

EDITORIAL

The topic of this special issue of *CESKOSLOVENSKA PSYCHOLOGIE* belongs to one of the most burning problems of human civilization – poverty. The UN set fighting poverty as its top goal in the 2030 Agenda for Sustainable Development. In the EU, more than 120 million people (24% of the total population) are at risk of poverty. This situation is sensitively reflected by the European public – according to the Eurobarometer Survey 90.1/October 2018 of the European Parliament public opinion monitoring survey, poverty and social exclusion were at the top (41%) of their priority list for the duties of the European Parliament. For decades, macro- and micro-economic views created the basis for poverty-reducing policies. Nowadays, recognizing the need to incorporate behavioral/psychological insights into policies addressing poverty (Anand & Lea, 2011) seems to be more effective.

The data underlying all the empirical studies come from the project “Psychological causes and consequences of poverty” [Grant No. 15-0404 of the Slovak Research and Development Agency]. In order to maximize the representativeness of the sample, a market research agency was hired to collect the data online. The agency sent an email to eligible participants from their database (e.g. based on their income, age, or gender), informing them about the purpose of the research and the incentives. The participants were then recruited until the pre-set inclusion criteria were met and the budget was exhausted. The research team did not intend to collect the data exclusively from people living in extreme poverty (e.g., people without a home) but rather aimed to capture the whole spectrum of socioeconomic status strata, with a slight emphasis on people below the official poverty threshold.

We would like to express our belief that the topic and the content of this special issue will be seen as useful and instructive not only for specialists from poverty engaged disciplines, but for policy makers and the general public as well.

Anand, P., & Lea, S. (2011). The psychology of behavioural economics of poverty. *Journal of Economic Psychology*, 32(2), 284-293.

J. Výrost

OBJECTIVE POVERTY AND WILLINGNESS TO DELAY GRATIFICATION: DO DIFFERENT POVERTY THRESHOLDS AND COGNITIVE LOAD MATTER?

MATÚŠ ADAMKOVIČ

Institute of Psychology, Faculty of Arts, University of Prešov

ABSTRACT

M. Adamkovič

Objectives. Poverty has been premised as one of the main causes of various forms of non-productive behaviour such as the unwillingness to delay gratification. The paper aims to examine the relationship between income, as an objective economic indicator, and poor delay of gratification. It puts a particular focus on different poverty thresholds and also after taking cognitive load into account.

Sample and settings. A total of 697 participants (out of which 233 also completed the retest) were recruited in two data collections. The participants provided information about their household income, frequency in experiencing negative affect and stress (together forming cognitive load) as well as their tendency to delay gratification.

Statistical analysis. The effect sizes for each subsample and poverty threshold were synthesized in a multilevel meta-analysis. Additional Bayesian estimations served as a sensitivity analysis. In order to test whether the average effect sizes differed from Hedges' $g = 0.2$ (our smallest effect size of interest), equivalence testing was used.

Results. The results indicated very small effects of poverty thresholds on the willingness to delay gratification. Hedges' g varied from -0.01 to 0.20 for all the performed analyses.

Study limitations. The potential limitations/explanations of the results have been identified. In particular, the core sociodemographic aspects of the sample, the possible social desirability in responding, the general over-reliance on objective poverty thresholds when explaining psychological concepts as well as the rather low verisimilitude of existing theories.

key words:

delay of gratification,
poverty,
cognitive load,
meta-analysis,
equivalence testing

klúčové slová:

ochota odďaľovať odmenu,
chudoba,
kognitívna záťaž,
meta-analýza,
testovanie ekvivalencie

INTRODUCTION

One of the current trends in poverty research is to study the different variables that could cause its perpetuation (Džuka, Babinčák, Kačmárová, Mikulášková, & Martončík, 2017). From a behavioural perspective, poverty is associated with seemingly suboptimal decision-making where a person thinks in a present-oriented way whilst disregarding the potential future advantages of waiting (Griskevicius, Tybur, Delton, & Robertson, 2011). This unwillingness to delay gratification can be observed in situations such as financial decision-making where people choose a smaller but immediate reward instead of waiting for a bigger one (e.g., Brown, Ivković, & Weisbenner, 2015). But can we consider it to be a general trait specific for people living under the poverty threshold?

M. A., Institute of Psychology, Faculty of Arts, University of Prešov, Slovakia; e-mail: matho.adamkovic@gmail.com

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Previous research has argued that the poor delay of gratification can be attributed to lowered self-control not only in economic decision-making (Bernheim, Ray, & Yeltekin, 2015; Mishra & Lalumière, 2016) but also in eating patterns (Laraia, Leak, Tester, & Leung, 2017) and rewards in samples of children (see the Marshmallow test; Duckworth, Tsukayama, & Kirby, 2013; Mischel, Shoda, & Rodriguez, 1989). As further discussed below, some explanations relying on one's self-control capacity have been proposed, newer evidence has suggested that they do not hold true when more sound methodology is used.

The most widely used mechanism in explaining the reduced delay of gratification in the context of poverty has been the Resource Model of Self-Control (Baumeister, Heatherton, & Tice, 1994). The model states that the mental capacity of a person is limited and can be exhausted when regulating one's own behaviour. This so-called ego-depletion process can cause the perpetuation of poverty where the depleted mental capacity leads to impulsive choices (Vohs, 2013). In other words, refraining oneself from satiating the basic needs makes her more engaged in the situation and thus creates a cognitive load by experiencing negative affect and stress. This can consequently lead to making economically less rational choices (see Adamkovič & Martončík, 2017). In the case that a person has faced financial constraints for some time and has had to constantly restrain herself from spending money on basic utilities like food or clothing, she feels sadness, guilt, or shame, and is generally distressed. This creates an exhausting mental burden that can subsequently lead to making economically suboptimal choices such as taking out a high-interest loan. Whilst this can meet the person's urgent needs in the short term, it simultaneously pushes her into greater financial constraints in the long run. Although this explanation is intuitively convenient, the recent replication crisis in psychology has revealed the need to re-examine and re-test existing knowledge and theoretical concepts. The notion of ego-depletion has been one of the first topics to undergo attempts at replication. These studies have followed much more sound research practices (e.g., Carter & McCullough, 2014; Hagger et al., 2016) and have shown that the effects of ego-depletion are likely indistinguishable from being nil, or at least negligible in practice.

There has been a somewhat similar situation with the Marshmallow test. The previous explanation of this phenomenon had suggested that the poor delay of gratification was caused by impaired self-control (i.e., the children behaved impulsively as they could not resist eating the cookie). Yet, a newer conceptual replication (Watts, Duncan, & Quan, 2018) has elicited that the delay of gratification in children can be explained by socioeconomic status and not necessarily by willpower as had previously been thought. This is also supported by a study by Sturge-Apple et al. (2016) on a sample of children with low socioeconomic status. They found, paradoxically, that children with a high vagal tone (high vagal tone indicates the ability to perform well under stress) opted for the immediate reward. From the evolutionary perspective, this might imply that it is less beneficial for a person scarce of resources to wait for a bigger reward instead of taking the present one as the immediate reward might help to saturate their urgent needs.

In a recent paper, Adamkovič, Bozogánová, and Lorincová (2018) tested a mediation model of the relationship between the subjective perception of socioeconomic status and willingness to delay gratification with impulsivity as the mediator. They found that the subjective perception of socioeconomic status had almost no effect on impulsivity and neither on delay of gratification, whereas the latter was moderately correlated with impulsivity. The authors have argued that impulsivity should be naturally associated with poor delay of gratification (i.e., if a person is impulsive, she will

not consider the alternatives properly and will opt for the one that is currently present). However, they offer almost no psychological interpretation and call for further conceptual replications in order to understand these relationships better.

The examination of delaying gratification in the context of economic situations, and particularly poverty, bears importance on multiple levels. Firstly, looking at the relationship between the economic situation and behavioural responses in a broader range of situations (not only financial decision-making or eating behaviour) provides further insight into how one's decision-making is shaped. Secondly, although poverty is a multifactorial construct which reflects the inferiority of income, access to food, proper housing or health (United Nations, 1995), it is a common routine for policy-makers and researchers to define it according to a threshold (most frequently, 60% of the median national household income – this is also known as the “at-risk-of-poverty rate”; Eurostat, 2018). Studying the effect of objective poverty thresholds on psychological variables might help to reveal whether it is the objective situation or its subjective perception that affects one's behaviour (see Liu, Feng, Suo, Lee, & Li, 2012; Mani, Mullainathan, Shafir, & Zhao, 2013). It also considers whether the objective poverty thresholds (e.g., the aforementioned 60% of the median national household income) are informative in practice. Furthermore, if we think about science as being built upon the principles of falsifiability of theories as found in Popperian epistemology (Popper, 1992), it is vital to examine whether the ego-depletion (or the cognitive load) theory can withstand another testing; this time in the context of poverty. In particular, this study will look at how the relationship between poverty and the delay of gratification changes if we control for cognitive load.

As such, the present study aims to examine the relationship between objective economic indicators and the willingness to delay gratification. By means of sensitivity analyses, it will look at how the effect of poverty changes based on different poverty thresholds (i.e., how a specific setting of poverty line will change the results). Moreover, the study intends to investigate if the results hold after controlling for cognitive load as represented by experiencing negative affect and stress.

METHOD

Participants

The data were gathered in two waves (2017 and 2018) as part of a bigger data collection for the project “Psychological causes and consequences of poverty” (APVV-15-0404). The data were collected online using request response utility (not forced entry; anyhow, no missing variables were in these datasets) from people in Slovakia. Although two data collections were conducted, the total sample can be divided into three groups as there were some participants who completed the survey in both 2017 and 2018. The first group consists of 197 participants who only completed the survey in 2017. The second group consists of 267 participants who only completed the survey in 2018. Additionally, the third group consists of 233 participants who completed the survey in both waves of data collection. In total, 49.64% of the participants were women and the mean age of all participants was 39.38 (SD = 11.93). 66% were either married or in a romantic relationship, 61% had at least a part-time job, 9% were full-time students, 20% were either unemployed or receiving disability benefits while the remaining 5% chose the “other” option. Four poverty thresholds with 70%, 60%, 50%, and 40% of the equalized household median income were computed for each group. These poverty lines were created based on an official report which looked at the structure of earnings in the Slovak Republic in 2017 (Krišková, 2018). Here, the

gross median income was stated as 874 €. The corresponding net income was calculated for each threshold. This was calculated by automatically subtracting the compulsory insurance and income-tax from the gross income using an online calculator. For example, the 60% median net income (the poverty line) worked out at approximately 430 €. As there have been no official reports regarding the median income in 2018, the rate from 2017 was used in which median income was approximately 80% of the average. Since the average net monthly earnings in Q1 of 2018 were 955 €, the median was considered to be 765 €, from which 60% works out at 460 €. Further information regarding the household income structure of the participants is provided in Table 1.

Table 1 The frequency of participants in each data collection falling under specific poverty thresholds

Sample	Year of data collection	N (total and for each poverty threshold)				Average household income (SD)	Household income correlation between years	
		Total	70%	60%	50%			40%
			2017					
			< 490 €	< 430 €	< 365 €			< 300 €
			2018					
< 535 €	< 460 €	< 380 €	< 310 €					
Group 1	2017	197	91	78	57	40	540 € (307)	–
Group 2	2018	267	119	100	70	46	600 € (356)	–
Group 3	2017	233	98	72	51	30	578 € (289)	.76
	2018		97	69	54	35	610 € (291)	

Note: Average household income represents equalized net household income per month; Household income correlation was computed using Spearman's Rho.

Measures

Poverty is represented by equalized net household income per month as an objective indicator (see Hagenaars, De Vos, & Zaidi, 1994; please note that in this case, 0.3 coefficient was assigned to every household member under 18 years old). As researchers commonly use different thresholds to determine the poverty line (Pantazis, Gordon, & Levitas, 2006), we decided to create 4 poverty thresholds based on 70%, 60%, 50% and 40% of the median income (the exact values for each year can be seen in Table 1). Sensitivity analyses were then carried out in order to see how different poverty operationalization affects the results.

The delay of gratification was assessed using a corresponding subscale from the Poor Behavioural Regulation Scale (Wills et al., 2013). It consists of 8 items (e.g., "I usually do what I want when I want to, I don't think about what it will mean to me later") with a 5-point response scale (1 = Not true at all; 5 = Very true). The reliability of the scale ranged from Omega total (ω_{Total}) of .78 to .81 across the groups. The test-retest reliability was high with $r = .70$.

Negative affect was assessed using a subscale from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants were asked to assess how often they had experienced 10 presented emotions such as guilt, nervousness or hostility over the past month. This was done on a 5-point scale (1 = very slightly or not at all; 5 = extremely). The Omega total coefficient for the scale ranged

from .87 to .90. The correlation between the 2017 and 2018 measures was high ($r = .70$) which indicates high stability over time.

Experiencing stress was assessed using the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983). Items such as “In the last month, how often have you felt that you were unable to control the important things in your life?” were ranked on a 5-point scale (0 = never; 4 = very often). The Omega total ranged from .81 to .88 across the samples. High stability over time was also observed and the correlation coefficient in the sample with repeated measures was $r = .68$.

The process of adapting from English to Slovak language followed the International Test Commission’s (2017) recommendations. This involved independent forward translations by 4 experts in psychology, 2 of whom had worked in the field abroad. Prior to the data collection, the adapted version was administrated to 5 respondents for feedback and was revised accordingly.

Statistical analysis

In the first step, the reliabilities of the scales were estimated by the ω_{Total} coefficient, with one latent factor and by using a polychoric correlation matrix. In the sample with the repeated measures, the test-retest reliability was estimated. Since the reliability coefficients were sufficiently high (the lowest observed ω_{Total} was .78; all test-retest correlations were about .70), the unweighted mean scale scores were computed without additional item analysis. Following this, descriptive statistics were calculated for the total sample as well as separately for each poverty threshold. The overall scale scores, as well as the subgroups scores based on different poverty lines, were approximately normally distributed. The means and standard deviations can be found in Table 3.

In order to answer the first research question regarding what the relationship is between household income and (poor) delay of gratification, Spearman’s Rho was computed, as household income was positively skewed. We also tried to examine the possible regional differences of these relationships. Unfortunately, such data were only available in the second data collection. The observed correlations were .05, -.13, .03, -.07, .13, -.13, -.12 for Bratislava ($N = 64$), Trnava ($N = 50$), Trenčín ($N = 53$), Nitra ($N = 52$), Žilina ($N = 52$), Banská Bystrica ($N = 64$), Prešov ($N = 80$), and Košice ($N = 85$) self-governing region, respectively. Given that the participants were representatively distributed in terms of region as well as Slovakia having one of the lowest inequality coefficients in the OECD countries, the data were not analysed further.

In terms of the second research question and seeing what effect particular poverty lines have on delay of gratification, one-sided Welsch t -tests (expecting unequal variances; see Delacre, Lakens, & Leys, 2017) were carried out. From the t -statistics and number of observations per cell, effect sizes in the form of Hedges’ g (Cohen’s d corrected for the small sample bias; see Borenstein, Hedges, Higgins, & Rothstein, 2009) were calculated. As there were several effect sizes obtained, a mini meta-analysis was conducted. This procedure follows the recommendations for sound research practices (see Goh, Hall, & Rosenthal, 2016). Given that the data were of a hierarchical structure (3 samples, of which one also completed a retest), the obtained effect sizes were synthesized using multilevel random-effects meta-analysis (see Van den Noortgate, López-López, Marín-Martínez, & Sánchez-Meca, 2015), employing the robust variance estimation method. Additionally, when we tried to control for negative affect and stress as covariates, linear models with delay of gratification as the dependent variable and poverty line, negative affect and stress as covariates had to be calculated. These models then allowed us to extract the corresponding t -statistics for each of the poverty lines. Again, the obtained t -statistics were transformed into Hedges’ g and synthesized

in multilevel meta-analysis. Due to the small number of studies, a sensitivity analysis in the form of a Bayesian meta-analyses with different (informative) priors for effect sizes and half-Cauchy priors for heterogeneity were also carried out for each of the poverty thresholds (Röver, 2017; note that for parsimony reasons, this was conducted and is only presented for the effect sizes controlling for negative affect and stress as covariates; also due to parsimony, only some selected results are presented). As the results showed surprisingly small effect sizes (regardless of the threshold), equivalence testing (Lakens, 2017) was done in order to examine whether the results truly indicated that there is no effect of poverty on the delay of gratification. As a result of issues associated with the null hypothesis significance testing (see e.g., Szucs & Ioannidis, 2017; Ropovik, 2017), the focus is primarily on the effect sizes while p-values are only marginally used throughout the whole manuscript.

The analyses were performed in R (R Core Team, 2018) and used the packages “psych” for descriptive statistics and reliabilities (Revelle, 2018), “compute.es” for the effect size transformations (Del Re, 2013), “metafor” for the multilevel meta-analyses (Viechtbauer, 2010), “bayesmeta” for Bayesian meta-analytic estimation (Röver, 2017) and “TOSTER” for the equivalence testing (Lakens, 2017). The Welsch “t-tests” and general linear models were estimated in the R baseline environment.

RESULTS

The zero-order and also partial correlations (controlling for negative affect and stress) between delay of gratification and the whole spectrum of household income consistently yielded small values of Spearman’s Rho from $-.11$ to $.10$. This implies that income is practically not associated with the tendency to delay gratification (Table 2).

Table 2 Zero-order and partial correlations between household income and delay of gratification

	2017	2018	Test 2017	Re-test 2018
Zero-order ρ	$-.09$	$-.07$	$.04$	$.03$
Partial ρ	$-.11$	$-.01$	$.10$	$.05$

Note: The correlation coefficients were calculated using Spearman’s Rho; partial correlations were controlled for negative affect and stress.

In addition, a look at the descriptive statistics (see Table 3) has already indicated that even the effects of poverty dichotomization are surprisingly low, especially in delaying gratification, regardless of the exact threshold.

Indeed, both meta-analytic models, without (Figure 1a) and with covariates (Figure 1b), show very small effect sizes of poverty in total as well as for each individual threshold. Specifically, in the model without covariates, the total estimated effect is $g = 0.08 [-0.13, 0.29]$ and the mean effect sizes for each threshold vary from $g = 0.04 [-0.10, 0.18]$ to $g = 0.14 [-0.03, 0.32]$ with the latter being the effect of the 40% poverty threshold. If we focus on the model with negative affect and stress as covariates, we find the outcomes to be very similar. The total estimated effect is $g = 0.03 [-0.20, 0.26]$ and the effects for each threshold range from $g = -0.01 [-0.15, 0.13]$ to $g = 0.10 [-0.08, 0.27]$. The subsequent Bayesian meta-analytic estimation with various priors for effect sizes and heterogeneity (Table 4) confirms the effect sizes as being small. However, in general, the performed sensitivity analysis confirms the effect sizes as only having a small magnitude ($g = 0.00 - 0.20$). As for the heterogeneity, although

Table 3 Descriptive statistics of delay of gratification, negative affect and stress for each group with respect to the defined poverty thresholds

Sample	Poverty threshold	Delay of gratification		Negative affect		Stress	
		Mean (SD)		Mean (SD)		Mean (SD)	
		Above	Below	Above	Below	Above	Below
Group 1 (2017) N = 197	-	2.51 (0.63)		2.76 (0.64)		1.86 (0.53)	
	70%	2.49 (0.57)	2.54 (0.69)	2.72 (0.65)	2.81 (0.62)	1.75 (0.51)	1.98 (0.52)
	60%	2.48 (0.60)	2.56 (0.67)	2.70 (0.66)	2.85 (0.60)	1.77 (0.54)	1.99 (0.48)
	50%	2.47 (0.61)	2.63 (0.66)	2.67 (0.64)	2.98 (0.59)	1.76 (0.52)	2.10 (0.46)
	40%	2.48 (0.61)	2.66 (0.69)	2.72 (0.64)	2.92 (0.61)	1.81 (0.53)	2.05 (0.45)
Group 2 (2018) N = 267	-	2.59 (0.70)		2.60 (0.70)		2.20 (0.54)	
	70%	2.53 (0.60)	2.66 (0.79)	2.54 (0.66)	2.68 (0.73)	2.11 (0.55)	2.31 (0.52)
	60%	2.52 (0.60)	2.71 (0.82)	2.56 (0.55)	2.68 (0.76)	2.13 (0.54)	2.31 (0.53)
	50%	2.55 (0.61)	2.69 (0.89)	2.54 (0.64)	2.77 (0.81)	2.13 (0.54)	2.38 (0.52)
	40%	2.54 (0.62)	2.81 (0.96)	2.57 (0.65)	2.76 (0.88)	2.16 (0.53)	2.38 (0.58)
Group 3 (Test 2017) N = 233	-	2.44 (0.46)		2.68 (0.66)		1.82 (0.54)	
	70%	2.47 (0.66)	2.41 (0.66)	2.65 (0.64)	2.74 (0.69)	1.76 (0.54)	1.90 (0.53)
	60%	2.46 (0.66)	2.40 (0.65)	2.67 (0.64)	2.71 (0.71)	1.78 (0.53)	1.92 (0.55)
	50%	2.46 (0.67)	2.40 (0.63)	2.67 (0.65)	2.74 (0.71)	1.78 (0.52)	1.97 (0.57)
	40%	2.44 (0.66)	2.47 (0.69)	2.67 (0.64)	2.79 (0.78)	1.79 (0.52)	2.02 (0.65)
Group 3 (Re-test 2018) N = 233	-	2.52 (0.66)		2.60 (0.68)		2.17 (0.61)	
	70%	2.52 (0.60)	2.52 (0.73)	2.53 (0.66)	2.70 (0.68)	2.09 (0.57)	2.28 (0.64)
	60%	2.52 (0.65)	2.52 (0.68)	2.56 (0.65)	2.71 (0.72)	2.12 (0.58)	2.29 (0.67)
	50%	2.52 (0.66)	2.52 (0.66)	2.57 (0.64)	2.71 (0.77)	2.14 (0.59)	2.28 (0.65)
	40%	2.52 (0.67)	2.54 (0.62)	2.60 (0.65)	2.63 (0.80)	2.16 (0.59)	2.24 (0.73)

Q-statistics ($Q = 13.42$; $p = .57$) suggest there is no substantive heterogeneity in the overall sample, other heterogeneity measures such as I^2 yields 40.72% heterogeneity, all of which can be attributed to the differences between the clusters ($\tau_{\text{Between-clusters}} = 0.123$).

When we tested the obtained meta-analytic estimates for the absence of a meaningful effect (our smallest effect size of interest is $g = \pm 0.2$; see Lakens, 2014), we found inconclusive evidence. The results of the equivalence testing suggest that the vast majority of the obtained effect does not support the alternative hypothesis, although approximately half of them (70% threshold and the overall estimate for the model without covariates; 70% – 50% thresholds and the overall estimate for the model with covariates) lie within the given equivalence bounds and hence are statistically equivalent to nil.

DISCUSSION

The aim of the paper was to study the relationship between objective poverty and willingness to delay gratification, particularly with respect to differing poverty lines. Moreover, the study aimed to address how controlling for cognitive load in the form of experiencing negative affect and stress would influence the results.

