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Psychosocial coping resources and health among Germans and Poles

Culture has a substantial impact on mechanism of coping with stress and related health outcomes. We proposed a model emphasizing the mediating role of coping resources and competences in the relationship between controllability of demands in professional/educational life and health in the cross-cultural context. The model is based on the transactional model of stress. 595 participants from East Germany, West Germany and Poland completed: Sense of Coherence Scale SOC-9, Self-Esteem Scale, Social Support Scale, Generalized Self-Efficacy Scale, Proactive Coping Inventory, Scale of Demands in Professional Life, Brief Stress Scale, Satisfaction with Life Scale and Mental Health Questionnaire. The results have shown the general cross-cultural validity of the proposed mediational model but also indicated some cultural differences in the determinants of health. Germans had higher self-esteem and social support. Poles had higher self-efficacy and used proactive coping strategies more often. Self-esteem was the strongest predictor of mental health in both nations. We discussed the results within a broad interpretive framework of social transitions.

Keywords: stress, coping resources, mental health, satisfaction with life, social transition

Introduction

The last years of the 20th century and the beginning of the 21st century are characterized by the start of numerous political, economic and social transitions of a global nature. The societies of Middle and Eastern Europe are under the pressure of constant changes (Sztompka, 1999, 2004). This long-term process of transition (Schröder, 2002) in combination with the phenomenon of globalisation represents a task that will define the entire lifetime of many. The most dramatic political changes occurred twenty years ago. The resulting economic and social consequences continue to unfold and present undergoing challenges that reach beyond those that people were formally adapted to. This results in increased adaptation efforts of groups and individuals. All social groups from countries in these regions are subject to these changes. These increasing demands disturb normal, stabilized behaviour, burden

regulation mechanisms, and cause people to suffer from chronic or recurring stress. These social changes are not only a burden and a threat but are also a challenge and opportunity for further development (Reschke, 2006; Schröder, 1997, 1999; Schröder & Scheuch, 1996). They are risk opportunities to which people should adapt to while pursuing their life goals.

Stress of transitions in political and economic systems experienced by Poles and Germans influences many spheres of their everyday lives. As a consequence of these changes the structure of everyday life demands is undergoing a transformation (Sztompka, 2004). Therefore in the present analyses we concentrate on coping with general stress of life in societies that are in a social transition process rather than on specific stressors strictly related to the perception of changing political and economic systems. The political transition, as a historic fact (Kollmorgen, 2005; Sztompka, 2000, 2004), changed the context of everyday functioning

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in professional and educational life among Poles and East and West Germans.

A problem of how individuals mobilize and use psychosocial resources and competences to face these demands in everyday life arises. Accumulation of stress affects health by increasing the risk of disorders. Stress and coping explains about 50% of the variance in psychological symptoms (Folkman, Lazarus, Gruen, & DeLongis, 1987). In situations where a lack or deficit of coping resources exists, chronic stress increases the sense of threat and pessimism. Individual and social resources may prevent these health risks. For instance, from 1989 to 1991 Schwarzer, Hahn, & Schröder (1994) conducted prospective research with female participants from Eastern Germany. The research showed that received social support and self-efficacy beliefs helped prevent depression. A considerable deal of research showed that this preventive function was supported, among other factors, by the sense of control, sense of coherence, and needs-adjusted support (Pasikowski & Şek, 2004; Şek & Pasikowski, 2004). These resources mainly affect event appraisal and choice of effective coping strategies that are conducive to good health and prevent psychopathology. They may also directly affect the level of well-being (Pasikowski, 2000; Şek & Pasikowski, 2002; Şek & Pasikowski, 2004; Shen, 2009).

In the transactional model of stress the relationships between stress and health outcomes were presented as a transaction between an individual and the environment (Lazarus, 1991; Lazarus & Folkman, 1984, 1987). Psychological stress refers to demands that excessively tax available coping resources appraised by the person involved. The health outcomes are the result of the interactions between personal and contextual factors. Primary and secondary appraisal play a fundamental role in the process of adaptation to life demands: 'in the psychological stress theory various kinds of appraisal define the relationship through subjects' eyes' (1987, p. 37). Primary appraisal refers to the meaning of an event. Secondary appraisal refers to the ability of an individual to cope with the demands of the situation.

