

Work overcommitment – Is it a trait or a state?

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Objective: In globally orientated working world stress is of rising importance as a health risk. ERI (effort-reward-imbalance) is a well-tested work-related stress model with three components: While an imbalance between its extrinsic components 'efforts' and 'rewards' leads to strain reactions its intrinsic component 'work-related overcommitment' (WOC) has been described as a certain personal characteristic with a set of attitudes, behaviors and emotions leading to a critical coping style with excessive striving combined with a strong desire for approval (Fig. 1). However, one question concerning WOC has not been well addressed in the literature so far: Is WOC a trait alone or prone to a changing working environment?

Methods: In this exploratory longitudinal data analysis of the prospective WOLF (WOrk, Lipids, Fibrinogen) cohort study 2940 industrial employees from Sweden were analyzed with multiple linear regression analysis. A change of WOC index or his subscales was regressed against a change of occupational decision latitude, extra work or work stress measured by an ERI proxy five years later. Covariates adjusted for were age, sex and education. The fully conditional specification (FCS)-algorithm was used for imputation of missing values.

Results: Work stress was the only work-related predictor (tab. 1) significantly associated with the total WOC index ($\beta=7.07$ (95%-CI: 4.91;9.25, tab. 2) and its subscales 'need for approval' ($\beta= 1.14$ (95%-CI: 0.48;1.80), 'disproportional irritability' ($\beta= 1.93$ (95%-CI: 1.26;2.61) and 'inability to withdraw from work' ($\beta= 3.26$ (95%-CI: 2.36;4.16) in the fully adjusted model. 'Competitiveness' showed a tendency, only. Education was positively associated with WOC.

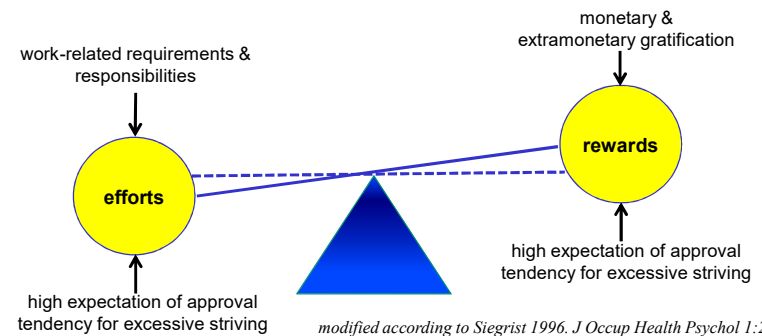


Table 1 Description of the respondents' characteristics at baseline (n=2940)

| | T1 | Change from T1 to T2 | p-values ¹ |
|---|------------------|----------------------|-----------------------|
| Male ^a | 83.9 | | |
| Lower educated ^a | 45.1 | | |
| Middle educated ^a | 34.7 | | |
| Higher educated ^a | 15.2 | | |
| WOC _{total} ^b | 60.17 (9.62) | - 0.66 (7.88) | <0.0005 ^d |
| Need for approval ^b | 14.49 (2.89) | - 0.50 (2.59) | <0.0005 ^d |
| Competitiveness ^b | 11.40 (2.62) | - 0.12 (2.64) | <0.01 ^d |
| Disproportional irritability ^b | 16.39 (3.01) | - 0.07 (2.85) | 0.19 ^d |
| Freedom of choice at work ^b | 0.76 (0.16) | 0.09 (0.17) | <0.0005 ^d |
| Occupational position ^b | 15.36 (3.15) | - 0.45 (2.81) | <0.0005 ^d |
| Extra work ^c | 1.00 (1.00;2.00) | 0.00 (-1.00;1.00) | 0.003 ^e |
| ERI proxy weighted ^b | 0.76 (0.16) | 0.09 (0.17) | <0.0005 ^d |

¹ change from T1 to T2 ^a valid percent (%) ^b mean (+/- sd) ^c median (min;max) ^d T-test for matched pairs ^e Paired Wilcoxon-Test
WOC = work overcommitment; mean = arithmetic mean; sd = standard deviation; min = minimum; max = maximum

Table 2 Stepwise multiple linear regression analysis on change of WOC from T1 to T2 (n=2940)

| Item | Model (B [95%-CI]) | | | | | | | |
|--|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1 | | 2 | | 3 | | 4 | |
| | CC | MI | CC | MI | CC | MI | CC | MI |
| Age | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.00 |
| | (-0.05;0.03) | (-0.05;0.03) | (-0.05;0.03) | (-0.05;0.03) | (-0.05;0.03) | (-0.05;0.03) | (-0.06;0.04) | (-0.04;0.04) |
| Sex female | 0.03 | -0.05 | 0.16 | -0.05 | 0.19 | -0.05 | 0.45 | 0.02 |
| | (-0.86;0.92) | (-0.97;0.88) | (-0.76;1.10) | (-0.97;0.87) | (-0.73;1.11) | (-0.97;0.88) | (-0.57;1.46) | (-0.89;0.94) |
| Education | 0.54* | 0.55* | 0.34 | 0.54* | 0.34 | 0.54 | 0.29 | 0.55* |
| | (0.06;1.03) | (0.05;1.04) | (-0.60;0.83) | (0.05;1.04) | (-0.17;0.83) | (0.05;1.04) | (-0.27;0.85) | (0.06;1.05) |
| Freedom of choice at work ¹ | | | -0.03 | -0.03 | -0.03 | -0.03 | -0.03 | -0.04 |
| | | | (-0.15;0.09) | (-0.14;0.08) | (-0.15;0.09) | (-0.14;0.08) | (-0.17;0.10) | (-0.15;0.08) |
| Extra Work ¹ | | | | | 0.11 | 0.34 | 0.61 | 0.39 |
| | | | | | (-1.00;1.23) | (-0.71;1.38) | (-0.68;1.90) | (-0.66;1.40) |
| ERI proxy - weighted ¹ | | | | | | | 6.77*** | 7.07*** |
| | | | | | | | (5.57;8.98) | (4.91;9.25) |

¹ Change from T1 to T2, positive estimates indicate a change of WOC and a change of the independent variable in the same direction; Abr.: WOC= work overcommitment; CC = complete case analysis, MI = multiple imputations with FCS-method; + p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

Conclusion: While WOC was insensitive to changes in decision latitude and extra work it was highly associated with changes in work stress (extrinsic ERI). In the original ERI-model reactivity of intrinsic to changes of extrinsic ERI has been already described. Our results points therefore to WOC being rather a personality trait than a state more common among higher educated employees. Further investigations with employees from different branches, various aspects of the working situation, longer observation periods and several measurement points are needed to prove our results.