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JULY 17-19, 2017, BERLIN, GERMANY

Dear readers, researchers, audience,

The presentation consists of the **two main parts**:
(1) researchers introduction;
(2) research (paper) introduction.

You can download the presentation below and pause it anytime you need to. OR contact dr. Jitka Vaculíková (at jvaculikova@fhs.utb.cz) for any further information you might have.

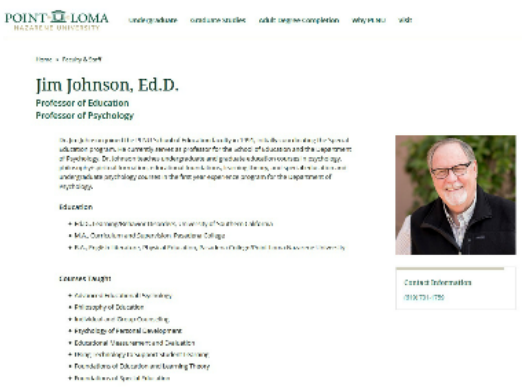
Best, Jitka

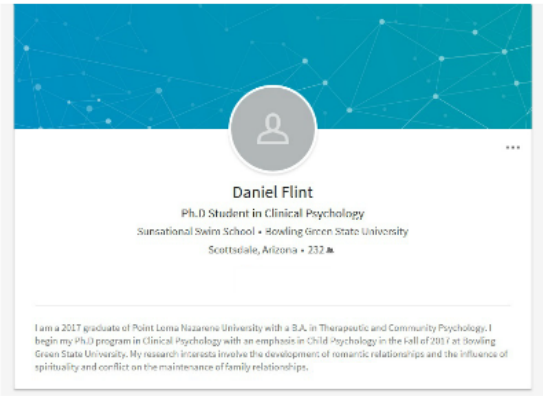
Let's introduce ourselves first

Who are we? Where do we come from?

Dr. Jitka Vaculíková

Dr. Jim Johnson and Daniel Flint





Dr. Jitka Vaculíková

Introducing...

Research Centre of the Faculty of Humanities TBU in Zlín

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About us...

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ORCID ID: orcid.org/0000-0002-0711-548X

Head of Department, Research Centre of FHS TBU in Zlín
Executive editor of the journal Sociální pedagogika | Social Education

Field of research:
- Promoting self-regulated learning (SRL)
- Motivational aspects of SRL
- Proactive coping
- Academic failure

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Sociální pedagogika Social Education časopis pro vědu a praxi

CV provides space for the editorial board of the Sociální pedagogika | Social Education journal that is a peer-reviewed scientific open-access journal at www.soced.cz. The journal is placed on the List of non-impact peer-reviewed journals published in the Czech Republic and included in ERIH Plus database, ERA, EBSCO, CEJSH, ProQuest, DOAJ, Google Scholar, Ulrich´s Periodicals Directory, SSRN and provides DOI.

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& do we come from?

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Jim Johnson, Ed.D.

Professor of Education
Professor of Psychology

Dr. Jim Johnson joined the PLNU School of Education faculty in 1991, initially coordinating the Special Education program. He currently serves as professor for the School of Education and the Department of Psychology. Dr. Johnson teaches undergraduate and graduate education courses in psychology, philosophy/spiritual formation, educational foundations, learning theory, and special education and undergraduate psychology courses in the first year experience program for the Department of Psychology.

