

# Psychological Well-Being During Unemployment. A Longitudinal Study

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## Abstract

*The investigation of the unemployment consequences is a challenging theme in current psychological research, but there is a surprising lack of data regarding the relationship between unemployment and well-being in Romania. We used the conceptual frame of the "Hierarchical Model of Well-Being" (Diener et al., 2003) and we aimed to investigate the evolution of psychological well-being components (life satisfaction, family satisfaction, balance affect, physical and mental health) in the case of an unemployed sample (N = 45) from 2007 to 2011, in three time points. The following instruments were used: "The Temporal Satisfaction with Life Scale" (Pavot, Diener & Suh, 1998), "The Family Satisfaction by Adjectives Scale" (Barraca et al., 2000), "The Depression-Happiness Scale" (Joseph and Lewis, 1998), and "The Health Survey Short Form" (Ware, Kosinski & Keller, 1994). The results indicated a maximum level of past life satisfaction in T2, and a minimum level of future life satisfaction in T2. Physical health was perceived as better in T2, opposite to mental health. Overall, the study supports the homeostasis of well-being components. Among the research limits were the poor data collection about the reasons of unemployment, family structure, job search behaviors and economic status.*

**Keywords:** Psychological Well-being; Unemployment; Health; Family Satisfaction.

## Introduction

It is generally accepted that the negative effect of unemployment goes well beyond the income loss (Winkelman, 2009), affecting *mental health* (Reine, Novo & Hammarström, 2004), *physical health* (Eliason & Storrie, 2009), *well-being* (McKee-Ryan et al., 2005), and even *personality traits* such as *sociability* (Burnay, Kiss & Malchaire, 2005) or *general causality orientation* (Drugaș, 2012). As a result, the detrimental effect of prolonged unemployment on the individual is well documented, but the results are still a subject of debate.

The subject of well-being during unemployment seems to be generously addressed in literature. However, a search performed in April 2013 in PsycINFO (one of the largest databases for psychological studies), by using „Romania”, „well-being”, and „unemployment” as keywords didn't highlight any results. After removing the term „Romania” in a new search, 21 results were found, and the combination between „Romania” and „well-being” highlighted 44 results. Among these last results it is worth mentioning a research performed by Kállay & Vonas (2011) on the demographic and interpersonal characteristics of well-being in a sample of Romanian adults. Although the participants in this study were all employed at the time of the assessment, the results could be useful in interpreting our data. Specifically, we noted the lack of differences in well-being among younger male and female participants (24-39), that may reflect, according to the authors, a homogenization in the types of events to which people were

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exposed. Also, both in male and female participants, education and access to information were found to contribute to the attainment of higher levels of well-being. Finally, the authors found that all aspects of well-being were seriously affected in those participants whose depressive symptomatology exceeded moderate levels.

The same shortage of studies targeting the relation between well-being and unemployment was documented by McKee-Ryan et al. (2005); the authors initially identified 5,010 articles, but only 104 of them met the required criteria for a meta-analysis (empirical studies, published in a peer-reviewed journal, focusing on job loss or unemployment, examining at least one variable connected to physical and/or mental health, and ultimately reporting statistical data which would allow the estimation of the effect size).

Starting from these observations, our research aims to fill a part of this knowledge gap and to investigate whether prolonged unemployment might alter the well-being of the individuals, from April 2007 (T1) to September 2007 (T2) and November 2011 (T3). We used the hierarchical model of well-being (Diener, Scollon & Lucas, 2003) as a framework, and we analyzed the affect balance, life satisfaction, physical and mental health.

## Unemployment and psychological well-being

Macroeconomic changes at the beginning of the millennia had unexpected effects on the well-being of the unemployed. In this regard, Ouweneel (2002) outlined that the well-being of the unemployed in rich countries is not significantly higher than of those in poor ones, although the state welfare mitigates the negative effects of unemployment. The author advances several possible explanations: (a) the sums of money received by the unemployed are too low, indifferently from the country; (2) “money does not bring happiness”; (3) psychological well-being is independent of aggregate indicators such as national wellness or social security; (4) political and cultural factors distort the results; (5) although the state welfare in poor countries is lower, it might be managed more efficiently by the government; (6) state welfare actually has adverse effects, which reduce its positive effects.

