

Professional frustration scale: testing psychometric properties in a Romanian sample

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Abstract: This study examines the psychometric properties (internal consistency, exploratory factor analysis, convergent validity and differential validity) of a scale regarding professional frustration. This study was conducted on 313 Romanian employees, aged between 21 and 59. A single-factor scale with a good internal consistency was obtained. Being strongly correlated with the job satisfaction scale, I can conclude that the Professional Frustration Scale respects the original version of this instrument. In addition, I found certain gender differences in professional frustration, being a small but significant effect on women. The scale can be used on further studies in the Organizational Psychology field and it can be related to work performance, well-being or family relations. Regarding the practical implications, it can be used to assess the Romanian employees frustration level, a preliminary step made by Human Resources specialists for programmes to reduce the work frustration. There are discussed some certain limitation regarding the cross-sectional design, the collecting data procedure and the convenience participants.

Keywords: professional frustration, job satisfaction, gender differences, exploratory factor analysis, validity

1. Introduction

The nature of man is to work, and it is through work that man realizes his full potential. Work plays a prominent role in a man's life. It takes more time than any other single activity and provides the economic basis for the lifestyles of human beings. Most adults spend more time at work than they do with their own families. Therefore, it is imperative that an individual's time spent working is both productive enjoyable as well as beneficial to both employee and employer. The employee satisfaction is, therefore, one of the criteria for establishing a healthy organizational structure (Graham, 2012).

Research in human resource management has established that it is in the interest of an organization to retain employees and minimize turnover. However, many organizations have little understanding of how to satisfy their employees and to decrease the level of employee job frustration.

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The Frustration Theory shows that the employees are motivated by their professional goals. If they are stuck in this activity, they feel frustration on how they can respond in an adaptive or an inadaptive manner (Blum & Naylor, 1968 cited in Krejei, Kvapil & Semrad, 1996). The relative frustration and deprivation theories can be applied to at an individual or at a collective level (Ficeac, 2010).

Frustration is considered one of the main causes of aggressive behaviours (which can be shown to other people or to the obstacle itself), but it does not always lead to aggressive manifestations. For example, slaves or other oppressed groups have to accept their miserable existence. But if they find that other social groups have achieved the desired rights, a revolt is imminent. Ted Gurr argues that intense frustration generated by the contradiction between what people know they could get and what they really are in reality causes aggressive behaviour, both at an individual level but especially for large social categories. The frustration theories and the relative deprivation explain the aggressive manifestations sociologically but did not explain the biological and neurophysiological reasons (Krejei, Kvapil & Semrad, 1996; Ficeac, 2010).

Research in Organizational Psychology has shown that the level of professional frustration is associated with an unethical attitude at the workplace (Krejei, Kvapil & Semrad, 1996; Afolabi & Adesina, 2006), with counter-productive organizational behaviours and organizational constraints (Fox, Spector & Miles, 2001; Fox & Spector, 1999; Spector 1997).

The self-reported frustration level was associated with variables, such as reactions on anger, hostility, discontent associated with workplace and, on a lower level, work-related anxiety. Some authors indicated that the organizational climate, the stress associated with one's position and social support contribute to the frustration-associated environment (Keenan & Newton, 2011). Frustration can be an alternative explanation for the workplace dissatisfaction, inequality and not taking part in organizational change (Spector, 2006). The communication level with a superior can decrease the frustration level for the employees from the bottom level of the hierarchy, and it can increase for the ones from the higher level. (Harvey & Harris, 2010).

The opposite of work frustration can be work satisfaction or professional commitment (Chang et al, 2014; Graham, 2012). Nurses often work in conditions that are highly frustrating. Although work excitement has been shown as having a greater influence on professional commitment when nurses experienced the dual work affects simultaneously, work frustration significantly reduces the professional commitment effect of nurses. Managers should not only construct a positive and exciting work environment but also work to mitigate the causes of work frustration promote professional commitment and retention among nurses (Harvey & Harris, 2010).

There are many possible reactions to frustration like aggression, regression, fixation, withdrawal or intention to quit the job. Employees who feel work frustration might feel apathy and they can be persuaded to give up or resign. They usually arrive at work late and leave early. They might pretend to be sick and tend to be absent. They avoid decision-making or leave the job (Mullins, 2006; Andalib et al., 2013; Mullins, 2007). Authors who sustain this idea present leaving the job as being in the top of the reactions to job frustration. Because of this, for this research I have taken into consideration the intention to leave the job as a prevention to this kind of behaviour.

Some empirical studies demonstrate that for some working areas (such as engineering) routine activities lead to frustration. For this, job enrichment, where employees have more responsibility by transferring tasks previously done by managers, should be considered (Holt, 2007; Chang et al, 2014).