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Contact Information

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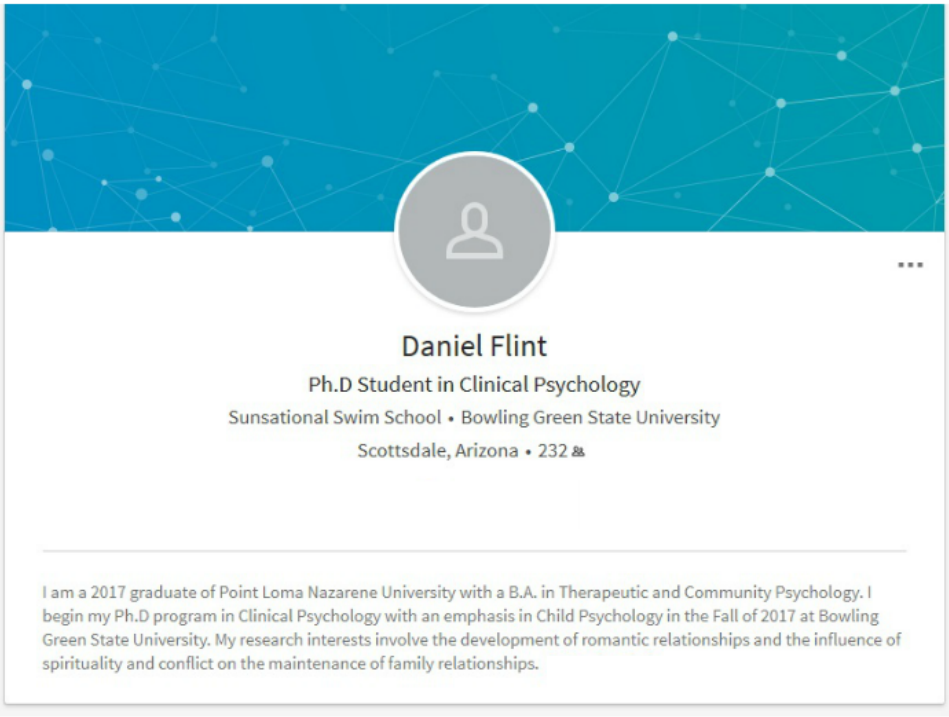

Daniel Flint

Ph.D Student in Clinical Psychology

Sunsational Swim School • Bowling Green State University

Scottsdale, Arizona • 232

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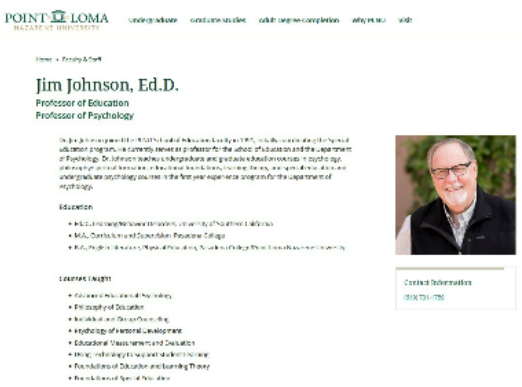

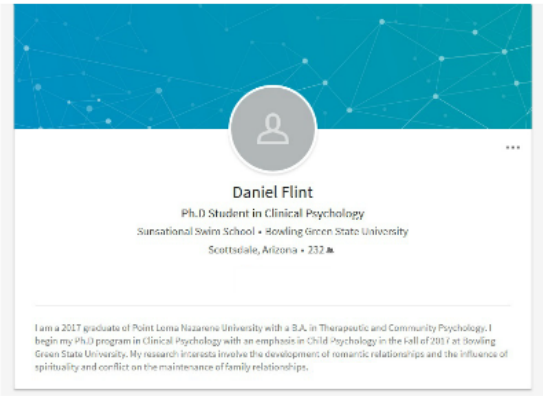

Now follows our video presentation of the research:

EVALUATING THE FACTOR STRUCTURE OF THE PROACTIVE AND PREVENTIVE COPING

EVALUATING THE FACTOR STRUCTURE OF THE PROACTIVE AND PREVENTIVE COPING

Jitka Vaculíková★, Jim Johnson★★, Daniel Flint★★

★Research Centre, Tomas Bata University in Zlín, Czech Republic
★★School of Education and Department of Psychology, Point Loma Nazarene University, San Diego, USA

Corresponding author at: Research Centre, Faculty of Humanities TBU, nám. T. G. Masaryka 1279, 760 01 Zlín, Czech Republic.
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Abstract

Proactive and preventive coping are oriented on certain future challenges that are not appraised as negative threats. The **aim of the study** is to answer the question whether the coping scales are separate constructs as measured by the Proactive Coping Inventory. The underlying factor structure was empirically assessed using exploratory factor analysis with Sample 1 and re-tested using confirmatory factor analysis with Sample 2. Moreover, item analysis and correlations with other personality variables were carried out to check the content validity. The present study opens discussion about construct validity that **was not supported empirically** in both samples.

INTRODUCTION

Within the forward-looking **coping strategies** that integrate processes of personal quality of life management with those of self-regulatory behaviors and goal achieving, proactive coping differs from traditional definitions of coping. Proactive copers are able to see risks, and opportunities in the future, but they do not perceive them as negative threats. Instead, they are positively motivated to overcome the stressful situations. Schwarzer and Taubert (2002) define the proactive coping as individuals´efforts to build up general resources to achieve challenging goals and personal growth without sense of potential threat or negative experience.