In general, the results show that the effect of poverty on the delay of gratification is very small, often indistinguishable from null (largest $g = 0.14$), regardless of the specific poverty. The effects get even smaller after including cognitive load as a covariate

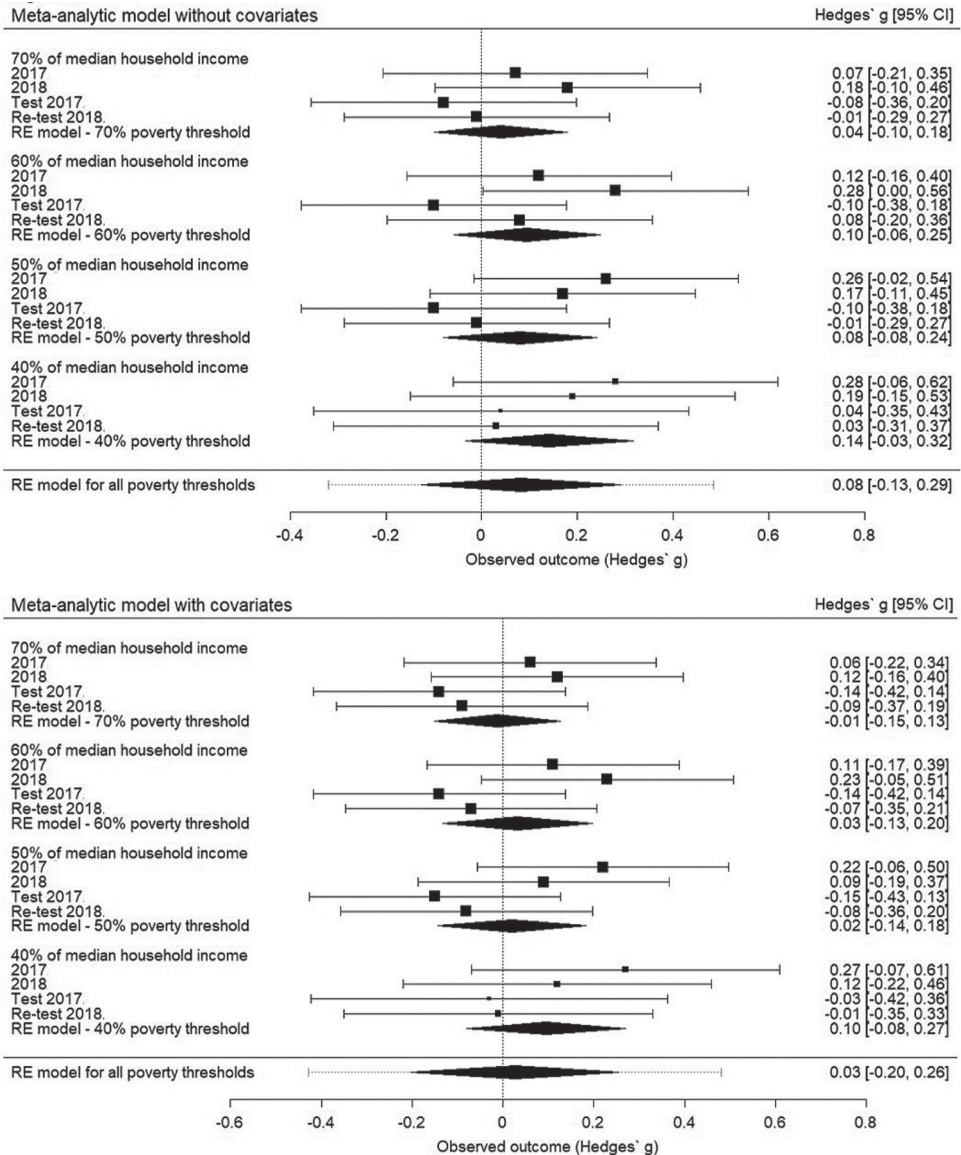


Figure 1a, b Meta-analytic models of the effects of poverty thresholds on delay of gratification

Note. The 95% intervals are confidence intervals. The prediction (credible) intervals are as follows: [-0.14, 0.22] and [-0.21, 0.18] for the 70% threshold, [-0.23, 0.42] and [-0.36, 0.43] for the 60% threshold, [-0.29, 0.45] and [-0.37, 0.41] for the 50% threshold, [-0.05, 0.34] and [-0.13, 0.32] for the 40% threshold, and [-0.32, 0.49] and [-0.43, 0.48] for the total effect estimates.

although the change is negligible. At first glance, this appears highly contradictory to existing notions. Indeed, Spears (2011) concluded that poverty diminishes behavioural control through limited attention, willpower and cognition. This was based on the results of two field experiments and analysis of observational data. While this seems

Table 4 Bayesian sensitivity analysis for the posterior summary effect sizes employing the different priors

Prior effect sizes and heterogeneity		Posterior mean summary effect size [95% credible interval]			
Mean (SD)	τ (half-Cauchy)	70% threshold	60% threshold	50% threshold	40% threshold
0.1 (0.1)	0.1	0.03 [-0.20, 0.27]	0.06 [-0.21, 0.34]	0.05 [-0.21, 0.33]	0.10 [-0.15, 0.34]
0.1 (0.1)	0.5	0.03 [-0.32, 0.43]	0.07 [-0.35, 0.50]	0.06 [-0.36, 0.50]	0.10 [-0.29, 0.49]
0.1 (0.3)	1	0.00 [-0.47, 0.48]	0.04 [-0.53, 0.62]	0.03 [-0.53, 0.61]	0.09 [-0.44, 0.63]
0.3 (0.2)	0.1	0.03 [-0.23, 0.32]	0.08 [-0.23, 0.41]	0.06 [-0.24, 0.40]	0.14 [-0.14, 0.43]
0.3 (0.3)	0.5	0.01 [-0.40, 0.47]	0.02 [-0.40, 0.48]	0.05 [-0.45, 0.60]	0.12 [-0.34, 0.61]
0.3 (0.1)	1	0.11 [-0.20, 0.53]	0.15 [-0.19, 0.57]	0.15 [-0.20, 0.58]	0.20 [-0.07, 0.49]
0.5 (0.3)	0.1	0.02 [-0.24, 0.31]	0.07 [-0.24, 0.42]	0.06 [-0.26, 0.40]	0.14 [-0.16, 0.44]
0.5 (0.2)	0.5	0.10 [-0.42, 0.84]	0.15 [-0.44, 0.93]	0.15 [-0.45, 0.94]	0.20 [-0.03, 0.83]
0.5 (0.3)	1	0.04 [-0.47, 0.69]	0.09 [-0.51, 0.85]	0.08 [-0.53, 0.84]	0.15 [-0.40, 0.80]

plausible, closer examination indicates that the effects are not of a large magnitude and are based on p-values consistently close to .05, some of which might also be false positives. If we delve deeper into economic literature, it can be found that income only has a small effect on time preference in financial decision-making (Falk, Becker, Dohmen, Enke, Huffman, & Sunde, 2015; Reimers, Maylor, Stewart, & Chater, 2009). However, these studies offer no psychological interpretation of the results. Thus, it is of interest to look at why objective poverty has a very small effect on one's willingness to delay gratification, regardless of the poverty threshold or addition of cognitive load as the covariate. We hypothesize that our results could be attributed to (1) the core sociodemographic aspects of the sample, (2) the sensitive nature of the items of the employed measures and associated social desirability of the responses, (3) the overestimated importance of objective poverty indicators and their limited predictive power in explaining such behaviour or (4) the fact that the established theories do not really capture the underlying causal mechanism.

From a socio-political perspective, Slovakia has been part of the EU for several years. People perceive themselves as satisfied with life in general (mean score 7.0 on an 11-point scale, where 11 = fully satisfied; Eurostat, 2013) and have one of the lowest income inequalities (Gini coefficient = .25 on a scale 0 to 1, where 1 indicates complete inequality; OECD, 2018). This indirect evidence implies that the majority of Slovak inhabitants, including those under the poverty line can satiate basic (material) necessities almost whenever and are not restrained in focusing on future-oriented goals. Therefore, poor delay of gratification might be a consequence of personality traits rather than a reflection of the economic situation. Even though this explanation might be plausible, the caveat is that it is mainly applicable in economic situations and will probably not clarify the broader spectrum of behaviour.

Another explanation for the obtained results can be inferred from the employed measures. Firstly, at least 3 out of the 8 items in the poor delay of gratification subscale in the Poor Behavioural Regulation Scale (Wills et al., 2013) are directly associated with financial behaviour. If we combine this with the sampling-based interpretation of the obtained effects (i.e., very low Gini inequality coefficient), it makes the results clearer. Furthermore, the items can be perceived as very sensitive or even embarrassing to answer (e.g., “I usually do what I want when I want to, I don’t think about what it will mean to me later.”) and hence the responses can be subject to social desirability (see Tourangeau & Yan, 2007). In other words, if being poor promotes giving socially desirable answers, the scores of the people living under poverty threshold are similar to the true scores of those over the poverty line. Such potential bias in the responses could have attenuated their variance and consequently the observed relationships as well. The downside of this explanation is that it a priori assumes that poor people provide biased responses without any evidence supporting that the poor incline towards socially desirable answers more often than the non-poor.

Evidence already exists which indicates that our behaviour is driven by the subjective perception of poverty or scarcity rather than by objective cues (Liu et al., 2012, Mani et al., 2013). Our results have demonstrated that establishing different poverty lines dichotomizing people into those above and below the poverty level do not explain the willingness to delay gratification. Therefore, it seems that approaches that try to attribute the differences in such kind of behavior to objective economic indicators are too reductionist and inaccurate. Nevertheless, Adamkovič et al. (2018) have indicated that it is not the subjective perception of the economic situation that has an effect on poor delay of gratification. In order to have a better insight into what causes the poor delay of gratification, we should try to incorporate personality traits (e.g., impulsivity, aggression, temperament, insecurity), contextual variables (e.g., perceived fairness, perceived reliability of the environment, the way the choices are presented), or create experimental situations to see whether the delay of gratification tendency itself is rather a time-stable trait (as often regarded in economic research, see, for example, Odum (2011) or whether it is more contextually driven instead. As it is a kind of standard for behavioural sciences, the causality behind these processes is yet to be explored and thus, we cannot properly determine the causal structure in terms of which variables are common causes mediators, or common effects (colliders). Nonetheless, in some cases, it is theoretically justifiable to consider the delay of gratification as a consequence of both personality traits and situational aspects. For example, one’s temperament can underpin her willingness to delay gratification (although the current evidence has shown rather small effects; see e.g., Hong, Doan, Lopez, & Evans, 2017). While an impulsive person may prefer the smaller but more immediate reward (Logue, 1988) a person who perceives the environment as very reliable and hence believes she will truly receive a better incentive, may increase their willingness to wait substantially (see e.g., Kidd, Palmeri, & Aslin, 2013).

We can also take a more pragmatic stance in explaining the results. If we take the current crisis of reproducibility of (psychological) research into account (see Open Science Collaboration, 2015), many of the former theories or common sense notions are built upon fragile (often false positive) fundamentals and might not withstand replication/falsification attempts. This suggests their low verisimilitude (for the list of over 1000 replications see www.curatescience.org/replications.html). Two of the most solid solutions that help to distinguish which effects actually exist and what their magnitude is, are accumulating scientific evidence (Nosek & Errington, 2017) and employing robust methods of testing such as triangulation (Munafò & Smith, 2018).

Our study disconfirms the role of cognitive load-based ego-depletion (at least as a phenomenon stable over time) in the relationship between income and the poor delay of gratification. Indeed, the results have, at least indirectly, indicated its influence to be very small or even negligible. One could legitimately call for engaging in experimental designs in order to gain more information about the potential causality of the psychological mechanisms. From this perspective, more research needs to be conducted in order to obtain further evidence from which we can draw better inferences. Nonetheless, the current study has served as a further stepping stone in this process.

CONCLUSION

The study has shown that neither income as an objective economic indicator is substantially associated with the delay of gratification, nor do different poverty lines have a considerable effect on one's willingness to delay reward. The results hold true even after controlling for cognitive load. We presume that the results can be attributed to the socio-demographic aspects of the sample, the nature of the employed measures which items could promote socially desirable responses, the overreliance on objective economic indicators when trying to explain behaviour, or to the arguably weak existing theoretical and empirical rationale for the psychological mechanisms that are hypothesized to underlie this kind of behaviour. Yet, all of these proposed explanations have some apparent flaws and should be subject to robust testing and sound methodological practices in future research.

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SÚHRN

Objektívna chudoba a (ne)ochota odďaľovať odmenu: Do akej miery sú rôzne hranice chudoby a kognitívna záťaž relevantné?

Cieľ. Chudoba je jednou z hlavných príčin neproduktívneho správania, akým je napríklad neochota odďaľovať odmenu. Článok sa zameriava na preskúmanie vzťahu medzi príjmom (ako objektívnym indikátorom chudoby) a neochotou odďaľovať odmenu. Špeciálne sa zameriava na efekt rôzne stanovených hraníc chudoby, berúc do úvahy taktiež kognitívnu záťaž osôb.

Výskumný súbor. Výskum bol realizovaný v 2 vlnách a zúčastnilo sa ho spolu 697 účastníkov (233 z nich absolvovalo retest). Účastníci odpovedali na otázky týkajúce sa príjmu domácnosti, frekvencie zažívania negatívneho afektu a stresu (dokopy tvoriacich kognitívnu záťaž) a tiež na ich ochotu odďaľovať odmenu. *Štatistická analýza.* Vyextrahované veľkosti efektov pre všetky podskupiny a rôzne stanovené hranice chudoby boli syntetizované v rámci viacúrovňovej meta-analýzy. Analýza sensitivity bola realizovaná za použitia Bayesiánskych odhadov. Na posúdenie toho, či sa pozorovaná priemerná veľkosť efektu líšila od Hedgesovho $g = 0.2$ (najmenšia relevantná veľkosť efektu; SESOI) bolo použité testovanie ekvivalencie. *Výsledky.* Rôzne stanovené hranice chudoby mali len malý efekt na (ne)ochotu odďaľovať odmenu – Hedgesovo g variovalo v rozmedzí -0.01 až 0.20 pre všetky realizované analýzy. *Obmedzenia štúdie.* Medzi limity štúdie je možné zaradiť jadrové sociodemografické charakteristiky výskumného súboru, potenciál výskytu sociálne žiaducich odpovedí, prehnanú dôveru v rôzne objektívne hranice chudoby pri snahe o vysvetlenie psychologických fenoménov, či relatívne nízku vierohodnosť existujúcich teórií.

NEGATIVE AFFECT AND LIFE SATISFACTION IN THE CONTEXT OF SUBJECTIVE POVERTY, OBJECTIVE POVERTY AND SELECTED SOCIODEMOGRAPHIC VARIABLES

JAROŠLAVA BABJÁKOVÁ

Institute of Psychology, Faculty of Arts, University of Prešov

ABSTRACT

J. Babjáková

Objectives. The aim of this study was to identify the differences in negative affect and life satisfaction in the context of subjective poverty, objective poverty, marital status, economic activity and gender. In particular, the significance of poverty variables.

Participants and settings. The research sample consisted of 499 Slovak respondents (249 women; 250 men, average age $M = 39.60$, $SD = 11.47$). Data were collected using the Satisfaction with Life Scale and the Negative Affect Scale from the Positive and Negative Affect Schedule (PANAS). The subjective assessment of poverty was measured by the question "In your economic situation, is it possible to make ends meet?" and objective poverty by "What is your monthly income after taxes?"

Hypotheses. It was hypothesized the main effects of objective poverty and subjective poverty on negative affect and life satisfaction and interaction effects of objective poverty and subjective poverty with other selected independent variables (marital status, economic activity, gender) on negative affect and life satisfaction.

Statistical analysis. MANOVA was used for the statistical analysis.

Results. The results confirm the main effect of subjective poverty in life satisfaction and negative affect. In terms of life satisfaction, interactions between gender and objective poverty, gender and subjective poverty as well as between gender, marital status and economic activity were found. With regards to negative affect, the study found interactions between gender and objective poverty as well as between objective poverty and subjective poverty.

Study limitations. The limitation of this study is the failure to include certain variables into the analysis such as the size of residence by population, regions according to the unemployment rate or gender roles.

key words:

negative affect,
life satisfaction,
poverty

klúčové slová:

negatívny afekt,
životná spokojnosť,
chudoba

INTRODUCTION

The 'at-risk-of poverty rate' in Slovakia was 12.4 % in 2017 and 16.9 % in the EU-28 in the same year (Eurostat, 2018, online). Vlačuha and Kováčová (2018) have noted the 'at-risk-of-poverty rate' as being 60% of the median of the equivalent disposable income. This definition is in compliance with Sen (1983) who suggested that this relative concept of poverty is the favouring view of poverty in rich countries. Similarly, Townsend (1979, p. 31) has stated about poverty that "The term is understood objectively rather than subjectively. Individuals, families and groups in the population can be said to be in poverty when lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or

J. B., Institute of Psychology, Faculty of Arts, University of Prešov, ul. 17. novembra 1, 080 01 Prešov, Slovakia; e-mail: jarkababjakova@gmail.com

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are at least widely encouraged or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities". An alternative to using objective measurements in poverty, is using subjective poverty measures. Haveman (2015, p. 743) has defined that "Subjective poverty measures are based on survey responses to questions regarding the minimum level of income or consumption that respondents consider to be 'just sufficient' to allow them to live a minimally adequate lifestyle". As Adamkovič and Martončík (2017) have noted, there are numerous assessments and definitions of poverty. In particular, they have highlighted that the term poverty is primarily an economic construct which lacks a precise definition as well as an operational definition (Adamkovič & Martončík, 2017).

In the context of poverty, psychological research in the Slovak and Czech Republics has focused prevalently on well-being (Babjáčová, Hruščová, Adamkovič, Šablatúrová, & Kravcová, 2017), well-being in the unemployed (Hruščová, Kačmárová, & Babjáčová, 2017) and life satisfaction (Hnilica, 2006; Hnilica, Rendlová, Bariekyahyová, & Hnilica, 2006). Well-being consists of both emotional and cognitive components. Life satisfaction is a cognitive component of subjective well-being and positive and negative emotions constitute the emotional component (Diener, 1984).

In terms of the emotional component of well-being, personal financial situation, gender and subjectively perceived state of health explained 26% of the variation of negative emotions in Slovak sample. Women were found to experience negative emotions more frequently as well as those who perceived their health and financial situation to be worse (Babjáčová et al., 2017). Similarly, in Czech sample, Šolcová, Slezáčková, Franková, and Greenglass (2012) examined economic variables such as financial threat, economic hardship and financial well-being. In the closest relationships to these variables were particular mental states. The strongest relationship was observed between the rate of fatigue, hostility and anxiety and perceived economic threat. They suggested that it is perceived economic threat, rather than real economic threat, which is connected to negative feelings, disorientation and suicidal thoughts (Šolcová et al., 2012). Amongst the unemployed Slovak people, Hruščová et al. (2017) confirmed gender and self-esteem as predictors of experiencing negative emotions. Unemployed women and people with lower self-esteem experienced negative emotions more often (Hruščová et al., 2017). Also Vlačuha and Kováčová (2018) have suggested that the risk of poverty in Slovakia is increased among unemployed people.

With regard to life satisfaction, Hnilica et al. (2006) have suggested that university and high school students from two cities, Prague and Říčany in Czech Republic, are less satisfied with life the more they believe their happiness is dependent on their material situation. In other study from Czech Republic Hnilica (2006) found significant results in terms of marital status and life satisfaction. Indeed, married men and women were found to experience higher levels of life satisfaction in comparison to divorced respondents. A positive correlation was also found between life satisfaction and income amongst adults in the Czech Republic. However, after income was added to the regression model, marital status was no longer significant (Hnilica, 2006). In the unemployed, Hruščová et al. (2017) found that socioeconomic status, self-esteem, and preparatory job search behaviour were positive predictors of life satisfaction. In people aged over 15 from 24 European countries, it was found that there were lower levels of life satisfaction and lower levels of happiness in the unemployed people with disabilities, and retirees compared to other groups (in work, work at home, military or civilian service, in education or other) (Výrost, 2007). In the same way, Lapinová and Kentoš (2010) noticed a higher level of life satisfaction in the employed compared

to the unemployed in sample of 2737 respondents in the Košice region in Slovakia. However, the study did not find an interaction between economic activity (employed, unemployed) and type of residence (city area, rural area) or marital status (single, married, divorced, widowed, cohabitated).

In terms of worldwide poverty psychological research, Diener and Biswas-Diener (2002) looked at whether money increased subjective well-being and whether money could make us happy. They found that the relationship between income, overall life satisfaction and positive and negative experience was negligible in economically developed countries. Higher income played an unimportant role in the positive relationship to the life satisfaction and positive and negative experiences especially in the economically developed countries. It was observed that the strong desire for a lot of money and preferences for material goals tended to lower levels of happiness (Diener & Biswas-Diener, 2002). With regards to income, Diener, Ng, Harter and Arora (2010) have suggested that income is a predictor of life satisfaction and is a weaker predictor of negative and positive experiences. Besides income, satisfaction with standard of living and possessing luxury conveniences were strong predictors of life satisfaction. In relation to emotions, the strongest association was with fulfilling psychological needs such as respect, autonomy, the ability to count on others in an emergency and learning and using one's skills (Diener et al., 2010). Ahn, García and Jimeno (2004) found higher satisfaction with financial and professional life amongst married unemployed people compared to single unemployed people. They subsequently suggested that the duration of unemployment has only a small negative effect on well-being. A comparison of unemployed men with unemployed women showed higher levels of satisfaction with leisure activities and health in men although they experienced lower satisfaction regarding their main vocational activity and financial support (Ahn et al., 2004). Ahn et al. (2004) also found higher satisfaction among the unemployed in all areas of life considering higher household income. McKee-Ryan, Song, Wanberg and Kinicki (2005) carried out a meta-analysis which suggested a correlation between financial stress and subjective well-being. They confirmed lower psychological and physical well-being among the unemployed compared to their employed counterparts (McKee-Ryan et al., 2005).

To summarize, previous poverty research has been mainly focused on well-being and sociodemographic variables such as marital status, economic activity and gender. The aim of this study is to identify the differences in negative affect and life satisfaction in the context of subjective poverty, objective poverty, marital status, economic activity and gender. The study is interested in verifying the effect of selected independent variables (subjective poverty, objective poverty, marital status, economic activity, gender) on dependent variables (negative affect, life satisfaction) in Slovakia. In particular, it wants to identify if poverty variables will be significant in the analysis. The research questions are as follows:

1. What are the main effects of selected independent variables on the dependent variables and will there be an observed main effect of poverty (objective or subjective) on the dependent variables?

2. What are the interactions among the selected independent variables in the analysis with two dependent variables and will be observed interaction of poverty (objective or subjective) and some sociodemographic variables with two dependent variables?

Therefore, we hypothesized both main effects of objective poverty and subjective poverty on negative affect and life satisfaction and interaction effects of objective poverty and subjective poverty with other selected independent variables (marital status, economic activity, gender) on negative affect and life satisfaction.

METHOD

Research sample and procedure

The sample consisted of 500 respondents from Slovakia. One respondent was excluded due to an incomplete questionnaire. Therefore, the final research sample consisted of 499 respondents (250 men, 249 women) with an average age of 39.60 (SD = 11.47, MIN = 18, MAX = 60). The respondents came from all regions in Slovakia in similar proportions and were from any size of residence (from fewer than 1000 inhabitants to more than 100 000 inhabitants). Table 1 provides sociodemographic information about the research sample. The data were collected online in March 2018 by an external agency. The sample was chosen using a quota sampling method based on gender, age group, region and monthly personal income.

Table 1 Sociodemographic characteristics of participants (N=499)

characteristic	n	%
<i>marital status</i>		
single	168	33.7
non-single	331	66.3
<i>economic activity</i>		
working	316	63.3
non-working	183	36.7
<i>objective poverty</i>		
objectively poor	194	38.9
objectively non-poor	305	61.1
<i>subjective poverty</i>		
subjectively poor	78	15.6
subjectively non-poor	421	84.4

Note: n-number of participants

Measures

The questionnaire consisted of sociodemographic questions which focused on gender, age, marital status, economic activity, objective poverty and subjective poverty.

Marital status was a self-report item which included 5 response options (single, in a relationship, married, divorced, widowed). This variable was dichotomized for our analysis where single, divorced and widowed respondents were considered as single. Married respondents and respondents in a relationship were assigned non-single.

Economic activity consisted of 8 self-report categories (full-time employment, part-time employment, entrepreneur or self-employed, unemployed, student, retired, disabled and other). Based on economic activity, the sample was dichotomized into working (full-time employment, part-time employment, entrepreneur or self-employed) and non-working respondents (unemployed, student, retired, disabled and other).

Objective poverty was measured by the item: "What is your monthly income after taxes?" In response to this, respondents indicated their income. The cut-off line was 359 € which was based on the "at-risk-of-poverty" threshold defined in the document EU SILC 2017 about income and living conditions from a household survey. Here, an

annual household income for one person was said to be 4 310 €, which equals 359 € per month (Vlačuha & Kováčová, 2018). Respondents with an income below 359 € were classified as objectively poor (under the poverty threshold line) and respondents above 359 € were defined as objective non-poor (above the poverty threshold line).

Subjective poverty was measured by the question: “In your economic situation, is it possible to make ends meet?” (Nygård, Härtull, Wentjärvi, & Jungerstam, 2017). Respondents were presented with 4 response categories (1 = without difficulty, 2 = with some difficulty, 3 = difficult, 4 = very difficult). Answers “with some difficulty”, “difficult” and “very difficult” were categorised as subjectively poor while responses “without difficulty” were categorised as subjectively non-poor. As Nygård et al. (2017, p. 688) mentioned “... subjective poverty, is a dichotomised variable based on older person’s subjective assessments of their economic situation”. The survey was translated into Slovak and modified by Džuka (2017, personal communication, according to Nygård et al., 2017).