Diener et al. (2003) provided a fine framework for the design of research on well-being (including well-being during unemployment), and we used it in our research. The authors described a hierarchical model, with the general concept of well-being at the top. At this level, the term reflects an overall evaluation of life, so researchers should focus on measuring four lower-level components: positive affect, negative affect, life satisfaction and domain satisfaction. These components are conceptually related and should correlate moderately. Within each component there are other variables, and the researcher can again narrow his study.

It is obvious that the relationship between unemployment and its diverse consequences is not linear. Thus, in a meta-analysis on this subject McKee-Ryan et al. (2005) identified several variables that may act as moderators between unemployment and its consequences: *unemployment rate* (a high rate transforms job search into a stressful process); *duration of unemployment* (it may act as a moderator because stress can accumulate and coping resources will be exhausted); *unemployment policies* (used as a moderating variable especially when one would want to conduct international studies); *the studied sample* (the impact of unemployment is likely to be different for adults and young graduates of secondary education or higher. Most graduates are not married, often live with parents, and generally have fewer financial obligations. On the other hand there is pressure on them to find an occupational identity, which adults already have). After analyzing these articles, McKee-Ryan et al. (2005) first outlined that unemployment has a generally negative effect on mental health. The causal interpretation was supported by the consistency of information provided by different types of research. The cross-sectional studies showed that the unemployed had lower levels of well-being compared to employees. The longitudinal studies showed that well-being decreased immediately after job loss, but recorded a massive boost soon after reemployment. The analysis of unemployment correlates (financial worries, work value) suggested that these are some of the factors leading to lower-levels of well-being during unemployment. In other words, job loss produces a “cascade” of secondary stressors.

Most cross-sectional studies concluded that well-being level was higher for employees compared to unemployed samples. For example, Lewchuck, Clarke & de Wolff (2008) showed that reemployment uncertainty in the near future and lack of social support are associated with poor health, even if individuals actively search for a new job. Broom, d'Souza, Strazdins, Butterworth, Parslow & Rodgers (2006) found that unemployed reported poorer health than employees. A carefully conducted data analysis pointed out that "bad" jobs (characterized by insecurity and stress) were also associated with poor health, similar to the unemployed. Ranzijn, Carson, Winefield & Price (2006) organized a series of interviews with middle-aged participants, who were asked about the impact of unemployment on the quality of their life. The results suggested a pessimistic perspective on the near future, fear concerning the degradation of household conditions, and frustration for not being able to insure financial aid for the children. Often the unemployed lack the opportunity to use their abilities, so they perform poorly at job interviews. As a result, the process of finding a new job could become longer than expected.

The authors pointed out the necessity for an early intervention with trainings focused on specific work behaviors. Creed, Lehmann & Hood (2009) showed that the well-being of the unemployed is positively associated with the feeling of being in control, self-efficacy and self-esteem, and negatively associated with neuroticism.

Unfortunately, the cross-sectional studies don't allow causal inferences. For example, a researcher who identifies that the mental health of a group of unemployed is lower than for a group of employees cannot conclude that this is merely due to unemployment. On the other hand, the longitudinal studies have the advantage of using within-group or mixed designs. For example, McKee-Ryan et al. (2005) investigated a sample of participants during unemployment and after reemployment. A moderate degradation of well-being was recorded soon after job loss, and a massive boost of well-being was identified immediately after reemployment. Luhmann & Eid (2009) showed that repeated episodes of unemployment lead to a long term decrease in life satisfaction.

From the same perspective of longitudinal studies, it is worth mentioning that although much less research focuses on the positive outcomes of unemployment these shouldn't be neglected. For example, Diener, Lucas & Scollon (2006) concluded a large amount of research stating that life satisfaction has a certain level for each individual (a baseline), at which he tends to return after important negative or positive life events (which initially moved the individual from the baseline; for an experimental study on the subject, see Drugaș, 2010). For example, in the case of the unemployed, the opportunity to change careers could be an event that favors the return to the baseline. However, Diener et al. (2006) stated in the conclusions of their paper that it is unclear why people seem to exhibit a long-lasting effect of unemployment on well-being even after they become reemployed.

## **Unemployment and health**

Job loss is an event with multiple adverse effects on health. For example, Pearlin et al. (1989, as cited in Matthews, Deary & Whiteman, 2005) argued that stress exposure (including chronic poverty and unemployment) leads to negative effects on health, through mediating variables like social support or perceived control.

