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Mediation Pattern of Proactive Coping and Social Support on Well-being and Depression

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ABSTRACT

Proactive coping is a multidimensional and future-looking quality of life strategy that can predict positive outcomes and regulate distress. Recently, social support has been seen as an essential resource for effective coping with stressors. On this basis, a cross-sectional study examining a theoretical model was investigated using a path analysis. It was hypothesized that social support would be associated with proactive coping in the synergistic relationship and in relation to the positive psychological variable of well-being. Moreover, direct relationships between well-being and feelings of depression were expected. In a sample of 482 full-time university students attending public university, the results showed that social support and comparable proactive coping directly contributed to an increase in well-being. Furthermore, well-being was directly related to depression. Besides direct effects, an indirect pathway from social support to well-being was tested confirming the hypothesis that proactive coping functions as a partial mediator between social support and well-being. Generalizability of the findings was tested across gender and age performing multi-group analyses. Furthermore, practical implications, study limitations, and future research are discussed.

Key words: proactive coping, social support, well-being, depression.

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Novelty and Significance

What is already known about the topic?

- Mediation pattern of proactive coping and social support on well-being and depression has not been fully tested.
- Cross-gender measurement equivalence has not been previously established in particular educational environment, nor was age invariance.
- Effective coping is no longer perceived as independent construct that appears solitary without conducting any relationships or changes.

What this paper adds?

- Path analysis confirmed indirect effect of proactive coping between social support and well-being. Well-being served as a full mediator of proactive coping and social support on depression.
- Proactive coping and social support directly contributed to an increase in well-being.
- The measurement invariance according to gender was not proven with the data tested. The measurement invariance according to age was successful allowed the same model to be applied to younger and older students equally.

It is clear that circumstances that occur throughout the life course differ among individuals, however, individuals can significantly vary according to their ability to overcome such obstacles (Frydenberg, 2017). Behavioral strategy focused on the assessment of potential stressors, and on the use of resources to obtain set goals refers to proactive coping. Lazarus (1993) defined coping as the change of cognition and behavior of efforts to manage psychological stress, while Folkman and Lazarus (1985) defined coping as a response to demands in stressful situations in the process-oriented

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approach. More recently, proactive copers anticipate potential stressors, and by acting in advance they prevent their occurrence or reduce their negative impact (Aspinwall & Taylor, 1997). The role of coping in positive overall functioning and complex adaptive system takes the lead (Cicognani, 2011). In this point of view, the emerging challenge is not perceived as threat, but instead proactive copers see demands as an opportunity and a chance to try their strength.

The function of coping in maintaining mental and physical health, the prevention of illness, successful adaptation and personal growth has been emphasized repeatedly in recent studies (Aspinwall, 2011; Greenglass, 2002; Kahana, Kelley-Moore, & Kahana, 2012; Zambianchi, 2018). For example, individuals with a reasonable perception of self-worth and self-efficacy to exert control over the situation practice conscientious health habits more, thus, promoting their well-being (Greenglas & Fiksenbaum, 2009). Applying hierarchical multiple regression analyses, Sougleris and Ranzijn (2011) reported that proactive coping was a highly significant predictor of well-being measured as having purpose in life, personal growth and satisfaction in life after controlling age and health.

In contrast to the traditional conceptions of coping, proactive coping was perceived as an adaptive reaction to stressful situations that had already occurred, and its function was to compensate for its past loss. Recently, however, proactive coping is viewed as a behavior or action that can be done before the stressful situation appears. Thus, proactive coping is more forward-oriented (Schwarzer, 2000). Since proactive copers perceive potential and current stressful situations as challenging with application of goal management instead of risk management, the motivation for this action is also more positive. Frydenberg (2017) mentioned that proactive coping shares the preventive nature of behavior, seeking to reduce future loss. Furthermore, amassing and protecting resources so that possible losses do not occur seems to be the essential component of proactive copers.

Increasingly, research findings have pointed out that social support has been an essential resource for effective coping with stressors (Camara, Bacigalupe, & Padilla, 2017; Hobfoll, 2002). Accumulation of the resources from one's network, covering practical assistance, information help, emotional support, prevention and mobilization in case of need are consistently associated with a reduced risk of depression. For example, Kane et alii (2014) investigated how this relationship may be modified by alcohol use. Reported findings suggested that social support was an important protective factor for depression among regular drinkers in the context of political violence. Furthermore, Roohafza et alii. (2014) also supported the notion that perceived family social support and active coping styles played an important role of protective factors for depression and anxiety.

In three different samples of first year university students, employees and rehabilitation patients, social support and proactive coping were seen as leading to greater positive outcomes with proactive coping partially mediating the relationship between social support and positive affect and getting on with life (Greenglass & Fiksenbaum, 2009). Conversely, well-being was expected to be associated with a reduced risk of depression. Similar expectations were confirmed by other cross-sectional as well as longitudinal studies of hospital patients, community dwelling seniors, immigrants or teachers from different cultural settings (Schwarzer & Knoll, 2003; Uskul & Greenglass, 2005). Zambianchi and Bitti (2014) indicated that proactive coping was captured as a partial mediator between optimism and self-esteem and trait anxiety in a sample of emerging adults. Social well-being showed significant positive correlations with proactive coping, future-oriented time perspective, expression of positive emotions and regulation

of negative emotions, divergent thinking, and open communication with parents. On the other hand, problematic family communication was negatively correlated with social well-being. Taken together, reported findings indicate that a significant relationship exists between coping styles and a range of socially significant variables in a variety of settings.

Selection of coping strategies is not only influenced by social, physical and psychological determinants, or personal experiences, but also by sociodemographic variables such as gender, age, ethnicity, family economic status or cultural settings. Wilson, Pritchard, and Revallee (2005) examined whether reported gender differences in physical and psychological health could actually be the result of differences in coping styles in the case of adolescents. The research confirmed that health and coping relations varied significantly by gender. The relationship between adolescent coping and the effect of gender, age and ethnicity was investigated by Frydenberg and Lewis (1993). The pattern of usage of different coping strategies significantly differed by the mentioned variables that were put under investigation.