Life satisfaction was measured as the overall judgment of a person’s life by the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). The scale contained 5 items ranging from 1 (strongly disagree) to 7 (strongly agree). The lowest score possible was 5 and indicated the lowest satisfaction with life, while 35 was the highest score and indicated the highest satisfaction with life. The one-dimensionality of the scale and its high reliability were confirmed by Lewis, Shevlin, Smékal, and Dorahy (1999).

The Negative Affect Scale from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to measure the range of negative affect. The schedule is made up of two independent scales each of which contains 10 items. In order to measure negative affect, adjectives describing negative affects, e.g. afraid, guilty and nervous were presented. Responses were collected using a 5-point scale from 1 being “very slightly or not at all” to 5 standing for “extremely”. Higher scores indicated a higher negative affect. The internal consistency of the scale and its reliability over two months were confirmed, as well as the convergent and divergent validity (Watson et al., 1988).

Data analysis

The research data were analysed in the statistical program SPSS 23.0. Descriptive statistics was used to describe the research sample. The reliability was verified using Cronbach’s alpha and normality by the skewness method. Cronbach’s alpha showed adequate reliability (negative affect: $\alpha = .894$; life satisfaction $\alpha = .881$) and the data for negative affect and life satisfaction were normally distributed. MANOVA was used to verify the aim of the study. A Box’s test was significant ($p = .04$). Tabachnick and Fidell (2007) have highlighted that this test is very sensitive in large samples. Due to this, they suggested violated robustness if Box’s M test is significant at $p < .001$ and sample sizes are unequal. As result of this, they suggested using Pillai’s criterion (Tabachnick & Fidell, 2007). A Levene’s test for life satisfaction was $p = .170$ and for negative affect $p = .113$. The assumption of homogeneity of variance was met.

RESULTS

Due to a large amount of research output, Table 2 only presents the significant results from the analyses. The complete results are available at the author.

The multivariate test showed one main effect (subjective poverty) and three interactions (1. gender and objective poverty; 2. gender and subjective poverty; 3. gender, marital status and economic activity).

Table 2 Multivariate and univariate analyses of variance for negative affect and life satisfaction

Source	Univariate								
	Multivariate			life satisfaction			negative affect		
	F	p	Π^2	F	p	Π^2	F	p	Π^2
subjective poverty	15.370	< 0.001	.061	30.259	< 0.001	.060	5.234	.023	.011
gender*objective poverty	5.327	.005	.022	6.062	.014	.013	7.644	.006	.016
gender*subjective poverty	3.055	.048	.013	5.827	.016	.012	1.476	.22	.003
gender*marital status*economic activity	3.264	.027	.015	5.008	.026	.010	.633	.427	.001
objective poverty*subjective poverty	2.781	.063	.012	1.968	.161	.004	4.935	.027	.010

Note: Multivariate F ratios were generated from Pillai's statistic.

With regard to life satisfaction, MANOVA showed a main significant effect of subjective poverty and three interactions (1. gender and objective poverty; 2. gender and subjective poverty; 3. gender, marital status and economic activity). In terms of negative affect, a main effect of subjective poverty and two interactions were found (1. gender and objective poverty; 2. objective poverty and subjective poverty) (Table 2).

Life satisfaction

1. Interaction – gender and objective poverty

As the results have shown (Table 2), there was an interaction between gender and objective poverty. One-way ANOVAs did not indicate any differences between objectively poor men and objectively non-poor men ($F = 1.996, p = .159$), between objectively poor women and objectively non-poor women ($F = 2.630, p = .106$), objectively poor men and objectively poor women ($F = 0.259, p = .611$) nor objectively non-poor men and objectively non-poor women ($F = 0.605, p = .437$) in terms of life satisfaction.

2. Interaction – gender and subjective poverty

In the interaction between gender and subjective poverty, significant differences in life satisfaction were detected by one-way ANOVA between subjectively poor men and subjectively non-poor men ($F = 41.54, p < 0.001$) as well as between subjectively poor women and subjectively non-poor women ($F = 12.086, p = .001$). In this interaction, there was found to be higher life satisfaction in subjectively non-poor men ($M = 24.13, SD = 4.63$) compared to subjectively poor men ($M = 18.38, SD = 5.584$). Similarly, subjectively non-poor women showed higher life satisfaction ($M = 22.82, SD = 5.919$) in comparison to subjectively poor women ($M = 19.06, SD = 5.703$). On the other hand, no significant differences were found in life satisfaction between subjectively poor men and subjectively poor women ($F = 1.526, p = .217$) nor between subjectively non-poor men and subjectively non-poor women ($F = 1.121, p = .293$).

3. Interaction – gender, marital status and economic activity

In this interaction, significant difference in life satisfaction were observed between non-single working men and non-single non-working men ($F = 4.986, p = .027$). Specifically, higher score in life satisfaction were found among non-single working men

($M = 20.36$, $SD = 5.229$) compared to non-single non-working men ($M = 17.61$, $SD = 6.528$). No other significant differences were detected in any other compared group in this interaction.

Negative affect

1. Main effect – subjective poverty

In terms of negative affect, a one-way ANOVA examined the main effect of subjective poverty. This result showed significant difference in negative affect between the subjectively poor and subjectively non-poor ($F = 21.466$, $p < 0.001$). In particular, higher levels of negative affect were observed in the subjectively poor group ($M = 26.62$, $SD = 6.768$) than in the subjectively non-poor group ($M = 22.78$, $SD = 6.508$).

2. Interaction – gender and objective poverty

In the interaction between gender and objective poverty, only one difference in negative affect was found by the one-way ANOVA. This was between objectively poor women and objectively non-poor women ($F = 9.550$, $p = .002$). There was a higher score found in negative affect of objectively poor women ($M = 28.10$, $SD = 6.819$) compared to objectively non-poor women ($M = 25.53$, $SD = 6.227$). Conversely, no differences in negative affect were detected between objectively poor men and objectively non-poor men ($F = 1.625$, $p = .204$), between objectively poor men and objectively poor women ($F = 3.187$, $p = .076$) and nor between objectively non-poor men and objectively non-poor women ($F = .848$, $p = .358$).

3. Interaction – objective poverty and subjective poverty

While a multivariate MANOVA test did not find the interaction between objective and subjective poverty to be significant in terms of negative affect, it was observed in a between subject test MANOVA (Table 2).

The one-way ANOVA revealed that objectively poor respondents differ in negative affect with regard to subjective poverty ($F = 5.165$, $p = .024$). Indeed, a higher level of negative affect was shown in objectively poor respondents who perceived themselves as subjectively poor ($M = 27.82$, $SD = 7.158$) compared to objectively poor respondents who perceived themselves as subjectively non-poor ($M = 23.36$, $SD = 5.759$). Similarly, a higher level of negative affect was found in objectively non-poor respondents who perceived themselves as poor ($M = 25.73$, $SD = 6.331$) compared to objectively non-poor respondents who perceived themselves as subjectively non-poor ($M = 22.66$, $SD = 6.696$) ($F = 11.668$, $p = .001$). In the case of subjectively poor respondents, difference in negative affect were detected according to their income ($F = 9.962$, $p = .002$). By this, higher levels of negative affect were experienced by respondents who perceived themselves as poor and were objectively poor ($M = 27.82$, $SD = 7.158$) compared to objectively non-poor respondents who perceived themselves as poor ($M = 25.73$, $SD = 6.331$). On the other hand, no differences were found in negative affect between subjectively non-poor respondents who were objectively poor compared to subjectively non-poor respondents who were objectively non-poor ($F = .132$, $p = .718$).

DISCUSSION

The aim of this study was to investigate the differences in negative affect and life satisfaction in the context of subjective poverty, objective poverty, marital status, eco-

conomic activity and gender. In particular, poverty (objective and subjective) and its main effects or interactions with gender, marital status and economic activity were the focus. The interest in this research has stemmed from the following three reasons. Firstly, as noted by Džuka, Babinčák, Kačmárová, Mikulášková and Martončík (2017), Slovak and Czech psychology research has previously failed to give attention to the issue of poverty. Secondly, previous research has only focused on certain aspects of similar topics or specific research samples such as the unemployed. Thirdly, objective poverty and subjective poverty have not been differentiated in previous research focusing on life satisfaction and negative affect, especially in Slovakia. The gain of knowledge in this area of research was the aim of the current study.

In terms of life satisfaction, the main effect of subjective poverty and three interactions was confirmed: gender and objective poverty; gender and subjective poverty; and gender, marital status and economic activity. With regard to negative affect, the main effect of subjective poverty was also found as well as two interactions: gender and objective poverty; and objective poverty and subjective poverty. It can be said, in keeping with the aim of the study, that objective poverty and subjective poverty were detected as significant variables.

In relation to life satisfaction, the MANOVA results indicated an interaction between gender and objective poverty although these differences were not confirmed by using separate ANOVAs. This can be explained by fact that MANOVA controls for mutual relationships whereas ANOVA does not. MANOVA usually includes more dependent variables in one analysis and investigates the relationship between them (Field, 2009).

Furthermore, the interaction between gender and subjective poverty revealed that subjectively non-poor men experienced higher levels of life satisfaction while subjectively poor men experienced lower levels of life satisfaction. A similar trend was confirmed among women. Indeed, higher levels of life satisfaction were experienced by subjectively non-poor women in comparison with subjectively poor women. These results are in line with findings by Hruščová et al. (2017) who found socio-economic status to be a significant and positive predictor of life satisfaction in a sample of unemployed people. Our findings are also supported by Hnilica (2006) who found a positive correlation between life satisfaction and income among adults from the Czech Republic. In study of Hnilica (2006), respondents did not report the exact number but rather assessed if their income was enough for their needs. Furthermore, it was not found age and gender to be significant predictors of life satisfaction although marital status, objective health and subjective health were confirmed as predictors of life satisfaction (Hnilica, 2006). On the other hand, we did not find significant differences between men and women in interaction between gender and subjective poverty in life satisfaction, but Ahn et al. (2004) found higher level of satisfaction with leisure activities and health and lower satisfaction with main vocational activity and financial support in unemployed men compared to unemployed women. The possible explanation of discrepancy between our findings and Ahn et al. (2004) in case of satisfaction could be that in our research we investigated the life satisfaction, but Ahn et al. (2004) examined satisfaction with specific areas like leisure activities, health, main vocational activity or financial support.

The findings of Hnilica (2006) have confirmed the importance of marital status, which was also identified in our research in the interaction between gender, marital status and economic activity. In particular, the research showed that non-single working men experienced a higher level of life satisfaction in comparison to non-single non-working men. This suggests the importance of economic activity in the context

of life satisfaction among non-single men. Other statistically significant differences were not found. Similarly, lower psychological well-being was also found in the unemployed when compared to the employed McKee-Ryan et al. (2005). As mentioned Vlačuha and Kováčová (2018) the unemployed people in Slovakia are at risk of poverty. In line with our findings both Ľapinová and Kentoš (2010) and Výrost (2007) have also suggested a lower level of life satisfaction in unemployed people. However, the interaction of economic activity with marital status in life satisfaction was not identified by Ľapinová and Kentoš (2010). This result in our analysis could be explained by the perception of the breadwinner role of men and the difficulty of realize this role in situation of non-working status. The unemployment of men and the perceived responsibility of them in providing financial stability could explain the lower life satisfaction among non-single non-working men. Knabe, Schöb, and Weimann (2016) have noted that unemployed men in a relationship feel unhappy because their gender role of the breadwinner is moved aside.

With regard to negative affect, the main effect of subjective poverty was found as well as two interactions: gender and objective poverty; and an interaction between objective poverty and subjective poverty. Subjective poverty seems to play a role in the experience of negative affect. This seems to be higher among respondents who consider themselves as being poor (subjectively poor). Moreover, lower levels of negative affect were observed among the subjectively non-poor. This is supported by Babjáčová et al. (2017) who found more frequent negative emotions among respondents who perceived their financial situation as being bad. Also Šolcová et al. (2012) suggested connection between negative feelings and perceived economic threat rather than real economic threat. This finding of Šolcová et al. (2012) supported our findings of main effect of subjective poverty in terms of negative emotions.

In terms of the interaction between gender and objective poverty regarding negative affect, a higher score of negative affect was found in objectively poor women compared to objectively non-poor women. Increased level of negative emotions in women compared to men has been confirmed by Hruščová et al. (2017) and Babjáčová et al. (2017). In addition to gender and the subjectively assessed health state of a person, Babjáčová et al. (2017) found that a worse financial situation is a positive predictor of experiencing negative emotions.

The interaction between objective poverty and subjective poverty was associated with higher levels of negative affect in three cases. Firstly, it was observed in objectively poor people who perceived themselves as subjectively poor compared to objectively poor people, who perceived themselves as subjectively non-poor. Secondly, it was detected in objectively non-poor people who perceived themselves as poor compared to respondents who were objectively poor and perceived themselves as subjectively non-poor. Thirdly higher level of negative affect was found in subjectively poor respondents who were objectively poor compared to objectively non-poor respondents, who perceived themselves as subjectively poor. There were no significant results found between objectively non-poor and objectively non-poor respondents who perceived themselves as non-poor. These results suggest that the subjective perception of poverty plays a considerable role. In a similar way, Diener et al. (2010) not only noticed the importance of money but also the importance of psychological needs and their fulfilment in relation to emotions. According to Diener et al. (2010), it is essential to pay attention to psychological and social variables in the context of well-being. Whilst previous literature does not provide a broad spectrum of evidence regarding the interaction between objective poverty and subjective poverty in the context of negative affect, it is something that could be investigated more in future research.

CONCLUSION

In summary, the results of our study have demonstrated the main effect of subjective poverty in life satisfaction and in negative affect. A main effect of objective poverty was not found. The interaction of subjective poverty and gender was detected as a significant result only in life satisfaction. In contrast, the interaction of objective poverty and gender was observed in both dependent variables, life satisfaction and negative affect. In only one significant interaction was not included poverty variable (objective or subjective poverty). It was interaction between gender, marital status and economic activity in terms of life satisfaction. This interaction was not found by negative affect. The interaction of both poverty variables (objective and subjective poverty) was detected by negative affect. In conclusion, significant finding seems to be the role of subjective poverty in relation to experiencing a lower level of life satisfaction and higher level of negative affect. Economic activity appeared to be significant in non-single men and played a role in the case of higher life satisfaction of working non-single men. Objective poverty was found to be significant particularly for women and they had a higher level of negative affect if they were objectively poor. Based on the interaction of subjective poverty and objective poverty, subjective poverty seems to be more pronounced in experiencing a higher level of negative affect. Further research needs to be conducted in order to confirm the findings of this study.

A possible limitation of our research could be the failure to include other variables in the analysis (e.g., gender role, size of residence by population, regions according to unemployment rate). This could provide more precise explanations of the results and detailed analysis.

For future research, the following is recommended. Firstly, research which includes variables such as gender role, size of residence by population (rural and urban areas) and regions according to the unemployment rate (region with either high or low levels of unemployment). Secondly, research which not only includes objective poverty based on income and subjective poverty but also the fulfilment of psychological needs as similar to Diener et al. (2010).

The current findings in this research could be valuable in the assessment of life satisfaction and negative affect amongst poor and non-poor Slovak people. Additionally, this research and future research including our recommendations could be beneficial in two areas. At first, in improving the well-being of the poor and non-poor people in the context of their sociodemographic characteristics. Secondly, in social work, by detecting which variables are the most important in the well-being of the poor and subsequently choosing the most appropriate intervention. This would either focus primarily on the provision of income, on the perception of subjective poverty or on fulfilling psychological needs. Vlačuha and Kováčová (2018) have noted that poverty is a current and serious issue. This study has offered insight into psychology research concerning poverty in Slovakia.

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SÚHRN

Negatívny afekt a životná spokojnosť v kontexte subjektívnej chudoby, objektívnej chudoby a vybraných sociodemografických premenných

Cieľ. Cieľom príspevku je identifikovať rozdiely v prežívaní negatívneho afektu a životnej spokojnosti v kontexte subjektívnej chudoby, objektívnej chudoby, manželského stavu, eko-

onomickej aktivity a rodu. Bola sledovaná najmä významnosť premenných chudoby.

Výskumný súbor a nástroje. Výskumný súbor pozostával zo 499 slovenských respondentov (249 žien; 250 mužov, priemerný vek $M = 39.60$, $SD = 11.47$). Testovú batériu tvorila Škála spokojnosti so životom a Škála negatívneho afektu z Dotazníka pozitívneho a negatívneho afektu (PANAS). Subjektívne hodnotenie chudoby bolo merané otázkou: „Dá sa vo Vašej ekonomickej situácii vystačiť s tým, čo máte?“ a objektívna chudoba pomocou otázky: „Aký je Váš čistý mesačný príjem (myslí sa príjem po zdanení)?“

Hypotézy. Boli predpokladané hlavné efekty objektívnej chudoby a subjektívnej chudoby na prežívanie negatívneho afektu a životnej spokojnosti a interakčné efekty objektívnej chudoby a subjektívnej chudoby s inými vybranými nezávislými premennými (manželský stav, eko-

nomická aktivita, rod) na prežívanie negatívneho afektu a životnej spokojnosti.

Štatistická analýza. Na štatistickú analýzu bola použitá MANOVA.

Výsledky. Výsledky potvrdili hlavný efekt subjektívnej chudoby pri životnej spokojnosti a negatívnom afekte. Z hľadiska životnej spokojnosti bola zistená interakcia rodu a objektívnej chudoby, rodu a subjektívnej chudoby a tiež rodu, manželského stavu a ekonomickej aktivity. V rámci negatívneho afektu boli v štúdiu zistené interakcie rodu a objektívnej chudoby, ako aj objektívnej chudoby a subjektívnej chudoby.

Obmedzenia štúdie. Obmedzením štúdie je nezahrnutie niektorých premenných do analýzy, ako veľkosť bydliska podľa počtu obyvateľov, kraje podľa miery nezamestnanosti či rodové roly.

FACTOR STRUCTURE OF THE BALANCED MEASURE OF PSYCHOLOGICAL NEEDS SCALE (BMPN) AMONG PERSONS WITH INCOMES BELOW THE 'AT-RISK-OF-POVERTY THRESHOLD'

JOZEF DŽUKA

Institute of Psychology, Faculty of Arts, University of Prešov

ABSTRACT

J. Džuka

Objectives. Self-Determination Theory assumes the existence of three basic psychological needs – relatedness, competence and autonomy. The objectives of this research respond to the fact that the analyses of the factor structure of tools for measuring basic psychological needs have almost exclusively been applied to samples of students. This research looks at a specific sample of people with an income below the 'at-risk-of-poverty threshold'. The intention was to replicate the identified factor structure of the Balanced Measure of Psychological Needs Scale (BMPN).

Sample and setting. Data were collected using on-line questionnaires in March 2018 as part of research where several tools for poverty research in Slovakia were verified. Quota selection was used in that there were representative quotas for gender, age, regions in Slovakia and net monthly income. In addition, people who were below the 'at-risk-of-poverty threshold' were selected for the analysis. The total sample comprised $N = 210$ participants, aged between 18 and 60 years old.

Hypotheses. It was hypothesized that the 5-factor model of the three-dimensional BMPN with two uncorrelated method factors, or the 6-factor model in which the three needs split up into

their respective satisfaction and dissatisfaction components would be suitable.

Statistical analysis. The data were analysed using correlation analysis, exploratory factor analysis with PCA and Varimax rotation as well as confirmatory factor analysis. This was done in the program LISREL 8.8.

Results. The results did not confirm the suitability of either model. Based on the correlation analysis and EFA of eighteen BMPN items, a model with two independent factors, i.e. satisfaction and frustration of the three basic psychological needs, was designed and tested using CFA. The model has acceptable properties ($\chi^2/df = 2.2$, RMSEA = 0.073, SRMR = 0.066, CFI = 0.96) and two scales of excellent reliability (.92 and .88 respectively).

Study limitation. The significance of the findings in the context of the structure of the measuring instrument and the specificity of the population surveyed is discussed.

key words:

Self-Determination Theory, psychological needs, confirmatory factor analysis

klúčové slová:

sebadeterminačná teória, psychologické potreby, konfirmatórna faktorová analýza

INTRODUCTION

In developed countries, psychological research looking at the poor has been lacking. Yet, it is of value to gain knowledge about the experiences of this group. However, the relationship between low income (defined as income below the 'at-risk-of-poverty threshold' in this research) and psychological experience is not direct (see Cummins, 2000). Some of the numerous variables which mediate this relationship can refer to

J. D.; Institute of Psychology, Faculty of Arts, University of Prešov, ul. 17. novembra 1, 080 01 Prešov, Slovakia; e-mail: jozef.dzuka@unipo.sk

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the satisfaction or frustration of psychological needs (see Džuka, 2019; Chen, Van Assche, Vansteenkiste, Soens, & Beyers, 2015). As such, it is useful to have adequate tools for measuring psychological needs. It is important to note that there are few of these tools globally, let alone any in Slovakia. Therefore, the aim of this paper was to verify the factor structure of a tool which measures the satisfaction of psychological needs devised in another country (USA) on a sample of Slovaks with an income below the 'at-risk-of-poverty threshold'. The paper will describe the complex development of this tool, its current form and the psychometric properties of a specific group of low-income people. This will enable researchers to carefully consider its usefulness.

A part of psychological research considers Self-Determination Theory (SDT) as the basis for the measurement of psychological needs. The first tool to our knowledge and the wording of the items in the SDT were published under the Intrinsic Motivation Inventory (IMI) (Ryan, 1982). One of the first studies which verified the factor structure and dimensionality of the IMI items was carried out by McAuley, Duncan and Tammen (1989). The authors reduced the number of IMI items from 27 to 18 and suggested names for the four identified dimensions. However, these dimensions are not compatible with the names of the scales that were later created on the basis of this tool. These dimensions were interest-enjoyment, perceived competence, effort-importance, and tension-pressure. McAuley et al. (1989) used CFA (LISREL VI, Jöreskog & Sörbom, 1984) to test a hypothetical model which they defined as follows: "The IMI constitutes a hierarchical factor model of four moderately related dimensions that collectively assess the construct of intrinsic motivation" (p. 51). They summarized the results of several alternative models using CFA in such a way that, after omitting 2 items, they maintained the five factor hierarchical model with 16 items and 4 dimensions (four first-order factors) as well as a single second-order factor (intrinsic motivation) ($\chi^2/df = 2.50$, $RMSR = .136$). It is possible to conclude that neither the postulated dimensionality nor the names of the scales were adopted in the next stage of developing the instrument, despite the fact that other authors refer to this study.

The text above appears to be incompatible with the name of this study, and also the text in this paragraph has similar features, yet indeed this does not represent measuring constructs which are currently known as "psychological needs". Kasser, Davey and Ryan (1992) and Ilardi, Leone, Kasser and Ryan (1993) created a Work Motivation Form (WMF) (two versions, for the employee and supervisor respectively). In selecting the items, they refer to McAuley et al. (1989, p.179) in that "the WMF measures three areas of motivation believed to be important in work: Competence, Relatedness, and Autonomy ... A total-motivation score was calculated by averaging the scores on the three motivational subscales, autonomy, competence, and relatedness". Elsewhere, they state that the WMF was created by adapting some items from the IMI which has a "well-developed factor structure" McAuley et al. (1989) as well as "by constructing new items on the basis of theoretical notions" (p.180). At this stage of developing the instrument, Kasser et al. (1992) and Ilardi et al. (1993) did not use the term "need", and before them McAuley et al. (1989) had not used the terms relatedness, competence and autonomy.

Over the ten years following this, it is possible to see how inconsistent the development process in the measurement of basic psychological needs in SDT has been. Gagné (2003), who developed the General Need Satisfaction Scale (BNSG-S), states that the scale was created by adapting the instrument for measuring motivation which had been published by Ilardi et al. (1993). This method had already been used in many other studies (e.g., Deci et al., 2001; these authors did not use the concept of motivation but rather intrinsic need satisfaction). It focuses on three psychological needs – the need for related-

ness (6 items), the need for competence (8 items) and the need for autonomy (7 items). In order to evaluate the results of the questionnaire, she used a composite score of all three scales. In other words, she did not work with the score of the three different psychological needs but with the total score as a sum of the three psychological needs. However, her study fails to justify the reason for generating a sum of the score of the three scales, which usually assumes the calculation of second order factor analysis. It can be added that the number of items in the different versions varied: IMI (27), BNSG – S (21) as well as the number of items in the other two publications (18 and 16 respectively).