Studies often show a positive association between unemployment rate and indicators such as mortality, coronary disease, mental health and alcohol abuse. As the financial resources decrease, well-being deteriorates. The unsuccessful search for a job is correlated with higher level of hostility, depression, anxiety, stress (Mantler et al., 2005), and also with a higher frequency of headaches and sleep disorders (Caplan et al., 1989). Depression is often measured among the negative effects of unemployment. During unemployment the intensity and frequency of the symptoms seems to be higher, as Dooley & Catalano (1988) recorded in epidemiologic studies. One of the explanations offered by the authors is the loss of latent and direct benefits of employment.

Price et al. (2002) reviewed a series of hypotheses trying to explain why job loss leads to the degradation of mental health. Unemployment deeply affects adult life, including alterations of the perception of time, social relationships, status and identity, abandoning important goals and

so on, all of them negatively influencing well-being. On the other hand, being employed brings a series of benefits: control over the environment, the use of abilities, interpersonal contacts, and financial resources. Job loss means to give up all these advantages. The above mentioned authors conducted a two years longitudinal study, concluding that reduction of personal control leads to a higher risk of depression and reduces the chances of reemployment.

Evidence shows that stress caused by financial losses and their side effects (e.g. food shortages, the impossibility of paying the bills) is an important mediator of the relationship between unemployment and depression and it explains 90% of the variance of mental health disorders (Vinokur & Schul, 1997). Depression has adverse effects on a wide range of roles (at work or at home); this is the reason why trainings which target reemployment often focus on emotional functioning.

In a Romanian study, Stroian (2001) suggested that unemployment, as imminence or as an installed phenomenon, is one of the most important risk factors for the increase of morbidity associated to mental disorders after 1989. The research identified that unemployment as imminence explains 52% of the variance of reactive mental pathology.

### Unemployment and family life

According to Barraca, Yarta & Olea (2000), family satisfaction is a global judgment obtained by summing different emotions one experiences when he/she is with his/her family. As a result, these judgments are *a priori* verbalizations of emotions which originated in verbal or physical interactions between the individual and the other members of the family.

Most people are happier and more satisfied when they are involved in a relationship, compared to when they are single (Myers, 2000). The question is if marriage is a key factor in happiness or if happiness leads to marriage. In the first case, marriage offers new roles and new sources of stress, but also additional rewards which become resources for identity and self-esteem, and eventually for happiness. In the second case, happy people are socially attractive because they are pleasant and easy to interact with. Up to a point, both hypotheses must be considered.

Lazarus & Folkman (1984, as cited in McKee-Ryan et al., 2005) argued that social resources contribute to health in two ways. First, social support fosters self-esteem and a positive perspective towards life. Second, social resources serve as a buffer against stress and its somatic consequences. In this line of thinking, Pinguart & Sorensen (2000, as cited in McKee-Ryan et al, 2005) pointed out the importance of the quality of social resources, suggesting that unemployment duration moderates the relationship between social resources and health.

In Romania, the unemployment rate grew steadily since the 1990s, changing the lifestyles of many families. The phenomenon is not spread evenly across the country; there are heavily affected areas, while in others the rate of unemployment is quite low. According to data provided by the National Agency for Employment (2010), the national unemployment rate recorded at the beginning of the study (T1, April 2007) was 4.1%; and at the second measurement (T2, September 2007) was 3.9%. In November 2011 (T3), the unemployment rate was 5.06% (*ibid*, 2011). In T1 the unemployment rate in Bihor county was one of the lowest in the country (1.7%), in T2 was 2.4% and in T3 it grew at 4.08% (still lower than the national level).

The lack of studies on the relationship between unemployment and well-being in Romania stood as a reason for this longitudinal study. Although there are some researches targeting this subject, they are cross-sectional, with emphasis on Economy; for example, Blanchflower & Oswald (2008) found that economic growth was associated with rising happiness in Eastern countries. However, their study used aggregate indicators of well-being, including satisfaction with democracy or market reform. Our study favored a psychological approach, with emphasis on the affective and cognitive components of well-being, and also included physical and mental health.

Taking into consideration the generally accepted negative influence of unemployment on well-being, our hypothesis in this research is that all well-being components that were measured [balance affect, life and family satisfaction, physical and mental health] should

deteriorate as unemployment prolongs (i.e., the highest levels should be registered in T1 and the lowest levels in T3).