In their original proposition Lazarus and Folkman (1984) put an emphasis on the coping strategies and competences in explaining the relationship between causal antecedents and the outcomes of the stress encounter. However, levels of coping resources and competences are a more stable individual characteristic than coping strategies that can change depending on contexts. We propose that coping resources and competences can be a more robust mediator in explaining the effects of more global and lasting processes, such as social transitions. Thus we expected that appraisals of demands in professional/educational life would have a significant effect on coping resources and indirectly on health.

We supplement the transactional model of stress with the assumptions of salutogenesis (Antonovsky, 1987). We emphasized the coping resources more than transactional dynamics. Besides personal we also selected interpersonal resources such as social support. The personal resources comprise coping competences that are directly related to the coping process (Gärtner, 2006; Pasikowski, 2000; Pasikowski & Şek, 2004; Şek & Pasikowski, 2004). The proactive coping was included as a generalized attitude rather than a situational strategy (Schmitz & Schwarzer, 1999).

Another conceptual divergence from the original transactional model is that we believe that the associations between antecedents, elements of coping, and outcomes can be studied within a cross-sectional design when such global and lasting processes as social transitions are under investigation. Although the proposition of Lazarus and Folkman was to study processual changes in time, this suggestion might not apply to the study of the long-term effect of social transitions. The stressor is not acute but rather contextual. Therefore it leads to parallel processes where distinct conceptual elements of stress are intermixed. For this reason the cross-sectional design was found appropriate.

The stressful challenges of macro-social transitions have affected Polish as well as German society. Both countries underwent government transformations that were at the same time breakthrough events (Schröder, 1999) and traumatic events such as Polish 'shock therapy' in economy (Sztompka, 2000, 2004). In each country the changes were initiated by mass social movements (Sztompka, 1993). Stress can have a long-term effect on health observed after decades (Öhman, Bergdahl, Nyberg, & Nilsson, 2007).

We made an attempt in a cross-cultural research programme to examine present levels of stress and health and to evaluate the efficacy of coping processes and their health outcomes. The analyses were primarily aimed at testing the strength of the general mediational model. But we also tried to identify the differences in determinants of health, as opposed to focusing solely on indicating cross-cultural validity of health determinants (e.g. Harari, Jones, & Şek, 1988; Sinha & Watson, 2007).

Germany and Poland were selected for this cross-cultural comparison because citizens of the countries were subjected to a comparable social transition from socialism to democracy and a free-market economy. Poland and Germany are appropriate countries for studying cultural determinants of health and disease for many reasons. These are the neighbouring countries from a geographical point of view, whose ecological and natural context is almost the same. Secondly, for many years they both stood on the frontier of two different cultural circles: the Germanic/Western and Slavic/Central European. At the same time the countries differed in culture, geopolitical position, and

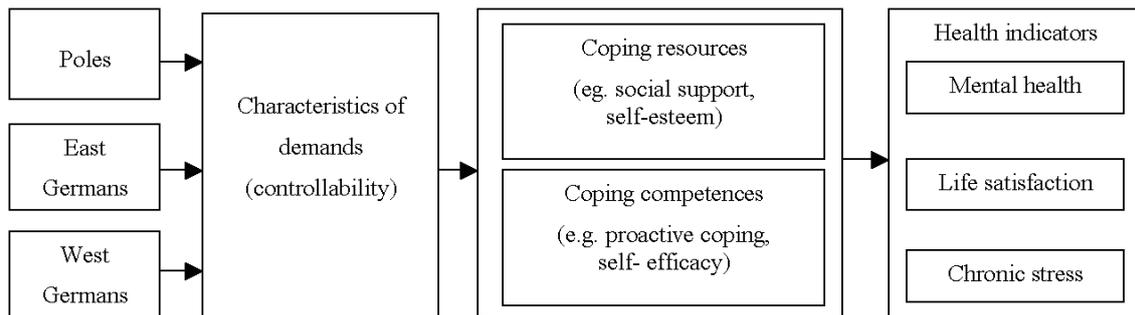


Figure 1. Model of culture-specific demands, coping resources and competences, and health.

economy For instance, in the 2008, the average hourly compensation cost was five time higher in German than in Poland, and the unemployment rate was only 5% lower in Germany (Bureau of Labor Statistics, 2011).