Based on the literature (e.g., Camara, Bacigalupe, & Padilla, 2017; Greenglass & Fiksenbaum, 2009; Hobfoll, 2002) a theoretical model was tested using a path analysis to examine how social support and proactive coping relate to positive outcomes. The general purpose of the study was to assess the interrelation of proactive coping with a subjective well-being, social support and depression in a sample of university students. Moreover, generalizability of the findings was tested across gender and age performing multi-group analyses. Cross-gender and age measurements equivalence has not been previously established in particular educational environment, nor were influences of the sociodemographic variables awaiting future research.

In accordance with Greenglass and Fiksenbaum (2009) a theoretical model in which social support was associated with proactive coping in the synergistic relationship was examined here in relation to positive variable of well-being. It was hypothesized that proactive coping would function as a partial mediator between social support and well-being. It was also expected that social support would lead directly to a positive feelings of well-being. Further, higher levels of well-being were seen to be directly related to less depression (see Figure 1). Moreover, tested models had the potential to characterize gender and age differences supporting its relative invariance.

In the present model, proactive coping and social support were perceived as positive influences that can affect psychological functioning, as well as reduce feelings of depression. Using structural equations, direct effects of social support and proactive coping on well-being and depression were estimated, along with indirect effects. The shift from the negative view of coping locates the focus on a broader range of positive experiences of stress events without a sense of potential threat, loss, or assessment of harm (Schwarzer & Taubert, 2002). Such an approach can contribute to the field of positive psychology in which social support and proactive coping are associated with psychological well-being.

METHOD

Participants

482 full-time university students attending public university with predominant traditional face-to-face classes participated in the research on a voluntary and anonymous basis. The age ranged from 18 to 31 with the mean age of 20.85 years ($SD= 1.65$).

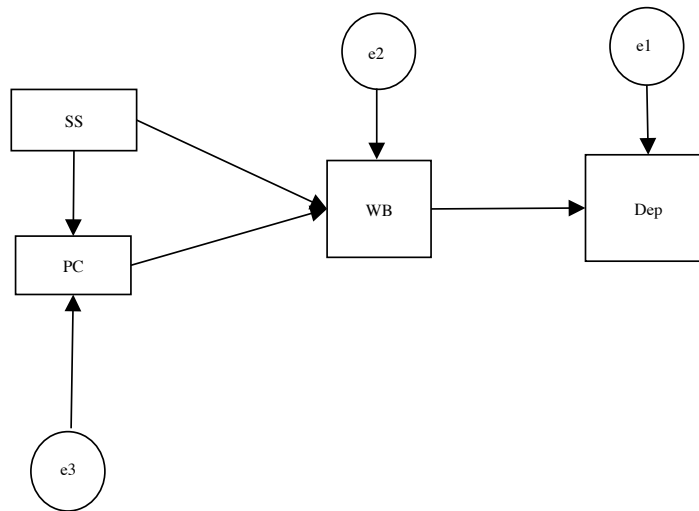


Figure 1. Tested theoretical model relating social support (SS), proactive coping (PC), well-being (WB) to depression (Dep). Source: IBM SPSS AMOS.

334 (70.2%) respondents were in the age category of 18-21 and 142 respondents fell within 22 to 31. The majority of respondents were female 88.6% (427), pursuing full-time bachelor's degree (449, 93.2%) in the field of Social education (121, 25.2%). The remaining students had studied English for Business Administration (111, 23.1%), Preschool Teachers' Training (101, 21%), 59 (12.3%) of students had chosen General Nursing, and the lowest share of students (9.6% and 7.9%) had studied Midwifery and Health and Social Care Worker respectively. The *University Human Resources Ethics Committee* and the *Institutional Review Board* of the University approved the research. The sample was used with independence of observations with no form of results-affecting influence. Cross-sectional data were collected during Spring 2017 in the traditional paper-and-pencil format.

Instruments

Proactive Coping Inventory (PCI, Greenglass, Schwarzer, & Taubert, 1999), covering 55-items was used to measure coping from a proactive perspective. The PCI consists of seven future-oriented subscales with Cronbach α reported for the Canadian students sample ranging from .71 to .85. Subscales cover proactive coping (14 items; e.g., "After attaining a goal, I look for another, more challenging one"), reflective coping (11 items; e.g., "I think about every possible outcome to a problem before tackling it"), preventive coping (10 items; e.g., "I plan for future eventualities"), strategic planning (4 items; e.g., "I often find ways to break down difficult problems into manageable components"), instrumental support seeking (8 items; e.g., "When solving my own problems other people's advice can be helpful"), emotional support seeking (5 items; e.g., "I know who can be counted on when the chips are down") and avoidance coping (3 items; e.g., "If I find a problem too difficult sometimes I put it aside until I'm ready to deal with it"). The PCI items deal with reactions one may have to various stressful events as well as in anticipation of difficult situations ahead. Responses were scored from 1 (not at all true), 2 (barely true), 3 (somewhat true), to 4 (completely true). Higher values indicated higher level of perceived coping behavior. The proposed PCI items were created based on the Schwarzer's Proactive Coping Theory (Schwarzer & Taubert, 2000) and subjected to psychological analysis using a sample of Canadian-Polish

students (Greenglass *et alii*, 1999). Within the last decade researchers (Almássy *et alii*, 2014; Bhusham, Gautam, & Greenglass, 2010; Greenglass, 2002) reported acceptable psychometric properties for the PCI subscales that have been widely tested for its cross-cultural validity, including utility in the Czech educational environment (Vaculíková, 2016). The identical Czech version of the original PCI scale (Šolcová, Lukavský, & Greenglass, 2006) was administered in this research. As part of the verification of the content validity, positive association of individuals' disposal to cope proactively as measured by the PCI with positive constructs are broadly discussed (Aspinwall & Taylor, 1997; Holland & Holahan, 2003; Uskul & Greenglass, 2005). Dijkstra and Homan (2016) argued that more engaged coping strategies were associated with more sense of control and hence to psychological well-being in heterogeneous sample in the Netherlands. On the contrary, passive reaction pattern, palliative reaction, and avoidance, were associated with less perceived control and proactivity, which in turn negatively affected psychological well-being. Taken together, the data indicated that perceived a sense of having the situation under the control and perceiving demands as a challenge that can be overcome were associated with decreased stress and improved mental and physical health.