## Method

### Participants and procedure

The unemployed were contacted with the help of The County Agency for Employment Bihor, Romania. The first data measurement (T1) took place between March and April 2007, during their visits to the agency, and the questionnaires were administered by the author of the study together with a group of students working on their dissertation. For the sampling procedure we used a preliminary interview to eliminate individuals who weren't looking for a new job and those who declared to be unemployed, but in fact they worked illegally. As a result, the initial sample consisted of 200 unemployed subjects from Bihor County (123 male and 77 female). 88 of them were married; levels of education varied from elementary school (10.5%) to secondary education (62%) and higher education (20.5%). The minimum age was 19 and the maximum 65 ( $M = 34.28$ ;  $\sigma = 7.48$ ). All participants resided in urban areas (Oradea, Romania).

The second measurement (T2) took place six months later (September 2007). Only 131 unemployed participants (79 male and 52 female) were tested in T2, because: (1) some of the participants found a job between T1 and T2; (2) some of the subjects couldn't be contacted or didn't want to participate to the study anymore. Questionnaires were administered at the County Agency for Employment for some of the participants or at home, by the author of the study together with a group of students working on their dissertation. From the initial sample, we still had 56 married individuals; 10 of them got married during the six months period, and 5 got divorced. The percent of participants with higher education decreased to 8.5%. The minimum age of the second sample was 19 and the maximum 64 ( $m = 35.21$ ;  $\sigma = 6.98$ ).

The third and final measurement (T3) took place in November 2011. We only had 45 participants (27 male and 18 female), from the same reasons as above. The questionnaires were administered at home for all participants by the author of the study. From the sample that was tested in T2, we still had 24 married individuals; 6 of them got married in the last four years, and 3 got divorced. There were only 3 individuals with higher studies (2.8%), 5 with elementary education (4.7%) and the rest of them had secondary and incomplete secondary studies. The questionnaires were administered at home for all participants. The minimum age was 23 and the maximum 59 ( $M = 36.51$ ;  $\sigma = 6.25$ ).

All participants signed an informed consent form and agreed to participate voluntarily to the study. The assessment lasted for approximately 45 minutes.

The statistical procedure was to compare the data obtained in T3 from the sample of 45 participants to that obtained in T1 and T2 from the same participants.

### Measures

*Life satisfaction.* This is the cognitive component of well-being. *Temporal Satisfaction with Life Scale* (Pavot, Diener & Suh, 1998) measures satisfaction with past (5 items), present (5 items) and future life (5 items). It is based on the famous Satisfaction with Life Scale (Diener et al., 1985), but allows detailed analyses of temporal moments, very useful especially when one would want to monitor life satisfaction of people who have gone through a major life event or are expected to go through one. On Romanian samples, the subscales have satisfying internal consistency and stability (measured at 5 months) coefficients: Cronbach's  $\alpha = 0.75$ ,  $r = 0.53$  (Past Life Satisfaction); Cronbach's  $\alpha = 0.88$ ,  $r = 0.71$  (Present Life Satisfaction); Cronbach's  $\alpha = 0.70$ ,  $r = 0.44$  (Future Life Satisfaction) (Druguş, 2008).

*Family Satisfaction.* According to Diener et al. (2003), family satisfaction is a component of well-being. *Family Satisfaction by Adjectives Scale* (Barraca et al., 2000) has 27 bipolar adjectives and it measures the affective effects of family interactions. The scale has satisfactory coefficients of internal consistency and stability (measured at 5 months): Cronbach's  $\alpha = 0.71$ ,  $r = 0.65$  (Druguş, 2008).

*Affect Balance.* This is the emotional component of well-being. *The Depression-Happiness Scale* (Joseph & Lewis, 1998) conceptualizes happiness as the lack of depression symptoms. It has 25 items, which are added together to obtain a total score for emotional balance. Higher scores reflect a high level of happiness and low depression in the original scale, but in the Romanian version the translation and the subsequent factorial analysis recommended the opposite; as a result, in our version the higher scores reflected higher depression and lower scores lower happiness. The scale has satisfactory coefficients of internal consistency and stability (measured at 5 months): Cronbach's  $\alpha = 0.80$ ,  $r = 0.89$  (Drugăș, 2008).