Based on the mixed results of the unification of the coping factor structure, the hypothesis **testing proactive and preventive coping construct validity as measured by the PCI** was formulated. Since the factor structure of the coping scales has not been subjected to factor validation in the Czech educational environment, the presented study aims to accomplish this task. Moreover, to better understand the underlying structural relationship of the coping scales the EFA and CFA techniques were used in two samples delivered from different cultures. We hypothesized that proactive and preventive coping represent separate constructs across samples analyzed in this study as previously confirmed by Drummond and Brough (2016).

Method

Participants

Sample 1
Sample 1 consisted of 447 Czech university students enrolled in a traditional face-to-face course delivery format studying at a medium-sized public university. The mean age of 441 students who completed their age was 21 years (SD = 2.07) with the two youngest 18-year-old students and the oldest 49-year-old student. The majority of respondents were female 89% (n = 398), pursuing full-time bachelor´s degree (n = 414, 93%) and master´s degree (n = 33, 7%) in the field of helping professions (i.e., future teachers, social educators, linguists and social care workers).

Sample 2
Sample 2 was comprised of 98 university students from a medium-sized private university in the Southwestern United States. 98 final questionnaires were used of students aged between 21 to 39 years (M = 29.66, SD = 6.10). 67% (n = 66) were female and 15% (n = 15) were male. More than half of the students were full-time students (n = 55, 68%) pursuing master´s degree (n = 80, 99%) with the major in the field of helping professions.

Measures

Measure of proactive and preventive coping.
The original English version of the Proactive Coping Inventory (PCI; Greenglass et al., 1999) as well as identical validated PCI for the Czech educational environment (Šolcová, Lukavsky, & Greenglass, 2006).

Measure of social support.
The nineteen-item Social Support Survey (MOS; Sherbourne & Stewart, 1991; Czech validation by Kožený & Tišanská, 2003).

Measure of well-being.
The Schwartz Outcomes Scale-10 (SOS-10; Blais et al., 1999; Czech validation by Dragomirecká, Lenderking, Motlová, Goppoldová, & Šelepová, 2006).

Measure of depression.
The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) validated for the Czech environment (Preiss & Vacíř, 1999).

RESULTS

Exploratory factor analysis (EFA)
Prior to performing PCA, the suitability of data (Sample 1) for EFA was assessed. Inspection of the correlation matrix revealed the presence of relationship (.30). KMO = .84 and the Bartlett's Test of Sphericity ($\chi^2(276) = 2489.51$, $p < .001$), supporting the factorability of the correlation matrix.

Results of the EFA

- The **two factor solution accounted for 32% of the variance** and comprised of factor measuring (F1) **proactive coping (12 items)** and (F2) **preventive coping (9 items)** with overall α = .83 (see Table 1).
- Results in Table 2 show that all of the items had **significant discrimination indices** ($p < .001$), which indicated that the proactive and preventive coping scales successfully discriminated students with high and low coping styles.
- Results in Table 3 show that proactive coping was significantly and positively correlated with preventive coping and well-being, as was expected. There was a medium, negative correlation with depression. As well as a small, positive significant correlation with social support.
- The strength of the correlation between coping scales was re-tested in each sample whilst controlling for gender and educational level (testing demographic differences between the samples) with no changes in the significance of the correlations found.

Now lets see the Tables 1, 2, and 3

RESULTS

Confirmatory factor analysis
In addition, the model fit in English speaking sample (Sample 2) was tested by CFA with maximum likelihood method. At this stage, the item 35 and 45 from the factor measuring proactive coping **were deleted** for its very low factor loadings. On the same basis, item 11 and 4 from the preventive coping factor **were deleted** and **error covariances** were added.

Results of the CFA

- Three rounds of the CFA.
- Results of the third CFA were as $\chi^2(df = 115, p = .00) = 260.9$, $\chi^2/df = 2.27$, and their GOF indexes values RMR = .02, RMSEA = .11, TLI = .73, CFI = .77, GFI = .79, AGFI = .72, PCLOSE = .00. However, all changes **did not improve** the model fit in Sample 2.

DISCUSSION

Presented proactive and preventive coping subscales were found to have **good internal reliability and satisfactory discriminant validity in Czech sample of university students.** However, this result was not supported in Sample 2 consisting of American university students.