Specialists in methodology usually test psychology instruments taking into consideration the internal consistency (using Cronbach's Alpha coefficient), the construct validity (usually tested by the relation with other relevant variables from the literature), the discriminative validity between the subfactors, the analysis factor (exploratory or confirmatory, to verify the factor structure assumed). We can obtain a scale in two ways: by elaborating the items on our own or by using the translation and back-translation technique. For this research, I have chosen the second method.

Most of the studies regarding the working characteristics have focused on job performance (Ahmad, 2008; Pincus, 1986; Beehr et al., 2000), job satisfaction (Beham & Drobnic, 2010; Iliescu, Livinți & Pitariu, 2010) or work commitment (Lum et al., 1998). I preferred the concept of work frustration because it is a concept which was less evaluated by the psychologists probably because it can have causes on other related fields (like biological or neurophysiological).

Some of the instruments used in the literature to assess job frustration contain from one to six items which describe the frustration associated with the job in terms which express this feeling (Herleman, 2009; Perkins & Oser, 2013; Longo et al., 2014; Iliescu et al., 2015). If I compare *The Job Satisfaction / Frustration Questionnaire* (JSF, Porter, 1961 apud Krejei, Kvapil & Semrad, 1996) with the previous ones describing the same construct, I prefer this one because it is more resistance to social desirability.

2. Method

The main purpose of this research is to investigate the psychometric properties of the *Professional Frustration* scale on a Romanian sample. In addition, I aimed to test the existing significant differences between participants through demographic variables, such as gender, working experience level, company profile, marital status and area of origin.

2.1 Participants

The participants of this study consisted of 313 Romanian employees (57% females and 43% males), aged from 21 to 59 ($M = 32.95$, $SD=8.47$) and with a work experience between 1 and 39 years ($M = 10.05$, $SD=8.55$). 82% of them work in private companies (18% in state institutions), 42% are married (58% unmarried), 89% of them live in the urban area (11% in the rural area).

2.2 Measures

For this research, I applied two instruments:

The Job Satisfaction / Frustration Questionnaire (JSF, Porter, 1961 apud Krejei, Kvapil & Semrad, 1996) is an instrument with 15 items, each of them evaluated on 3 scales: scale A (the working importance scale), scale B (the working satisfaction scale) and scale C (the professional frustration, the difference between scale A and scale B). For this research, we obtained an Alpha Cronbach coefficient of .85 (scale A – a better consistency than into the original study, .75), .95 (scale B – compared with .87 from the original study) and .90 (scale C – taking into consideration that in the original study the authors obtained .84). The instrument was obtained by the translation and back-translation technique from the original version.

Job Satisfaction Survey (JSS, Spector, 1994 apud Iliescu, Liviniți & Pitariu, 2010) is an instrument used for convergent validity. It contains 36 items which are grouped on 9 factors, assessed on a Likert scale with 6 steps. The instrument was obtained from the authors who have published on their web site the questionnaire which has already been validated on a Romanian sample (Spector, 2015). For the Romanian version of this instrument, the authors obtained an internal consistency coefficient above average (between .78 and .91) and a factorial structure with 2 factors (Iliescu, Liviniți & Pitariu, 2010).

In the end of the survey, we assessed the intention of leaving the current job by one item with a Likert scale and some demographic variables, such as gender, age, civil status, working area, etc.

2.3 Data collection procedure

We used a correlational design, for which the participants filled in questionnaires online during March and April 2015. The link with the research invitation was distributed through on-line groups and professional networks; the groups were selected to represent all the working areas from the Romanian population. The participation in this study was voluntary. The participants with extreme scores were deleted from the database.

Data were analyzed using the SPSS for the Windows 17.0 programme. To test the normal distribution of data, we applied the Kolmogorov-Smirnov test; to test the internal consistency, we calculated the Alpha Cronbach coefficient. Because we did not obtain a normal distribution of data on the K-S test, for the subsequent analysis we applied some techniques to normalize the

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data. There is a positive asymmetry, so we applied the radical value of the work frustration value. Because the multicollinearity and additivity conditions were met, I kept all the items for the analysis (see Table 1).