Medical Outcomes Study Social Support Survey (MOS; Sherbourne & Stewart, 1991) was selected to measure social support. The focus was on anticipated social support and subjective interpretation of one's social inclusion. Social functioning was defined as one's ability to create and maintain social relationships, and on this basis obtain social support. Respondents were asked how often each of the kinds of support was available to them if they needed it with a score ranging from 1 (none of the time), 2 (a little of the time), 3 (most of the time), to 4 (all of the time). 19-items measured emotional/informational support (8 items; e.g., "Someone you can count on to listen to when you need to talk"), tangible support (4 items, e.g., "Someone to help with daily chores if you were sick"), affectionate support (3 items, e.g., "Someone who shows you love and affection"), positive social interaction (3 items, e.g., "Someone to do something enjoyable with"), and the last additional item was "Someone to do things with to help you get your minds off things". Higher values indicated higher level of anticipated social support. The identical Czech version of the original MOS English version (Kožený & Tišanská, 2003) was administered in this research. The results of the exploratory and confirmatory factor analysis indicated the existence of the three correlated factors: understanding authority, emotional proximity, and practical intervention. Emotional proximity and practical intervention correspond to the affectionate and tangible support, the original factors identified by Sherbourne and Stewart (1991). Understanding authority factor included positive social interaction and the emotional/informational support. High internal reliability of $\alpha = .94$ indicated good scale consistency.

Schwartz Outcomes Scale-10 (SOS-10, Blais *et alii*, 1999), a one-scale measurement composed of 10-items was selected to measure well-being. Well-being represents a broad construct related to multiple aspects of psychological functioning and psychological well-being. Scale instruction asked respondents to answer to each statement by checking the number that best fitted how they have generally felt over the last 14 days. Scores ranged from 1 (none of the time), 2 (a little of the time), 3 (most of the time), to 4 (all of the time). A higher score was associated with greater well-being. An item examples are "I am often interested and excited about things in my life", or "I am generally satisfied with my psychological health". The identical Czech version of the original PCI English version (Dragomirecká *et alii*, 2006) was administered in this research with reported Cronbach's α of .92.

Beck Depression Inventory (BDI-II, Beck, Steer, & Brown, 1996) consisted of the 21 manifest variables and was used to measure depression feelings. The BDI-II items can be divided into two basic components of depressive symptomatology that are cognitive-affective and somatic-performance. 13 items covering feelings of sadness, loss of pleasure, crying, agitation, loss of interest, indecisiveness, loss of energy, changes in sleeping pattern, irritability, changes in appetite, concentration difficulty, tiredness or fatigue, and loss of interest in sex, were indicators of cognitive-affective components of depression. 8 remaining items (pessimism, past failures, guilty feelings, punishment feelings, self-dislike, self-criticalness, suicidal thoughts or wishes, and desire and feeling

of worthlessness) suggested somatic-performance symptoms of depression. Higher values on the 4-point scale indicated higher level of perceived depression. The identical Czech version of the original BDI-II scale (Preiss & Vacíř, 1999) was applied in this study.

Data Analysis

The major aim of the present study was to identify whether paths in the tested model reflect the theoretical model across the sample of university students in helping professions enrolled in traditional face-to-face educational settings. Moreover, a comparison of the model across gender and age groups was conducted. The research question was if the same model can be applied to men and women and across different age groups (i.e., configural measurement invariance) as well as if the model with the same regression weights fit to both genders and is valid in each age group (i.e., metric invariance).

Cross-sectional design based on voluntary anonymous sample selection was implemented. Psychometric properties of the individual subscales forming the multidimensional measurements used in this study, covering the PCI (consisting of seven coping subscales), and the MOS (consisting of three social support subscales), were checked first. For introductory data analysis, the basic descriptive statistics covering the number of items, range, means, standard deviations and internal consistency coefficients were calculated. The disadvantages of Cronbach's α , e.g., large number of items resulting in large α and vice versa; sensitivity to extreme values; and worse estimate of unidimensional constructs, were partly compensated by reporting McDonald's ω .

Second, subscales discriminant indices comparing students with scores above the third quartile and below the first quartile were compared, indicating whether the coping and social support subscales successfully discriminate students with high and low repertoires of supportive social resources and productive coping styles. The strength and direction of the linear relationship among the PCI and the MOS variables were also checked using zero-order correlations coefficients. Furthermore, correlations between the final model scales were calculated and tested for discriminant validity. Preliminary analyses of the presented analysis were performed using IBM SPSS v. 24.

Moreover, IBM SPSS AMOS v. 5 providing SEM methodology that can better reflect reality with greater precision rather than standard multidimensional statistical methods, such as factor analysis, correlation analysis, or regression, was used. To evaluate overall model fit, several fit indices were discussed covering the χ^2 goodness-of-fit statistic, the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA). Furthermore, the Akaike information criterion (AIC) and the Bayesian information criterion (BIC) for the tested and saturated model were compared. Finally, the model's explanatory power was evaluated using the coefficient of determination (R^2).

RESULTS

All tested scales and subscales are presented in arithmetic averages for the individual items, i.e., ranges follow original range for the individual items. Orientation for all scales and subscales represents higher values associated with higher levels of the phenomenon measured by the scale. The descriptive statistics with internal consistency coefficients of the PCI subscales are presented in Table 1.

Means and Standard Deviations at the subscale level ranging from an approximate low of $M= 2.493$ ($SD= .666$) for Avoidance coping to an approximate high of $M= 3.036$

Table 1. Descriptive statistics of the PCI subscales including reliability coefficients.

Subscales (PCI)	Number of Items	Minimum	Maximum	M (SD)	McDonald's ω	Cronbach's α	95% Confidence α interval	
							Lower	Upper
1. Proactive coping	14	1.50	3.79	2.717 (.417)	.796	.785	.755	.812
2. Reflective coping	11	1.36	4.00	2.749 (.449)	.787	.782	.752	.809
3. Preventive coping	10	1.60	3.90	2.804 (.435)	.738	.733	.696	.767
4. Strategic planning	4	1.00	4.00	2.558 (.529)	.558	.554	.485	.616
5. Instrumental support	8	1.38	4.00	3.010 (.487)	.775	.770	.737	.799
6. Emotional support	5	1.00	4.00	3.036 (.599)	.746	.737	.698	.773
7. Avoidance coping	3	1.00	4.00	2.493 (.666)	.711	.707	.658	.749

($SD = .599$) for emotional support seeking with significant difference, $\chi^2(6, n = 482) = 443.57, p < .001$. Resulted scores above the mean average on four-point Likert scale in all coping subscales with low scores for avoidance coping indicated good overall coping strategies of students.

