Oral presentation OP390

Network Approach to Work Addiction: A Cross-Sectional Study

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science

Research goal and why the work was worth doing: In this study, I aimed to use a network approach to conceptualize work addiction as a dynamic system of symptoms that are in direct relationships with each other. Such conceptualization might provide novel insights regarding potential targets of therapeutic interventions and prevention programs focused on work addiction.

Theoretical background: According to the World Health Organization and the International Labour Organization, every year over 745 thousand people die worldwide due to overworking. One of the mental health problems contributing to these deaths is work addiction, which has a prevalence rate of up to 10% among working individuals. Besides death, work addiction leads to other negative work-related phenomena such as occupational stress, job burnout, work-life conflict, and a global burden of disease. Typically, work addiction is investigated within the latent trait framework. However, previous studies showed some non-trivial direct relationships between the symptoms of work addiction. The presence of these relationships might indicate that there exists an additional process in which symptoms of work addiction influence each other. Such a process would be congruent with both clinical practice, in which intervention strategies focused on symptoms and relations between them are usually successful (e.g., cognitive-behavioural therapy), and the network theory of mental disorders (i.e., a theory behind network approach). Consequently, the network approach to work addiction might constitute a bridge between the results of quantitative studies on work addiction and intervention strategies applied in clinical practice.

Methodology: I used four datasets in which work addiction was measured with the Bergen Work Addiction Scale. Two datasets comprised responses from working Norwegians (n 1 = 16,426, M age1 = 37.31, SD age1 = 11.36; n 2 = 776, M age2 = 29.76, SD age2 = 7.12) and two datasets comprised responses from working Poles (n 3 = 719, M age3 = 36.39, SD age3 = 11.36; n 4 = 715, M age4 = 25.58, SD age4 = 3.41). I jointly estimated the four networks of work addiction and estimated the stability of the four networks. Then, I searched for potential clusters of symptoms, estimated symptoms' centrality (based on node strength), and estimated symptoms' predictability in each network. Finally, I quantitatively compared the edge weights in the four networks.

Results: Stability analyses indicated that all four networks were accurately estimated, with small to moderate confidence intervals around the edge weights. The four jointly estimated networks featured many consistent edges (e.g., an edge between conflict and problems) and two clusters of symptoms. The first cluster included salience, mood modification, and withdrawal. The second cluster included tolerance, relapse, conflict, and problems. Relapse was the most central symptom and mood modification was the least central symptom in each network. Mean symptom predictability varied between 23.1% and 28.6% across networks. In the omnibus tests of the six possible pairwise comparisons, only Network 1 differed from Network 4 ($p < .001$), and Network 2 differed from Network 3 ($p = .030$). Out of all 21 edges, four edges differed significantly between Network 1 and Network 4 and three edges differed significantly between Network 2 and Network 3.

Limitations: The symptoms of work addiction were measured with single items, which might have biased estimates of networks' parameters and reduce the validity of the results. The data were cross-sectional, which puts limitations on causal inference. Last but not least, the four samples were predominantly female and represented general populations from just two European countries, which

puts restrictions on the generalizability of the results to clinical populations and populations from other countries and cultures.

Conclusions: This study showed that the network approach constitutes a promising framework for studying work addiction. However, it also highlighted the need for conceptual clarification of the meaning of centrality in cross-sectional networks. The obtained results seem to indicate that centrality represent diagnostic importance of a symptom rather than its potential to influence other symptoms in a network.

Relevance to the Congress Theme: In recent years, there has been an exponential growth in the amount of research papers applying network analysis to psychological phenomena. It is probable that in the future, network analysis will become an important statistical tool for analysing work-related behaviours. Consequently, this presentation might allow the congress attendees to familiarize themselves with network analysis and make them aware of strengths and limitations of this statistical tool.

Keywords: network analysis, work addiction, workaholism