Moreover, the fact that Germany was divided and one part of it was subjected to a political system similar to the system of Poland, resulted in a unique situation. Thirty years ago Eastern Germany was more similar to Poland than to Western Germany in some basic cultural dimensions such as individualism-collectivism (Suh, Diener, Oishi, & Triandis, 1998). Although Germany is united politically, there are still large differences today between the East and West in terms of economic growth, unemployment, income levels, poverty rates and even in the mentality of the population. For these reasons, in the present study we distinguished three groups: Poles, East Germans and West Germans. We also expected that East Germany would display both similarities to Poland and to West Germany and the strongest differences would be between Poland and West Germany.

In sum, the first aim of the current research was to support a model indicating a cross-cultural generality of mediating role of coping resources and competences in the relationship between demands and outcomes (see Figure 1). We hypothesized that controllability of life demands would have an indirect effect on health with coping resources and competences as intervening variables. More specifically, we expected that controllability of life demands would be related to higher levels of resources and competences, and this in turn would be further related to higher levels of health. The second aim was to determine whether within this general framework there are differences in levels of specific variables. We aimed at testing the differences between West and East Germans and Poles in: (1) controllability of demands in professional/educational life, (2) coping resources and competences, and (3) positive and negative aspects of health. Measuring both negative and positive aspects of health leads to a more holistic and realistic portrayal of well-being (Nelson & Cooper, 2005). The third aim was to identify the determinants of health in the three groups. We explored which structure of resources and personal competences contribute to maintaining health among West Germans, East Germans, and Poles.

The unique contribution of this study is a cross-cultural perspective on the mediating role of psychosocial coping resources and competences in the relationship between demands and stress outcomes. In the face of frequent transitions occurring in the European Union and the mixing of cultures, it is important to carefully monitor intercultural discrepancies including those in public health. Tailoring interventions to specific groups is one of the most recent trends in social and behavioural science literature (Hagger, 2009). Studying cross-cultural differences has the potential to explore the most fundamental stress- and health-related factors often overlooked in 'one-size-fits-all' perspectives.

Material and Methods

Participants

A snow-ball technique was used to recruit participants for this study. Trained students distributed a set of paper-pencil questionnaires within their social networks. Participation in the research was voluntary and anonymous. The sample was diverse in the scope of family situation, number of children, wealth, job, education and religiosity.

Among participants of the study were 208 East Germans between 18 and 50 years old ($M = 26.13$; $SD = 7.28$; 59.1% women), 149 West Germans between 19 and 45 years old ($M = 25.83$; $SD = 6.33$; 59.1% women) and 238 Poles between 18 and 56 years old ($M = 26.32$; $SD = 6.50$; 59.24% women).

The research reported here is part of a larger unpublished cross-cultural research project. To balance the number of participants in each national group, the sample of East Germans, which was initially relatively larger, was reduced by sampling a random subsample using PASW 18.00. There were no differences between the groups in respect to gender, $\chi^2(2) = 0.01$; $p = .99$, and age, $F(2, 584) = 0.23$; $p = .79$.

Measures

The participants completed a set of questionnaires individually. Bilingual versions of the tools were developed. The scales that had not been adapted before, were translated into Polish by a pair of psychologists fluent in German

and Polish. The Polish version was back-translated and compared with the original. Items that differed from the German version were modified and retranslated. As a result, each item reached a satisfactory convergence. In the present research, 3 groups of variables were measured: (1) psychosocial resources and competences, (2) professional/educational life situation demands, and (3) health.