Internal consistency for the PCI subscales ranged in acceptable values ($> .70$) of ω and α , except strategic planning subscale ($\omega = .558$ vs. $\alpha = .554$). However, with $\alpha = .616$ representing the upper bound of the 95% Confidence α interval, the subscale seems to be quite consistent. Furthermore, correlations were all in the expected direction supporting the suitability of creating a single construct (see Table 2). Moreover, all of the subscales had significant discrimination indices ($p < .001$), which indicated that the coping subscales successfully discriminated students with high and low coping styles (see Appendix).

Table 2. Zero-order correlation coefficients of the PCI subscales.

Subscales (PCI)	1	2	3	4	5	6
1. Proactive coping	-					
2. Reflective coping	.451**	-				
3. Preventive coping	.427**	.643**	-			
4. Strategic planning	.387**	.508**	.502**	-		
5. Instrumental support seeking	.092*	.247**	.217**	.180**	-	
6. Emotional support seeking	.189**	.124**	.046	.107*	.658**	-
7. Avoidance coping	-.366**	-.103*	-.204**	-.240**	.019	-.041

Notes: * = $p < .05$; ** = $p < .01$.

Descriptive statistics of the MOS subscales including reliability and zero-order correlation coefficients were also checked (see Table 3). All social support means ranged above the central point of the four-point Likert scale with emotional proximity reaching the highest value of $M = 3.669$ ($SD = .502$), $\chi^2(2, n = 482) = 136.77, p < .001$. Reliability coefficients demonstrated very good internal consistency and correlations reached expected positive significance supporting the single construct (see Table 3). Furthermore, all of the subscales had significant discrimination indices ($p < .001$), which indicated that the MOS subscales successfully discriminated students with high and low levels of social support (see Appendix).

The final model consisted of variables covering proactive coping, social support, well-being and depression (see Table 4). Items falling into the avoidance coping subscale were reversed as this subscale negatively correlated to all other subscales measuring proactive coping. Scales reached reasonable internal consistency of α as well as of

Table 3. Descriptive statistics of the MOS subscales including reliability and zero-order correlation coefficients.

Subscales (MOS)	No	Min	Max	M (SD)	McDonald's ω	Cronbach's α	95% Confidence α interval		Pearson's r	
							Lower	Upper	1	2
1. PI	4	1.25	4.00	3.465 (.585)	.799	.796	.765	.825	-	-
2. EP	4	1.50	4.00	3.669 (.502)	.851	.844	.820	.865	.348**	-
3. UA	11	1.64	4.00	3.470 (.485)	.902	.900	.886	.913	.560**	.718**

Notes: PI= Practical Intervention; EP= Emotional Proximity; UA= Understanding Authority; No= Number of Items; Min= Minimum; Max= Maximum; **= $p < .01$.

Table 4. Descriptive statistics of the scales including reliability and zero-order correlation coefficients

Scales	No	M (SD)	Cronbach's α	McDonald's ω	95% Confidence α interval		Pearson's correlation r			
					Lower	Upper	1	2	3	
1. Proactive coping	55	2.813 (.320)	.873	.881	.856	.888	1			
2. Social support	19	3.511 (.442)	.924	.927	.913	.933	.286**	1		
3. Well-being	10	2.939 (.476)	.817	.818	.791	.840	.327**	.374**	1	
4. Depression	21	5.531 (.370)	.864	.867	.846	.881	-.143**	-.235**	-.617**	1

Notes: No= Number of Items, M= Mean, SD= Standard Deviation; ** $p < .01$.

ω . According to exploratory analysis (not described here) two scales were more or less symmetric (proactive coping and well-being) and two very skewed (depression positively and social support negatively). Before conducting path analysis, zero-order correlations for the final scales enabling preliminary understanding of the final results were calculated (see Table 4). As hypothesized by the theoretical model (see Figure 1) a strong and negative relationship was found between depression and well-being (-.62). Well-being showed similar association with social support and proactive coping (.37 vs. .33). Likewise, social support correlated positively with proactive coping and well-being. Taken together, it seemed to be not only theoretical support of the tested model, but data seemed to support this model too. According to the correlation analysis, the expectation could be set forth that the final model would explain more for depression than for well-being (see R^2 for the final model).

Further, path analysis was used to examine how proactive coping and social support related to well-being and depression. Direct path from social support and proactive coping to well-being was tested. Moreover, proactive coping should function as a partial mediator between social support and well-being. The final part of the model included a direct link between well-being and depression representing the final outcome for the model. According to the results for the Chi-square test and different SEM criteria that are commonly used for SEM evaluation, the model fitted the data very well (see Table 5). The statistically non-significant Chi-square test confirmed that it was not possible to reject tested model based on the data. All fit indices measuring model fit (AGFI, CFI, and TLI) were above the level of .95 considering very good fit. The RMSEA measuring the misfit of the model reached excellent value laying below the critical value of .05 (Kline, 2011). According the AIC and BIC information criteria tested theoretical model was comparable to saturated model. It is fair to admit that Greenglass and Fiksenbaum (2009) in their path analysis reported even slightly better results in the university students sample model. However, the presented model reached

Table 5. Fit indices of path analysis

Fit Indices	χ^2	df	p	AGFI	CFI	TLI	RMSEA	Our Model		Saturated Model	
								AIC	BIC	AIC	BIC
Model	3.269	2	0.195	.983	.997	.990	.036	19.269	52.692	20.000	61.779

Notes: AGFI= Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; TLI= Tucker-Lewis Index; RMSEA= Root Mean Square Error of Approximation; AIC= Akaike's Information Criteria; BIC= Bayes's Information Criteria.

higher explanatory power evaluated by R^2 in case of depression (.381). Moreover, R^2 for well-being reached a quite small value of .193.

The standardized coefficients with listwise deletion of missing cases were presented graphically (see Figure 2). The unstandardized parameter estimates, standard errors, and t -values for the tested theoretical model are displayed in Table 6. As expected by the preliminary correlation analysis, social support as well as proactive coping was significantly and positively predictive of positive outcome of well-being in university student sample. This influence was comparable (.30 vs. .24). The model also confirmed positive impact of social support on proactive coping (.29). The highest standardized regression weight was found between well-being and depression (-.62) and, according to our expectations, this relationship was negative. In other words, higher levels of well-being were related to less depression. Summarized, proactive coping was found to be a partial mediator of social support on well-being.

