefficients *r*	0,22	0,16	0,26	0,14
	p values	0,019	0,087	0,006	0,16
Emotionality-fear	Coefficients *r*	0,27	0,19	0,27	0,24
	p values	,004	0,053	0,004	0,011
Emotionality-anger	Coefficients *r*	0,20	0,26	0,10	0,10
	p values	0,04	0,007	0,29	0,27
Activity	Coefficients *r*	0,24	0,28	0,18	0,09
	p values	0,012	0,003	0,06	0,31
Sociability	Coefficients *r*	0,04	0,02	0,07	-0,002
	p values	0,66	0,77	0,44	0,98

After interpreting the obtained results, we can conclude that, according to predicted relationships, individuals, who work excessively and lose control over work, are characterized by a low arousal threshold and a tendency to react with negative emotions in threatening situations. Considering the pattern of their high scores on the sub-scales Emotionality-Distress, Emotionality-Fear and Emotionality-Anger, as well as the Emotionality scale, we can assume that individuals who lost control over work seek low-strength stimuli, to maintain their optimal level of arousal. They feel best in a well-known environment, and for them it is work. Work progressively takes over the space devoted to other types of activities, which then become marginalized. Additionally, the correlation between the LCWS and the FCB-TI Perseverance scale points to temperamental predispositions towards addiction and lack of control over one's behavior (see also: Golińska, 2011, p.48). Such results may indicate high arousability of a person (see: Strelau, 2002, p.265). However, this conclusion is contradicted by the correlation between the WEQ LCWS scale and the results of the EAS Activity scale. According to these results, an individual who leans towards work addiction is seen as stimulation-seeking, energetic and full of vigor, regardless of the type of performed tasks. In this case, excessive workload would constitute a means to increase stimulation and maintain an optimal level of arousal.

Thus, the obtained pattern indicates a non-harmonized temperament (Zawadzki, Strelau, 1999, p.151). We can say that lack of control is associated with, on the

one hand, a tendency to relieve non-optimal tension, and on the other, with not avoiding (or even seeking) stimulation. Therefore, it is possible that for the addicted individuals work is both a source of strong stimuli and a place for releasing tension, when it reaches a certain critical value.

Conclusion

The conducted study confirmed the hypothesis about low arousal threshold and low impulse inhibition. It can be said that individuals who work excessively react with strong negative emotions to low-strength stimuli and tend to relive and ruminate for long periods of time over situations, which they perceive as difficult. For such people, work becomes the main and only source of stimulation. Therefore, it can be said that this pattern of temperamental traits predisposes individuals to work addiction. The discovered relationship between high activity and lack of control over work suggests that work becomes not only source of stimulation, but also a place in which excessive tension is released (see: criteria ICD5, ICD6, ICD8, Hornowska, Paluchowski, 2013).

Hypotheses regarding the relationship between a sense of mission in one's profession and the experience of lack of control, as well as the relationship between lack of control over work and years of work, were partially confirmed.

We found that individuals with a sense of social mission fall into the work addiction risk group. However, this stems from the characteristics of the profession, which requires above-average engagement, sacrificing oneself for the benefit or health of others, as well as readiness to undertake work-related activities at any time. This does not necessarily indicate addiction and lack of control. Having an accepting and supportive family seems to be a harmonizing factor in the functioning of such individuals.

We noted a trend in the relationship between lack of control and years of work. According to this trend, it can be assumed that lack of control, which leads to addiction, is a long-term process that has a stronger effect on individuals with longer experience and working history.

The hypotheses about the relationship between locus of control and lack of control over work, as well as between lack of control over work, low self-esteem and experiencing internal conflicts were not confirmed.

However, we noted that individuals who tend to lose control over work perceive themselves as competent, effectively handling their allocated tasks and physically attractive. Therefore, we can assume that work is a source of support for one's high self-esteem, which comes at the cost of lack of control and neglect of other areas of life.

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