Johnston and Finney (2010) examined the consistency of the theory of the instrument and the constructs used in measuring basic psychological needs as well as making a very good attempt to verify the psychometric properties of the instrument. The authors focused on assessing the existing state and stated that the measurement of basic needs in general (BNSG-S) as opposed to a specific context (cf. Gagné, 2003) is very frequent in research. However, they noted that “there has not been any rigorous study of the psychometric properties of the scale” (Johnston & Finney, 2010, p. 281). In their study, the theoretical bases were explicitly defined in the sense that it is the SDT that postulates the existence of the three basic psychological needs of relatedness, competence and autonomy. They used CFA to test two theoretical models: a model with one common factor of satisfaction (Gagné, 2003) and a model with three factors representing the satisfaction of each of the three needs separately. The one-factor model did not fit the data which supports the hypothesis that the BNSG-S is multidimensional. It should be noted that the use of the composite score (Gagné, 2003) would not be supported by these results. However, in contrast to what had been expected, the authors found that the theoretically postulated three-factor model did not fit the data. After testing a variety of alternative models and subsequently reducing the number of items from 21 to 16, a 16-item three-factor model with a negatively-worded method effect was proposed ($\chi^2 = 190.74$, $df = 96$, $SRMR = 0.047$, $CFI = 0.97$). However, Johnston and Finney (2010) have pointed out that in the case of a three-factor model, negatively formulated items are problematic. They go on to say that “a negative-worded method effect indicates that negatively worded items share common variance that is not explained nor is related to the respective latent factors, but is instead related to the fact that the items are negatively worded” (p. 287). Neubauer and Voss, (2016, p. 67) also find this conclusion problematic. They state that “this solution complicates the interpretation of the three need factors as the loadings of the method factors are not equal across all items. This indicates that the items (and, hence, the three subscales) are differentially influenced by the two method factors”.

These findings have two main implications. On one hand, they are a warning of the inappropriateness of using all three scale composite scores due to the presence of a negative method effect. On the other hand, they speak in favour of using a partial score of the three sub-scales, after reversing the polarity of the negative formulated items before calculating. Johnston and Finney (2010) analysed their data in such a way that the items which were negatively formulated were reversed prior to analyses – higher scores are indicative of a higher level of satisfaction of needs.

Sheldon and Hilpert (2012) also responded to the state of psychological needs measurement in SDT in the sense that they acknowledged Gagné’s (2003) often-used tool as being problematic. As a result of the problems with the negatively formulated items, they proposed an alternative measure called Balanced Measure Psychological Needs (BMPN). As had been done in previous studies, they administered it to a sample of students. They tested a five factor model which specified three latent need factors – relatedness, competence and autonomy as well as two latent method factors

– satisfaction and dissatisfaction. From their conclusions using the MTMM (Multi-Trait Multi-Method) approach, it was determined that the three need variables should not be combined into one general need factor and may have a separate satisfaction and dissatisfaction dimension. They stated that “the BMPN scale could be used as three distinct but distinctive autonomy, competence, and relatedness subscales (after recoding the negatively worded items)” (p. 449).

Sheldon and Hilpert (2012) called their instrument “balanced” because the tool from Gagné (2003) had been unbalanced in terms of the number of items in the three scales (6, 8, 7). There was also an issue in terms of the number of negatively formulated items – in the autonomy scale, no negatively formulated item was found. Sheldon and Hilpert (2012) realigned this imbalance and made further reformulations of items in the belief that positively and negatively formulated items are not only psychometric opposites but have a fundamental interpretative effect. Sheldon and Hilpert’s (2012) BMPN contains 18 items, 6 in each scale, while the number of positively and negatively formulated items in the scales is identical. They define latent variables as follows: “In line with Self-determination theory, autonomy is defined as the experience of choice, and self-regulation; competence is defined as the experience of effect, mastery, and ability; and relatedness is defined as the experience of support, connection, and closeness with important others (Deci & Ryan 2000). Satisfaction is defined as the so-called ‘I feel competent’ while dissatisfaction is defined as the ‘I feel incompetent’ experience” (p. 442). After reverse-scoring of negatively worded items, the three need inter-correlations were .46, .48, and .49 for the three BMPN scales.

One limitation of these analyses is the generalizability of the tool due to the samples only including students. This is also true of the Portuguese version where Cordeiro, Paixao, Lens, Lacante and Sheldon (2016) verified the factor structure and dimensionality of the BMPN among Portuguese high school students. They compared the 5 factor model (the three need factors of autonomy, competence and relatedness, and the two method factors of need of satisfaction and dissatisfaction) with three other alternative models. However, they did not find the best to be the 5 factor model but rather the 6 factor model that separately modelled the satisfaction and frustration components of the three needs. The term “satisfaction” was used for the positively formulated items while the term “frustration” was used for the negatively formulated items. As the negatively formulated items indicate a lack of satisfaction of needs, the term “frustration” appears to be a reasonable alternative.

Neubauer and Voss (2016) translated the BPMN into German and tested several models, including the 5 and 6 factor models. They posted an online questionnaire on two homepages which provided information about current psychological research for laymen. The link was also distributed through word-of-mouth recommendations. In study one, 323 people clicked on the link and 251 participants ($M = 26.2$ years, $SD = 7.3$, range = 14-59; 78% female) filled in the questionnaire; in study two, 209 participants filled in the questionnaire ($M = 25.3$, $SD = 5.1$, 14-48, 77% female). The authors compared their results ($\chi^2/df = 1.61$, CFI = 0.953, SRMR = 0.044, RMSEA = 0.050) with the five factor models tested by Sheldon and Hilpert (2012) without correlations of positive and negative item formulations, the so-called correlated trait/uncorrelated method model ($\chi^2/df = 1.45$, CFI = 0.974, SRMR = 0.042, RMSEA = 0.039) as well as with the correlated traits/correlated methods model ($\chi^2/df = 1.51$, CFI = 0.974, SRMR = 0.043, RMSEA = 0.040). It can be said that these two tested models met the rigorous cut-off criteria for model fit. Similarly to Cordeiro et al. (2016), the authors also tested a six-factor model where the three needs split into their respective satisfaction and dissatisfaction components. This model was favoured by

the authors who commented on the comparison of 5 and 6 factor models as follows: “A three-factor solution with a latent ‘method’ factor representing the dissatisfaction items is also acceptable. Therefore, we conclude that the BMPN can be used to assess either the fulfilment of the three needs, or the three needs split into their satisfaction and dissatisfaction subscales. Although the six-factor solution should be preferred, a three-factor solution is acceptable if necessary: For example, with a small sample size, using the six scores as predictors of an outcome could overload the model” (p. 64). In terms of scale intercorrelation, the latent factors for autonomy, competence, and relatedness in their study (.41, .58, and .62, respectively) were similar to the correlations in the original version (.51, .54, and .59).

Neubauer and Voss (2016) repeated their analysis on another sample, and the six factor model which they favoured showed itself to be the best although worse than in the first study: $\chi^2/df = 1.90$, CFI = 0.894, SRMR = 0.064, RMSEA = 0.066). In their second study, on the basis of a number of analyses from the first, the authors reformulated one item in order to “to avoid an artificial inflation of correlations, we have replaced item 2 of the relatedness scale (‘I was lonely’) by a new item (‘I was excluded or ostracized’)” (p. 65).

The objectives of this research respond to the fact that previous analyses of the factor structure of tools measuring basic psychological needs have almost exclusively been applied to samples of students. Our research builds on the analysis of factor structure and dimensionality of the measurement of basic psychological needs with BMPN (Sheldon & Hilpert, 2012, Neubauer & Voss, 2016). It differs in that it will use a specific sample of people with incomes below the ‘at-risk-of-poverty threshold’. Our intention was to replicate the identified factor structure of the current BMPN version (Neubauer & Voss, 2016). In particular, we aimed to confirm the validity of the 5-factor model of the three-dimensional BMPN with two uncorrelated method factors and to verify the suitability of the 6 factor model.

METHOD

Participants and Procedure

Data were collected using an on-line questionnaire in March 2018 as part of research where several tools for poverty research in Slovakia were verified. From the total number of respondents $N = 798$, 501 completed the BMPN (62.8%). Quota selection was used in that there were representative quotas for gender, age, regions in Slovakia and net monthly income. In addition, people who were below the ‘at-risk-of-poverty threshold’ were selected for the analysis. The total sample (Table 1) comprised 210 participants, aged between 18 and 60 years old ($M = 35.03$, $SD = 11.66$).

29.5% of the respondents had a net monthly income (income after tax) of less than €200 while 148 (70.5%) of the respondents had an income between €201–400. According to Statistical Office of the Slovak Republic data published in 2018, being at risk of poverty in 2016 was considered to be a monthly net income of €347.58. While newer data have not yet been published, a rise in the gross minimum wage from €405 in 2016 to €480 in 2018 means this threshold has increased. As such, the current poverty line is slightly higher than in 2016 at around €400.

Measures

Basic Psychological Needs

In order to assess basic psychological need satisfaction, the 18-item Balanced Measure of Psychological Needs scale was used (BMPN, Sheldon & Hilpert, 2012). Based

Table 1 Demographic characteristics of total sample (N = 210)

	Number	Percentage
Gender		
Male	63	30.0
Female	147	70.0
Slovak region		
Western part	55	26.2
Central part	87	41.4
Eastern part	68	32.4
Education		
Elementary	11	5.2
Apprentice school	27	12.9
Secondary specialized and “gymnázium”	117	55.7
University	55	26.2
Economic status		
Full time employee	26	12.4
Part time employee	24	11.4
Entrepreneur or self-employed	5	2.4
Unemployed	23	11.0
Student	36	17.1
Retiree	2	1.0
Disabled or incapable to work	41	19.5
Other	53	25.2
Objective income		
0-200 €	62	29.5
201-400 €	148	70.5

on a recommendation by Neubauer and Voss (2016), we replaced one item “I was lonely” with “I was excluded or ostracized.” The scale contains 6 items each for relatedness (“I felt close and connected with other people who are important to me”), competence (“I did well even at the hard things”), and autonomy (“I was free to do things my own way”). In each, there were 3 positively and 3 negatively worded items. Items were rated on a 7-point Likert scale, ranging from 1 (not true at all) to 7 (completely true). The English version was firstly translated into Slovak by the author (Appendix). The back translation was done by an independent translator and the third, an English native speaker, commented on the back translation.

RESULTS

Preliminary analysis

Table 2 presents the correlations of the 18 BMPN items. Each of the three psychological needs is represented by 3 positively formulated and 3 negatively formulated items (e.g. items 1 to 6 represent the relatedness scale, the first three positive and the other three negative). The three items that are positively formulated correlate with each other, both positively and highly, which is what had been expected: relatedness (.61 to .67), competence (.64 to .71) and autonomy (.57 to .61). However, the almost

Table 2 Summary of item correlations (N = 210)

Item/Scale	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Relat+	.61**	.67**	-.06	.09	.07	.53**	.39**	.56**	-.06	.00	.09	.50**	.54**	.49**	.02	.05	.05
2. Relat+		.67**	.10	.26**	.15*	.49**	.51**	.60**	.16*	.10	.13	.57**	.59**	.62**	.27**	.07	.17*
3. Relat+			.16*	.09	.51**	.48**	.59**	-.01	.02	.09	.57**	.61**	.55**	.09	.05	.10	.16*
4. Relat-				.46**	.44**	.01	.13	.17	.58**	.44**	.38**	.05	.04	.13	.50**	.38**	.49**
5. Relat-					.47**	.24**	.30**	.34**	.39**	.48**	.39**	.16*	.28**	.29**	.42**	.45**	.47**
6. Relat-						.07	.25**	.20**	.43**	.62**	.46**	.17*	.06	.11	.46**	.40**	.52**
7. Relat+							.69**	.64**	.00	.03	.09	.51**	.60**	.56**	.13	.09	.03
8. Relat+								.71**	.12	.14*	.21**	.49**	.62**	.61**	.22**	.14*	.16*
9. Relat+									.07	.14*	.21**	.56**	.73**	.66**	.19**	.18*	.13
10. Relat-										.51**	.40**	.08	.08	.10	.67**	.32**	.48**
11. Relat-											.46**	.06	.06	.09	.46**	.55**	.52**
12. Relat-												.17*	.14*	.22**	.30**	.34**	.47**
13. Relat+													.57**	.61**	.15*	-.09	.02
14. Relat+														.59**	.20**	.06	.03
15. Relat+															.16*	.01	.11
16. Relat-																.39**	.57**
17. Relat-																	.53**
18. Relat-																	1

Notes. Table depicts product-moment correlations. Relat = Relatedness, Comp = Competence, Auto = Autonomy, + = positively worded items, - = negatively worded items

equally high correlations of the positively formulated triple items of relatedness with the positively formulated items of the remaining two scales of competence and autonomy (range .39 to .62) indicates that the ability of this scale to differentiate between constructs is controversial. The same applies to the remaining combinations: the positively formulated competency scale items very closely correlate with the positively formulated items in the remaining two scales (.39 to .73); in the case of the positively formulated items in the autonomy scale it is .49 to .73.

There is a similar state of results in the negatively formulated items despite the correlations being slightly lower. The triplets of negatively formulated items correlate with each other as follows: relatedness .44 to .47, competence .40 to .51 and autonomy .39 to .57. It was found that there were equally high, and in some cases even higher, correlations of the negatively formulated items in the relatedness scale with the negatively formulated items in the remaining two scales of competence and autonomy (.38 to .62). The negatively formulated competence scale items very strongly correlate with the negatively formulated items in the remaining two scales (.30 to .67); in the case of the negatively formulated items in the autonomy scale it is .38 to .62.

It can be concluded that the correlation analysis does not support the expectation that the positively formulated items represent three different constructs. The same applies to the negatively formulated items. On the contrary, it appears that all the positively formulated items, regardless of the assumption that there are three factors, represent a single factor while the negatively formulated items also form a different factor.

Table 3 presents the correlations of the six subscales which consist of triplets of positively and negatively formulated items, then among the three scales (relatedness, competence, autonomy) whose score was calculated by adding 6 items after the polarity of the half of the negatively formulated items of a given scale was reversed, and finally, between satisfaction and frustration scales consisting of 9 positively and 9 negatively formulated items.

The intercorrelations of the three positively formulated subscales, relatedness, competence and autonomy, are very high (.66 to .78). The same applies to the three negatively formulated subscales (.70 to .73). The problem seems to be the low correlations of the positively and negatively formulated subscales: Relatedness+ and Relatedness- correlate .14, Competence+ and Competence- correlate .16 and Autonomy+ and Autonomy- correlate .11. These low and positive correlations of scales which represent the same construct is an unexpected and unwanted situation. This means that the positively and negatively formulated items do not represent the same constructs.

A further noteworthy result refers to the three scales of relatedness, competence and autonomy which were created by adding 6 items of the respective scale (previously the negatively formulated items were rescaled, Sheldon & Hilpert, 2012). These scales were found to correlate very highly with each other, from .61 to .65. However, the very low coefficients of alpha consistency in these scales (.53 to .54) indicate their low reliability and thus the inappropriateness of using them in research. Finally, the two scales of satisfaction and frustration which were created from the positively and negatively formulated items correlate low ($r = .20$). This indicates the need to independently measure satisfaction and frustration of psychological needs.

The results of the preliminary analysis can be summarized as follows. Despite intending to verify the 5 and 6 factor models, the correlation analysis does not support the suitability of these models and rather favours a two-factor model of psychological needs with satisfaction and frustration factors. Therefore, we have conducted an ex-

Table 3 Scale intercorrelations, descriptive statistics and alpha reliability

Scale	2	3	4	5	6	7	8	9	10	11	M	SD	alpha
1. Relatedness+	.14*	.66**	.08	.75**	.13	.64**	.45**	.42**	.89**	.13	5.14	1.39	.87
2. Relatedness-		.26**	.73**	.21**	.70**	-.67**	-.35**	-.41**	.23**	.90**	3.45	1.44	.72
3. Competence+			.16*	.78**	.20**	.29**	.66**	.40**	.90**	.23**	4.53	1.44	.87
4. Competence-				.16*	.71**	-.50**	-.64**	-.45**	.15*	.90**	3.36	1.42	.72
5. Autonomy+					.11	.39**	.48**	.62**	.93**	.18**	4.82	1.34	.81
6. Autonomy-						-.45**	-.39**	-.71**	.16*	.90**	3.41	1.50	.73
7. Relatedness							.61**	.63**	.49**	-.60**	4.84	0.93	.53
8. Competence								.65**	.59**	-.51**	4.58	0.93	.53
9. Autonomy									.53**	-.58**	4.70	0.95	.54
10. Satisfaction										.20**	4.83	1.26	.92
11. Frustration										1	3.41	1.31	.88

Notes. Table depicts product-moment correlations. + = three positively worded items of the scale, - = three negatively worded items, Relatedness, Competence and Autonomy = three negatively worded items were reversed scored prior to summing of six items (Sheldon & Hilpert, 2012), Satisfaction = sum of 9 positively worded items, Frustration = sum of 9 negatively worded items

ploratory factor analysis (EFA) before the Confirmatory Factor Analysis (CFA) using PCA and varimax rotation. Based on this, the two factors that explain 58% of the variance – satisfaction 35% and frustration 23% – represent the best and only appropriate factor solution.

Confirmatory factor analysis (CFA)

The indicator data was considered at the approximate interval level and screened for multivariate normality. Skewness was within -1 and +1 range for all indicators. Therefore, the subsequent CFA was calculated with the maximum likelihood estimations (ML). The factor structure of the BMPN was analysed in the program LISREL 8.8. CFA has several advantages over other statistical procedures (see, e.g., Brown, 2015). The goal was to test two models using CFA: a) a five factor model with three factors that represent the three psychological needs and two factors that represent the positively and negatively formulated items (this is the model preferred by Sheldon and Hilpert (2012) and was also tested by Neubauer and Voss (2016)); (b) a six-factor model in which the items in three factors are positively formulated and three factors in which they are formulated negatively. This is the model favoured by Neubauer and Voss (2016).

However, based on the results of the correlation analysis and EFA among people with incomes below the ‘at-risk-of-poverty threshold’, it was also decided to test a third, two-factor model with factors – satisfaction (9 positively formulated items) vs. frustration of psychological needs (9 negatively formulated items) without specification (differentiation) of the three basic psychological needs. The aim was to verify the assumption that the positively and negatively formulated questionnaire items would not only produce the effect of the method as assumed by Sheldon and Hilpert (2012), but that these factors would represent two different constructs among persons with incomes below the ‘at-risk-of-poverty threshold’ – satisfaction vs. frustration of psychological needs.

Determining model fit

In order to assess the fit of the models, the common fit indices used in the CFA were examined. These included the ratio of the Chi-square significance test and degrees of freedom, the Standardized Root Mean square Residual (SRMR), the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA). In order to determine the goodness of fit an “adequate” cut-off criteria as a starting point was chosen, similar to that of Sheldon and Hilpert (2012, see Hu & Bentler 1999). We then paid close attention as to whether the results approached or surpassed the rigorous cutoffs (denoted in parentheses): $\chi^2/df < 2.0$; CFI $> .90$ (.96); SRMR $< .08$ (.07); RMSEA $< .10$ (.06) (Hu & Bentler 1999).

Factor structure and Dimensionality

Table 4 presents a summary of model comparisons. The original intention to compare the 5 and 6 factor models by Neubauer and Voss (2016) was not possible with our results. The tests of both models in persons with incomes below the ‘at-risk-of-poverty threshold’ did not have an appropriate solution. This was indicated by the results of the correlation analysis and EFA. The most acceptable solution seemed to be the one with two factors – satisfaction and frustration (Fig. 1).

So as to fit the value indices, our results can be compared to the 5 factor model and also partly to the 6 factor model by Neubauer and Voss (2016). Although the ratio of χ^2/df in our model is less favorable (there is no consensus regarding an acceptable

Table 4 CFA of the BMPN: Overall model fit in studies Sheldon and Hilpert (2012), Neubauer and Voss (2016) and in Slovak study

	χ^2	df	χ^2/df	RMSEA	SRMR	CFI
5 factor model						
Sheldon and Hilpert (2012)	–	–	1.45	0.039	0.042	0.97
Neubauer and Voss (2016)	242.51	114	2.12	0.073	0.102	0.87
6 factor model						
Neubauer and Voss (2016)	228.37	120	1.90	0.066	0.064	0.89
2 factor model						
Slovak study $\theta_{01,13}$ and $\theta_{06,05}$ free ^a	294.38	132	2.23	0.073	0.066	0.96

Notes. ^a Correlated residuals ($\theta - \theta$) between items 01relatedness+ and 13relatedness+, and 06autonomy- and 05competence-

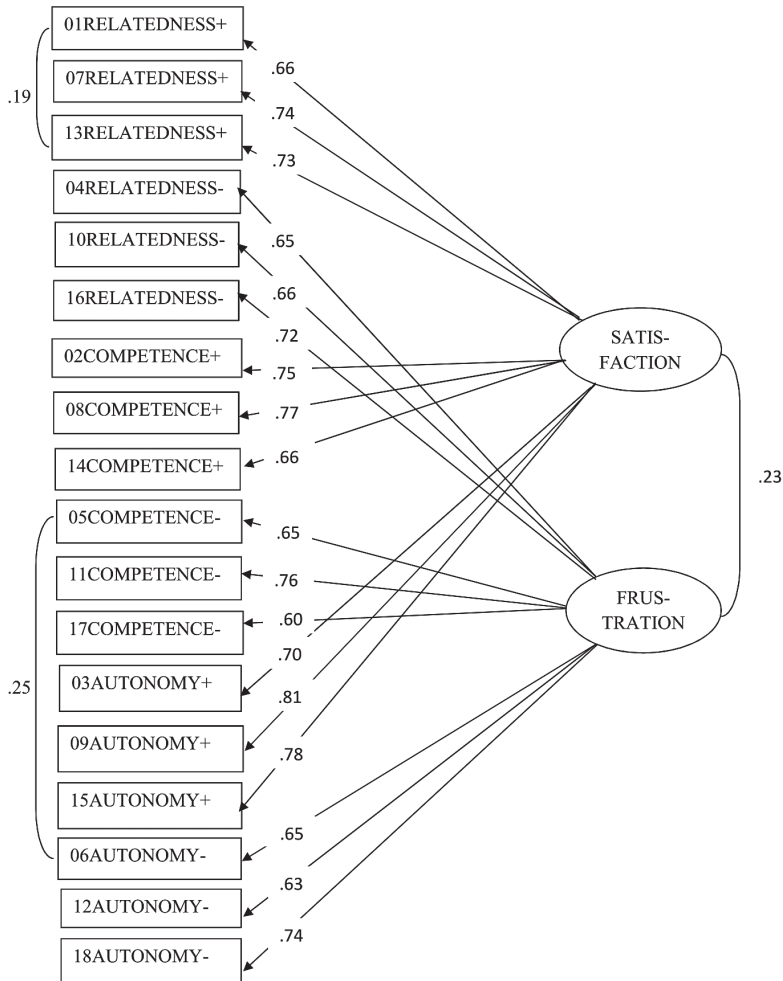


Fig. 1 Two-factor confirmatory model

ratio for this statistic, recommendations range from as high as 5.0 (Wheaton et al., 1977) to as low as 2.0 (Tabachnick & Fidell, 2007), the RMSEA and SRMR are comparable or even better in our results. Indeed, the relative fit index CFI is even more favourable (a value of $CFI \geq 0.95$ is recognized as indicative of good fit, Hu & Bentler, 1999). As can be seen in Figure 1, all factor loadings are high and at the same time, both dimensions – satisfaction and frustration, are sufficiently independent from each other (.23). The two permitted covariances of error variances can be considered as justified. In the first case (01relatedness+ and 13relatedness+), there are two positively formulated items that are very similar while in the second case (05competence- and 06autonomy-) these are two negatively formulated items. However, from a theoretical viewpoint they belong to different scales although people perceived them as very similar. Most importantly, since in the two-dimensional model the two allowed covariances belonged to their own scales, their weighted sum before calculating the overall score of the scale can be considered a suitable solution for allowing these covariances.