*Physical and mental health.* It is also a component of well-being, according to Diener et al. (2003). *Health Survey Short Form SF-36* (Ware, Kosinski & Keller, 1994, as cited in Corcoran & Fischer, 2000) measures perceived physical and mental health. Two composite scores are produced: physical health [with the following subscales: physical functioning, physical role, bodily pain, and general health] and mental health [with the following subscales: vitality, social functioning, emotional role, and general mental health]. The scale has satisfactory coefficients of internal consistency and stability (measured at 5 months): Cronbach's  $\alpha = 0.77$ ,  $r = 0.85$  (physical health); Cronbach's  $\alpha = 0.85$ ,  $r = 0.65$  (mental health). Ware (2000) stated that the questionnaire has general utility and doesn't target a specific age, disease or treatment group. Therefore it may be used to compare the relative health status between groups, the benefits of different treatments or to monitor the evolution of individual cases. It was used in over 40 countries as part of *The International Quality of Life Assessment Project* (Drugăș, 2008).

## Results

### Preliminary analyses

Descriptive statistics and correlations for GCO's are presented in Table 1. The Kolmogorov-Smirnov test for normality with Lilliefors significance correction was conducted to evaluate the normality of the distribution for the variables involved in the research.

**Table 1:** Means, standard deviations, KS coefficients and correlations between variables in T1, T2, and T3

			M	SD	KS	1	2	3	4
T1	1	life satisfaction	62.54	16.59	0.105	--			
	2	family satisfaction	96.95	7.02	0.128 <sup>a</sup>	0.39*	--		
	3	affect balance	40.15	5.93	0.112	-0.39*	-0.06	--	
	4	physical health	16.18	1.89	0.220 <sup>a</sup>	-0.08	0.11	-0.10	--
	5	mental health	18.54	2.78	0.109	0.21	0.38*	0.35	-0.41*
T2	1	life satisfaction	61.38	9.57	0.098	--			
	2	family satisfaction	99.04	4.65	0.155 <sup>a</sup>	-0.08	--		
	3	affect balance	38.00	4.84	0.096	-0.08	-0.04	--	
	4	physical health	17.40	2.04	0.159 <sup>a</sup>	-0.25	-0.18	0.04	--
	5	mental health	17.15	3.07	0.131	-0.02	-0.27	0.21	0.23
T3	1	life satisfaction	61.52	13.57	0.098	--			
	2	family satisfaction	95.70	7.26	0.122	0.25	--		
	3	affect balance	39.47	6.95	0.078	-0.52*	-0.22	--	
	4	physical health	15.61	2.15	0.134 <sup>a</sup>	0.12	-0.28	0.05	--
	5	mental health	18.90	2.74	0.120	-0.33	0.16	0.01	-0.41*

<sup>a</sup>  $p < 0.05$ ; the Lilliefors significance correction was applied

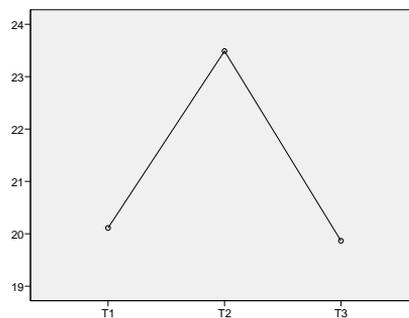
\*The Bonferroni correction for multiple correlations was applied, the new alpha = 0.01

Statistically significant correlations ( $p < 0.01$ ) were found in T1 between life satisfaction and family satisfaction (consistent with general literature), between life satisfaction and balance affect (correlation was negative because in the Romanian version higher scores in balance affect represents the dominance of negative emotions), and between family satisfaction and mental health (probably family acting like a buffer). In T3 we found again the significant correlation between life satisfaction and balance affect, but also a negative significant correlation between physical and mental health.

### The evolution of life satisfaction in T1-T2-T3

Repeated measures ANOVA was conducted to evaluate whether there were significant differences between time points with regard to general life satisfaction (data distribution was normal in all cases). Although the results didn't show significant differences [ $F_{(2,88)} = 0.105$ ;  $p > 0.05$ ], we performed some additional analysis on past, present and future life satisfaction.

