The 3D Model in Analysing the Relations of Professional Demands during Group Trainings „Anchoring the Professional Balance State", or where it disappeared their relationships with Psychosocial Factors related to Professional Activity?

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Abstract

This article deals with the systemic and atomic approach issues of investigating the post-intervention outcomes. The concept of psychosocial modelling was to ensure the professional balance of doctors, teachers and social workers.

Thus, data analysis revealed that some psychosocial factors that had significant relationships at the end of the formation "Anchoring the Professional Balance State" did not show the same Pearson significance chart. These facts have led us to study another kind of significant Pearson relations, the pre-intervention variables in their relationship with post-intervention, so the significant relationships identified have explained why in the case of complex variables some of them contribute to trainings and others may disappear following the same trainings sessions. This fact made us to structure the data that we received in a 3D model, which, besides facilitating the analysis of the obtained Pearson relations, also explained the phenomenon of complex psychosocial variables.

The article, only will discuss about the case of the complex variable - Professional Demands, in the significant Pearson relations identified with the other investigated factors (Professional Activity and Health State).

Keywords: 3D model of analysis, Professional Demands and Activities, transient variables, reflexive and rebound reality, professional balance.

1. Introduction

The term professional balance is the Francophone approach of living space, which limits life in private and professional one, unlike the Anglophone approach of work/life balance. In the latter case, it is not clear where are the boundaries that would delimit the work space from the living space, which made us to focus on the primary approach when we created and structured our training curriculum "Anchoring the Professional Balance State".

As result of investigations on the problem of professional balance, it has been found that the dilemma is widely dealt with in the literature and that this confirms the importance attached to the subject. The social system is rather a "social pact" where the

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community is committed to helping its members without waiting for social support (a rhetorical question arises: if professionals fail to meet their own needs, how will solve the cases on micro, mezzo or macro levels?). There is a desire to increase the number of social services centered professions (health, education, counseling, help, etc.) in municipalities at local and regional level, but this will not meet the quality characteristics of the profession.

The general aim of the program was to ensure the balance of psychosocial professional factors such as: professional exigencies and requirements, professional activity, cultural and environmental ones, factors conditioning human welfare and health, with interventional orientation towards reasons, needs, values and talents on the "I-Self", "I-Profession" and "I-Environment" axes, as well as the axes of the career anchors. The experiment consisted of 50 hours, in which 27 persons, separate teachers and special social assistants participated in two sections (Zubenschi, 2017).

The obtained data evoked the importance of systematization of participating variables in the experiment; for these reasons, more attempts were made to treat them, one of which was classical: the analysis of the Cohen's effect of participating variables until and after trainings (http://www.picaturigand.com/anda/2016/09/07/indici-de-marime-al-efectului-d-cohen-2/). This fact only demonstrates the significant nature of the trainings, but not the significant changes of the trained factors. That's why we analyzed Pearson's correlations, which amazed us when we generally investigated complex factors identifying that some of them only contribute to solidifying the relationship, and others disappear following training. Here really could not give up, how do some participatory psychosocial factors in the experiment no longer maintain significant relationships?

Let's try, to say, to delimit these two-dimensional complex variables into the constituent factors (the COPSOQ questionnaire allow us to deal with this statistical phenomenon). In this way the primary components of complex variables have demonstrated a significantly more varied Pearson picture. All identifiers required a visual outpost, as they represented one-dimensional relationships, where the content of trainings lost its meaning. Thus, the idea of experimental realities (initial, reflexive and augmented) emerged to trainings (https://www.realitytechnologies.com/augmented-reality/), finally these realities had their own areas in the space of a 3D model (https://sketchfab.com/tags/psychology).