The level of coping resources was comprised of three variables: (1) sense of coherence, (2) self-esteem, (3) social support. The following questionnaires were used to measure the variables:

The Sense of Coherence Scale SOC-9 (Schumacher et al., 2000; Sęk & Pasikowski, 2004). The questionnaire consists of 9 items (e.g. 'How often do you feel that what you do does not really make sense?'). Answers were given on a 7-point scale of which extremes had been labelled differently, according to the content of the item. This scale was internally consistent: $\alpha_{WG} = .84$; $\alpha_{EG} = .87$; $\alpha_P = .86$

Rosenberg Self-Esteem Scale (Rosenberg, 1965; Sęk & Pasikowski, 2004). The scale is used for self-evaluation. It consists of 10 items (e.g. 'From time to time, I think that I am useless'). Answers were given on a 4-point scale, in which 1 meant 'does not apply to me at all', and 4 meant 'applies to me completely'. Alpha coefficients for overall scores were high: $\alpha_{WG} = .86$; $\alpha_{EG} = .88$; $\alpha_P = .89$.

The *Social Support Scale* (Gärtner, 2006; Sęk & Pasikowski, 2004). This scale referred to perceived support and included 14 items (e.g. 'I have friends/family members who always have time to hear me out'). Answers were given on a 5-point scale (1 – 'does not apply', 5 – 'applies'). The internal consistency in each group was very high: $\alpha_{WG} = .92$; $\alpha_{EG} = .92$; $\alpha_P = .91$.

Personal competences consisted of two constructs: (1) self-efficacy and (2) proactive coping. The variables were measured with the following questionnaires:

Generalized Self-Efficacy Scale (Juczyński, 2001; Schwarzer & Jerusalem, 1995). This scale is used to examine general beliefs in personal efficacy in coping with occurring obstacles and challenges. It consists of 10 items (e.g. 'Thanks to my resourcefulness, I know how to handle unforeseen situations'). Answers were given on a 5-point scale (1 – 'does not apply', 5 – 'applies'). The scale's reliability was $\alpha_{WG} = .89$; $\alpha_{EG} = .89$; $\alpha_P = .85$.

Proactive Coping Inventory (Pasikowski, Sęk, Greenglass, & Taubert, 2002; Gärtner, 2006). This questionnaire was used to determine proactive coping strategies. It consists of 17 items (e.g. 'I try to pinpoint what I need to succeed'). Participants used a 4-point scale with extremes labelled 1 – 'no', 4 – 'yes'. The scale had high internal consistency of overall scores: $\alpha_{WG} = .86$; $\alpha_{EG} = .84$; $\alpha_P = .85$.

Evaluation of Demands in Professional/Educational Life Scale (Gärtner, 2006; Sęk & Pasikowski, 2004). The method is a psychometric tool developed to measure

various aspects of perceived demands (primary appraisal) or control (secondary appraisal) (Gärtner, 2006). The theoretical background for this method was the transactional model of stress (Lazarus & Folkman, 1984) supported by the demand-control model of stress (Karasek, 1989; Karasek & Theorel, 1990). Using this scale we obtained the general measure of controllability by aggregating responses to statements reflecting the lack of transparency ('My professional/educational situation seems unclear and muddled', reverse coded), predictability ('The situation is predictable in its course of action'), and controllability ('I can control my professional/educational situation by my own activity'). Participants used a 4-point scales (1 – 'does not apply to me at all', 4 – 'it applies to me completely'). The average intercorrelations between these three items were acceptable (George & Mallery, 2003), $\alpha_{WG} = .66$; $\alpha_{EG} = .63$; $\alpha_P = .53$.

State of health – three facets. Two positive indicators were used to measure health: (1) life satisfaction and (2) mental health. Subjective level of stress was used as the third, negative indicator. The following methods were used to measure the health indicators:

Life Satisfaction Scale (Diener, Emmons, Larsen, & Griffin, 1985; Juczyński, 2001). The scale consists of five items measuring the level of life satisfaction (e.g. 'I have already achieved everything I wanted in life'). The answers were given on a scale from 1 – 'I definitely disagree', to 7 – 'I definitely agree'. The scale was reliable: $\alpha_{WG} = .81$; $\alpha_{EG} = .84$; $\alpha_P = .75$.