DISCUSSION

The result of analysing the factor structure of the BMPN among persons with incomes below the ‘at-risk-of-poverty threshold’ is a model with two independent factors and dimensions – satisfaction of psychological needs and frustration of psychological needs. This suggests that the BMPN scale could not be used as three separate and distinguishable relatedness, competency, and autonomy subscales (after recoding the negatively worded items) as recommended by Sheldon and Hilpert (2012) and also partly by Neubauer and Voss (2016). Our analysis suggests that the satisfaction and dissatisfaction subscales for a given need should not be treated separately, as the satisfaction and dissatisfaction forms of needs could be substantive and distinguishable in and of themselves (6 factor model). Moreover, it is the case for our data “that need satisfaction and need dissatisfaction are more than psychometric opposites and can differentially affect self-reports and behavior” (Neubauer & Voss, 2016, p. 70). In their responses to the items, persons with incomes below the ‘at-risk-of-poverty threshold’ did not differentiate between the three psychological needs but responded in a significantly different way to positively and negatively formulated items. This finding raises two questions. Firstly, why the BMPN questionnaire factor structure among people with incomes below the ‘at-risk-of-poverty threshold’ is different from the studies done on student samples. Secondly, what the fact that the three psychological needs could not be identified as latent factors means for the interpretation of the questionnaire results. This also raises the issue as to how we should interpret the results of the questionnaire in accordance with the previously demonstrated two factor structure tool.

It was not possible to confirm the model with the five factors (causes of improper solutions, see e.g., Chen, Bollen, Paxton, Curran, & Kirby, 2001). This means that we have not been able to show that two independent measures of the same needs are not correlated (i.e., the relatedness satisfaction and relatedness dissatisfaction measures are not associated by way of the latent relatedness need). The corresponding satisfaction and dissatisfaction subscales did not converge in measuring their own latent need. In addition, the needs factors are collinear and are not tapping different constructs (divergent validity). This suggests that the three needs should not be examined separately. In other words, it has not been possible to show the scales as sound measures of their individual traits, without significant shared method variance causing bias in trait measurement. Our first explanation is related to the fact that 210 respondents

answered the questionnaire for whom the satisfaction of psychological needs is not differentiated. Thus, a theoretically postulated needs structure for this group does not apply. The second explanation is unrelated to the specific sample but to the fact that the items representing the three different psychological needs are not sufficiently differentiated.

While Sheldon and Hilpert (2012) have shown acceptable reliability values (alpha) of the three scales after reverse scoring the negatively worded items for the BMPN autonomy, competence, and relatedness (.78, .79, and .78, respectively); the reliability scale values in our research are very low (.53, .53, and .54, respectively). This is the reason why the three scales and their scores should not be interpreted. Although there is no support for this in our data, it does not rule out that if a researcher wants to interpret each scale separately, they should unconditionally verify their reliability. Our model (correlated methods, no traits), confirmed by CFA, does not suggest that satisfaction and frustration (dissatisfaction) factors are different “methods” measuring the three needs. We assume that these two factors represent two independent dimensions – satisfaction vs. frustration of undifferentiated psychological needs. Since both dimensions correlate low (5% of the common variance), they provide different information.

First of all, this correlation suggests that experiencing satisfaction and frustration in the same person are not mutually exclusive – people can be both satisfied and frustrated.

An explanation for this view can be found in a third study by Neubauer and Voss (2016) which relates to the stability of the measured characters. The authors verified the stability of the three scales, i.e. relatedness, competence and autonomy and stated that the nature of the measured characters is that of state rather than traits. The test-retest correlations (measurement interval of 1 week) were of moderate size: from .40 to .53. In his earlier study, Sheldon (2011) assumed that satisfaction and dissatisfaction could work at a different time (the period covered by the questionnaire was that over the last 30 days). This would explain why statements about the satisfaction and frustration of psychological needs correlate very poorly. He also assumed that the two mechanisms operate in a completely different way and claimed frustrated needs “trigger motivation to restore the dissatisfied need, while need satisfaction rewards a successful restoration process” (Sheldon, 2011, p. 69). In our opinion, need satisfaction not only rewards the successful restoration process but acts as a separate positive incentive system. It is also worth mentioning a point made by Neubauer and Voss (2016) that low test-retest correlation may not only mean low stability of the measured character but may also mean a low reliability of the measurement. Although the alpha consistency coefficient expresses another type of reliability, our coefficients are similar and relatively low (to .53) in comparison with the retest reliability coefficients by Neubauer and Voss (2016).

CONCLUSION

The BMPN can be considered appropriate for assessing the satisfaction and frustration of the basic psychological needs in low-income groups. However, in contrast to previous studies carried out among students, the analysis of construct validity using CFA showed a different factor structure – two scales representing two latent factors which have excellent internal consistency (.92 and .88 respectively). They are also relatively independent (5% of the common variance) and sufficiently discriminate between satisfaction or dissatisfaction of psychological needs.

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SÚHRN

Faktorová štruktúra škály vyváženej miery psychologických potrieb (BMPN) u osôb s príjmom pod hranicou rizika chudoby

Ciele. Sebaderminačná teória predpokladá existenciu troch základných psychologických potrieb – spolupatričnosti, kompetencie a autonómie. Ciele tohto výskumu reagujú na fakt, že analýzy faktorovej štruktúry nástroja na meranie základných psychologických potrieb boli takmer výlučne realizované na vzorkách štu-

dentov. Tento výskum je zameraný na špecifickú skupinu osôb s príjmom pod hranicou rizika chudoby. Zámerom bolo replikovať identifikovanú faktorovú štruktúru škály BMPN.

Výskumný súbor. Dáta boli zozbierané prostredníctvom on-line dotazníkov v marci 2018 ako súčasť výskumu, v rámci ktorého bolo overovaných viacero nástrojov na výskum chudoby na Slovensku. Bol použitý kvótny výber, v ktorom bolo zohľadnené reprezentatívne zastúpenie z hľadiska rodu, veku, regiónov a čistého mesačného príjmu. Okrem toho, do analýzy boli vybrané osoby, ktorých príjem bol pod hranicou rizika chudoby. Celkový výskumný súbor predstavovalo $N = 210$ participantov vo veku 18 až 60 rokov.

Hypotézy. Bolo predpokladané, že vhodnými modelmi budú 5-faktorový model s tromi dimenziami a dvoma nekorelujúcimi faktormi metódy alebo 6-faktorový model, v ktorom by

sa každá z troch potrieb rozdelila na dva komponenty, uspokojenie a neuspokojenie.

Štatistická analýza. Dáta boli analyzované pomocou korelačnej analýzy, exploratívnej faktorovej analýzy PCA s rotáciou varimax, ako aj pomocou konfirmatórnej faktorovej analýzy. Bolo použitý program LISREL 8.8.

Výsledky. Výsledky nepotvrdili vhodnosť žiadneho z dvoch modelov. Na základe korelačnej analýzy a EFA osemnástich položiek BMPN bol navrhnutý a pomocou CFA testovaný model s dvoma nezávislými faktormi, t. j. uspokojenie a frustrácia troch základných psychologických potrieb. Model má akceptovateľné vlastnosti ($\chi^2 / df = 2.2$, RMSEA = 0.073, SRMR = 0.066, CFI = 0.96) a dve škály výbornú reliabilitu (0.92 a 0.88).

Obmedzenia štúdie. Bol diskutovaný význam zistení v kontexte štruktúry nástroja a špecifik opytovanej skupiny osôb.

APPENDIX

Slovak translation of the BMPN

Prosím, čítajte pozorne postupne všetky nasledujúce konštatovania a premýšľajte, v akom vzťahu sú k Vášmu životu. Uveďte, v akej miere sa vzťahujú na Vás, *ak zohľadníte predchádzajúcich 30 dní.*

Na vyjadrenie Vašich odpovedí použite stupnicu:	1	2	3	4	5	6	7
	vôbec to nie je pravda			trochu je to pravda		úplne je to pravda	

zakružkujte jedno číslo, ktoré sa najviac hodí

1. Zažíval/a som blízkosť ľudí, ktorí sa o mňa zaujímajú a o ktorých sa zaujímam ja	1	2	3	4	5	6	7
2. Úspešne som splnil/a náročné úlohy a projekty.....	1	2	3	4	5	6	7
3. Mal/a som slobodu urobiť veci tak, ako som ja sám/a chcel/a.....	1	2	3	4	5	6	7
4. Iní ľudia ma odmietli alebo neprijali.....	1	2	3	4	5	6	7
5. Zažil/a som zlyhanie alebo som nebol/a schopný/á niečo urobiť.....	1	2	3	4	5	6	7
6. Zažíval/a som tlak, ktorý by som viacej nechcel/a.....	1	2	3	4	5	6	7
7. S ľuďmi, ktorí sú pre mňa dôležití, som sa cítil/a byť blízky/a a úzko spätý/á.....	1	2	3	4	5	6	7
8. Prijal/a som a zvládol/la veľké výzvy.....	1	2	3	4	5	6	7
9. Moje rozhodnutia boli prejavom môjho pravého „ja“.....	1	2	3	4	5	6	7
10. Cítil/a som sa byť zo strany jedného alebo viac pre mňa dôležitých ľudí nedocenený/á	1	2	3	4	5	6	7
11. Urobil/a som niečo hlúpe a cítil/a sa potom ako neschopný/á.....	1	2	3	4	5	6	7
12. Iní ľudia mi prikázali, čo mám robiť.....	1	2	3	4	5	6	7
13. Mal/a som silný pocit dôvery v ľudí, s ktorými som trávil/a čas.....	1	2	3	4	5	6	7
14. Aj veľmi ťažké veci som urobil/a dobre.....	1	2	3	4	5	6	7
15. Robil/a som naozaj to, čo ma zaujíma.....	1	2	3	4	5	6	7
16. Mal som nezhody alebo konflikty s ľuďmi, s ktorými zvyčajne dobre vychádzam.....	1	2	3	4	5	6	7
17. Išlo mi ťažko urobiť to, v čom by som mal byť dobrý.....	1	2	3	4	5	6	7
18. Musel som robiť veci proti vlastnej vôli.....	1	2	3	4	5	6	7

THE EFFECT OF LOCUS OF CONTROL ON THE RELATIONSHIP BETWEEN POVERTY AND SELF-ESTEEM

MARCEL MARTONČIK

Institute of Psychology, Faculty of Arts, University of Prešov

ABSTRACT

M. Martončík

Objectives. The goal of this exploratory study was to examine whether locus of control significantly moderates the relationship between poverty and self-esteem.

Participants and setting. The research sample consisted of 499 people (249 men) living in Slovakia. The sample selection was based on a representative quota for gender, age group and region.

Hypotheses. It was hypothesized that poor people with low internal locus of control may view their economic situation as a result of their incompetence, cognitive skills, personality or other characteristics. This can devalue their self-esteem more than in people with high internal locus of control. In a situation of high chance or high external locus of control, poor people may see their economic situation as a result of factors which are beyond their control. They may see themselves as unable to change their economic situation which can therefore devalue their self-esteem more than in people with low external locus of control or chance.

Statistical analysis. The hypotheses were examined using moderated multiple linear regressions.

Results. In the present data, locus of control was not a significant moderator. The effect sizes in the relationship between poverty and self-esteem were small.

Study limitations. The limitations of the present study are the lower reliability of the internality dimension of the Multidimensional Locus of Control Scale as well as the absence of meaningful covariates, e.g. duration or previous experiences of poverty or parental warmth.

key words:

poverty,
self-esteem,
locus of control,
scarcity,
economic situation

klúčové slová:

chudoba,
sebahodnotenie,
miesto kontroly,
nedostatok,
ekonomická situácia

INTRODUCTION

According to Eurostat, 22.4% of the population in the EU-28 was at risk of poverty or social exclusion in 2017. This is an extremely high number, considering that Western capitalistic civilization is deemed full of wealth and abundance. Therefore, research dealing with poverty perpetuation and the causes and consequences of poverty is an ongoing hot topic. A person's self-esteem is one of the variables which could play a crucial role in poverty perpetuation and as a consequence. Poor people tend to have low self-esteem (e.g., James & Amato, 2013; Waters & Moore, 2002) which may prevent them from finding and holding onto a good job. The causal effect of poverty on self-esteem has been supported by the consistent results of longitudinal studies (Avison, 2001; Elliot, 1996). These studies have examined job loss in rela-

M. M., Institute of Psychology, Faculty of Arts, University of Prešov, Slovakia; e-mail: martoncik@protonmail.ch

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tion to a worsening economic situation and subsequent lowering of self-esteem and changes in self-concept. Indeed, a longitudinal study by Drago (2011) found that low self-esteem is one of the causes of low earning. This can be the hypothetical root of poverty perpetuation. Besides that, low self-esteem also has an effect on various kinds of financial behavior, e.g. saving, investment or credit management behaviors (Tang & Baker, 2016). Self-esteem is also important from other perspectives. There have been numerous studies which have connected self-esteem with various aspects of psychological well-being (e.g., Du, King, & Chi, 2017; Paradise & Kernis, 2002). These have consistently found that people with low self-esteem (including poor people) score significantly lower. Self-esteem is also important in the process of creating social support (Marshall, Parker, Ciarrochi, & Heaven, 2013). Social support can be useful in the process of overcoming or coping with poverty. These are the main reasons why psychological research should deal with self-esteem amongst the poor. The process by which the economic situation could influence self-esteem is unclear and has not yet been addressed in the literature.

In accordance with the United Nations (1995), poverty can be defined as a complex construct of factors such as income insufficiency, lack of resources ensuring dignified living, experiences of hunger, aggravated health and poor healthcare, limited access to education, improper housing conditions and social discrimination. Many of the constitutive definitions such as from the UN, include vague words such as “poor”, “limited”, “improper” and “aggravated”, which are very hard to operationalize. This may be the reason why such a high number of different operational definitions exist (e.g. food/income ratio, fixed cost/income ratio, total expenditure/income ratio, composite indexes of wealth, absolute or relative poverty lines). Many researchers believe that poverty cannot be objectively calculated and have therefore introduced concepts of subjective poverty as an individual feeling (Van Praag & Ferrer-i-Carbonell, 2008). The choice of definition and its subsequent measurement heavily influence who will be labelled as poor. This has serious implications for the policies aimed at reducing poverty (Hagenaars & de Vos, 1988; Williamson, 1999). It can be concluded that poverty is a multidimensional construct (see: Smeeding, 2015; Siposné Nándori, 2010; Van Praag & Ferrer-i-Carbonell, 2008) and traditional assessments using economic indicators should be enriched by the inclusion of subjective evaluations.

Self-esteem has been defined as “the individual’s positive or negative attitude toward the self” (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995, p. 141) and is one of the most studied topics in personality and social psychology (Campbell, Eisner, & Riggs, 2010). The construct of self-esteem is relevant to poverty research because of its well-established association with psychological well-being (Ho, Li, & Chan, 2014). In particular, low self-esteem is associated with a higher rate of depression and anxiety (Rosenberg et al., 1995), which are states often present in poor people (Ho, Li, & Chan, 2014; Lund et al., 2010). Research has shown consistent results in claiming that poor people have low self-esteem, whether defined by income (James & Amato, 2013; Mikulášková & Adamkovič, 2018), subjectively assessed poverty (Waters & Moore, 2002) or socioeconomic status (Damian & Roberts, 2015; Quon & McGrath, 2015; Twenge & Campbell, 2002). In addition, the results of longitudinal studies have shown that job loss or claiming welfare lowers self-esteem (Avison, 2001; Elliot, 1996). On the contrary, people with higher socioeconomic status or income tend to have higher self-esteem (Damian & Roberts, 2015; Quon & McGrath, 2015; Twenge & Campbell, 2002).

Another construct, which can hypothetically mitigate or intensify the effect of poverty on self-esteem, is locus of control. Locus of control has been expressed as “the

degree to which the individual perceives that the reward follows from, or is contingent upon, his own behavior or attributes versus the degree to which he feels the reward is controlled by forces outside of him-self and may occur independently of his own actions” (Rotter, 1966, p. 1). There are two general dimensions of locus of control; internal and external. People with high internal locus of control believe that they can manage their lives and influence the events around them. Internal control is often referred to as efficacy, autonomy, agency or instrumentalism (Shifrer, 2018). People with high external locus of control believe that their lives are under the control of powerful others or what happens to them is a result of luck, chance or fate (Rotter, 1966). Ryon and Gleason (2013) have suggested that it is more likely that external control is a result of poverty rather than its cause. They have stated that “those who consistently report higher levels of hassles and anxiety have generally lower levels of daily (internal) locus of control” (p. 129). Accordingly, people with low income (Lachman & Weaver, 1998) or low socioeconomic status (Shifrer, 2018) have external control and believe rather in fate and powerful others than in their own efficacy (Lachman & Weaver, 1998). Goldsmith, Veum and Darity (1995) summarized the results of 11 longitudinal and cross-sectional studies, in which five studies together with citing authors confirmed the causal effect of job loss (and loss of income) on the increase of external locus of control. However, this effect was not confirmed in the six remaining studies. Similar results were also obtained in the six-year longitudinal study by Nowicki, Ellis, Iles-Caven, Gregory, and Golding (2018). They found that higher externality was associated with a higher prevalence of financial problems, greater stress and less stability in personal relationships. According to Shifrer (2018) and Ahlin and Lobo Antunes (2015), the relationship between economic situation and locus of control can be explained by lower levels of parental warmth, supervision, and engagement in the period of adolescence. Similarly, earnings at work contribute to higher internal control (Ross & Mirowsky, 1992). It was also found, that high internal locus of control can act as a protective factor against some negative life events such as death of close friends or serious personal injury (Buddelmeyer & Powdthavee, 2015). Previous research looking at both self-esteem and locus of control has also produced consistent results. Judge, Erez, Bono, and Thoresen (2002) conducted a meta-analysis on 47 published studies and found a significant positive relationship (0.52 with 95% CI [.44, .59]) between these constructs. Indeed, internally oriented people tend to have a higher self-esteem. Judge et al. (2002) hypothesized that variables like self-esteem, neuroticism, locus of control, and generalized self-efficacy are indicators of a common core construct (core self-evaluations), but the “evidence regarding locus of control was the weakest” (p. 707).

The goal of the study

The goal of this exploratory and hypotheses building study (see Wagenmakers, Wetzels, Borsboom, van der Maas, & Kievit, 2012) was to investigate the relationship between poverty (or more broadly – economic situation) and self-esteem. In particular, the study aims to examine the role of locus of control as a moderator in the relationship between poverty and self-esteem. So far, no study has dealt with self-esteem and locus of control in the context of poverty. This particular research is interesting due to poverty or an adverse economic situation affecting self-esteem, which is often associated with well-being. We suggest that locus of control can possibly mitigate or worsen this effect. We have hypothesized that poor people with low internal locus of control may see their economic situation as a result of their incompetence, cognitive skills, personality or other characteristics. This can devalue their self-esteem more

than in people with high internal locus of control. In a situation of high chance or high external locus of control, poor people may see their economic situation as a result of factors which are beyond their control. They may also see themselves as unable to change their economic situation which can therefore devalue their self-esteem more than in people with low external locus of control or chance.

METHOD

Participants

The sample consisted of 500 people (250 men) living in Slovakia, aged between 18 and 60 years old; $M = 39.57$ and $SD = 11.48$. One participant was removed from the analysis because he only answered the first third of the questions. The sample selection was based on a representative quota (for gender, age group and region) and on the basis of a quota fixed to net monthly personal income (12.4% in the dataset with an income up to 200 € and 29.7% with an income between 200 € and 400 €). The number of people who responded to the questionnaire was $n = 798$, a completion rate of 62.7% (500 people). In terms of marital status, 121 participants were single, 95 in a relationship, 237 married, 44 divorced and 3 widowed. 13 participants stated primary school as their highest level of education, 317 participants said secondary school and 170 participants had a university degree. From the sample, 285 people were employed, 32 were entrepreneurs, 41 students, 30 unemployed, 6 retirees, 51 were invalids and 55 people reported their economic status as “other”. From an economic point of view, 214 participants (42.9%) earned less than 524.4 € (gross income below the poverty threshold in 2017). The data were collected online via a local (Slovak) agency specializing in data collection and market research. The agency works on principles that are pretty much similar to Amazon Mechanical Turk. All materials were administered to the respondents online. After completing the study, each participant was given a small reward. The data used in this study were collected as part of a bigger data collection for the research grant APVV-15-0404 “Psychological causes and consequences of poverty”. No participant was removed from the sample based on the disposable household income or other economic indicators as we did not want to limit the variance of the variables by range restriction (see Coaley, 2010; Murphy & Davidshofer, 2005; Sireci & Sukin, 2013).

Measures

There has been no consensus on how to define and operationalize poverty (e.g., Hagenaars & de Vos, 1988; Smeeding, 2015). We have opted for distinguishing between objective and subjective poverty, which fits our view of poverty as a multidimensional construct. We decided to perform sensitivity analyses to find out whether different operationalization of poverty would lead to different results. Therefore, several regressions were conducted with different operationalizations of poverty as the independent variable rather than doing one regression analysis. We decided to assess objective poverty as:

1) disposable household income calculated by the OECD-modified equivalence scale (Hagenaars, De Vos, & Zaidi, 1994). The OECD formula assigns a value of 1 to the household head, 0.5 to each additional adult member and 0.3 to each child. For example, if a household income is 2000 € and the household consists of 3 adults (2 parents and 18+ years old offspring) and 2 children, the household income would be computed as: $2000 \text{ €} / (1 \times 1 + 2 \times 0.5 + 2 \times 0.3) \cong 770 \text{ €}$.

2) the 60% median gross income per month. In this case, poverty is operationalized

as a dichotomous variable (1 = people with a gross income below the poverty threshold which was 524.4 € for 2017; 0 = other people).

Subjective poverty as a perception of one's own wealth was measured in three different ways:

1) financial and material wealth satisfaction measured as the mean score of the created 2-item 5-point scale (ranging from very badly to very good) with items ("How are you financially and materially?" and "How is your household financially and materially?");

2) economic satisfaction measured as the mean score of the created 4-item 5-point scale (ranging from very badly to very good) with items ("Are you satisfied with your monthly income?", "Are you able to handle unexpected financial expenses?", "Are you able to handle all common financial expenses?"); "Does your current economic situation enable you to meet needs that are not essential to your life?"¹,

3) as a dichotomous variable measured by the item: "In your economic situation, is it possible to make ends meet?" (ranging from 1 = without difficulty to 4 = very difficult). People with responses 2, 3 or 4 were considered to be subjectively poor.

The Rosenberg Self-Esteem Scale (Halama & Bieščad, 2006; Rosenberg, 1965) consists of 10 items which measure global self-esteem, i.e. generalized and relatively stable perception of one's own value. The items were answered on a rating scale ranging from 1 (strongly disagree) to 4 (strongly agree). The reliability of the scale expressed as the value of omega total coefficient was $\omega = .85$.

The Multidimensional Locus of Control Scale (Levenson, 1973) consists of 24 items divided into 3 factors (8 items each), specifically Internality, Powerful others and Chance. Internal dimensions represent beliefs that people can manage their life with their own behaviors while the external dimension reflects beliefs that people have no control over the events in their lives (Levenson, 1981). Besides these two basic dimensions of internal and external, Levenson (1981) further differentiates between two types of external orientation, namely chance and powerful others. Chance represents the "belief in the basic unordered and random nature of the world" and powerful others means a "belief in the basic order and predictability of the world, coupled with the expectancy that powerful others are in control. In the latter case, there is a potential for control" (p.15). The items were answered on a rating scale ranging from -3 (strongly disagree) to +3 (strongly agree). The reliability of the subscales expressed as the value of the omega total coefficient were $\omega_i = .60$ for Internality, $\omega_i = .80$ for Powerful others and $\omega_i = .77$ for Chance.

Data analysis

The role of locus of control as a moderator in the relationship between poverty and self-esteem was examined using moderated multiple linear regressions. The moderated multiple regressions were calculated using the library "psych" (Revelle, 2018) in the programming language R (R version 3.5.1; R Core Team, 2018). The assumptions for the use of linear regression were met in that there were independent and normally distributed errors and the absence of multicollinearity. The dependent variable was self-esteem, the independent variables were 5 different operationalizations of poverty, the moderators were 3 dimensions of locus of control and control variables were age, gender and marital status (coded as single, in relationship, married, widowed and

¹ The model which consisted of 2 distinct factors (financial and material wealth satisfaction and economic satisfaction) had acceptable fit using CFA with WLSMV estimator: $\chi^2 = 26.003$ at the .001 level, CFI = .982; TLI = .966; RMSEA = .067; SRMR = .017.

divorced). It was decided not to exclude any outliers (except obviously impossible scores of which none were found) as we assume the potential “outliers” in our sample represent the distribution of the population. The size of the sample had 99% power to detect even small effects.