The **different findings** across samples may be due to respondents sociodemographic differences (i.e., their heterogeneous nature). Proactive coping and preventive coping can differentially enable Czech and American students to perceive demanding situations in college life as personally challenging. In addition to different socio-cultural environments, American sample of university students was small-sized needed further empirical verification.

LIMITATIONS

- First of all, as stated by Roesch et al. (2009), the PCI represents a dispositional scales of coping. Thus, nonspecific external stressors can cause different responses.
- Second, presented results are generalizable only to the research samples of university students carried out in this study.
- The third limitation is related to the small-size sample represented by 98 university students in Sample 2.
- Last, voluntary anonymous participation was conducted facing the risk of a small-sized analysis.

CONCLUSIONS

This study contributes to the recent discussions on dimensionality of proactive and preventive coping by using the PCI in two independent samples. The mixed evidence in support of their independent factor structure is provided. Presented investigation of the psychometric properties of the PCI subscales assessing proactive and preventive coping suggests **refinements of the scales.**
Future research involving balanced comparison of samples and following verification of the constructs on the population may enhance our understanding of the theoretical and empirical distinction between the two coping behavioral strategies.

Abstract

Proactive and preventive coping are oriented on certain future challenges that are not appraised as negative threats. The **aim of the study** is to answer the question whether the coping scales are separate constructs as measured by the Proactive Coping Inventory. The underlying factor structure was empirically assessed using exploratory factor analysis with Sample 1 and re-tested using confirmatory factor analysis with Sample 2. Moreover, item analysis and correlations with other personality variables were carried out to check the content validity. The present study opens discussion about construct validity that **was not supported empirically** in both samples.

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Table 1: Pattern and Structure Matrix for PCA with Oblimin Rotation on 2-factor Solution

No.	Item*	Pattern F1	Pattern F2	Structure F1	Structure F2	h^2	*M (SD)*	*α-i*
22.	I like challenges and beating the odds.	.73		.71		.63	2.52 (.92)	.80
53.	If someone tells me I can't do something, you can be sure I will do it.	.73		.70		.56	2.84 (.79)	.80
41.	I always try to find a way to work around obstacles; nothing really stops me.	.67		.69		.49	2.73 (.75)	.80
35.	When I have a problem, I usually see myself in a no-win situation. (r)	.62		.49		.54	2.74 (.83)	.81
33.	Despite numerous setbacks, I usually succeed in getting what I want.	.61		.62		.48	2.80 (.66)	.80
54.	When I experience a problem, I take the initiative in resolving it.	.57		.62		.65	2.55 (.68)	.80
45.	I often see myself failing so I don't get my hopes up too high. (r)	.51		.46		.63	2.65 (.92)	.82
51.	I turn obstacles into positive experiences.	.51		.53		.47	2.80 (.82)	.81
28.	I visualize my dreams and try to achieve them.	.50		.56		.55	2.97 (.79)	.81
1.	I am a "take charge" person.	.50		.51		.44	2.66 (.65)	.81
15.	After attaining a goal, I look for another, more challenging one.	.43		.49		.38	2.24 (.81)	.81
55.	I develop my job skills to protect myself against unemployment.	.40		.49		.44	2.87 (.76)	.81
43.	I think ahead to avoid dangerous situations.		.72		.69	.55	2.86 (.71)	.71
18.	I prepare for adverse events.		.69		.66	.52	2.66 (.75)	.71
30.	I plan my strategies to change a situation before I act.		.64		.66	.57	2.60 (.75)	.71
11.	Rather than spending every cent I make, I like to save for a rainy day.		.60		.53	.73	2.77 (.96)	.72
47.	I plan strategies for what I hope will be the best possible outcome.		.54		.60	.51	2.87 (.75)	.72
50.	I try to manage my money well in order to avoid being destitute in old age.		.52		.50	.74	2.85 (.97)	.73
25.	Before disaster strikes I am well-prepared for its consequences.		.49		.51	.44	2.33 (.74)	.72
4.	I plan for future eventualities.		.44		.47	.38	2.75 (.74)	.73
37.	I try to pinpoint what I need to succeed.		.43		.47	.48	3.09 (.65)	.74
	Number of items	12		9				
	M (SD)	2.70 (.46)		2.74 (.46)				
	Eigenvalue	5		2				
	Explained variance in %	22		10				
	Cronbach´s alpha	.82		.75				

Note: (r) = reversed items; * = presented numbers of the items correspond to the original order of the PCI; α-I = Cronbach alpha if the item is deleted.