Mental Health Questionnaire (Becker, 1992; Sęk & Pasikowski, 2004). The questionnaire was comprised of 20 items measuring mental state (e.g. 'I have a sense of a lack of commitment and an inner emptiness'). The participants answered on a 4-point scale in which 1 meant 'always' and 4 meant 'never'. The scale was highly internally consistent: $\alpha_{WG} = .91$; $\alpha_{EG} = .90$; $\alpha_P = .90$.

Brief Stress Test (Reschke & Schröder, 2000; Sęk & Pasikowski, 2004). This test measures the subjective intensity of chronic stress. The scale consists of 7 items referring to various aspects of stress experiences (e.g. 'Even after free days or hours of peace I feel down and unhappy'). The respondents gave their answers on a 4-point scale in which 1 meant 'does not apply' and 4 meant 'does apply'. The level of internal consistency of the Polish version was satisfactory, $\alpha_P = .76$. The reliability in the German samples was: $\alpha_{WG} = .78$; $\alpha_{EG} = .77$.

Statistical analyses

For descriptive and exploratory purposes, we present a comparison of mean levels of measured variables across three groups and test the differences with single-factor analysis of variance ANOVA. We present a matrix of *r*-Pearson correlations to test total associations between controllability of demands, coping resources and competences, and health

Table 1
Differences in levels of health, personal resources, personal competences and controllability.

	<i>M (SD)</i>			F (2, 590)	η^2	Tukey's HSD
	W-Germany	E-Germany	Poland			
Mental health	58.91 (7.79)	61.64 (7.34)	60.29 (8.37)	5.28**	.02	WG<EG
Life satisfaction	23.77 (5.02)	24.19 (5.51)	21.86 (5.11)	12.39**	.04	P<WG; P<EG
Stress	14.40 (3.50)	13.33 (3.53)	14.51 (3.69)	6.78**	.02	EG<WG; EG<P
Sense of coherence	43.55 (8.23)	46.85 (8.63)	45.31 (8.95)	6.32**	.02	WG<EG
Self-esteem	33.23 (4.85)	34.11 (4.78)	31.70 (5.31)	13.24**	.04	P<WG; P<EG
Social support	63.23 (7.65)	62.96 (8.00)	59.67 (9.22)	11.70**	.04	P<WG; P<EG
Self-efficacy	28.18 (4.63)	28.92 (4.53)	30.12 (4.29)	9.32**	.03	WG<P; EG<P
Proactive Coping	47.59 (7.39)	49.15 (6.69)	50.75 (6.81)	9.74**	.03	WG<P; EG<P
Demands controllability	8.95 (1.82)	9.31 (1.77)	9.25 (2.05)	1.59	.00	

* $p < .05$. ** $p < .01$

Note. W-Germany – West Germany, E-Germany – East Germany

Table 2
Correlations between indicators and predictors of health.

	Mental health			Life satisfaction			Stress		
	W-Ger	E-Ger	Pol	W-Ger	E-Ger	Pol	W-Ger	E-Ger	Pol
Sense of coherence	.78**	.77**	.73**	.58**	.55**	.47**	-.70**	-.70**	-.64**
Self-esteem	.79**	.78**	.76**	.53**	.56**	.44**	-.63**	-.62**	-.58**
Social support	.24**	.48**	.47**	.37**	.47**	.35**	-.42**	-.51**	-.36**
Self-efficacy	.76**	.77**	.68**	.46**	.44**	.32**	-.57**	-.53**	-.46**
Proactive Coping	.71**	.66**	.68**	.35**	.41**	.27**	-.46**	-.40**	-.45**
Demands controllability	.48**	.30**	.42**	.36**	.36**	.28**	-.46**	-.31**	-.35**

Note. W-GER – West Germany, E-GER – East Germany, Pol – Poland

* $p < .05$; ** $p < .01$

indicators. We used multiple regression analysis to test the contribution of coping resources and competences to health in three groups of participants. Our model assumes that psychosocial coping resources and competences mediate between controllability of demands (the independent variable) and health indicators (dependent variables). To test this multiple mediator hypothesis we used a product-of-coefficients strategy for assessing indirect effects (Preacher & Hayes, 2008). Both asymptotic and nonparametric resampling procedures (bootstrapping) were used to test the total indirect effects.