RESULTS

The descriptive statistics and zero-order correlations are presented in Table 1.

Table 1 Descriptive statistics and zero-order correlations

	Mean (<i>SD</i>)	SE	HI	DIG	FMWS	ES	DSP	I	CH	PO
SE	2.97 (.49)	--								
HI	630.57 (329.94)	.199**	--							
DIG	42.9% [^]	.179*	.307**	--						
FMWS	6.19 (1.45)	.230**	.424**	.199**	--					
ES	11.09 (3.57)	.212**	.456**	.244**	.763**	--				
DSP	84.4% [^]	.220*	.397**	.183**	.431**	.518**	--			
I	4.07 (.53)	.247**	.109*	.022	.205**	.156**	.136	--		
CH	3.62 (.77)	.361**	.161**	.145*	.125**	.123**	.175**	.034	--	
PO	3.50 (.82)	-.324**	.102*	.043	.135**	.125**	.151	.028	.632**	--

Note: [^] = a proportion of poor people from the whole sample; Pearson, Spearman, Eta and Cramer's V coefficients were used. SE = Self-Esteem, HI = Household Income, DIG = dichotomized gross income, FMWS = Financial and material wealth satisfaction, ES = Financial and material wealth satisfaction, DSP = dichotomized subjective poverty, I = Internality, CH = Chance, PO = Powerful others. * $\leq .05$, ** $\leq .01$.

The results of the moderated linear regressions are presented in Table 2. For parsimony reasons, only the interactions are presented. For the purpose of sensitivity analysis, each of the rows represents a separate regression.

As shown in Table 2, none of the locus of control dimensions significantly (at the .05 level) moderated the relationship between self-esteem and poverty. Neither did the choice of definition of poverty affect the results.

DISCUSSION

In the present data, we tried to examine the role of locus of control as a moderator in the relationship between poverty/economic situation and self-esteem. It was found that locus of control was not a significant moderator in this relationship. Due to a lack of similar research, our results can only be compared to three studies by Lachman and Weaver (1998). In their data, the internality locus of control was found to be a weak but significant moderator of the relationship between wealth and life satisfaction ($\beta = -0.07$) in one of their three studies while the externality dimension of locus of control was in two of the three studies ($\beta = 0.09$, $\beta = 0.09$). They found that people with the lowest household income but with high locus of control had a similar level of wellbeing to people with high income. It seems that locus of control is not an information-rich variable in explaining the effects of poverty.

Table 2 Moderated regression analyzes with self-esteem as a criterion, poverty as an independent variable and locus of control as a moderator

Predictor variable	β	SE	t	p	95% CI
Moderator: Internality					
Household income	.02	.05	.40	.69	[-.07, .11]
Dichotomized gross income	.00	.04	-1.10	.27	[-.09, .08]
Financial and material wealth satisfaction	-.03	.04	-.65	.51	[-.11, .06]
Economic satisfaction	-.02	.04	-.42	.68	[-.10, .07]
Dichotomized subjective poverty	.01	.04	.12	.90	[-.08, .09]
Moderator: Chance					
Household income	-.08	.04	-1.88	.06	[-.16, .00]
Dichotomized gross income	.03	.04	.83	.41	[-.05, .12]
Financial and material wealth satisfaction	-.02	.04	-.55	.58	[-.10, .06]
Economic satisfaction	-.02	.04	-.40	.69	[-.10, .06]
Dichotomized subjective poverty	-.03	.04	-.67	.50	[-.11, .06]
Moderator: Powerful others					
Household income	-.04	.04	-1.00	.32	[-.12, .04]
Dichotomized gross income	.06	.04	1.46	.15	[-.02, .14]
Financial and material wealth satisfaction	-.04	.04	-.89	.37	[-.12, .04]
Economic satisfaction	-.07	.04	-1.64	.10	[-.15, .01]
Dichotomized subjective poverty	.01	.04	.35	.73	[-.07, .10]

The relationship between poverty and self-esteem was small in our data, suggesting that the effect of wealth on self-esteem is not as high as had been expected. This is an interesting finding considering that poverty has serious negative effects on social aspect of people's lives (Mood & Jonsson, 2015). People living in poverty are not able to afford a number of things and services such as vacations, food, clothes or leisure time activities in such quality or quantity as rich people. As Mood and Jonsson (2015) have stated, they are excluded from society in the long run because their standard of living is significantly lower. It seems that traditional factors such as academic achievement, social acceptance, athletic competences or physical appearance may play a more important role in shaping self-esteem than income or subjectively assessed wealth. The weak relationship between poverty and self-esteem has been consistently found in previous studies. In a meta-analysis of 446 samples, Twenge and Campbell (2002) found that socioeconomic status had a very weak relationship with self-esteem ($d = 0.15$, $r = 0.08$), casting doubt on its practical meaning. More recent studies have produced similar coefficients with different operationalizations of poverty (e.g. Damian & Roberts, 2015, $r = 0.15$ for SES; James & Amato, 2013, $\beta = 0.10$ for income; Quon & McGrath, 2015, $r = -0.11$ for SES) with a few exceptions (Mikulášková & Adamkovič, 2018, Cohen's $d = -0.78$ for dichotomized income; Waters & Moore, 2002, $\beta = -0.46$ for subjective poverty). The reason why the relationship between poverty and self-esteem is small may lie in the self-protective strategies which people tend to use. One of the examples may be self-serving bias (Campbell & Sedikides, 1999, p. 23) which is explained as "taking credit for personal success but blaming external factors for personal failure". In accordance with the self-serving

bias, poor people may not blame themselves (their abilities or effort) for their economic situation but rather the government, neighbourhood, bad luck or other external factors. From poor people's point of view, it may mean that affiliation to being rich or poor depends on external factors. Thus having low or no income does not mean that they are not valuable, capable or clever individuals. Similar results were obtained by Crocker and Major (1989) who argued that low SES does not necessarily lead to lowered self-esteem. Those people may protect their self-esteem with different strategies such as comparing themselves with people in worse situations or selective valuating and devaluating of some aspects of living (devaluation of income or intelligence but the valuation of physical endurance or manual skills such as woodwork). For poor people, it is adaptive to keep their self-esteem as high as possible because it protects them from their failures and helps them cope with negative experiences (Zeigler-Hill, 1993).

There are also some limitations to the present study. Poverty is a phenomenon which is hard to define, especially from a psychological perspective. From the many approaches to defining poverty, we chose five to cover both its subjective and objective nature. We acknowledge that there are other approaches and operationalizations which can probably influence the results. Another limit of our research stems from the absence of meaningful covariates, e.g. more specific to the studied relationships such as the duration or previous experiences of poverty, not only actual income; parental warmth as it is related to locus of control; or more general, related to self-esteem, e.g. academic achievements or physical appearance, etc., which were unfortunately not measured. It would be interesting to also include qualitative questions regarding causal attributions of one's self-esteem. Another limitation is the lower reliability of the internality dimension of the Multidimensional Locus of Control Scale which could possibly change the estimates in the regression analysis.

CONCLUSION

Although poverty adversely affects people's lives and is one of the causes of social exclusion, the relationship between poverty and self-esteem present in our dataset was small. Other factors such as academic achievement or physical appearance may play a more important role in shaping self-esteem. Whether people have high internal control or believe in chance or the influence of powerful others, this does not affect the effect of poverty on self-esteem, as no moderation effects were present. It has to be said that the results in the present exploratory study should be confirmed in subsequent confirmatory studies. For future research, it would be of interest to study the relationship between self-esteem and experiences of shame in poor people and to use the DAG method (directed acyclic graphs) to specifically examine causal pathways as to whether income influences self-esteem or the level of self-esteem is influenced by one's income.

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SÚHRN

Efekt miesta kontroly na vzťah medzi chudobou a sebahodnotením

Cieľ. Cieľom tejto exploračnej štúdie bolo zistiť, či miesto kontroly moderuje vzťah medzi chudobou a sebahodnotením.

Metóda. Vzorku tvorilo 499 ľudí (249 mužov) žijúcich na Slovensku. Výber vzorky bol reprezentatívny vzhľadom k rodu, veku a kraju.

Hypotézy. Chudobné osoby s nízkou úrovňou vnútorného miesta kontroly by mali za príčinu svojej ekonomickej situácie považovať nedostatok vlastných zručností, kognitívnych schopností, špecifickú skladbu osobnostných alebo iných vlastností. To by malo následne pôsobiť devalvačne vo väčšej miere na ich sebahodnotenie ako u ľudí s vyššou úrovňou vnútorného miesta kontroly. V situácii s vysokou úrovňou vonkajšieho miesta kontroly alebo náhody by chudobné osoby mali za príčinu svojej ekonomickej situácie považovať faktory, ktoré sú mimo ich kontroly, a preto by to malo pôsobiť devalvačne vo väčšej miere na ich sebahodnotenie ako u ľudí s nižšou úrovňou vnútorného miesta kontroly.

Štatistická analýza. K overeniu hypotéz boli počítané moderované viacnásobné lineárne regresné analýzy.

Výsledky. Miesto kontroly nevystupovalo v analyzovaných údajoch ako signifikantný moderátor vzťahu medzi chudobou a sebahodnotením. Veľkosti účinkov pre vzťah medzi chudobou a sebahodnotením boli malé.

Obmedzenia výskumu. Obmedzením sú nižšie hodnoty reliability škály vnútorného miesta kontroly dotazníka Multidimensional Locus of Control Scale ako aj absencia ďalších zmysluplných kovariátov, napríklad trvania chudoby, predošlých epizód chudoby alebo vrelosti rodičov.

SOCIAL REPRESENTATIONS OF POVERTY: CAUSES OF POVERTY, POVERTY PERPETUATION AND POSSIBILITIES OF ESCAPING FROM POVERTY

GABRIELA MIKULÁŠKOVÁ, MONIKA KAČMÁROVÁ

Institute of Psychology, Faculty of Arts, University of Prešov

ABSTRACT

G. Mikulášková, M. Kačmárová

Objectives. The aim of the study is to conceptualize the term poverty from the viewpoint of the importance attributed to the term, the assumed causes of poverty, the reasons for poverty perpetuation, and the assumed possibilities of escaping from poverty.

Participants and analysis. The study did a discourse analysis of statements using open coding. This was carried out on research sample $N = 52$ of the general population aged 15–56 ($M = 25.92$, $SD = 8.22$).

Results. It was found that poverty is presented differently in the discourses of a person's own potential poverty and the poverty of others, also when describing the state of being poor and the process of "becoming" poor. Furthermore, the analysis pointed to two discursive lines concerning the causes of poverty, reasons for poverty

perpetuation and the possibilities of escaping from poverty: the individualistic discourse thematizing the role of an individual and the structuralist discourse thematizing society.

Study limitations. The limitation of the study dwells in the method of collecting data in the form of statements that was conducted online, which was impersonal.

key words:

poverty,
causes of poverty,
poverty perpetuation,
escaping from poverty

klúčové slová:

chudoba,
príčiny chudoby,
zotrúvanie v chudobe,
vymanenie sa z chudoby

INTRODUCTION

Poverty is a phenomenon which has predominantly been studied in sociological and economic research (Džambazovič, 2007; Strapcová, 2005). However, poverty from the psychological perspective has also intensified in recent years (Džuka, Babinčák, Kačmárová, Mikulášková, & Martončík, 2017). Unlike other research subjects in psychology, poverty represents a concept that is strongly influenced by changing social discourse (debate). The importance of discourse analysis has been pointed out by the post-modern movements in psychology which assume the normative function of predominant discourses (Freedman & Combs, 2009). From the discursive psychology viewpoint, the prevailing discourse in society has the power to direct, regulate, reward or sanction certain social phenomena (Harré & Gillet, 2001). Gerbery (2008) draws attention to the fact that the fight against poverty is an example that shows the forms of discourse on poverty which affect its perception and policy rather than the very facts about the phenomenon. A specific example is the unwanted accusation of the victims of poverty (Paugam, 2016). Shek (2004) has emphasized the relevance of

G. M., Institute of Psychology, Faculty of Arts, University of Prešov, Slovakia; e-mail: gabriela.mikulaskova@unipo.sk, monika.kacmarova@unipo.sk

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studying poverty discourses. He considers the study of the attributed causes of poverty important because they have an impact on the motivation to overcome the state of poverty and to recognize the possibilities of escaping from it.

Davids and Gouws (2013) and Shek (2004) see poverty as a socially constructed phenomenon which must be understood to prevent the stigmatization of the poor. Shek and Ma (2009) describe four categories of beliefs about the origin of poverty: profligacy (uneconomical pattern of behavior), injustice (unfair distribution of financial resources), attributed deprivation (e.g., poor parents) and fatalism (personal misfortune). These studies present three groups of causes attributable to poverty (Da Costa & Dias, 2014; Davids & Gouws, 2013; Furnham, 1982): individualistic explanations, structural or social explanations and fatalistic explanations. Individualistic explanations find the cause of poverty in the person himself (alcohol and drug abuse, laziness, the lack of will to overcome obstacles, low intelligence, etc.). Structural explanations believe that external social, political or economic impacts or contextual factors (the lack of work for the poor in a given country, discrimination of the population, insufficient state support, etc.) are responsible for poverty. The third group of fatalistic explanations attribute the causes of poverty to misfortune, fate or disease. Hayati and Karami (2005) have related the individualistic attributes of the causes of poverty to quality of life levels. In economically developed countries, there are preferences towards individualistic and fatalistic causes whereas structural causes are present in less developed countries (Da Costa & Dias, 2014).

The idea that poverty is influenced by the current historical and social context is supported by studies which have examined the historical context of poverty (Germek, 1999; Rheinheimer, 2003). These authors have shown that changes in historical context have not only modified the view on poverty but also the way of dealing with the poor. Furthermore, they refer to the historically different definitions of poverty ranging from compassion, mercy, pity and charity to social solidarity. They have also pointed out the differentiation between material and non-material aspects of poverty and analyze the sustainability rates of measures against poverty. The power of dominant discourse has been illustrated by Gans (1995) who has highlighted the categorization between the “deserving poor” and “undeserving poor” in American society. In this concept of poverty, the deserving poor are those for whom the situation (health or circumstances) does not allow them to take care of themselves and they accept the “benevolence” of the society. In contrast, the undeserving poor is defined as persons who have induced the state of poverty by their inappropriate behavior and are therefore not worth helping.

Paugam (2016) offers another typology of poverty that links societal debate and social practices towards the poor. This classification has 3 types referred to as integrating, marginal and disqualifying poverty. Integrating poverty is understood as poverty that is not perceived as a problem since it is widespread throughout society and mitigated by social support. Marginal poverty is related to the overall economic state of the country where the poor are seen as unable to change their state of poverty while disqualifying poverty is perceived as a consequence of the inability to be employed. Paugam (2016) has explained the practical impact of this classification. According to him, the concept of marginal poverty means the poor are perceived negatively and may suffer from social stigma whereas disqualifying poverty permits a more positive perception of the poor.

In addition, the classic typology of the attributed causes of poverty (van Oorschot & Halman, 2000) indirectly allows a differentiated way of assessing the poor. According to this typology, attributed causes of poverty can be: 1. individual failure, the

so-called blaming-the-poor approach, 2. the fate of an individual, 3. society failure, the so-called blaming-the-state approach and 4. the fate of society. This classification enables the identification of two basic dimensions – the “individual versus social” and the “failure versus fate” dimensions. In this regard, Strapcová (2005) states that this allows the causes of poverty to be perceived either as internal, linked to a particular individual (accentuating moral failure, e.g., the poor as people with negative personality traits) or external, mainly linked to society (or a certain external group of people). In this, the poor are seen as victims of external influences. Alem, Köhlin and Stage (2014) have confirmed the relevance of studying social representations of poverty. They go on to explain how people’s perception of their own poverty influences the subjective assessment of their future income. However, it is necessary to note that the majority of these studies are predominantly of a sociological nature. On exception to this is a study by Willems, Swinnen and De Maeseneer (2005) who conceptualized the perspective of people who do not suffer from poverty but encountered the poor every day at their medical practice. Psychological research favors the discourse of poverty from the viewpoint of the poor themselves (Hernández, 2016; Ho et al., 2016; Tuason, 2008; Zhang, 2016).

This theoretical base implies the following: 1. the discourse on poverty is changing and the changes in the discourse modify certain social practices towards the poor, 2. the research on poverty discourse has mainly been the domain of sociology, although current psychology has a theoretical background (discursive psychology, theory of social constructivism) that makes it possible to analyze the relationship between language and prevailing social practices, 3. psychological research has rather been aimed at perceiving the state of poverty by the poor.

The aim of the study was to examine the prevailing discourse on poverty, not the statements of the poor. More specifically, this qualitative study aims to: 1. analyze the poverty discourse with a focus on social representations of poverty and 2. analyze the poverty discourse with a focus on the causes of poverty, the reasons for poverty perpetuation and the possibilities of escaping from poverty.

METHOD

Research sample

The research sample consisted of 52 people aged 15–56 (with an average age of 25.92; $SD = 8.22$), out of which 12 were men and 40 were women. In terms of marital status, 34 people were single and 18 in relationship. In terms of education, 4 participants had only finished primary education, 10 respondents had finished secondary education, 16 participants were university students and 22 respondents had done a university degree. The study did not gain information about respondents’ jobs. To the question “How is your family doing financially and materially?”, 12 people responded “very well”, 17 people responded “quite well”, 20 people chose the “average” option, 1 person answered “not very well” and 1 person said “poorly”.

Research instrument

The data were obtained through an on-line questionnaire (Google form) and were collected between February and April 2017. The subject of the discourse analysis were the statements respondents had given to the following questions: 1. “When (under what circumstances) would you say that you are poor?”; 2. “What situation would signal to you that you are poor (how would you recognize that you are poor)?”; 3. “When (under what circumstances) would you label a person, e.g., your neighbor

or acquaintance as poor?"; 4. "If someone tells you that he/she is in poverty, what do you imagine?"; 5. "What do you consider as the most common causes of poverty?"; 6. "Why do you think that some poor people remain poor?"; 7. "Imagine that you knew a poor person and after a year you learnt that he/she had escaped from poverty. How would you explain it?" In total, 692 statements were analyzed.

Research method

Discourse analysis was used to analyse the data. The first step was thematic open coding which aimed to create a list of themes from the acquired statements about poverty. The central/relevant themes were identified and a code system created. This was followed by a system of categories and subcategories (Strauss & Corbin, 1999). The principle of complete data processing was used. All statements with the exclusion of "no funds" were analyzed. Each person provided between at least one and three statements. Next, the discourse analysis followed (Plichtová, 2000, 2002; Wetherell & Potter, 1997). The discourse structure was identified in the first phase of the analysis with the help of consistency differences, both in the content and form of the discourse. In the second phase, the functions and consequences of the discourse were identified. The attention was focused on the different ways of constructing the state of poverty, the causes of poverty and ways of escaping from poverty found in the statements. Based on an exhaustive description, searching for the connection between the individual themes and the compaction of meaning, the last phase of the analysis was identifying the organizing principles in individual representations and comparison of the thematic structure of individuals in the research (Flick, 2002). This used a systematic comparison method (Silverman, 2005). Following the segmentation and systemization of individual themes, the basic discursive lines were created. The data were validated by the complete data processing method as well as the method of triangulating the researchers (Silverman, 2005).

RESULTS

The aim of the study was to clarify the poverty discourse from the perspective of the general population. In particular, it aimed to analyze the poverty discourse focusing on social representations of poverty, the causes of poverty and the possibilities of escaping from poverty.

State of poverty in the discourses

The purpose of the discourse analysis of the statements was to clarify the state of being poor (e.g., the state of poverty) and the process of "becoming" poor as presented in the acquired statements. The analysis of the results has highlighted that the state of poverty and the process of "becoming" poor constitute separate discourses. At the same time, the study makes it possible to differentiate between what a person states about their own poverty (the discourse of internal poverty) or about the poverty of others (the discourse of external poverty). Table 1 presents the themes, categories, subcategories and statements identified in the poverty discourses. Table 2 outlines the discourses on the process of "becoming" poor.

A comparison of the thematic structure of internal and external poverty descriptions implies that the state of one's own poverty thematizes different domains than the state of other people's poverty. The description of internal poverty includes themes that are embedded into five major domains: material, mental, physical, behavioral and social with the richest description being present in mental and behavioral domain. The mental domain is dominated by the category of poverty related to comparison, which

Table 1 Themes, categories, subcategories and statements presenting the internal poverty and the external poverty in the discourses

Internal poverty (If I was poor)	Themes	Categories	Subcategories	Statements
	Material domain	Food (20) Clothing (16)		<p>“If I did not have anything to eat.”</p> <p>“When I do not have money to buy clothing.”</p> <p>“... do not have anywhere to live.”</p>
	Mental domain	Housing (16) Poverty as a result of comparison (4)	<p>Comparing with others</p> <p>Comparing with the past</p> <p>Comparing with the standard</p> <p>Comparing with desired state</p>	<p>“If my daughter could not join other kids on a school trip.”</p> <p>“...be in a situation when I would have nothing to live on...”</p> <p>“If I did not have enough money to secure what is considered the living standard in Slovakia.”</p> <p>“...I cannot buy what I want, just like that.”</p>
	Physical domain	Uncertainty (1) Lack of personal hygiene (2)		<p>“When I am worrying if I will have money to live on the next month.”</p> <p>“If I felt embarrassed about myself, my appearance.”</p>
	Behavioral domain	Change in money management (5)	<p>Inability to have what I want</p> <p>Expenses restrictions</p> <p>Need for a budget</p>	<p>“If I could not afford things I currently find ordinary.”</p> <p>“...if I could only afford buying the cheapest grocery, if I could only live on.”</p> <p>“If I had to think twice of where every cent goes...”</p> <p>“If I were alone, without family and friends that are worth keeping.”</p>
External poverty (When others are poor)	Social domain	Loneliness (2) Loss of family (1)		<p>“...they do not have money for food.”</p> <p>“They do not have money to buy basic things necessary for living.”</p> <p>“They have nowhere to live.”</p> <p>“They have no one around them.”</p> <p>“They have children they cannot feed.”</p>
	Material domain	Food (20) Finances (8) Housing (20) Loneliness (2) Inability to take care of family (1)		

Note: Numbers in the parentheses indicate the number of identified categories in the discourses

has gained several meanings in the discourses. Respondents describe the state of poverty as the result of an unfavorable comparison with their own standards (the desired state and the state in the past) and as a result of comparison with others. The mental domain is not thematized in the discourses of external poverty. Indeed, external poverty is only thematized in two domains; material and social. A comparison of the internal and external poverty discourses suggests that the theme of the social domain as the poverty afflicted domain is presented in a different way. Loneliness has a jointly shared meaning. However, while people describing their own poverty emphasize the absence of family, the description of external poverty stresses poverty as a condition that does not allow taking care of others. Another difference is in the description of the behavioral domain which does not appear in the discourse of external poverty. When people describe their own poverty, they associate it with changes in financial management such as the need for savings, the inability to buy for joy and the need for a budget. The only theme that is described identically is the material domain within which respondents do not distinguish between their own poverty and the poverty of others.

The analysis of the statements have highlighted the minimal differences in the descriptions of internal poverty in terms of the state of poverty and the process of “becoming” poor. The description of internal poverty is consistent when thematizing the material, physical, behavioral and social domains. The most significant difference was found in the description of the mental domain in which the process of “becoming” poor is associated more with the meaning of a miserable existence. The process of becoming poor includes a richer description of feelings such as insecurity, sorrow and depression than respondents’ description of the state of being poor. The thematic structure of discourses on external poverty differs in the descriptions of the state of poverty in others and the process of “becoming” poor in others. The analysis of responses points to richer descriptions of the process of “becoming” poor in other people. Apart from the congruently described material and social domains affected by poverty, the description of “becoming” poor presents different views on the changes in a person’s behavior when becoming poor. This includes behavior such as begging, moving out, and selling property which is not present in the descriptions of internal poverty.

The causes of poverty in the discourses

The discourse analysis of the statements about the causes of poverty, reasons for poverty perpetuation and the possibilities of escaping from poverty has revealed two distinguishable discourses. These are the individualistic discourse (emphasizing the role of the individual) and the structuralist discourse (the role of society). These labels were chosen in accordance with the literature that has described the persistent attributions of causes and the state of poverty in the discourses (Da Costa & Dias, 2014; Davids & Gouws, 2013). The categories concisely represent the statements themselves without having to present the statements. The individualistic and structuralist discourse on the causes of poverty is outlined in Table 3.