Table 6. Unstandardized Path coefficients, Standard Errors, and t -values for the Model.

Path	Estimate	SE	t	p
Social support to proactive coping	.207	.032	6.547	<.001
Social support to well-being	.329	.046	7.132	<.001
Proactive coping to well-being	.357	.064	5.617	<.001
Well-being to depression	-.479	.028	-17.210	<.001

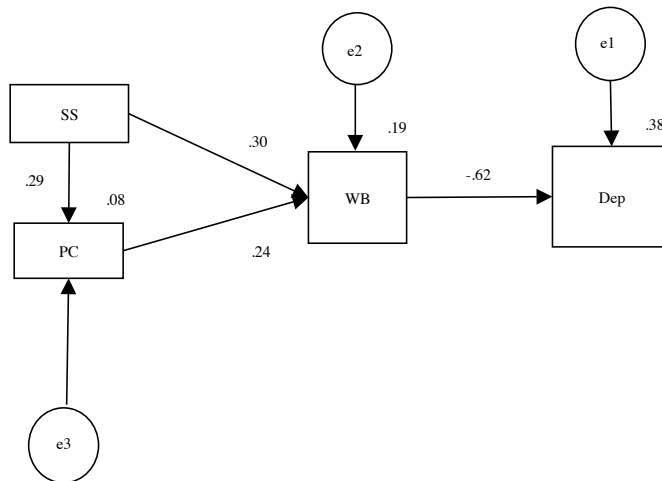


Figure 2. Results for theoretical model relating social support (SS), proactive coping (PC), well-being (WB) to depression (Dep) with standardized coefficients. Source: IBM SPSS AMOS.

Table 7 presents the estimates for specific standardized direct, indirect and total causal effects of variables in the tested model. Indirect pathway from social support to depression (line 2) was higher than indirect pathway from proactive coping to depression (line 3). However, these effects did not reach statistical significance. In addition, the

Table 7. Direct, indirect and total effects (standardized) for the path model.

Path	Direct effect	Indirect effect	Total
Social support-(Proactive coping)-Well-being	.305	.069*	.374
Social support-(Proactive coping-Well-being)-Depression	.000	-.231	-.231
Proactive coping-(Well-being)-Depression	.000	-.148	-.148

Note: * = $p < .05$.

path from social support to well-being (line 1) was significant, confirming that proactive coping functioned as a partial mediator between social support and well-being.

An alternative model including direct impact of social support on depression and direct path from proactive coping to depression (not described here) was also tested, however, statistically as well as substantively non-significant. Therefore, well-being served as a full mediator of proactive coping and social support on depression.

The last step of the analysis involved a comparison of the model across gender and age of the respondents. For men, the model did not fit well (not described here) with only the relationship between depression and well-being proven. All other tested pathways were statistically and substantively non-significant. After applying a test for measurement invariance (not necessary here) metric invariance was not proven (see Table 8). In summary, the measurement invariance according to gender was not proven with the data tested.

Table 8. Measurement invariance (assuming unconstrained model to be correct) by gender.

Model	df	p	CMIN	NFI Delta-1	NFI Delta-2	RFI rho-1	TLI rho2
Structural weights	4	.017	12.066	.031	.031	.029	.030
Structural covariances	5	.034	12.083	.031	.031	.022	.023
Structural residuals	8	.007	21.131	.053	.054	.031	.032

Notes: CMIN= Min Value of Discrepancy Function χ^2 ; NFI Delta-1, 2= Bentler-Bonnet Normed Fit Index; RFI rho-1= Bollen's Relative Fit Index; TLI rho2= Tucker-Lewis Coefficient.

Moreover, the model was appropriate for both age groups, confirming configural invariance (not described here) in students 18-21 ($n= 334$), and students falling between 22-31 ($n= 142$). Followed step included fixing structural weights (metric invariance), structural co-variances and structural residuals between the age groups. Results displayed in Table 9 (change of chi-square, change of TLI) proved metric invariance as well as a good model fit with fixed structural co-variances and structural residuals between the age groups. Taken together, proving measurement invariance according to age groups was successful with the data tested. The same model can be applied to younger and older students equally.

Table 9. Measurement invariance (assuming unconstrained model to be correct) by age.

Model	df	p	CMIN	NFI Delta-1	NFI Delta-2	RFI rho-1	TLI rho2
Structural weights	4	.425	3.863	.010	.010	-.013	-.013
Structural covariances	5	.487	4.444	.012	.012	-.016	-.016
Structural residuals	8	.746	5.109	.013	.014	-.024	-.025

Notes: CMIN= Min Value of Discrepancy Function χ^2 ; NFI Delta-1, 2= Bentler-Bonnet Normed Fit Index; RFI rho-1= Bollen's Relative Fit Index; TLI rho2= Tucker-Lewis Coefficient.

DISCUSSION

The aim of the present study was two-fold. First, the theoretical model, including social support associated with proactive coping in the synergistic relationship and in

positive relation to psychological variable of well-being, was tested. The last part of the model tested whether well-being was directly related to depression. An alternative model including direct paths of social resources on feelings of depression and direct path from proactive coping to depression were tested too. Second, generalizability of the findings was assessed across gender and age using multi-group analyses. So far, cross-gender measurement equivalence has not been previously established in particular educational environment, nor was age invariance.

Drawing on published literature (Bronfenbrenner, 1978; Greenglass & Fiksenbaum, 2009; Greenglass, 2002; Lelorain, Tessier, Florin, & Bonnaud-Antignac, 2012; Thoits, 1995) the tested theoretical model assumed that proactive coping does not exist independently in the environment, but has both a direct and indirect effect on other psychological variables. On this basis, effective coping is no longer perceived as independent construct that appears solitary without conducting any relationships or changes. Such perception represents an important contribution to the field of positive psychology by demonstrating that proactive coping and other constructs such as social resources are associated with positive feelings and perspective approaches to one's own life, that on the other hand significantly reduces negative feelings of depression.