Results

Table 1 shows descriptive statistics for the variables included in the research.

The analysis of variance indicated (see Table 1) that levels of stress were comparable among West Germans and Poles and higher than in East Germans. Polish participants had the lowest life satisfaction whereas West Germans reported the lowest level of mental health. There was no difference in the reports of demands controllability in professional or educational life between the three groups.

Poles reported the lowest level of social support and self-esteem. However, self-efficacy and proactive coping was the highest in the Polish sample. The sense of coherence among West Germans was lower than East Germans. There was no difference in self-efficacy and proactive coping between East and West Germans.

The group of personal resources and competences was positively correlated with mental health and life satisfaction and negatively with levels of stress (see Table 2). The highest correlations were observed in the groups of West Germans. Mental health was correlated with self-esteem and the sense of coherence in this group. The sense of coherence was also related to satisfaction with life and inversely to levels of stress. The correlations for Poles were weaker.

The tested models (see Table 3) allowed for predicting the life satisfaction level among West Germans ($R^2 = .37$; $F = 18.50$; $p < .01$) and East Germans ($R^2 = .36$; $F = 24.36$; $p < .01$) to a larger extent than among Poles ($R^2 = .25$; $F = 16.93$; $p < .01$). Sense of coherence appeared to be significant for life satisfaction in each group. Social support was a determinant of life satisfaction among both groups of Germans but not Poles. Self-esteem was significant both for East Germans and Poles.

Self-esteem, sense of coherence, self-efficacy, and proactive coping determined the level of mental health. The

Table 3
Coping resources and competences as predictors of health.

Predictors	West Germany			East Germany			Poland		
	B	SE	β	B	SE	β	B	SE	B
DV: Life satisfaction									
Sense of coherence	.22	.07	.36**	.14	.06	.22*	.17	.05	.29**
Self esteem	.20	.10	.19	.30	.11	.26**	.23	.08	.24**
Social support	.11	.05	.18*	.13	.05	.19**	.07	.04	.13
Self efficacy	.12	.12	.11	-.06	.11	-.05	.10	.10	.09
Proactive Coping	-.07	.07	-.10	.09	.06	.11	-.13	.07	-.17
	R ² = .37; F = 18.50**			R ² = .36; F = 24.36**			R ² = .25; F = 16.93**		
DV: Mental Health									
Sense of coherence	.23	.06	.24**	.20	.05	.24**	.23	.05	.25**
Self esteem	.65	.09	.41**	.53	.09	.34**	.58	.08	.36**
Social support	-.07	.04	-.07	-.06	.04	-.06	.03	.04	.03
Self efficacy	.34	.11	.20**	.50	.09	.31**	.45	.10	.23**
Proactive Coping	.21	.06	.20**	.17	.05	.16**	.16	.07	.13*
	R ² = .78; F = 106.50**			R ² = .76; F = 133.06**			R ² = .71; F = 115.34**		
DV: Level of stress									
Sense of coherence	-.20	.04	-.46**	-.21	.03	-.51**	-.18	.03	-.44**
Self esteem	-.14	.06	-.19*	-.12	.06	-.16	-.17	.05	-.25**
Social support	-.09	.03	-.19**	-.06	.03	-.14*	.00	.02	.01
Self efficacy	-.08	.07	-.11	-.03	.06	-.04	-.07	.06	-.08
Proactive Coping	.03	.04	.05	.03	.03	.05	.01	.04	.02
	R ² = .57; F = 36.58**			R ² = .52; F = 44.42**			R ² = .44; F = 38.49**		

* $p < .05$. ** $p < .01$

Table 4
Indirect effects of controllability on aspects of health via coping resources.