The individualistic discourse thematizes the role of an individual in the causes of poverty. The description of an individual is primarily presented with negative characteristics. The most significantly thematized were: the lack of motivation (unwillingness to work and solve the situation), personal qualities (idealism, egoism, comfort, narcissism), the lack of financial literacy (inadequate money management and indebtedness) and dependence on others. Another thematized cause of poverty is the presence of illness (disturbed physical and mental health) and the family situation

Table 2 Themes, categories, subcategories and statements presenting the process of “becoming” poor in the discourses

Themes	Categories	Subcategories	Statements	
Internal poverty (If I was poor)	Material domain	Food (7) Finances/inability to pay bills (7)	“Lack of money for food.” “I would not have money to pay my cheques.” “...I have poor clothes.” “...if I do not have what I want...” “I cannot afford things other people in surrounding ordinarily have.”	
	Mental domain	Poverty as a result of comparison (7) Change in experiencing (3)	Comparing with desired state Comparing with others Comparing with the past Insecurity	
	Physical domain	Maintaining personal hygiene (2)	Dissatisfaction Sorrow	
	Behavioral domain	Change in money management (5)	Indebtedness Need for a budget	
	Social domain	Lack of social support (1) Loss of work (1)	Inability to buy “for joy”	
External poverty (When others are poor)	Material domain	Food (9)	“If they did not have money to eat properly.” “Unhealthy lifestyle.” “If they were dressed in worn out clothes.” “House in a bad condition.” “They cannot pay bills for a flat.” “If they stank and wore dirty and worn out clothes.” “If they begged for money.” “If they borrowed money to buy the basic things.” “They would not have any savings for future.” “If they lost the roof overhead.” “If they are forced to move out to a smaller flat.”	
	Physical domain	Clothing (2) Housing (6) Finances/inability to pay bills (13) Neglected appearance (8)	“When I see they have sorrows, they are pitiful.” “If they do not have family that would take care of them.” “They cannot pay for food, school activities, or school club for their kids.”	
	Behavioral domain	Change in behavior (4)	“When I see they have sorrows, they are pitiful.” “If they do not have family that would take care of them.” “They cannot pay for food, school activities, or school club for their kids.”	
	Mental domain	Change in experiencing (1)	Feelings of insecurity, sorrow	
	Social domain	Lack of support from family (1) Inability to take care of family (1)		

Note: Numbers in the parentheses indicate the number of identified categories in the discourses

Table 3 Themes, categories and subcategories of discourses on the causes of poverty

Themes	Individualistic discourse on the causes of poverty – individual as an actor		Structuralist discourse on the causes of poverty – society as an actor	
	Categories	Subcategories	Themes	Categories
Person of the poor	Lack of motivation (12) Personal qualities (7)	Unwillingness to work; Unwillingness to solve the situation Idealism Egoism Loss of control over life Desire to be perfect and to have everything Comfort Indebtedness Dependence on others (2) Lack of education Alcoholism Gambling Long-term exhaustion Physical illness Lot of children Divorce	Social domain	Social system in the society (40) Availability of things necessary for life (6)
Presence of psychopathology	Insufficient financial literacy (15) Dependence on others (2) Education (6) (9)		Crisis situation	Situation in country (3) Situation in family (2)
Presence of illness Social domain	(4) Situation in family (3)			Insufficient social care Figures in parliament and government Low wages High grocery prices High prescription drugs prices High housing prices Natural disasters Warfare Death of family member

Note: Numbers in the parentheses indicate the number of identified categories in the discourses

(number of children and divorce). On the other hand, the structuralist discourse on the causes of poverty illustrates the role of society failure in two thematic domains: social domain and crisis situation. The cause of poverty is attributed to the failure of society. For instance, a bad social system that respondents perceive in the current government and the high prices of vital things (medicine, housing, food). Another perceived cause of poverty is the crisis situation in the country or in the family.

Poverty perpetuation in the discourses

In terms of the discourse on poverty perpetuation, the results of the analysis have outlined two distinguishable discursive lines similar to the discourse on the causes of poverty. The individualistic discourse and the structuralist discourse are described in Table 4.

Table 4 Themes, categories and subcategories of discourses of the reasons for poverty perpetuation

	Individualistic discourse on poverty perpetuation – individual as an actor		Structuralist discourse on poverty perpetuation – society as an actor			
Themes	Categories	Subcategories	Themes	Categories	Subcategories	
Person of the poor	Lack of motivation (31)	Unwillingness to work	Social domain	Employment (5)	Lack of employment opportunities	
		Lack of ambitions		Social relationships (2)	Rejection by society	
		Current state suits them well				Absence of social support
		Resignation				
Fear						
	Personal qualities (12)	Comfort				
	Dependence on others (4)	Dependence on others				
	Education (3)	Lack of education				
	Situation of a person (5)	Personal debt repayment				
Presence of illness	(1)	Health problems				

Note: Numbers in the parentheses indicate the number of identified categories in the discourses

The individualistic discourse describes a person in poverty perpetuation as a person with lower motivation, a reluctance to work and lack of ambitions. The mental state of people in poverty perpetuation is perceived as a state of resignation, fear and comfort. There is also a significant role played by the reliance on others, lack of education and health problems. A comparison of the discourse on the causes of poverty and the mechanism of poverty perpetuation reveals that personality traits such as idealism, egoism, the desire to have everything and various addictions are present in the discourse on the causes of poverty and not present in the discourse on poverty perpetuation. An analysis of the thematic structure of the structuralist discourse on poverty perpetuation shows that respondents emphasize the lack of employment opportunities and social factors such as rejection by society or the absence of social support. In contrast to the discourse on the causes of poverty, this structuralist discourse prefers themes of social support more than the financial unavailability of essential things.

Escaping from poverty in the discourses

In a similar way to the discourses on the causes of poverty and poverty perpetuation, the results regarding the discourse on the possibilities of escaping from poverty has identified two separate discourses: the individualistic discourse (where the individual is the main actor) and the structuralist discourse (where society is the main partaker). The descriptions of the individualistic and structuralist discourses on escaping from poverty are presented in Table 5.

Table 5 Themes, categories and subcategories of discourses on the possibilities of escaping from poverty

	Individualistic discourse on possibilities of escaping from poverty – individual as an actor		Structuralist discourse on possibilities of escaping from poverty – society as an actor		
Themes	Categories	Subcategories	Themes	Categories	Subcategories
Person of the poor	Personality change (32) Treatment of addiction (2) Change of employment (12)	Change in life attitudes Developing one's own potential Taking responsibility for one's situation Finishing with substance addiction Employment Moving for work	Social domain	Support from the surroundings (8)	“Good people“ Heritage – improvement of financial situation

Note: Numbers in the parentheses indicate the number of identified categories in the discourses

The individualistic discourse presents the possibility of escaping from poverty as a change that respondents describe on several levels: the personality change associated with changes in life attitudes, taking responsibility for their lives and self-realization. In terms of the possibilities of escaping from poverty, important assumptions are the treatment of addictions and changing employment. The structuralist discourse on the possibilities of escaping from poverty only presents one option and that is financial support from the surroundings. A comparison of the discourses on the causes of poverty (Table 3), poverty perpetuation (Table 4) and escaping from poverty (Table 5) indicates that the themes presented in the causes of poverty and poverty perpetuation do not appear in the descriptions of escaping from poverty (job offer, improvement of the social system, lowering prices).

DISCUSSION

The first aim of this qualitative study was to clarify the discourses on poverty. In particular, it aimed to depict a thematic structure of the discourse regarding the state of poverty. In terms of the research results, it is necessary to reflect on the research sample which was taken from the general population and was predominantly made up of women. The discourse analysis of the statements regarding the state of poverty has shown that the descriptions differ depending on whether a person is describing his or her own potential poverty (internal poverty) or the poverty of others (external poverty). Another significant finding is that the discourses on poverty differ depending on whether the content of the discourse is poverty as the state of being poor or poverty as the process of “becoming” poor (represented by the question about the first signs of poverty in this study). The study has revealed that the descriptions of both internal

and external poverty only identically thematize one domain affected by poverty; the material domain. Respondents depict the state of their own poverty and other people's poverty as mainly a material shortage. In other words, they associate poverty with a lack of finances, clothing and the absence of adequate housing. The state of poverty, both internal and external, is perceived as going hand in hand with a malfunctioning in the social domain. Loneliness was mentioned as a key theme. However, a more thorough analysis has also revealed differences in discourses within the social domain. Internal poverty is presented as the state of lacking social support while external poverty is presented as the state of being unable to provide social support to others. This finding indirectly points to a higher degree of "demands" from respondents when it is the other person who is being identified as poor. A significant theme when describing internal poverty appears to be that of comparison. This can be a comparison with one's own standards, the past, the desired state or with other persons (the mental domain affected by poverty). Hereby, the analysis of the statements has confirmed a concept of poverty that understands subjective poverty as a consequence of social comparison (Miller, Reichert, & Flores, 2015). However, our research sample has confirmed the concept solely in the descriptions of internal poverty. Another theme that is part of the discourse on internal poverty are changes in financial management such as the need for savings, the inability to buy for joy and the need to budget (the behavioural domain related to poverty). Interestingly, the respondents only present "saving mechanisms" when the state of poverty affects themselves. Similarly, a higher degree of sensitivity to one's appearance has also only been confirmed as relevant in discourses on internal poverty.

Another aim of the study was to clarify how the process of "becoming" poor is presented in discourses. We have found that the process of "becoming" poor is presented in a similar way, regardless of whether the poverty concerns the person himself or another person. The first indicators of poverty, identically presented in the discourses of internal and external poverty, are: a lack of finances and housing options (endangered material domain), a lack of personal hygiene and appearance drawbacks (endangered physical domain) and feelings of insecurity, sorrow, and dissatisfaction (endangered mental domain). Unexpectedly, it was discovered that the first indicators of poverty (external vs. internal poverty) are displayed differently at the behavioural level. When respondents present the first indicators of their own poverty, they not only thematize debt but also behaviours such as budgeting and the inability to buy for joy. When respondents present behaviours as the first indicators of other people's poverty, they thematize more radical behaviours such as begging or selling property. Similarly, to the description of poverty, the description of the first signs of poverty perceives internal poverty in terms of lacking social support while external poverty is presented as the state of being unable to provide social support for others. Overall, the description of the process of "becoming" poor (external and internal poverty) includes richer descriptions of feelings such as insecurity, sorrow and depression than the descriptions of the state of being poor. Indeed, the content of the discourse is more heterogeneous. We have found that addressing questions about the change in status (asking for the first signs of poverty) is likely to be closer to the respondents' experience than asking about the static state of poverty. This subsequently allows for more comprehensive statements in the research.

The second aim of the study was to identify the dominant discourses on the causes of poverty, poverty perpetuation and escaping from poverty. The discourse analysis of the statements has identified two distinguishable discourses on poverty. Based on existing theory (Da Costa & Dias, 2014; Davids & Gouws, 2013; Furnham, 1982), we

have created the individualistic and structuralist discourses on the causes of poverty, poverty perpetuation and escaping from poverty. In accordance with the authors mentioned above, we have confirmed individualistic explanations as well as structuralist or social explanations. However, no fatalistic explanations of poverty were recorded during statements analysis as had been by these authors. The individualistic discourse is used for the discourse that finds the explanations of the causes of poverty, poverty perpetuation and the possibilities of escaping from poverty in the person himself. The identified structuralist discourse in our research is based on the notion that the reasons of poverty are external. In other words, social, political, economic or contextual factors such as lack of work, discrimination against the poor or a lack of social support. Interestingly, both discursive lines are equally strong and neither of them dominates the other. This finding contradicts the idea of Da Costa and Dias (2013) who claim that the preference of individualistic and fatalistic causes is typical for economically developed countries while less developed countries prefer the structuralist causes.

The individualistic discourse in our research thematizes the role of the individual in the causes of poverty, poverty perpetuation and escaping from poverty. At the same time, it seeks the explanations of causes in the poor person himself. The individual is presented as lacking the motivation to work as well as being idealistic, egoistic, comfortable, narcissistic and lacking in financial literacy. Another thematized cause of poverty is the presence of illness and the family situation caused by the person himself (divorce, number of children). This finding may be interpreted as the tendency of respondents to blame the poor for their poverty which can be supported by the theory of avoiding negative events by one's own endeavour (Miller, Reichert, & Flores, 2015). The admittance of a person not being responsible for their own poverty might mean admitting the possibility of their own poverty. A further important finding is that the image of a poor person changes in the individualistic discourse when the poor is described as caught in the cycle of poverty. Although negative descriptions, lack of motivation and ambitions are present, specifically negative personal traits such as idealism, egoism, the desire to have everything and various addictions (typical for the image of the causes of poverty) are not mentioned in the discourse of poverty perpetuation. Rather, descriptions of a disturbed mental state are present in poverty perpetuation in the form of resignation, fear, and comfort with a reliance on others, lack of education and health problems playing a crucial role. The presence of this can be interpreted as a form of justification for the poor in poverty perpetuation which is in contrast with the indirect accusation towards the poor when describing the causes of poverty. In escaping from poverty, the individualistic discourse primarily presents changes at the level of personality change, change in life attitudes, change of employment, taking responsibility for their lives and self-realization.

On the other hand, the identified structuralist discourse on the causes of poverty, poverty perpetuation and the possibilities of escaping from poverty has mainly depicted the failure of certain structures in society. The failure of society has been highlighted as a cause of poverty. In particular, a bad social system with respondents referring to both the current government and the high prices of essential items (medicine, housing, food). A less frequently mentioned theme is the crisis situation within the country or family. The analysis of the thematic structure of social discourse about reasons for poverty perpetuation emphasize the lack of employment opportunities and social factors such as rejection by society or the absence of social support. In comparison to the discourse on the causes of poverty, respondents prefer themes of social support more than the financial unavailability of essential things. The social discourse on the possibilities of escaping from poverty presents the financial support of the sur-

roundings as the only option. A comparison of the discourses on the causes of poverty, poverty perpetuation and escaping from poverty highlights that the themes presented in the causes and in poverty perpetuation are not present in the descriptions of escaping from poverty (job offer, improvement of the social system, price reduction).

The main limitation of the study dwells on the method of collecting data. This was done in the form of statements conducted online which was an impersonal way. It is possible that using semi-structured interviews in face-to-face meetings would have provided more meaningful answers. On the other hand, this alternative would have had to have taken the possible presence of self-presentation strategies into account (Goffman, 1999). These were not present in the current study due to the anonymity of the statements. A further limitation in the study was the validation process. In further research, it is recommended that the validation be done by the research participants themselves. By this, they would actively enter and continuously validate the process of statements analysis. Yet, this method of triangulating the methods for data collection seems to be insufficiently used. In the future, it would be recommended to use the data from focus groups as well as the methods of quantitative methodology.

CONCLUSION

The qualitative study conceptualizes the poverty discourse from the point of view of general population. The discourse analysis of the statements concerning the state of poverty, causes of poverty, poverty perpetuation and the possibilities of escaping from it has brought the following findings: 1. The state of poverty is presented differently in the discourses on a person's own poverty compared to the poverty of others, 2. Poverty is presented differently when describing the state of being poor and the process of "becoming" poor, 3. The discourse analysis has identified two lines explaining the causes of poverty, the reasons for poverty perpetuation and the possibilities of escaping from poverty; the individualistic discourse thematizing the role of an individual and the structuralist discourse thematizing the role of society. The fatalistic explanations which had been in the theory were not present in the statements. In the future, a comparison of the statements obtained not only from the general population but also from the poor, the use of data from focus groups or the inclusion of quantitative methods would undoubtedly contribute to further research.

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SÚHRN

Sociálne reprezentácie chudoby: príčiny chudoby, zotrvávanie v chudobe a možnosti vymanenia sa z chudoby

Cieľ. Cieľom štúdie bolo konceptualizovať pojem chudoba z hľadiska dôležitosti pripisovanej tomuto pojmu, predpokladané príčiny chudoby, dôvody na zotrvávanie v chudobe a predpokladané možnosti vymanenia sa z chudoby.

Výskumný súbor a analýza. V štúdií bola realizovaná diskurzívna analýza výrokov s využitím otvoreného kódovania. Výskumnú vzorku tvorilo 52 respondentov pochádzajúcich z netriedenej populácie vo veku 15-56 rokov ($M = 25,92$, $SD = 8,22$).

Výsledky. Bolo zistené, že chudoba je prezentovaná odlišne v diskurzoch o potenciálnej vlastnej chudobe a chudobe iných osôb, rovnako odlišne, keď bola opisovaná chudoba ako stav a ako proces „stávania sa chudobným“. Okrem toho, analýza poukázala na dve diskurzívne línie týkajúce sa príčin chudoby, príčin zotrvávania v chudobe a možnosti vymanenia sa z chudoby: individualistický diskurz tematizujúci úlohu jednotlivca a štrukturalistický tematizujúci úlohu spoločnosti.

Obmedzenia výskumu. Obmedzením štúdie bolo spôsob zberu údajov vo forme výrokov uskutočnený on-line formou, čo bolo neosobné.

THE ROLE OF EFFECTIVE TREATMENT OF MENTAL ILLNESS IN THE FIGHT AGAINST POVERTY

MILOŠ ŠLEPECKÝ¹, DAVID M. CLARK², IVETA ŠEFAROVÁ³, JÁN PRAŠKO^{1,4}, MARTA ZAŤKOVÁ¹, MARTA POPELKOVÁ¹, ANTÓNIA KOTIANOVÁ¹, ALENA BAŠISTOVÁ⁵, KATARÍNA JANDOVÁ⁶, STANISLAVA ŠAFFOVA⁷

¹Department of Psychology Sciences, Faculty of Social Science and Health Care, Constantine the Philosopher University in Nitra

²University of Oxford, Oxford

³Department of Psychology, Faculty of Arts, University of Ss. Cyril and Methodius, Trnava

^{1,4}Department of Psychiatry, Faculty of Medicine and Dentistry, Palacky University Olomouc, University Hospital Olomouc

⁵Department of Management, Faculty of Business Economics in Bratislava, Kosice

⁶First Department of Gynecology and Obstetrics of Slovak Medical University and University Hospital, University Hospital Bratislava

⁷King's College London, London

ABSTRACT

M. Šlepecký, D. M. Clark, I. Šefarová, J. Praško, M. Zaťková, M. Popelková, A. Kotianová, A. Bašistová, K. Jandová, S. Šaffova

In Slovakia, one in five people experiences mental disorder. Mental illness tends to start early in life, which makes it the most prevalent disease among people of working age. It accounts for a third of expenditures on disability benefits, increases unemployment and deepens poverty. There is a substantial gap in psychological care for patients who receive adequate treatment and those who need it, but do not get it. Provision of appropriate psychological therapy early on could prevent and reduce much of the negative impact of mental illness. The experiences from IAPT initiative in England where evidence based psychological therapies are made widely accessible can serve as a guide. IAPT initiative

operates stepped care model with emphasis on starting with low intensity interventions. By using these principles, we can fill the gap between primary care and highly specialized treatment of mental disorders in Slovakia. Early psychological intervention can help people with depression, anxiety disorders and long-term psychological conditions to get well, improve quality of life and reduce unemployment and poverty.

key words:

mental illness,
poverty,
early psychological interventions,
low intensity therapy

klúčové slová:

duševné ochorenia,
chudoba,
včasné psychologické intervencie,
terapia druhého stupňa nižšej intenzity

INTRODUCTION

Generally, the income is perceived as one of the most important factors of poverty determined by education, experience, skills, health and further quantifiable factors (Zelinsky, 2014). Despite rapid economic growth, Slovakia has struggled with poverty and is known as the Eurozone's second poorest member state. The government policy to help people overcome poverty is mostly focused on specific populations (e.g., Roma communities), older people, or students. But a large group of people threatened by poverty due to their mental illness is overlooked.

M. Š., Department of Psychology Sciences, Faculty of Social Science and Health Care, Constantine the Philosopher University in Nitra, Slovak Republic; e-mail: milos.slepecky@gmail.com

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THE GAP IN MENTAL HEALTH CARE

Mental illness can lead to deprivation of basic human needs due to deterioration of ability to complete day to day tasks (e.g., in psychotic disorders) or difficulties in maintaining healthy functioning at work (e.g., in social phobia, or agoraphobia). If not treated, mental health problems can lead to unemployment, long term sickness or reduction of productivity at work. Mental disorders, such as psychotic disorders (schizophrenia), neurotic and depressive disorders are linked with a substantial degree of impairment and difficulties in life (Jacobi et al., 2014; Bandelow & Michaelis, 2015). Up to 33.7% of the population experiences an anxiety disorder at some point in their life (Bandelow & Michaelis, 2015). Depression is also common with its lifetime prevalence currently estimated at 10.8% (Lim et al., 2018). Moreover, the number of sufferers continually rises (World Health Organisation, 2017). Schizophrenia spectrum disorders, which affect approximately 1% of the population, are considered especially severe and disabling (Gur et al., 2014; Xia, Merinder, & Belgamwar, 2011).

According to the official Health Statistic yearbook of the Slovak Republic (National Health Information Centre, 2016) the prevalence of mental diseases treated at a first contact in psychiatric inpatient and outpatient services was as follows: 1) the number of examined persons by diagnoses according to ICD-10 F 30.0–39 was 14,930 cases or 27.5 per 10,000 population; 2) the number of examined persons by diagnoses according to ICD-10 F40.00–48.9 was 21,928 cases or 40.3 per 10,000 population. Bražinová, Hašto, Levav and Pathare (2019) found that there are hundreds of thousands of people in Slovakia who have symptoms of depression, anxiety disorders and addiction but are not being treated. She estimates that 67% of people who are most likely to suffer from depression are not currently in treatment. Up to 80% of people with symptoms of alcohol dependency do not get psychological support either. The proportion of people with untreated anxiety disorders is as high as 84%. These numbers demonstrate the size of the gap in mental health care in Slovakia.

According to Pathare, Brazinova and Levav (2018), mental health care gap refers to the percentage of persons who require treatment, but do not receive it, either due to non-availability of facilities, stigma or poor access to appropriate care. Treatment gap seems to be frequently seen by policymakers, researchers and non-professional stakeholders as exclusively relating to clinical psychiatric interventions. The result is the exclusion of a range of effective psychological and psychosocial interventions available today. Typically, measurement of the gap focuses on the mental health needs that are to be met by either highly specialized or primary care health services, while those addressed by related sectors using stepped care and lower intensity interventions are usually not included (World Health Organization, 2009).

THE BURDEN OF MENTAL DISEASE

Vos et al. (2012) estimated overall morbidity of mental disease in most developed countries at 28% and the musculoskeletal complaints at 25%. World Health Organization (2017) investigated the degree of disability due to depression and compared it with that caused by the four most common chronic physical diseases – diabetes, asthma, angina and arthritis. The results demonstrated that depression is in fact 50% more severe and disabling than any of the above physical illnesses. Depression and anxiety disorders together account for more than half of all mental diseases. (Layard & Clark, 2014). Mental illness is the most significant single cause of suffering in modern societies. According to Layard and Clark (2014, p. 63) “Mental illness causes more of the suffering in our society than physical illness does, or than poverty or unemployment

do. It reduces life expectancy as much as smoking does. It accounts for nearly half of all the disabled people on disability benefits, and nearly half of all days off sick. It affects educational achievement and income as much as pure IQ does. And nine out of ten prisoners have mental health conditions when they enter prison.”

According to Robins (1991), people with mental disorders are four times more likely to be unemployed or partially employed. The problem tends to begin in childhood. Commonly, children and adults with mental disabilities are discriminated against in school, rejected and bullied (Astbury, 2008). Due to the strong relationship between mental illness, poverty and lack of education (Bor & Dakin, 2006; Patel & Kleinman, 2003), insufficient treatment of mental disorders in children is likely to negatively affect their learning outcomes and limit their employment and other income generating opportunities later in life. Since the quality and performance of the work force is currently an essential element in achieving enterprise competitiveness, untreated mental health problems can contribute to reduced socioeconomic status in those struggling with mental ill health. According to OECD (2018) a large part of these expenses are due to lower employment rates and productivity of people with mental health issues (1.6% of GDP or EUR 260 billion) and greater spending on social security programmes (1.2% of GDP or EUR 170 billion), with the rest being direct spending on health care (1.3% of GDP or EUR 190 billion). Unemployment disrupts normal daily routine, negatively affects relationships, and reduces one’s ability to contribute to family life.