Table 2: Item Discrimination Analysis between High and Low Proactive and Preventive Coping Scores

Proactive item No.	*M (SD)* for low scores ($n = 135$)	*M (SD)* for high scores ($n = 104$)	Sig.	Preventive item No.	*M (SD)* for low scores ($n = 134$)	*M (SD)* for high scores ($n = 98$)	Sig.
22	1.77 (.66)	3.40 (.70)	< .001	43	2.22 (.57)	3.51 (.56)	< .001
53	2.19 (.62)	3.53 (.56)	< .001	30	1.92 (.59)	3.23 (.57)	< .001
41	2.12 (.65)	3.43 (.54)	< .001	18	2.13 (.59)	3.42 (.56)	< .001
35	2.13 (.76)	3.32 (.71)	< .001	47	2.24 (.64)	3.54 (.54)	< .001
33	2.31 (.57)	3.25 (.59)	< .001	11	2.42 (1.0)	3.12 (.84)	< .001
54	1.99 (.53)	3.07 (.56)	< .001	25	1.87 (.63)	2.92 (.70)	< .001
45	2.26 (.90)	3.11 (.88)	< .001	50	2.53 (.96)	3.12 (.99)	< .001
51	2.28 (.77)	3.47 (.59)	< .001	4	2.32 (.65)	3.32 (.64)	< .001
28	2.44 (.72)	3.58 (.62)	< .001	37	2.72 (.59)	3.57 (.57)	< .001
1	2.22 (.64)	3.07 (.56)	< .001				
15	1.76 (.65)	2.83 (.77)	< .001				
55	2.74 (.77)	3.25 (.62)	< .001				

Table 3: Intercorrelations between the Coping Scales, Social Support, Well-Being and Depression

Variables	*M (SD)*	1.	2.	3.	4.	5.
1. Proactive coping	2.70 (.46)	(.82)				
2. Preventive coping	2.74 (.46)	.38**	(.75)			
3. Social support	3.52 (.44)	.18**	.07	(.93)		
4. Well-being	2.94 (.48)	.49**	.16**	.38**	(.83)	
5. Depression	1.35 (.38)	-.38**	-.07	-.23**	-.60**	(.86)

Note: Alpha coefficients are presented on the diagonal. * = $p < .05$; ** = $p < .01$.

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RESULTS

Confirmatory factor analysis

In addition, the model fit in English speaking sample (Sample 2) was tested by CFA with maximum likelihood method. At this stage, the item 35 and 45 from the factor measuring proactive coping **were deleted** for its very low factor loadings. On the same basis, item 11 and 4 from the preventive coping factor **were deleted** and **error covariances** were added.

Results of the CFA

- Three rounds of the CFA.
- Results of the third CFA were as x2(df = 115, p = .00) = 260.9, x2/df = 2.27, and their GOF indexes values RMR = .02, RMSEA = .11, TLI = .73, CFI = .77, GFI = .79, AGFI = .72, PCLOSE = .00. However, all changes **did not improve** the model fit in Sample 2.

DISCUSSION

Presented proactive and preventive coping subscales were found to have **good internal reliability and satisfactory discriminant validity in Czech sample of university students.** However, this result was not supported in Sample 2 consisting of American university students.

The **different findings** across samples may be due to respondents sociodemographic differences (i.e., their heterogeneous nature). Proactive coping and preventive coping can differentially enable Czech and American students to perceive demanding situations in college life as personally challenging. In addition to different socio-cultural environments, American sample of university students was small-sized needed further empirical verification.

LIMITATIONS

- First of all, as stated by Roesch et al. (2009), the PCI represents a dispositional scales of coping. Thus, nonspecific external stressors can cause different responses.
- Second, presented results are generalizable only to the research samples of university students carried out in this study.
- The third limitation is related to the small-size sample represented by 98 university students in Sample 2.
- Last, voluntary anonymous participation was conducted facing the risk of a small-sized analysis.

CONCLUSIONS

This study contributes to the recent discussions on dimensionality of proactive and preventive coping by using the PCI in two independent samples. The mixed evidence in support of their independent factor structure is provided. Presented investigation of the psychometric properties of the PCI subscales assessing proactive and preventive coping suggests **refinements of the scales.**

Future research involving balanced comparison of samples and following verification of the constructs on the population may enhance our understanding of the theoretical and empirical distinction between the two coping behavioral strategies.