DV	West Germany				East Germany				Poland			
	PE	SE	95% BC CIs		PE	SE	95% BC CIs		PE	SE	95% BC CIs	
			Lower	Upper			Lower	Upper			Lower	Upper
Stress	-.32	.06	-.45	-.21**	-.20	.05	-.32	-.10**	-.26	.04	-.36	-.18**
Life Sat.	.27	.06	.15	.39**	.17	.04	.08	.28*	.17	.04	.10	.25**
Mental Health	.38	.06	.24	.52**	.25	.05	.13	.39**	.35	.05	.25	.45**

Note. DV = dependent variable; PE = point estimate (total indirect effect); SE = standard error; BC CIs = bias-corrected confidence intervals
 * $p < .05$; ** $p < .01$ (significant indirect effect).

tested models allowed also for high predictions of mental health among West Germans ($R^2 = .78$; $F = 106.50$; $p < .01$), East Germans ($R^2 = .76$; $F = 133.06$; $p < .01$), and Poles ($R^2 = .71$; $F = 115.34$; $p < .01$).

Sense of coherence predicted lower levels of stress in each group. In Poles and West Germans, higher levels of stress correlated with lower self-esteem. In both groups of Germans social support predicted lower levels of stress. The models explained considerable amounts of variance among West Germans ($R^2 = .57$; $F = 36.58$; $p < .01$) East Germans ($R^2 = .52$; $F = 44.42$; $p < .01$), and the Poles ($R^2 = .44$; $F = 38.49$; $p < .01$).

The tests of multiple mediation supported our hypothesis that coping resources and competences are

mediators in the relationship between controllability of professional/educational life demands and stress, life satisfaction, and mental health (see Table 4). There was a significant mediation in each of the three groups. In line with our predictions, controllability was related to higher coping resources and competences and that in turn had an indirect effect on health.

Discussion

The aims of the research were twofold. The first aim was to capture the cross-cultural psychological mechanism of coping in two European nations after a major social transition (Sztompka, 2004). We can conclude that the

general results of the study give an empirical support for the modified transactional model of stress (Lazarus & Folkman, 1984). Coping resources and competences serve as elements of a larger coping mechanism that leads from life demands to better or worse health by building or depleting psychosocial resources. In the light shed by the results, the basic mediational function of resources and competences is robust and universal across different nations.

Our second aim was to identify the differences observed on a more specific level. The data on cross-cultural differences in coping mechanisms is sparse when compared to numerous studies testing these processes within a single culture. For this reason there was not enough theory and evidence in psychological literature to predict the structure of health determinants in each nation. However, we explored the structure of health, resources and demands, and found meaningful differences. First, there are differences in the levels of specific psychosocial resources and competences between nations. Moreover, there are similarities and differences in those resources that predict health. We did not observe any difference in the controllability of demands in professional/educational life between the three groups.

On the whole, in line with our predictions, Poles were more similar to East Germans than to West Germans. We expected such a pattern because Poles and East Germans experienced the same kind of government transformation from post-war socialism to capitalism in the last decades of the XX century. Causal inferences assuming that historical events influence psychological mechanisms within an individual (e.g. coping with stress) are always speculative because there is no way to test it experimentally. Therefore we might as well presume the opposite direction of causality: an increase in coping resources (e.g. self-efficacy) might have contributed to social transitions. Regardless of this limitation, we believe that psychological perspectives on coping with stress and health should be more often analyzed within broader sociological and cultural perspectives (cf. Hobfoll, 1998).

The similarities of Poles to East Germans might in such a perspective result from a similar influence of political and economic systems until the last decade of the 20-th century. This finding supports the notion that coping with stress is strongly determined by external factors (Hobfoll, 1998). Poles suffered a major economic break-down after the termination of the former political and economic system. It was followed by an economy shock-therapy that was beneficial in the long run, but caused immediate increases in poverty and unemployment rates. As a consequence, Poles might have developed proactive coping strategies and exercised their self-efficacy, as indicated in our study. As for the German sample, social support emerged on a higher level than among Poles. Individualism was believed to be associated with low levels of social support (Baker,

Richter, & Anand, 2001; Hofstede, 1991). However our his result seem to contradict this notion. Germany (especially West Germany) is a more individualistic country than Poland (Suh, Diener, Oishi, & Trandis, 1998). However Germans seems to have higher levels of social support. A similar pattern was observed in a cross-cultural study comparing Poles to Americans (Harari, Jones, Sęk, 1988), i.e. American displayed higher levels of social support despite their higher individualism. This suggest that the relationship between individualism and social support can be positively related.