482 full-time university students in helping professions attending medium-sized public university with predominant traditional face-to-face classes participated in this research. The traditional paper-and-pencil format of the data collection was used, in which variables studied were proactive coping measured by the Proactive Coping Inventory (PCI; Greenglass, Schwarzer, & Taubert, 1999), social support measured by the Medical Outcomes Study Social Support Survey (MOS; Sherbourne & Stewart, 1991), well-being assessed by the Schwartz Outcomes Scale-10 (SOS-10, Blais *et alii*, 1999), and depression measured by the Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996). All the measurements were administrated in the validated Czech versions. As argued by previous research (Greenglass & Fiksenbaum, 2009), social support and comparable proactive coping contributed significantly to an increase in well-being. Furthermore, well-being was seen in its significant negative relationship to depression. Besides direct effects, an indirect pathway from social support to well-being was tested confirming that proactive coping functioned as a partial mediator between social support and well-being. Moreover, an alternative model including direct impact of social support on depression and direct path from proactive coping to depression (not described here) were tested, reaching statistically, as well as substantively, non-significant results. Therefore, more general theoretical model functioned better, compared to the alternative model.

These results are in consistency with previous findings indicating an importance of resources in others while dealing with stressors, which can be effectively transformed into the proactive forms of coping (Greenglass & Fiksenbaum, 2009). Those who are high in resources are most likely to cope effectively (Frydenberg, 2017). Affiliation with others that is linked to the wide range of useful support most likely results in wellness and positive future orientation (Kasser & Rayn, 1999; Ryan & Deci, 2017). Moreover, receiving comfort from others can function as a buffer against stress, which seems to be experienced differently between male and female (Taylor, 2010).

Female tend to display "tend or befriend" approach while "fight or flight" is more likely male gendered response. Therefore, comparison of the model across gender was put forth. The tested model did not fit well for men. The only significant relationship resulted between well-being and depression. All other tested pathways were statistically and substantively non-significant. Moreover, after applying a test for measurement invariance,

metric invariance was not proven. Results suggest that gender-based measurement invariance was not proven by the data collected. The possible reason for this result might be a small number for male in the sample ($n= 55$). However, gender imbalance presented in the data corresponds to the actual proportion of students in helping professions. More specifically, selection of students was intentional in its nature given that it is believed that among other students, future professionals in helping professions should dispose of wide repertoire of coping skills, allowing them to effectively handle stressful situations and possible burnout. Thus, paying an attention to proactive behaviour of the presented sample has not only theoretical but also practical implications. However, explication of these processes would deserve further research.

Besides social resources, both practical and emotional, age matters too (Aldwin, 1991; Aldwin, Sutton, Chiara, & Spiro, 1996). On this basis, research question considering model invariance across age was investigated. Results showed appropriate model usage for both age groups confirming configural invariance in students 18-21, and students 22-31. In other words, the same model fit to younger and older students equally. Proactive coping seems to vary within many aspects of the situation factors (i.e., health-related situation, personal finance-related situation, social resource-related situation), that is, the type of stressor. However, age in this case of university students did not play significant differential role.

Presented research indicates the potential that proactive coping might have while dealing with student or work-related burnout. Greenglass (2002) also reported positive contribution of proactive coping to professional efficacy and highlighted its focus on professional competence, accomplishment and job-related proactivity. Thus, implications for practice are that by implementation of the interventions designed to employ proactive coping strategies, stress and negative feelings can be significantly reduced, and positive constructs such as self-esteem, self-assessment, and feelings of professional competence, i.e., self-esteem, can be increased. Considering that proactive coping competencies can be taught, one possible implementation is that introducing proactive coping to students on a daily basis can help to protect their anxieties about the future. Moreover, drawing on the potential of social support increasing well-being, students with more support might report more vitality and positive mood. As with applications in general, promotion of the proactive coping in the health- and medicine-related industry, as well as in job- and leadership-related domains, would be beneficial.

This study has some limitations that have to be discussed. As Kenny, Kaniskan, and McCoach (2014), and Greenglass and Fiksenbaum (2009) pointed out in their study, models with low degrees of freedom tend to have a good fit to the data, and thus the theory is said to be unfalsifiable. However, location of the source of specification error was an appropriate approach that might reduce this limitation. Another limitation can be seen in the essentiality of the self-reported surveys that represent assumed but not always real capture of the condition being investigated. In addition, the measurement of the proactive coping involved instrumental and emotional support seeking subscales that might partly influence overlap of correlation with social support subscales including practical intervention, emotional proximity and understanding authority. Another consideration may also be due to the limitation of the measures being used. The nature of the instruments is rather general. Thus, responses to specific situations may lead to a different action in any kind of sample.

Additionally to the situational factors that impact how individuals cope, coping strategies differ in their quality. Labouvie-Vief, Hakim-Larson, and Hobart (1987) using

a combination of qualitative and quantitative data, found out that despite the same extent of coping strategy use, coping strategies were used for different reasons. In general, qualitative procedures might be more likely to reveal specific-related change than are quantitative methods. Even having strong design and statistics, the research can suffer from limited impact from being too population-specific. However, the presented study did not aim to generalize the results to the population. Instead, the aim of the study was to test an hypothesized model which required more support in the data on a reasonably large sample of university students. Findings generalization on the entire population is therefore pointless.

Presented investigation of the synergistic relationship between social support and proactive coping in relation to positive well-being was discussed. Affiliation with others is linked to the use of social support and close constructs such communal and dyadic coping falling within the context of married life (Frydenberg, 2017). Hobfoll (2002) pointed out the communal aspects of coping in which the centre of interest is common coping with others. DeLongis and O'Brien (1990) talk about the importance of drawing on the resources of others as an important element affecting the ability to cope with the stressors. A more precise description of these processes could be carried out in future research as belonging to a group or a couple might unpack productive ways of coping. In addition to studying factors that make coping effective, it will be important to examine particular reasons why students may choose not to engage in proactive coping, even when they have successfully figured out further steps that would be needed. Also researching the relationship between coping and development can provide foundation for understanding how coping unfolds throughout the life.

In the present study, coping and provision of useful help (both directly and indirectly) contribute to greater positive outcomes. Synergistic function of coping and social support leading to states of well-being was taken under consideration. In contrast to traditional conceptualization of coping focused on negative states, the present study assessed coping strategies in a relationship with positive outcomes. Subjective feelings of well-being are characterized by perceiving obstacles as challenges rather than to negative threats, therefore, the function of coping should be broadened to include promotion of positive mood and optimistic feelings about the future events.