People with untreated mental illness are often forced to rely on financial support from their families to get their basic needs met and cover the cost of their treatment (Magliano, McDaid, Kirkwood, & Berzins, 2007). Unmet psychological and physical needs often result in frustration with one’s inability to work and its consequences, unsuitable living conditions, lack of dignity and personal fulfillment as well as lack of acceptance by others. There may be fear of the future, low self-confidence, loss of self-esteem, even suicidal thoughts and behaviors. Sufferers can experience negative changes in cognitions, emotions and bodily functions and engage in maladaptive patterns of behavior. Mental disorders can have diverse negative social consequences including homelessness, imprisonment and others (see Layard & Clark, 2014). Lack of material resources to meet one’s basic needs and to afford appropriate treatment can lead to further deterioration of health and premature death. Thus, a vicious cycle of human suffering is developed.

Burns, Tomita and Kapadia (2014) in his review of incidence rates for schizophrenia disorders, found that between 1975 and 2011 countries with a large rich-poor gap have increased risk of schizophrenia. In Slovakia and the Czech Republic, the situation is similar in that high percentage of patients from different diagnostic groups are either unemployed or receive incapacity benefits and their income is below the poverty line. There are several studies to show that.

Slepecky et al. (2018) studied the research sample consisting of 380 in-patients suffering from alcohol dependence, 282 men and 98 women. The patients were from OLUP Predna Hora (n=212) in Slovakia, Wotuw Cracow (n=117) in Poland and psychiatric hospital in Jemnice (n=51) in the Czech Republic. Almost half of the patients (46.5%) were unemployed, 36.4% had stable employment, 6.9% were receiving incapacity benefits, 9% were retired and 1% were students. The high level of unemployment (58.2%) was also found in another Slovak study of hospitalized alcohol-dependent patients (Benkovič, Mišurdová, & Grossman, 2012).

Holubova et al. (2018) studied 82 out-patients, who met diagnostic criteria for depressive disorder. She found that 39% of the sample were unemployed. The study

identified specific negative coping strategies such as a tendency to give up and escape for stressful situations in this patient group. Vrbova et al. (2018) studied 48 schizophrenic out-patients in stable condition (without a need for changes in treatment). She found that 26 of the patients were employed, 22 patients were unemployed, 17 patients were receiving full pension and 5 patients a partial pension. Grambal et al. (2016) studied a sample of patients with various diagnoses. The result is showed in the Table 1. Holubova et al. (2018) studied 153 out-patients with neurotic spectrum disorders (panic disorder, agoraphobia, social phobia, generalized anxiety disorder, mixed anxiety-depressive disorder, adjustment disorder, somatoform disorders and obsessive compulsive disorder; 88 patients were employed and 64 patients were unemployed.

Table 1 Sample of patients with various diagnoses

Categories	All	BPD	SCH	MDD	BAD	AD
Number (%)	184 (100)	35 (19.0)	49 (26.6)	33 (17.9)	30 (16.3)	37 (20.1)
Age (year) (mean ± SD)	38.29±12.0	29.97±9.6	37.49±10.5	45.52±11.3	39.77±11.9	39.57±12.2
Rent (n) no	103	26	19	18	14	26
Rent (n) partial	40	3	23	5	5	4
Rent (n) full	30	6	7	6	7	3
Old-age pension	23	11	6	1	1	4
Employment (n) Yes	84	8	18	18	16	23
Employment (n) No	100	27	31	15	14	14

Note: AD: anxiety disorder; BAD: bipolar affective disorder; BPD: borderline personality disorder; MDD: major depressive disorder; SCH: schizophrenia spectrum disorder

The above studies show the high percentage of unemployment and those in receipt of incapacity benefits across the diagnoses of mental diseases. Although the rate is the highest in psychotic disorders, the proportion of unemployed and incapacitated people with anxiety disorders and major depressive disorders is alarming. The findings are in line with Hendriks et al. (2015) who argued that the association between psychopathology and functioning is not restricted to severe mental illness. It has been noted that anxiety and depressive disorders were associated with work disability and absenteeism compared with healthy controls. Long-term work disability and absenteeism were most prominent in comorbid anxiety and depressive disorders, followed by depressive disorders and lowest in anxiety disorders.

Substance-related disorders are also a global problem affecting people of any nationality, race, social environment, education or gender. It is estimated that about 50 million people are suffering from substance related problems worldwide. The adverse use of alcohol results in 3.3 million deaths each year (World Health Organization, 2014). Alcohol use disorders are among the ten leading causes of Years Lost due to Disability (YLD) in low-income, middle-income as well as high-income countries (World Health Organization, 2014).

In Slovakia, Social Insurance System monitors the official data on incapacity benefits paid for selected diagnoses (Džado, 2018). The analysis of the data on new incapacity benefits in 2017 showed the following spending. Diseases of the muscular,

skeletal system and connective tissue is 25%, tumors (neoplasms) 17%, mental disorders and behavioral disturbances 15%, diseases of the circulatory system 10%, neurological disorders 7%, the other diseases 26%.

Table 2 shows selected diagnoses of new disability benefits in 2017 in Slovakia.

Table 2 Selected diagnoses in new disability benefits in 2017 in Slovakia

Category/age	19-29	30-39	40-49	50-60	60 and more	total
Diseases of the muscular, skeletal system and connective tissue	61	400	1329	3098	433	5321
Tumors (neoplasms)	93	342	796	1993	435	3659
Mental disorders and behavioral disturbances	273	561	771	1313	150	3068
Diseases of the circulatory system	14	73	317	1344	314	2062
Diseases of the nervous system	65	185	306	759	179	1494
Total 2017	506	1561	3519	8507	1511	15604

The data demonstrate that mental disorders and behavioral disturbances are the third major cause of new disabilities. The most striking is the finding that they are a leading cause of new disabilities at the age of 19 to 39. This suggests that an early onset of mental disease can result in disruption of a healthy life cycle and poor quality of life as individual's final pension depends on the number of years worked and their income. The data are a reflection of human suffering of those affected by mental illness too. Unfortunately, the policymakers are predominantly concerned with the level of national income rather than the life satisfaction of the population (Layard & Clark, 2014). This is where researchers can help by investigating how satisfied people are with their life, which could in turn inform future policy making process. In order to know how to change policies, we need to understand what factors affect people's life-satisfaction and to what degree. Studies of the population demonstrate considerable influence of people's mental health on their life satisfaction but also its links with their physical health, income, work, family, age and gender.

Table 3 illustrates finding about life satisfaction from Britain, Germany, and Australia (Layard & Clark, 2014). In each country, it is showed who is unhappy (defined as the bottom 10%) and who is not. The factors causing people to feel miserable are discussed and their significance is measured. The results show that mental ill-health explains more of the misery in the population than physical illness does. Moreover, mental ill-health also explains a lot more misery than is explained by poverty or unemployment (Layard & Clark, 2014).

Since mental illness is the most significant cause of misery in adults (as shown in Table 3), we need a new concept of deprivation, which includes much more than just financial hardship. Financial resources do not create life satisfaction if people lack the psychological means to enjoy their life. For this reason, mental health must be acknowledged in the development of public policy (Layard & Clark, 2014).

INABILITY TO WORK

According to Layard and Clark (2014), mental illness causes over a third of all disability in Britain, the USA and Continental Europe as it is shown in Table 4.

Table 3 Mental illness is the biggest cause of misery (adults)

	Partial correlation coefficients *		
	Britain	Germany	Australia
Mental ill health (1 year earlier)	.30	.21	.21
Physical ill health (now)	.12	.10	.15
Household income per head (log)	-.05	-.06	-.05
Unemployment	.04	.06	.05
Number surveyed	103,00	50,000	57,000

*These numbers show the strength of the relationship between misery and each variable after controlling for the influence of all the other variables shown. According (Layard & Clark, 2014).

Table 4 Percentage of people of working age on disability benefits

	Due to all causes	Of which due to mental illness
Britain	6.1	2.5
USA	6.6	2.0
6 other OECD countries (average)	6.4	2.4

Altogether, approximately 6% of working-age adults are on disability benefits (1/3 of these attributable to mental illness). Moreover, we need to add many people who report physical illness, like back pain or headache and medically unexplained symptoms of psychosomatic origin. Thus, the proportion of disability benefits caused by mental diseases is closer to 50%. Further, people with mental disorders who are employed often struggle to perform well at work. They are much more likely to take days off work due to sickness. Psychiatric disorders account for between a third and a half of all days off work. Sometimes, the absence is caused by the problematic relationship or the atmosphere in workplace. However, in at least 80% of cases work absences are due to an unresolved mental health problem (Layard & Clark, 2014). Another work related problem caused by mental illnesses “presenteeism”. This term refers to the situation where people are at work, but their performance is below expected standard. When people start receiving welfare benefits due to mental illness, it is likely that they will continue to do so for a long time. In Britain, the average time on welfare benefits is four years. The most surprising is the fact that less than half of them receive any form of treatment (Layard & Clark, 2014).

LACK OF PROPER TREATMENT

Despite strong research support for effectiveness of psychological therapy, most people suffering from depression and anxiety disorders in Slovakia are not treated according to evidence-based medicine (EBM) recommendations. In Slovakia, out of all F diagnoses to the ICD-10 (1996), 38.2% of the patients are treated by general practitioners (GPs), 45.5% by the secondary psychiatric care and only 9.5% are treated by clinical psychologists. The main method of treatment by GPs and psychiatrists is through prescribing psychotropic medication (Source: Ministry of Health 2018, requested information). The survey of the 50 most prescribed medications shows that the fifth in the rank is Stilnox 10 mg, the 23rd Neurol 0.5 mg, the 34th is Neurol 0.25

mg, 39th Oxazepam 10 mg, 45th Hypnogen (National health information center, 2018). It is likely that these have been prescribed for sleep problems and anxiety. As far as psychotherapeutic treatment is concerned, the preferred psychotherapeutic intervention in 2017 by psychiatrists was short term, rational, insight-oriented therapy (term used by insurance catalogue) offered 65,801 times. The second one was individual psychotherapy offered 16,041 times. Clinical psychologists offered individual psychotherapy 81,257 times and short-term, rational, insight-oriented therapy 39,235 times. There are 448 registered outpatient psychiatric practices and 221 outpatient psychological practices in Slovakia. (Source: data from Ministry of Health Slovak Republic, 2018, requested information). So most people with mental health problems are treated by GPs and psychiatrists, mostly by psychotropic medication or simple forms of psychotherapy.

There are currently no clinical guidelines for treatment of mental disorders in Slovakia (these are presently being developed at the Slovak Ministry of Health). Various forms of psychotherapy originating from different psychotherapeutic orientations are being provided, not taking into account EBM scientific approach. The situation in Slovakia is characterized by low access rates and insufficient quality of care for people with mental health problems. One of the best guidelines for treating mental disorders was developed in England by The National Institute for Health and Care Excellence, or NICE. NICE was created by the National Collaborating Centre for Mental Health (NCCMH). NCCMH guidelines have been translated and adopted by healthcare systems in Italy, Australia and Slovenia (The NCCMH has also supported NICE International to aid the Netherlands, Georgia, Turkey, the USA and others in establishing their national guideline treatment programs in collaboration with the American Psychological Association).

NICE (2011) stepped-care model provides guidance for organizing mental health problems, as well as helping their families and carers. NICE guidelines help healthcare professionals to identify and choose the most effective interventions for specific mental disorders. The model presents an integrated overview of the key treatment interventions. NICE guidelines recommend delivery of mental health care in a stepwise manner in order for the intervention to be the most effective and least burdensome for the patient. Please see Figure 1 for the illustration of the stepped-care model: a combined summary of common mental health disorders.

WHAT WE NEED TO DO

In 2008 in the UK, British government had made a decision to start a major national program to deliver evidence-based psychological therapies through the National Health Service. This initiative is called the Improving Access to Psychological Therapies (IAPT) (Layard, 2017). We are of the view that Slovakia needs to go through a similar process. IAPT is an example of how to enable access to EBM therapies for wider populations in need of psychological help and how to organize the delivery of these psychological therapies. Under the IAPT initiative, new treatment centers with well-trained therapists working under regular supervision were established. In IAPT center, patients' progress is measured session by session. This approach offers valuable information for care providers about how effectively their money is spent. All data from the system (other than personally identifiable patient data) are regularly published. Three essential features characterize the IAPT model (Layard & Clark, 2015):

Stepped care approach ensures that treatment is provided on the basis of patients' needs. This ensures that everyone gets the most effective and least burdensome treat-

Focus of the intervention	Nature of the intervention
Step 3: Persistent subthreshold depressive symptoms or mild to moderate depression that has not responded to a low-intensity intervention; initial presentation of moderate or severe depression; GAD with marked functional impairment or that has not responded to a low-intensity intervention; moderate to severe panic disorder; OCD with moderate or severe functional impairment; PTSD.	Depression: CBT, IPT, behavioural activation, behavioural couples therapy, counselling, short-term psychodynamic psychotherapy, antidepressants, combined interventions, collaborative care, self-help groups. GAD: CBT, applied relaxation, drug treatment, combined interventions, self-help groups. Panic disorder: CBT, antidepressants, self-help groups. OCD: CBT (including ERP), antidepressants, combined interventions and case management, self-help groups. PTSD: Trauma-focused CBT, EMDR, drug treatment. All disorders: Support groups, befriending, rehabilitation programmes, educational and employment support services; referral for further assessment and interventions.
Step 2: Persistent subthreshold depressive symptoms or mild to moderate depression; GAD; mild to moderate panic disorder; mild to moderate OCD; PTSD (including people with mild to moderate PTSD).	Depression: Individual facilitated self-help, computerised CBT, structured physical activity, group-based peer support (self-help) programmes, non-directive counselling delivered at home, antidepressants, self-help groups. GAD and panic disorder: Individual non-facilitated and facilitated self-help, psychoeducational groups, self-help groups. OCD: Individual or group CBT (including ERP), self-help groups. PTSD: Trauma-focused CBT or EMDR. All disorders: Support groups, educational and employment support services; referral for further assessment and interventions.
Step 1: All disorders – known and suspected presentations of common mental health disorders	All disorders: Identification, assessment, psychoeducation, active monitoring; referral for further assessment and interventions.

Figure 1 Stepped-care model: a combined summary for common mental health disorders

ment adequate for their needs. Most people begin with ‘psychological wellbeing practitioners’ or PWPs, the therapists trained in low-intensity approaches delivered through telephone contact, self-help books, computerized therapy, group therapy or low-intensity one to one therapy. People who suffer from more severe anxiety and depression, all patients with PTSD, and patients with milder symptoms who do not recover with PWPs are referred, or ‘stepped-up’, to receive more intensive treatments to be delivered by therapists trained in high-intensity therapies that require additional training, knowledge and skills. All therapies offered by IAPT are evidence-based with predominant but not exclusive use of CBT. People can be referred to IAPT either by their GP or other professionals involved in their care but people can also self-refer. IAPT initiative in England started in late 2008 and since then has continued to grow steadily. Similar initiatives were developed in Australia and Canada (Gratzer & Goldbloom, 2016). Clark (2017) summarized the results achieved by IAPT in his presentation at CBT congress in Cluj, Romania. The program transformed treatment of common mental health disorders of depression and anxiety. Psychological therapy services based on stepped-care model were established in every area of England. As a result, approximately 16% of local prevalence of mental disorders (950,000 per year) was seen in IAPT services. Around 60% of these cases were treated (approximately 575,000 per year) and treatment outcomes were recorded in 98.5% of all cases. The effectiveness of therapeutic interventions in IAPT is monitored through regular use of two questionnaires, PHQ-9 and GAD-7, which are completed for every therapy ses-

sion. The criteria for recovery are rigorous – both scores for depression and anxiety have to be under the clinical cut-off point. Data collected between January and March 2017 showed that 51% of patients in IAPT reached recovery and 16% of them were improved. The substantial pre-post effect size was 1.4 for depression (PHQ-9) and 1.5 for anxiety (GAD-7).

Since the model has worked so well and is so important, it has generated significant interest in other countries. At least seven countries expressed their interest, and Norway and Sweden have already started to introduce their versions of the system. The model is an inspiration for Slovakia, too.

According to Layard and Clark (2014), there are six main criteria which a service has to satisfy if it is to be an IAPT service.

- It has to deliver only evidence-based, NICE-recommended therapies. This includes not only CBT but interpersonal therapy, brief psychodynamic therapy, couples therapy and counseling for depression.
- It has to employ therapists who are fully trained in how to deliver the relevant treatment.
- It has to measure patient outcomes on a session-by-session basis, with at least 90% of completeness of data.
- Each patient receives a professional assessment when he/she arrives and is then allocated to high- or low-intensity treatment, as appropriate. About 46% get low-intensity only, 34% get high-intensity only, and 20% get both – having been stepped up to high-intensity after low-intensity failed.
- Each therapist must have weekly supervision, and each trainee must have a well-qualified supervisor.
- The service must be open to patients who refer themselves, without going through their general practitioner (GP). This breaks with all conventional arrangements in the National Health Service. When it was proposed, some people argued that it would attract the ‘worried well’. On the contrary, it was found that patients who self-refer are as ill as those coming through their GP-referred. They have also been ill longer, and recover as well (often with fewer sessions, reflecting their high level of motivation). They also include a higher proportion of people from black and minority ethnic groups than patients referred by GPs, and this helps to ensure that IAPT patients have a more similar ethnic balance to their population at large.

CONCLUSION

So why is it important to introduce the new model of mental healthcare in order to fight poverty? As explained above, mental diseases cause low income, low quality of life and poverty. Most mental diseases are treatable in their early stages. However, the most effective modern psychological treatments are not widely available nor delivered by mental health professionals in Slovakia. The reform of the system for mental healthcare is long overdue in our country, and the development of the missing steps of care for treatment of common mental disorders such as depression and anxiety, as well as anxiety or depression related to long term health conditions is a worthwhile goal.

In order to achieve this goal, there are several steps to be completed. First, it is necessary to develop clear practice standards for treatment of specific mental disorders based on scientific evidence. The Ministry of Health of the Slovak Republic has already taken a positive stance toward this initiative by setting up professional groups of psychiatrists and clinical psychologists and is supporting their activity inspired by the work of NICE and IAPT models.

Secondly, it is important to address the current lack of monitoring system in order to understand and measure effectiveness of presently used treatments for mental disorders. It is crucial to be able to provide feedback to policy makers and providers about the effectiveness of individual treatments used in clinical practice. The lack of transparency about effectiveness of specific treatments has contributed to the current state of our clinical practice where the majority of people suffering from mental health problems are treated by medication, or by very specialized psychotherapies (many of these have insufficient evidence base), while psychological therapies with good evidence base are scarcely used. However, the recent initiative of conversion to electronic healthcare records could provide an opportunity for integrating the measurement of effectiveness of mental health interventions within this new system.

Thirdly, we need to introduce further 'steps' into the current system of care for treatment of common mental health disorders based on severity of patients' needs. In the new proposed care system, initial support can be provided by GPs at Step 1 and mild to moderate mental health problems can be addressed at Step 2 using low-intensity, evidence-based psychotherapeutic interventions following an adequate initial assessment. The low-intensity interventions can be delivered through phone consultations, internet-based psychotherapy, guided self-help and group treatment by therapists appropriately trained in these forms of interventions. More severe manifestations of mental health problems, or those who haven't responded to lower-intensity treatments should be referred to an appropriately trained therapist certified for providing adequate disorder-specific psychotherapy. The overarching aim is for anyone suffering with mental illness to receive appropriate evidence-based and disorder specific treatment.

Apart from adequate diagnosis and treatment of mental disorders, we also consider strategies for prevention of mental illness as very important. The revised National Mental Health Program dated 6th October 2004 (Úrad verejného zdravotníctva, 2004) based on the recommendations of the World Health Organization, emphasizes it. It states that not enough attention is paid to the support of mental health and prevention of mental disorders in the society. According to the program, there was an important difference between real and declared mental healthcare. Moreover, the level of care for those with mental disorders fell behind the care for those with physical illness. As such, the issue with mental health is becoming a political priority in all its complexity. At the same time, there are significant differences noted in current mental health and physical health between urban and rural areas. Unfortunately, options for psychological support are given minimum attention in this material. Within this framework, the EU has set the following priorities:

- Prevention of depression and suicides
- Mental health of youth and education
- Mental health in the workplace
- Mental health of older people
- Tackling social exclusion

Lack of appropriate training and education in the field of mental health results in an insufficiently informed society. Poorly developed care for people with mental disorders and low awareness of the population about mental health issues leads to persistence of mental disorders and sometimes to stigmatization and discrimination of those who suffer with mental health problems. The current situation does not promote better quality of life for people with mental illness, nor does it help to prevent mental disorders.

Educating society about how to prevent psychological problems and how to promote mental health in an essential aspect of mental health policy. We believe that the interventions and services for improving mental health should be aimed at the society as a whole. Raising general awareness of mental health is a duty of every individual as this awareness is critical for maintaining our psychological wellbeing.

The program points out the need to devote adequate resources and decisive powers to those involved in mental healthcare while taking the service users' needs into account.

The implementation of changes into the mental healthcare system is expected to bring the following benefits:

- More professional specialist services and better quality of life for recipients of care and their families.
- The highest possible number of current passive recipients of state support to become active contributors to the society.
- Positive economic impact for the individual (higher financial self-sufficiency, better access to resources, increased personal freedom, responsibility and self-respect, lower family burden) and the society as a whole (reduction of expenditure on welfare as the recipients of appropriate care should be able to return to productive economic activities and pay taxes, pension contributions and insurance) (NPDZ, 2017).

In Slovakia, more than 400 psychologists graduate from universities every year. Some of these graduates could be trained in delivering low-intensity treatments after one year of training based on the experiences from England. For the project of transformation of mental healthcare, we will be looking for support from politicians, ministry of health, patient organizations and all professionals supporting people suffering with mental illness. The importance of a combined strategy for tackling the mental health burden is recognized by WHO (2013) in its objectives and targets of the Comprehensive Mental Health Action Plan for 2013-2020.

Currently we are at the very beginning of a long journey hoping that our joint efforts will eventually succeed.

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SÚHRN

Úloha účinnej liečby duševných chorôb v boji s chudobou

Na Slovensku trpí duševným ochorením jeden z piatich ľudí. Tieto ochorenia začínajú obvykle vo včasnjšom veku, a preto sú v produktívnom veku najčastejšie. Odhaduje sa, že sú zodpovedné za tretinu sociálnych výdavkov, zvyšujú nezamestnanosť a prehlbujú chudobu. Prítomný je tiež značný nepomer v psychologickej liečbe u pacientov, ktorí sú liečení primeranou liečbou, a tými, ktorí túto liečbu potrebujú, ale ju nedostávajú. Poskytnutie vhodnej psychologickej liečby včas môže zabrániť alebo obmedziť väčšinu negatívnych vplyvov duševných ochorení. Podnetom, na zlepšenie tohto stavu sú skúsenosti „Iniciatívy na zvýšenie prístupu k psychologickej liečbe (IAPT)“ v Anglicku, kde sa podarilo sprístupniť dôkazmi podloženú liečbu významnému počtu pacientov. IAPT iniciatíva používa model postupnej starostlivosti s dôrazom na začiatok liečby pomocou menej intenzívnych intervencií. Ak by sme postupovali podľa tohto modelu, mohli by sme vyplniť medzeru medzi primárnou starostlivosťou o duševné ochorenia a ich vysoko špecializovanou liečbou. Včasné psychologické intervencie môžu pomôcť uzdraviť sa ľudom s depresiou, úzkostnými poruchami a pomôcť aj pacientom s chronickým ochorením, a takto zlepšiť ich kvalitu života, znížiť nezamestnanosť a chudobu.

Represent your country at the ICP 2020!

**On behalf of the ICP Scientific Committee,
let me invite you to Prague:**

Preparations for the Prague ICP 2020 are in the full swing. The Czech team, its Organizing and Scientific Committees are busy finding the best speakers and diverse representation of the world psychological science. We have formed a Scientific Committee representing over 40 thematic areas for the ICP 2020 scientific program. Each section now has a corresponding working group, a mini-team of experts (some of which you see at the photo below), who recruit speakers from around the world. Make sure that your field, your nation, your institution and you are not missing at the Congress!

**Mark your calendars, please, Prague, Czech Republic is
looking forward to having you at the ICP, July 19–24, 2020
In the meantime, please keep an eye on our website**

www.icp2020.com and on Facebook updates

*Sincerely,
Martina Klicperová-Baker,
Chair of the ICP 2020 Scientific Committee*