As for social support, there was also a relatively weaker association of this resource with mental health in the sample of West Germans. Social support as a coping resource plays a complex role in the mechanisms of coping with stress (Schwarzer & Knoll, 2007) and this applies also to stress in professional/educational settings. The functions of social support depend on gender, age, and the type of measured social support (Greenglass, 2011; Sęk, Cieślak, 2011). However, these variables were equal in each group. These ambiguous results of regression analysis for the social support as the health predictor might have resulted from a possible interaction of social support with the type of stress and self-esteem. High levels of the need for support and perceived support has a negative effect on self-esteem (Sęk, 2011). Moreover, the effect of social support are moderated by the intensity of stress (Sęk, 2011).

Our analyses additionally showed that self-esteem appeared to be the strongest determinant of mental health in both nations. The Germans are better supplied with self-esteem and report higher life satisfaction. One of possible explanations for this difference is that lower life satisfaction and self-esteem reported by Poles may result not only from objective perceptions but also from the Polish 'culture of complaining'. This phenomenon observed in earlier research (Doliński, 2005; Wojciszke & Baryła, 2005) may serve defensive purposes. For instance, it may strengthen the sense of unity. On the other hand, complaining supports a negative perception of the world and oneself, which may in turn be related to even lower self-esteem.

The mediating role of coping resources and competences on health revealed a more complex association between demands and stress outcomes. In the original proposition by Lazarus and Folkman (1984) an emphasis was put on the coping processes consisting of coping strategies in explaining health. However, our analysis indicates that the variation in the levels of psychosocial coping resources is sufficient for explaining the relationship between antecedents and outcomes of stress. In our model, the depletion or the surplus of resources results from demands and influences health.

There were some limitations to our study. To begin with, longitudinal studies might give more support for the dynamic relationship among variables. Secondly, the

recruited participants were mostly young adults. Inferences made on the basis of our studies should be limited to this developmental group. Thirdly, no gender differences were considered in the analyses because the tested model did not account for gender differences and did not allow for making any predictions in this regard. Another point is that in any further study the Polish sample might be divided into subgroups, as an analogy to West and East Germans. There is a meaningful distinction between so-called Poland A, and Poland B¹ in the literature that reflects different levels of economic and social development. Moreover, cross-cultural comparisons between more distant cultures in the process of change might shed new light on coping processes and health observed from the perspective of social transitions. A recent exemplary study revealed meaningful psychosocial determinants of mental health in Chinese medical students in response to dramatic changes in their society (Yingjiao, Aya, Seiji, Quijun, & Juanguo, 2009).

Further theoretical studies on stress and coping aimed at integrating sociological and psychological perspectives into interdisciplinary research programmes are needed to better understand the cross-cultural differences in coping resources that affect health (c.f. Probst, 2011). Culture has a substantial impact on health (Baker et al., 2001). Nonetheless relatively seldom has this notion been put to empirical tests. There is no simple methodology nor any rich set of psychometric instruments developed to facilitate such lines of research. Capturing impact of social transitions on psychological processes requires constant monitoring of populations because such transitions have been constantly occurring and in most cases they are unpredictable. For instance, the global financial crisis of the late-2000s had a strong impact on many countries and influenced life of its citizens (Cooper, 2010). Although stress, mental health, and satisfaction with life have been incorporated into many present social monitoring actions (e.g. Czapiński & Panek, 2009), these programmes might benefit from a more comprehensive assessment of the mechanisms that are behind outcome variables. Identifying such mechanisms can guide actions implemented on the micro-level (such as health promotion programmes) or a macro-level (such as public health policies). With the increasing popularity of the internet (Kraut et al., 2004) and improvement of web-based surveys as valid research tools (Denissen, Neuman, & van Zalk, 2010) such monitoring endeavours could be carried out within reasonable technical and economical limits.

¹ The distinction is a consequence of partitions of Poland that took place in the years 1772 - 1918. They were carried out by the Russian Empire, Kingdom of Prussia and Austria. Three parts of Poland were subjected to different cultural influences.

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