EVALUATING THE FACTOR STRUCTURE OF THE PROACTIVE AND PREVENTIVE COPING

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Abstract

Proactive and preventive coping are oriented on certain future challenges that are not appraised as negative threats. The **aim of the study** is to answer the question whether the coping scales are separate constructs as measured by the Proactive Coping Inventory. The underlying factor structure was empirically assessed using exploratory factor analysis with Sample 1 and re-tested using confirmatory factor analysis with Sample 2. Moreover, item analysis and correlations with other personality variables were carried out to check the content validity. The present study opens discussion about construct validity that **was not supported empirically** in both samples.

INTRODUCTION

Within the forward-looking **coping strategies** that integrate processes of personal quality of life management with those of self-regulatory behaviors and goal achieving, proactive coping differs from traditional definitions of coping. Proactive copers are able to see risks, and opportunities in the future, but they do not perceive them as negative threats. Instead, they are positively motivated to overcome the stressful situations. Schwarzer and Taubert (2002) define the proactive coping as individuals´efforts to build up general resources to achieve challenging goals and personal growth without sense of potential threat or negative experience.

Based on the mixed results of the unification of the coping factor structure, the hypothesis **testing proactive and preventive coping construct validity as measured by the PCI** was formulated. Since the factor structure of the coping scales has not been subjected to factor validation in the Czech educational environment, the presented study aims to accomplish this task. Moreover, to better understand the underlying structural relationship of the coping scales the EFA and CFA techniques were used in two samples delivered from different cultures. We hypothesized that proactive and preventive coping represent separate constructs across samples analyzed in this study as previously confirmed by Drummond and Brough (2016).

Method

Participants

Sample 1
Sample 1 consisted of 447 Czech university students enrolled in a traditional face-to-face course delivery format studying at a medium-sized public university. The mean age of 441 students who completed their age was 21 years (SD = 2.07) with the two youngest 18-year-old students and the oldest 49-year-old student. The majority of respondents were female 89% (n = 398), pursuing full-time bachelor´s degree (n = 414, 93%) and master´s degree (n = 33, 7%) in the field of helping professions (i.e., future teachers, social educators, linguists and social care workers).

Sample 2
Sample 2 was comprised of 98 university students from a medium-sized private university in the Southwestern United States. 98 final questionnaires were used of students aged between 21 to 39 years (M = 29.66, SD = 6.10). 67% (n = 66) were female and 15% (n = 15) were male. More than half of the students were full-time students (n = 55, 68%) pursuing master´s degree (n = 80, 99%) with the major in the field of helping professions.

Measures

Measure of proactive and preventive coping.
The original English version of the Proactive Coping Inventory (PCI; Greenglass et al., 1999) as well as identical validated PCI for the Czech educational environment (Šolcová, Lukavsky, & Greenglass, 2006).

Measure of social support.
The nineteen-item Social Support Survey (MOS; Sherbourne & Stewart, 1991; Czech validation by Kožený & Tišanská, 2003).

Measure of well-being.
The Schwartz Outcomes Scale-10 (SOS-10; Blais et al., 1999; Czech validation by Dragomirecká, Lenderking, Motlová, Goppoldová, & Šelepová, 2006).

Measure of depression.
The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) validated for the Czech environment (Preiss & Vacíř, 1999).

RESULTS

Exploratory factor analysis (EFA)
Prior to performing PCA, the suitability of data (Sample 1) for EFA was assessed. Inspection of the correlation matrix revealed the presence of relationship (.30). KMO = .84 and the Bartlett's Test of Sphericity ($\chi^2(276) = 2489.51$, $p < .001$), supporting the factorability of the correlation matrix.

Results of the EFA

- The **two factor solution accounted for 32% of the variance** and comprised of factor measuring (F1) **proactive coping (12 items)** and (F2) **preventive coping (9 items)** with overall α = .83 (see Table 1).
- Results in Table 2 show that all of the items had **significant discrimination indices** ($p < .001$), which indicated that the proactive and preventive coping scales successfully discriminated students with high and low coping styles.
- Results in Table 3 show that proactive coping was significantly and positively correlated with preventive coping and well-being, as was expected. There was a medium, negative correlation with depression. As well as a small, positive significant correlation with social support.
- The strength of the correlation between coping scales was re-tested in each sample whilst controlling for gender and educational level (testing demographic differences between the samples) with no changes in the significance of the correlations found.

Now lets see the Tables 1, 2, and 3

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