Table 1. Descriptive statistics

	K-S	p	α (reference population)	α Cronbach	95% CI
Job importance	1.81	.003	.75	.85	.83 - .88
Job satisfaction	1.44	.03	.87	.95	.94 - .96
Job frustration	1.81 / 1.06	.003 / .21	.84	.90	.88 - .92

Note. N=313

K-S = Kolmogorov – Smirnov; CI = confidence interval

3. Results

Exploratory factor analysis

In order to explore the construct validity, an exploratory factor analysis was conducted on the main component. The 0.89 value for the Kaiser-Meyer-Olkin's indicator and $\chi^2 = 2364.39$, $p < 0.001$ value for the Bartlett test indicate that the factor analysis can be carried out and that the sample of subjects is appropriate. The Kaiser criteria (Eigenvalue higher than 1) and the Cattell's scree-plot criteria suggested a solution for the 15 items on 3 factors. The percentage of the covered variance items is 65.95%. The percentages for each factor were: 42.81 %, 16.48% and 6.66%. The table shows the saturations and the communalities (see **Table 2**).

Table 2. Exploratory factor analysis

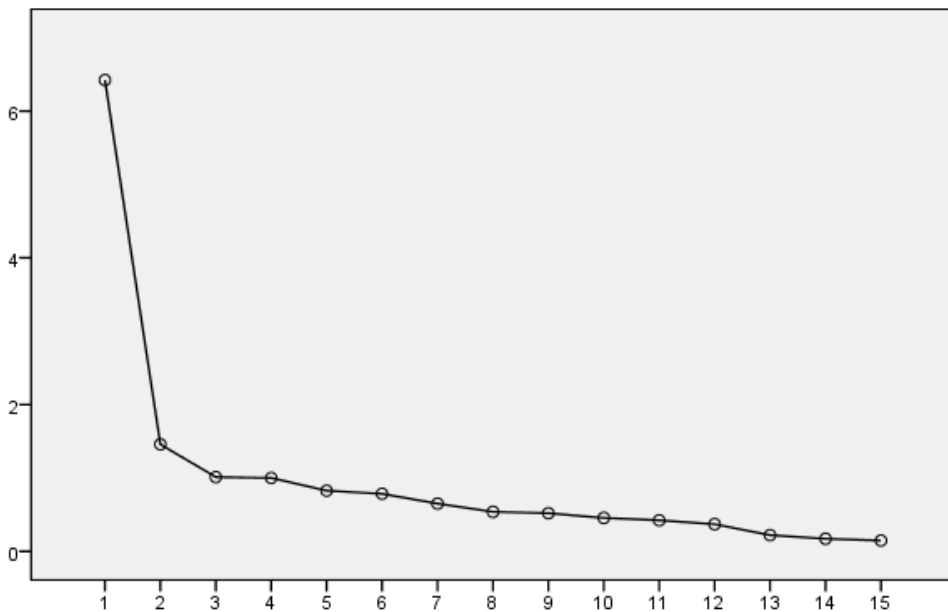
	<i>Factors and saturations</i>			<i>Communalities</i>
	<i>1</i>	<i>2</i>	<i>3</i>	
JF_frust13	.84			.83
JF_frust12	.83			.82
JF_frust11	.81			.75
JF_frust10	.74	-.34		.79
JF_frust9	.73	-.32		.82
JF_frust8	.69			.58
JF_frust15	.68			.54
JF_frust14	.64			.51

JF_frust4	.62	.30		.51
JF_frust5	.61	.41		.57
JF_frust7	.53		-.31	.67
JF_frust2	.52	.33	.41	.64
JF_frust6	.49	.38		.53
JF_frust3		.67		.58
JF_frust1	.48		.67	.68
Cumulative % of Variance	42.81	59.29	65.95	

Note. N=313; saturations > .30.

Looking for the scree-plot graphic (see **Figure 1**), I also performed an unidimensionality analysis with all 15 items (as it was in the original structure). Because of the way the graphics shows, I removed the item 1 for the second unidimensionality analysis. In the end, the scale was analysed with 13 items - items 1 and 3 were erased.

Figure 1. Scree plot of professional frustration



As it can be seen in the Table 3, it is an improvement on the cumulative percent of variance explained, while items 1 and 3 were removed from the exploratory analysis. To confirm this structure of 13 items, a further Confirmatory Factor Analysis would be needed.

Table 3. Exploratory unifactor analysis with a fixed number of factors

	Cumulative % of Variance
1 factor (15 items)	42.81%
1 factor (item 1 erased)	44.38%
1 factor (items 1 and 3 erased)	47.21%

Note. N=313

Discriminant validity

To test the discriminant validity, we calculated a Pearson correlation between the 3 scales of the *Professional Frustration Questionnaire*: job importance, job satisfaction and job frustration. Although there is a medium positive correlation between job importance and job satisfaction ($r = .38$), we found a strong and negative correlation between job satisfaction and job frustration ($r = -.77$) and non-significant relations between job importance and job frustration (see Table 4). These results sustain the previous research which shows a direct relation between job satisfaction and frustration. For this reason, it is more probable that people who feel a high level of job satisfaction feel a low level of job frustration.