REFERENCES

- Aldwin CM (1991). Does age affect the stress and coping process? Implications of age differences in perceived control. *Journal of Gerontology: Psychological Sciences*, *46*, 174-180. Doi: 10.1093/geronj/46.4.P174
- Aldwin CM, Sutton KJ, Chiara G, & Spiro A (1996). Age differences in stress, coping, and appraisal findings from the normative aging study. *Journal of Gerontology: Psychological Sciences*, *51*, 179-188. Doi: 10.1093/geronb/51B.4.P179
- Almássy Z, Pék G, & Papp G (2014). The psychometric properties of the Hungarian version of the Proactive Coping Inventory: Reliability, construct validity and factor structure. *International Journal of Psychology and Psychological Therapy*, *14*, 115-124.
- Aspinwall LG (2011). Future-oriented thinking, proactive coping, and the management of potential threats to health and well-being. In S Folkman (Ed.), *The Oxford Handbook of Stress, Health, and Coping* (pp. 334-365). Oxford: Oxford University Press.
- Aspinwall LG & Taylor SE (1997). A stitch in time: Self regulation and proactive coping. *Psychological Bulletin*, *121*, 417-436.
- Beck AT, Steer RA, & Brown GK (1996). *Manual for The Beck Depression Inventory Second Edition (BDI-II)*. San Antonio: Psychological Corporation.

- Bhushan B, Gautam R, & Greenglass ER (2010). The Hindi adaptation and standardization of the Proactive Coping Inventory (PCI). *International Journal of Psychology and Psychological Therapy*, *10*, 331-343.
- Blais MA, Lenderking WR, Baer L, deLorell A, Peets K, Leahy L, & Burns C (1999). Development and initial validation of a brief mental health outcome measure. *Journal of Personality Assessment*, *73*, 359-373.
- Bronfenbrenner U (1978). The social role of the child in ecological perspective. *Die Soziale Rolle des Kindes in Ökologischer Perspektive*, *7*, 4-20.
- Camara M, Bacigalupe G, & Padilla P (2017). The role of social support in adolescents: Are you helping me or stressing me out? *International Journal of Adolescence and Youth*, *22*, 123-136. Doi: 10.1080/02673843.2013.875480
- Cicognani E (2011). Coping strategies with minor stressors in adolescence. Relationships with social support, self-efficacy and psychological well-being. *Journal of Applied Social Psychology*, *41*, 559-578. Doi: 10.1080/00221325.2016.1178101
- DeLongis A & O'Brien TB (1990). An interpersonal framework for stress and coping: An application to the families of Alzheimer's patients. In MAP Stephens, JH Crowther, SE Hobfoll, & DL Tennenbaum (Eds.), *Stress and Coping in Later-life Families* (pp. 221-239). Washington, DC: Hemisphere Publishers.
- Dijkstra MTM & Homan AC (2016). Engaging in rather than disengaging from stress: Effective coping and perceived control. *Frontiers in Psychology*, *7*, 1-12. Doi: 10.3389/fpsyg.2016.01415
- Dragomirecká E, Lenderking WR, Motlová L, Goppoldová E, & Šelepová P (2006). A brief mental health outcomes measure: Translation and validation of the Czech version of the Schwartz Outcomes Scale-10. *Quality of Life Research*, *15*, 307-312. Doi: 10.1007/s11136-005-1389-y
- Folkman S & Lazarus R (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, *48*, 150-170.
- Frydenberg E (2017). *Coping and the Challenge of Resilience*. London: Macmillan Publishers Ltd.
- Frydenberg E & Lewis R (1993). Boys play sport and girls turn to others: age, gender and ethnicity as determinants of coping. *Journal of Adolescence*, *16*, 253-266.
- Greenglass ER (2002). Chapter 3. Proactive coping and quality of life management. In E Frydenberg (Ed.), *Beyond Coping: Meeting Goals, Vision, and Challenges* (pp. 37-62). London: Oxford University Press.
- Greenglass ER & Fiksenbaum L (2009). *Proactive coping, positive affect, and well-being: Testing for Mediation Using Path Analysis*. *European Psychologist*, *14*, 29-39. Doi: 10.1027/1016-9040.14.1.29
- Greenglass ER, Schwarzer R, & Taubert S (1999). *The Proactive Coping Inventory (PCI): A multidimensional research instrument*. Retrieved from <https://www.psych.yorku.ca/greenglass>.
- Hobfoll SE (2002). Social and psychological resources and adaptation. *Review of General Psychology*, *6*, 307-324. Doi: 10.1037/1089-2680.6.4.307
- Holland KD & Holahan CK (2003). The relation of social support and coping to positive adaptation to breast cancer. *Psychology and Health*, *18*, 15-29. Doi: 10.1080/0887044031000080656
- Kahana E, Kelley-Moore J, & Kahana B (2012). Proactive aging: A longitudinal study of stress, resources, agency, and well-being in late life. *Aging & Mental Health*, *16*, 438-451. Doi: 10.1080/13607863.2011.644519
- Kane JC, Rapaport C, Zalta AK, Canetti D, Hobfoll SE, & Hall BJ (2014). Regular drinking may strengthen the beneficial influence of social support on depression: Findings from a representative Israeli sample during a period of war and terrorism. *Drug and Alcohol Dependence*, *140*, 175-182. Doi: 10.1016/j.drugalcdep.2014.04.014
- Kasser VG & Ryan RM (1999). The relation of psychological needs for autonomy and relatedness to vitality, well-being, and mortality in a nursing home. *Journal of Applied Social Psychology*, *29*, 935-954. Doi: 10.1111/j.1559-1816.1999.tb00133.x
- Kenny DA, Kaniskan, B, & McCoach DB (2014). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, *44*, 486-507. Doi: 10.1177/0049124114543236
- Kline RB (2011). *Principles and practice of structural equation modelling*. New York: Guilford Press.
- Kožený J & Tišanská L (2003). Dotazník sociální opory MOS: Vnitřní struktura nástroje [Social Support Survey MOS: Internal structure]. *Československá psychologie*, *47*, 135-143.
- Labouvie-Vief G, Hakim-Larson J, & Hobart C (1987). Age, ego level, and the life-span development of coping and defense processes. *Psychology and Aging*, *2*, 286-293.
- Lazarus R (1993). Coping theory and research: Past, present and future. *Psychosomatic Medicine*, *55*, 234-247.
- Lelorain S, Tessier P, Florin A, & Bonnaud-Antignac A (2012). Posttraumatic growth in long term breast cancer survivors: Relation to coping, social support and cognitive processing. *Journal of Health Psychology*, *17*, 627-639. Doi: 110.1177/1359105311427475