2. Why to use the 3D model in a psycho-social experiment?

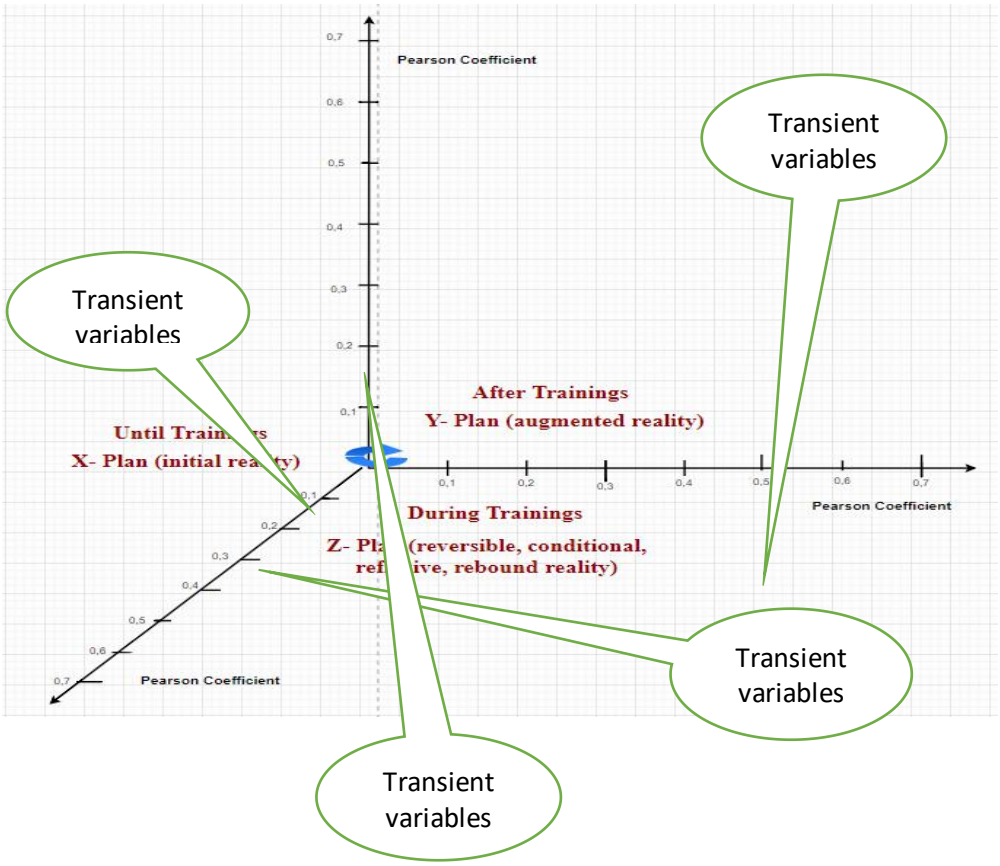
It should be noted that during this period of social transition, not only career management strategies are being developed, but also concepts that are congruent and fit with the positioning of the person in the organizational environment, the system, or the human resource approach in accordance with principles of effectiveness, defining the main objectives, setting priorities, setting deadlines, managing time, etc. The latter is a simple feature of the professional guidance process, where its trajectories differ in terms of individual characteristics such as behavior, personality, motivation, interest,

achievement, etc. Personal and social determinants determine career paths, choices and vocations in terms of anchor, which in turn inherit a range of professional features.
The rationales of investigating the happenings into a 3D model are (Figure 1):

- the 3d model can work with complex variables;
- the 3d model offers 3 spaces or realities of the psychosocial experiment;
- could be used as a simulation of expectations from a psychosocial experiment;
- the 3D model provides explanations and arguments that are not reflected at the end of the trainings programme. 3D model can evoke the co-dependent, moderating and cofounding variables. It does not limit the experiment to dependent and independent variables;
- it can provide explanations for what happens with Pearson's relationships in trainings, or relationships that are not identified until or after the psychosocial experiment;
- is easy to handle, especially when there are complex variables that contribute to the effect of Cohen. This makes it easy to find out which part (component) of the variable is participatory in the experiment.

It is clear that these are not all the 3D model's priorities over the two-dimensional relationship before and after training.