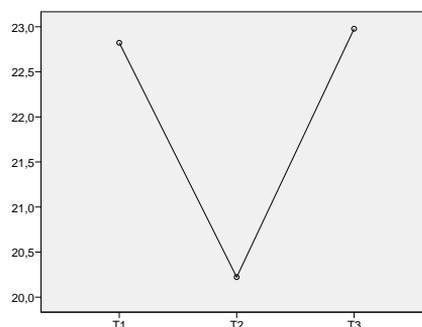
With regard to past life satisfaction, a Friedman test was conducted to evaluate whether there were significant differences between time points. The results indicated a significant difference [ $\chi^2_{(2)} = 12.63$ ;  $p < 0.01$ ]; trying to identify exactly where the differences appeared, we conducted three Wilcoxon tests (with Bonferroni adjustment). The differences were significant between T2-T1 [ $z = -2.94$ ;  $p < 0.01$ ;  $r^2 = 0.18$  – medium effect size] and T2-T3 [ $z = -3.15$ ;  $p < 0.01$ ;  $r^2 = 0.22$  – medium effect size]. So, past life satisfaction had significantly higher levels in T2 than in T1 and T3 (see Figure 1 for a graphical representation).



**Figure 1:** The evolution of past life satisfaction in T1, T2, and T3

We conducted again a Friedman test to identify differences regarding present life satisfaction between time points, but the results didn't show significant differences [ $\chi^2_{(2)} = 4.20$ ;  $p > 0.05$ ].

Repeated measures ANOVA determined the existence of significant differences between time points with regard to future life satisfaction (data distribution was normal in all cases) [ $F_{(2,88)} = 6.09$ ;  $p < .01$ ]. The pairwise comparisons (with Bonferroni adjustment) identified significant differences between T2-T1 [ $t = 3.02$ ;  $p < 0.01$ ,  $r^2 = 0.09$  – medium effect size] and T2-T3 [ $t = 3.31$ ;  $p < 0.01$ ;  $r^2 = 0.10$  – medium effect size]. Future life satisfaction had significant lower levels in T2 compared to T1 and T3 (see Figure 2 for a graphical representation).



**Figure 2:** The evolution of future life satisfaction in T1, T2, and T3

The evolution pattern of past and future life satisfaction is interesting. In T2 we identified both a maximum for past life satisfaction, and a minimum for future life satisfaction. As a result, they cancel each other and this is the reason why for the general life satisfaction we didn't find significant differences between time points.

### The evolution of family life satisfaction in T1-T2-T3

With regard to family life satisfaction, a Friedman test was conducted to evaluate whether there were significant differences between time points. The results didn't show a significant difference [ $\chi^2_{(2)} = 4.75$ ;  $p > 0.05$ ].

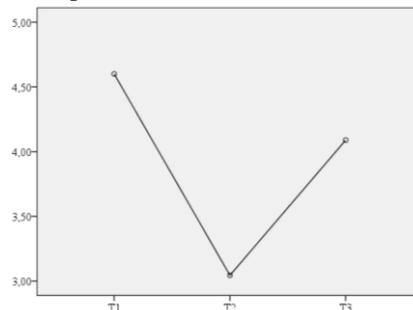
### The evolution of balance affect in T1-T2-T3

With regard to balance affect, repeated measures ANOVA was conducted to evaluate whether there were significant differences between time points. The results didn't show a significant difference [ $F_{(2,88)} = 1.44$ ;  $p > 0.05$ ], although there was a minimum in T2.

### The evolution of health in T1-T2-T3

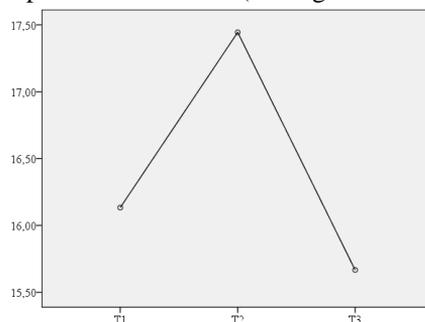
We conducted five repeated measures ANOVA to identify the evolution of physical and mental health components [bodily pain, perceived physical health, vitality, social functioning, and perceived mental health] between the time points.