Table 4. Discriminant validity

	1	2	3
1.Job importance	-		
2.Job satisfaction	.38**	-	
3.Job frustration	.08	-.77**	-

Note. N=313; * $p < .05$ significant; ** $p < .01$ significant; *** $p < .001$ significant.

Convergent validity

To test the convergent validity, we calculated a Pearson correlation between the *Professional Frustration Questionnaire* and other correlated variables: the intentions of leaving a job, the *Job Satisfaction Survey* and seniority. As expected, we found a medium and positive correlation between professional frustration and the intention of leaving a job ($r = .39$), and a strong and a negative relation with job satisfaction ($r = -.53$). There was no significant relation between the professional frustration and the age or between professional frustration and seniority (see **Table 5**). This result sustains an association between job frustration and intention to quit a job.

Table 5. Convergent validity

	1	2	3	4
1.Job frustration	-			
2.Leaving the job	.39**	-		
3.Job satisfaction	-.53**	-.59**	-	
4. Seniority	-.06	.04	-.05	-

Note. N = 313; *p<.05 significant; **p<.01 significant; ***p<.001 significant.

Differential validity

For differential validity, we applied the t-test and ANOVA to test the differences by the demographic variables on professional frustration. The only significant difference obtained was between males and females, a result supporting the general opinion that women are more emotionally affected by the working demands. Cohen's test value is .23, a result that confirms a small effect size regarding the gender differences on professional frustration. There is also a probability to obtain some significant differences between married and unmarried employees – the last ones have a slightly higher score than the married employees (see Table 6). The research can be detailed to obtain information regarding the supportive behaviour that employees can receive from their couple partners and its impact on professional frustration.

Table 6. Differential validity

	N	\bar{X}	t/ F	p
Job frustration			-1.97*	.04
M	133	3.74		
F	180	4.06		
Job frustration			2.17	.11
Juniors	101	4.14		
Middle-level	86	3.92		
Seniors	126	12.00		
Job frustration			1.12	.26
Public institutions	52	4.12		
Private companies	259	3.88		
Job frustration			1.68	.09
Public service	27	4.27		
Construction	29	3.43		
Education	25	3.61		
Finance	24	4.49		
Engineering	57	3.86		

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IT	46	3.96		
Self-employed	33	4.16		
Health	17	4.27		
Social services	27	3.50		
Sales	28	3.91		
Job frustration			-1.85	.06
Married	131	3.75		
Un-married	182	4.05		
Job frustration			-.90	.36
Urban	279	3.90		
Rural	34	4.13		

Note. N=313; *p<.05 significant.

\bar{X} = mean; t = t-test value; F = ANOVA test value

4. Discussion

Taking into consideration the importance of work in our lives (Krejei, Kvapil & Semrad, 1996), the aim of this study was to test the psychometric properties of the *Professional Frustration Scale* on a Romanian sample.

The results showed good internal consistency of the scale, an unifactorial structure and a strong and negative relationship between job satisfaction and professional frustration, a result which is supported by the original scale version (Krejei, Kvapil & Semrad, 1996).

An employee is motivated to reach some aims in his work. If he is blocked in this activity, he feels frustrated. On the other hand, if he feels that his professional needs are satisfied, there are accomplished some of the conditions for his working satisfaction. For a more detailed explanation regarding working frustration as a difference between what is important for us and what we feel that gives us a satisfaction (Krejei, Kvapil & Semrad, 1996). As a prevention measure, we can propose for the specialists in this area to assess better what are the specific activities that are relevant and suitable for each employee. If we allocate them in the activities important for them, we can increase the percentage of employees that feel satisfied with their job.

The significant relation between work frustration and the intention to leave a job can be explained by other authors who proved that work frustration is connected to work stress, work anxiety or workplace dissatisfaction (Keenan & Newton, 2011; Spector, 2006). To avoid this result, we can also propose some changes in the working environmental aimed to satisfy employees needs.

Women experience higher levels of professional frustration, and there is a probability for unmarried people to feel at the same level. To generalize these results, further analysis is required in order to achieve a representative

sample, better data quality control, the analysis of the effects and a future study with certain power.

Several limitations of this study can be noted. First, the study is cross-sectional, and it did not allow us to assume the existence of causal relations. The collecting data procedure and the convenience participants might create the the context for uncontrolled variables, but this possible errors has to be checked by future studies on this theme.

If we take into consideration the results of this study, we believe that this scale can be used for future studies in the Work Psychology field. Regarding the practical implications, it can be used to assess the Romanian employees frustration level, a preliminary step made by Human Resources specialists for programmes to reduce the work frustration. For further research, work frustration can be related to work performance, well-being or family relations on a longitudinal study.

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