Figure 1. Analysis Approach of Compound Variables through 3D Model of Trainings Realities

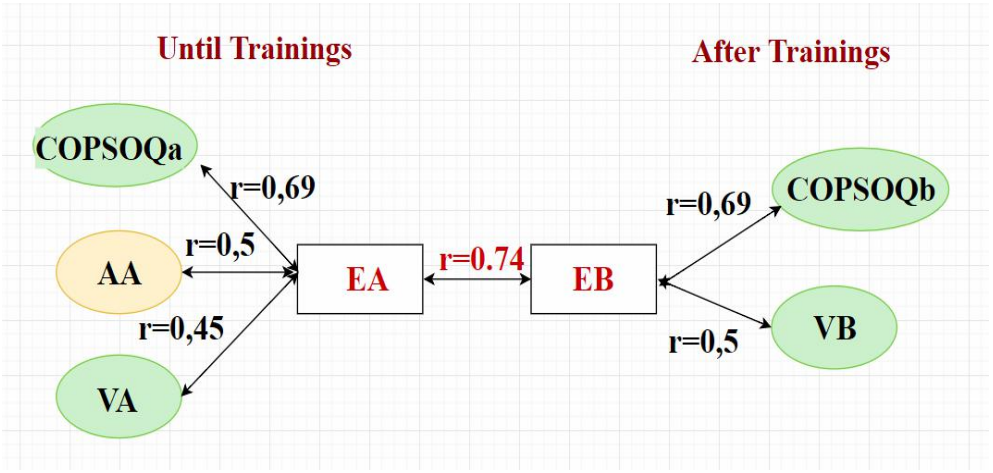


3. Data and Methodology

In the formative experiment, after the data analysis, other relationships between the variables and the cause-effect phenomenon were identified. Thus, a new relationship with a new variable can occur as a result of the experimental trainings (the case of Job Insecurity and the Psychosocial Factors related to Professional Activity (r = -0,41)), or to contribute to strengthen the Pearson's correlation in experimental trainings (the case of Job Insecurity and General Health State (r = -0,47)).

After data analysis, we also identified so-called: *two-dimensional variables*, such as those that contributed in maintaining the significant relationship with the compound variable until trainings, but significantly being inferior in relationship with compound variable after trainings, still manifesting until trainings significant correlation with compound variables after trainings (the case of Work Satisfaction with Job Insecurity (r = - 0,38)) (Eisele, 2007). Two-dimensional variables are apparently transient variables, between plan X (initial reality) to plan Z (reversible or conditional reality), or from Plan Z to the Plan Y (augmented reality) (https://docs.jboss.org/jbpm/v3.3/userguide/ch10s05.html). In experimental research in the field of psychology or sociology there is, unfortunately, no methodology that could evoke and explain what is happening with human nature in the formation, training, social experiment, from one end (cause) to the another (effect). Under today's circumstances, it's too meager to look at obvious one-dimensional relationships, because all these types of medium Pearson relationships have contributed per total to the Cohen effect's probability of researched COPSOQ psychosocial factors (d=0,47).

Figure 2. Pearson correlations between Professional Demands (E), General COPSOQ impact, Psychosocial Factors related to Professional Activity (A) and Health State (V) (Tage S., Hannerz H., Høgh A., Borg V., 2003).



Professional Demands: quantitative/time (E1), cognitive (E2), emoțional (E3), demands for hiding emotions (E4), senzorial demands (E5), demands for responsibility at work (E6)

EA (until trainings)	EB (after trainigs)
Pearson correlation that decreases the significance ratio following experimental training	**Pearson correlation that persists until the end of experimental training**
Psychosocial Factors related to Professional Activity: influence at work (A1), possibilities for development (A2), degree of freedom at work (A3), meaning of work (A4), commitment to the workplace (A5)	Health State: general health (V1), mental health (V2), vitality (V3) General COPSOQ impact