With regard to bodily pain, the results indicated significant differences between time points [ $F_{(1,79;78,83)} = 7.19$ ;  $p < 0.01$  – the Huyhh-Feldt correction was applied]. The pairwise comparisons (with Bonferroni adjustment) identified significant differences between T2-T1 [ $t = 3.93$ ;  $p < 0.01$ ,  $r^2 = 0.16$  – medium effect size] and T2-T3 [ $t = 2.94$ ;  $p < 0.016$ ;  $r^2 = 0.09$  – medium effect size]. Bodily pain complains were significantly lower in T2 compared to T1 and T3 (see Figure 3 for a graphical representation).



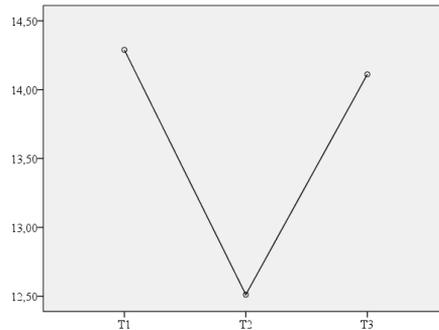
**Figure 3:** The evolution of bodily pain complains in T1, T2, and T3

With regard to perceived physical health, the results indicated significant differences between time points [ $F_{(2,88)} = 9.71$ ;  $p < 0.01$ ]. The pairwise comparisons (with Bonferroni adjustment) identified significant differences between T2-T1 [ $t = 3.09$ ;  $p < 0.01$ ,  $r^2 = 0.08$  – small effect size] and T2-T3 [ $t = 4.95$ ;  $p < 0.01$ ;  $r^2 = 0.22$  – medium effect size]. Physical health was perceived as significantly better in T2 compared to T1 and T3 (see Figure 4 for a graphical representation).



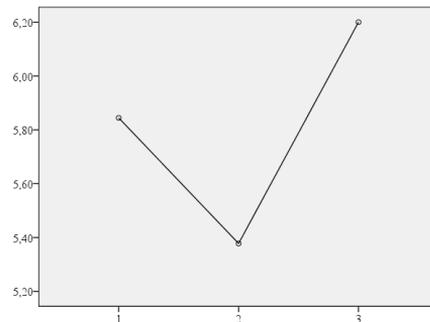
**Figure 4:** The evolution of perceived physical health in T1, T2, and T3

The same procedure was applied with regard to vitality, and the results showed significant differences between time points [ $F_{(1,72;76,07)} = 11.63$ ;  $p < 0.01$  – the Huyhh-Feldt correction was applied]. The pairwise comparisons (with Bonferroni adjustment) identified significant differences between T2-T1 [ $t = 8.86$ ;  $p < 0.01$ ,  $r^2 = 0.35$  – large effect size] and T2-T3 [ $t = 3.60$ ;  $p < 0.01$ ;  $r^2 = 0.13$  – medium effect size]. Vitality was significantly lower in T2 compared to T1 and T3 (see Figure 5 for a graphical representation).



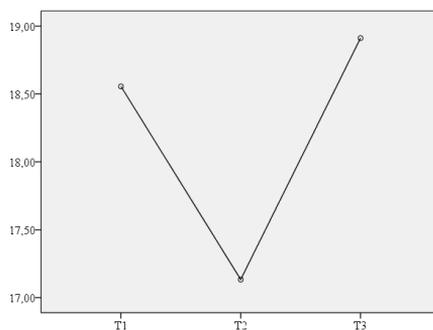
**Figure 5:** *The evolution of vitality in T1, T2, and T3*

With regard to social functioning, the results indicated significant differences between time points [ $F_{(2,88)} = 6.31$ ;  $p < 0.01$ ]. The pairwise comparisons (with Bonferroni adjustment) identified significant differences between T2-T3 [ $t = 3.48$ ;  $p < 0.01$ ;  $r^2 = 0.12$  – medium effect size]. Social functioning was perceived as significantly better in T2 compared to T3 (see Figure 6 for a graphical representation).



**Figure 6:** *The evolution of social functioning in T1, T2, and T3*

The final analysis regarded mental health. The results identified significant differences between time points [ $F_{(2,88)} = 4.89$ ;  $p < 0.01$ ]. The pairwise comparisons (with Bonferroni adjustment) identified significant differences between T2-T3 [ $t = 2.61$ ;  $p < 0.05$ ;  $r^2 = 0.06$  – small effect size]. Mental health was perceived as significantly lower in T2 compared to T3 (see Figure 7 for a graphical representation).