- Preiss M & Vacíř K (1999). *Beckova sebespozovací škála depresivity pro dospělé BDI-II. Příručka*. Brno: Psycho-diagnostika.
- Roohafza HR, Afshar H, Keshteli AH, Mohammadi N, Feizi A, Taslimi M, & Adibi P (2014). What's the role of perceived social support and coping styles in depression and anxiety? *Journal of Research in Medical Sciences*, *19*, 944-949.
- Ryan RM & Deci EL (2017). *Self-determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York: Guilford Press.
- Schwarzer R (2000). Manage stress at work through preventive and proactive coping. In EA Locke (Ed.), *The Blackwell Handbook of Principles of Organizational Behavior* (pp. 342-355). Oxford: Blackwell.
- Schwarzer R & Knoll N (2003). Proactive coping: Mastering demands and searching for meaning. In SJ López & CR Snyder (Eds.), *Positive Psychological Assessment: A Handbook of Models and Measures* (pp. 393-409). Washington, DC: American Psychological Association.
- Schwarzer R & Taubert S (2002). Tenacious goal pursuits and striving toward personal growth: Proactive coping. In E Frydenberg (Ed.), *Beyond Coping: Meeting Goals, Visions and Challenges* (pp. 19-35). London: Oxford University Press.
- Sherbourne CD & Stewart AL (1991). The MOS social support survey. *Social Science and Medicine*, *32*, 705-714.
- Šolcová I, Lukavský J, & Greenglass ER (2006). Dotazník proaktivního zvládnání životních situací [The Proactive Coping Inventory: Czech adaptation]. *Československá Psychologie*, *50*, 148-162.
- Souglaris C & Ranzijn R (2011). Proactive coping in community-dwelling older Australians. *International Journal of Aging and Human Development*, *72*, 155-168. Doi: 10.2190/AG.72.2.d
- Taylor SE (2010). *Health Handbook of Social Psychology*. Hoboken: Wiley.
- Thoits PA (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior*, *35*, 53-79. Doi: 10.2307/2626957
- Uskul AK & Greenglass ER (2005). Psychological well-being in a Turkish-Canadian sample. *Anxiety, Stress, and Coping: An International Journal*, *18*, 269-278. Doi: 10.1080/10615800500205983
- Vaculíková J (2016). Proactive Coping behavior in sample of university students in helping professions. *Sociální Pedagogika/Social Education*, *4*, 38-55. Doi: 10.7441/soced.2016.04.02.03
- Wilson GS, Pritchard ME, & Revalee B (2005). Individual differences in adolescent health symptoms: The effects of gender and coping. *Journal of Adolescence*, *23*, 369-379. Doi: 10.1016/j.adolescence.2004.08.004
- Zambianchi M (2018). Time perspective, coping styles, perceived efficacy in affect regulation, and creative problem solving in adolescence and youth. *Psicologia Educativa*, *2*, 1-6. Doi: 10.5093/psed2018a1
- Zambianchi M & Bitti REP (2014). The role of proactive coping strategies, time perspective, perceived efficacy on affect regulation, divergent thinking and family communication in promoting social well-being in emerging adulthood. *Social Indicators Research*, *116*, 493-507.

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APPENDIX

Subscales Analysis

As a part of the determination of subscale discriminations, each item means of the coping and social support scales were further compared among students who scored higher than 75 percentile (above the third quartile) and those who scored lower than 25 percentile (below the first quartile) for each subscale (see Appendix Table 1).

Appendix Table 1. Percentiles for coping and social support mean scores.

Subscales	Percentiles	PRO	REF	PREV	STRAT	INST	EMOT	AVOI	PL	EP	UA
PCI	25	2.428	2.454	2.50	2.25	2.718	2.60	2.00			
	75	3.00	3.09	3.10	3.00	3.375	3.525	3.00			
MOS	25								3.00	3.50	3.181
	75								4.00	4.00	3.909

Notes: PRO= Proactive Coping; REF= Reflective Coping; PREV= Preventive Coping; STRAT= Strategic Planning; INST= Instrumental Support Seeking; EMOT= Emotional Support Seeking; AVOI= Avoidance coping, PI= Practical intervention, EP= Emotional proximity, UA= Understanding Authority.

Appendix Table 2 shows that all of the subscales had significant discrimination indices ($p < .001$), which indicated that the coping and social support subscales successfully discriminated students with high and low coping styles and social support network.

Appendix Table 2. Subscales discrimination analysis between high and low coping and social support scores.

		<i>N</i> low scores	<i>N</i> high scores	<i>M</i> (<i>SD</i>) low scores	<i>M</i> (<i>SD</i>) high scores	<i>p</i>
Subscale (PCI)	1. Proactive coping	107	80	2.14 (.19)	3.33 (.17)	<.001
	2. Reflective coping	132	84	2.20 (.24)	3.40 (.23)	<.001
	3. Preventive coping	137	107	2.27 (.21)	3.38 (.19)	<.001
	4. Strategic planning	172	65	2.00 (.29)	3.42 (.24)	<.001
	5. Instrumental support seeking	120	133	2.37 (.28)	3.59 (.18)	<.001
	6. Emotional support seeking	124	120	2.25 (.38)	3.75 (.15)	<.001
	7. Avoidance coping	153	73	1.76 (.30)	3.59 (.28)	<.001
Subscale (MOS)	1. Practical intervention	124	170	2.64 (.44)	4.00 (.00)	<.001
	2. Emotional proximity	147	266	3.03 (.47)	4.00 (.00)	<.001
	3. Understanding authority	136	135	2.83 (.33)	3.97 (.04)	<.001

Notes: *N*= number of cases, *M*= Mean, *SD*= Standard Deviation.