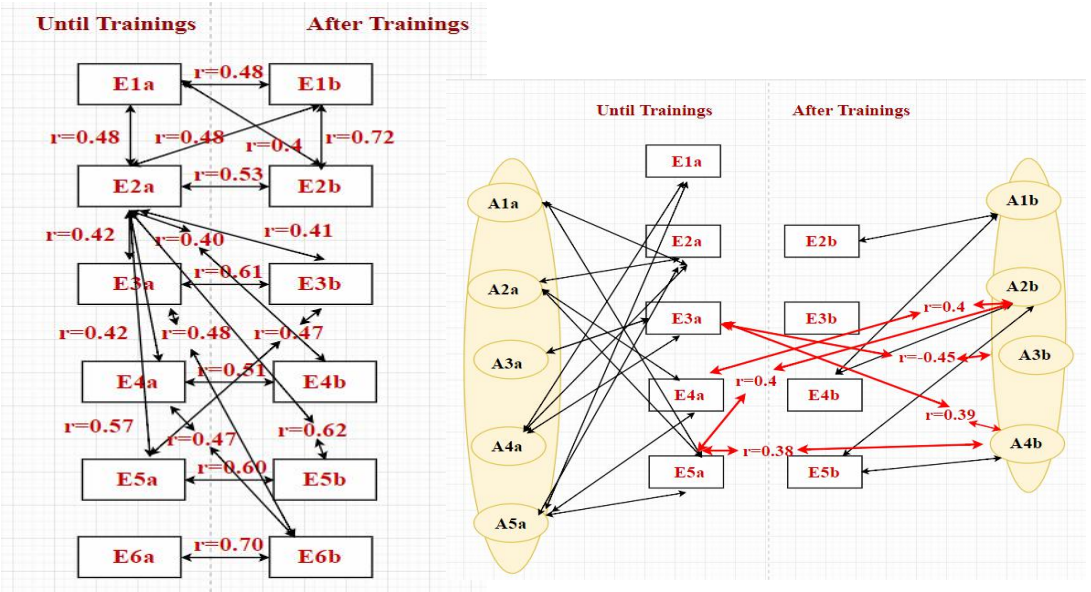
The meaning of color in the quadrants of variables and signs
* **Orange**: signifficant Pearson's correlation disappears after experimental trainings
* **Green:** signifficant Pearson correlation persist until the end of experimental trainings
↔ the relationship of variables in Pearson correlation

4. Findings and evidences

All significant Pearson relationships, following the prior data analysis were structured into a portfolio of variables called: the 3D statistical portfolio of participatory variables in the formative experiment "Anchoring the Professional Balance State", one example being the relationship of the complex Professional Demands (E), illustrated in figure below (Figure 2). From this figure we can see that the significant relationships between Professional Demands and the complex Psychosocial Factors related to Professional Activity (r = 0.5) disappear.

Then we asked, well, if both variables are composed of its components (Psychosocial Factors related to Professional Activity from: influence at work (A1), possibilities for development (A2), meaning of work (A4), commitment to the workplace (A5) and Professional Demands from: Quantitative / time demands (E1), cognitive (E2), emotional (E3) at work (E6)) let's evaluate their correlations (Figures 3, 4 and 5).