**Figure 7:** *The evolution of perceived mental health in T1, T2, and T3*

## Discussion

The objective of our research was to investigate the evolution of psychological well-being during 4 years of unemployment (2007-2011). We analyzed the dimensions of psychological well-being (general life satisfaction, balance affect, and domain specific life satisfaction – family and health).

The general life satisfaction is a cognitive component of psychological well-being (Diener et al., 2003). The analysis of past, present and future life satisfaction brought some unexpected results. We found that after six months of unemployment the individuals are more satisfied with their past life („the good old times”) and more worried about their future. Apparently this suggested that prolonged unemployment makes past life seem better (and the future darker), but it wasn't the case 4 years later. In September 2007, the past life satisfaction registered a massive boost, and future life satisfaction a significant drop. It is possible that some external events influenced these changes (e.g., in 2007 Romania joined the European Union). This phenomenon is well explainable by the adaptation theory of well-being (Diener et al., 2006). Unemployment is an important life event, affecting the general level of well-being (baseline), but individuals return over time to this general level; our results show that 4 years should be enough.

Balance affect is an affective component of psychological well-being (Diener et al., 2003). We didn't find significant differences between time points, which is, apparently, a surprising result of our research. However, the results are supported by a previous research of Kállay & Vonas (2011); the authors stated in the conclusions of their study that all dimensions of well-being are seriously affected in those participants whose depressive symptomatology, and even if the person accepts the situation, its occurrence still continues to have a negative impact on the person's affective states. This could explain the lack of differences regarding balance affect between time points.

Another surprising result is the lack of significant differences with regard to family life satisfaction. We didn't identify significant differences between 2007 and 2011, because some of the participants got married and other got divorced. We expected to find a decrease of family life satisfaction, as the family support is a consumable resource. Yet it seems that 4 years are not enough.

The issue of physical and mental health during unemployment currently receives increasing attention, and offers convincing evidence that support the relationship between low economic status and health. While the general relationship between health status and well-being is known, the risk factors that may undermine the relationship remain relatively unexplored. Unlike in Western studies, we identified the decrease of bodily pain after 6 months of unemployment and a perceived improvement of physical health. Both variables returned in 2011 to levels similar to those in April 2007.

In the case of variables connected to mental health [vitality, social functioning, and perceived mental health], the minimum was registered in September 2007 for all three cases, and in 2011 we registered similar levels to those in April 2007.

The results must be interpreted with caution. McKee-Ryan et al. (2005) pointed out in the conclusions of a meta-analytic study that although many researches show the negative effect of unemployment on mental health, they must be cautiously read, because the exact causal chain is often neglected. In most cases, researches only identify a “cascade” of secondary factors: worries, uncertainty, or financial and marital difficulties. Our study supports the conclusions of the cited authors. It is possible that the current unemployment rate at the time of data collection was not related to the mental health effects of unemployment; moreover, the individual's perception of the unemployment rate may have had a stronger impact on well-being than the actual unemployment rate.

Among the limitations of our study, we mention especially the sampling procedure. Although we tried to eliminate participants who have started working illegally and those who tried to cast a favorable light on themselves, we are not confident that we have fully succeeded, especially in T3, when we still had a surprisingly large sample of unemployed. Another difficult decision was whether to include or not people who initially received unemployment benefits. The decision was to include them, because we believe, like Ouwenel (2002) outlined, that money is a poor consolation for the job loss, although it may mitigate its impact. The immediate impact of unemployment is quite high, especially for „the first timers”.

Another limitation is that we haven't collected enough data to enable a comparative analysis of recent graduates (which become directly unemployed) with adults (which may be „experienced”

unemployed). Effect of unemployment is likely to be completely different for the young, because they are not married, are living with their parents and/or have fewer financial obligations. Moreover, because they never had a job, they also lacked the occupational identity that most adults already have. The pressure to gain such an identity may have a negative effect on well-being.

We also neglected data collection about family structure, the exact reason of unemployment, and job search behavior. In this regard, the attention of researchers should focus on variables like work values and coping mechanisms.

We would like to make one final comment, connected to the limitations of the research. We fully neglected the effects of the financial crisis in this analysis and the global perception on Romanian economy. At the beginning of the study, in April 2007, the financial crisis was not a reason to worry. Although we collected some data about this variable in September 2011, we preferred not to include them in the interpretation of the results. A future study which will include the perception of the financial crisis is recommendable.

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