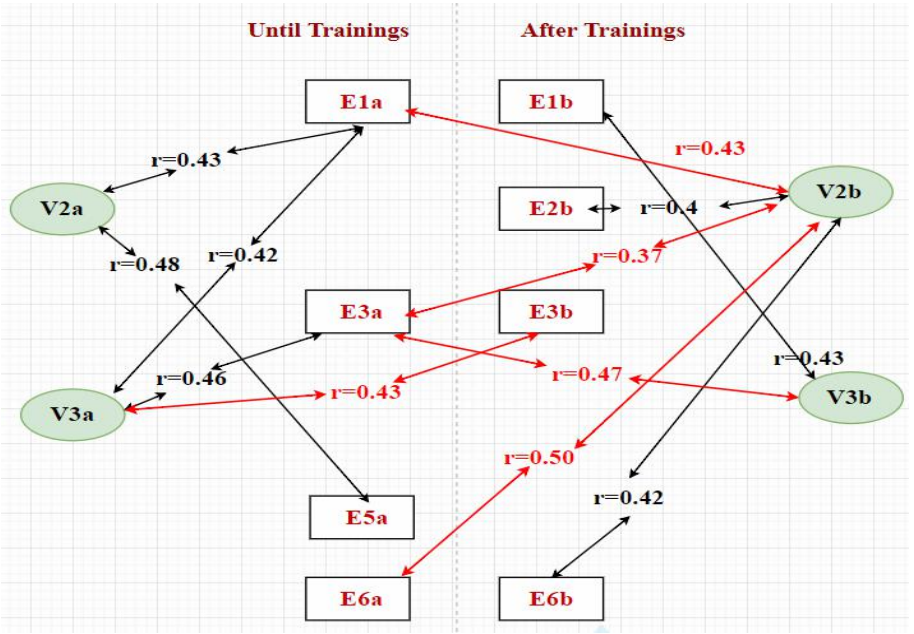
Figure 3. General Pearson correlations of Professional Demand and Requirements with Psychosocial Factors related to Professional Activity, until (a) and after (b) Trainings



From Figures 3 and 4, it is noticeable that:

- the Cognitive Demands variable (E2a) demonstrates the most significant correlations until training with the Professional Demands components;
- E2, E3, E4, E5, A1, A2, A3, A4, V2 and V3 retain the status of significant variables at the end of the psychosocial experiment (Figure 3 and 4);
- General health (V1) did not participate in the trainings;
- Quantitative or time professional demands (E1) and E6 was not trained, because they have more aspects related to the existence in the abundance or not of the professional tasks than of the psychological nature. In case of, when these variables were involved in excess, the persons participating in the training were to demonstrate average or medium levels of professional burning. But a selection criterion for candidates was focused on training people who do not show symptoms of burning). Emotional (professional) burning and stress representing a collapse or a professional imbalance, and in their case is operated with other techniques of psychological rehabilitation;
- significant Pearson correlations (those marked red in figures 3 and 4) E3a / A3b; E3A / A4b; E4a / A2b, E5a / A2b, E5a / A4b, E1a / V2b, E3a / V3b, E6a / V2b trace plan X, Z and Y, where professional demands influenced the professional activity, mental health and vitality after trainings;
- the Pearson correlation V3a / E3b shows that vitality first moderated emotional demands after training (r=0,43).

Figure 4. General Pearson correlations of Professional Demand and Requirements with Health State (V), until (a) and after (b) Trainings



And if we go back to Figure 2 and compare it to 3, we notice that Psychosocial Factors related to Professional Activity retains the status quo of participating variable.

From the above figures, relations marked with red are relations that trace the reality of Z, influencing or moderating the outcome of the psychological efforts of the participating persons. They are those variables that amplify the dissemination of the Cohen's effect of the psychosocial experiment.

5. Conclusions

Following the "Anchoring the Professional Balance State" trainings programme, the participants satisfied the condition of ensuring the positive psycho-emotional state (professional balance) with transformative accents of the dependent relationships between the psychosocial factors trained in the workshops (demands and professional activities, cultural and environmental factors, factors that contribute to well-being and health). It was satisfied the psycho-cognitive processes for the orientation of personal and professional resources on the experimental axes "I-Self", "I-Profession" and "I-Environment".

The Balance Act triggers the need to update processes and mobilize resources. Resources are interpreted as the efficiency or effectiveness of the subject or the "I / Self" case where, in addition to the logistical aspect (definition of objectives, prioritization, deadlines, time management and synergy), everything will strictly depend on individual goals, aspirations, the qualities and problems and the entire bio psychological testament. Under these conditions, deep aspirations, essential motivations, beliefs and hopes, personal capabilities will be set at the forefront. In the

context of human activity, the demands of society towards professions increase. The occupations themselves change depending on the current labor market and personal characteristics. These fluctuations will continue to be on the background of changes in norms, ethics, principles underpinning vocational and vocational concepts.

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