

How does the economic crisis affect the psychological well-being? Comparing college students and employees

Kathrin Wetzel

Carl von Ossietzky Universität Oldenburg, Germany

Anne Mertens

Carl von Ossietzky Universität Oldenburg, Germany

Heinke Rübken

Carl von Ossietzky Universität Oldenburg, Germany

ABSTRACT

Little is known about differences in the impact of economic stress on students as compared to persons holding secure job positions. Besides the macroeconomic effects, an economic downturn can also affect individual's physical health and psychological well-being (Aytaç & Rankin, 2009). Prior research showed that socio-demographic characteristics and conditions (e.g. age, gender, job status, or education) are associated with people's mental health (Hobfoll, 1998). The present study addressed two general questions: how people perceive their financial situation and their employability in the time following a financial crisis and whether or not these crisis-based appraisals of their economic standing have influence on their mental health. Of particular interest to this study was to explore these issues across occupational status (college students versus employees) and gender.

Keywords: economic crisis, stress, students, employees, well-being, gender

INTRODUCTION

In the stress and coping literature, different theories tackle the problem of social support-structures and resource-strategies. Theoretical frameworks differ basically in terms of classifying types or dimensions of life stressors that challenge emotional health (Thoits, 1983). Pearlin, Menaghan, Liebermann and Mullins (1981) define stressful life events as discrete occurrences, which are limited by time and happen at various points in the life cycle. The economic crisis is one example of a stressful life event. The influence of financial strain on psychological distress has been studied intensively with samples of middle-aged and older people (Thompson et al. 1993, Krause 1987). For example, Thompson et al. (1993) analyzed the psychosocial burden of disaster victims. They distinguished four age groups young, early middle-aged, late middle-aged and old adults. The late middle-aged adults were strongly burdened, while young adults showed the lowest symptoms of strain due to situations of disaster. Krause (1987) suggested that older adults may be more vulnerable to the effects of life stress because of their limited physical capabilities and also because of their diminishing psychological resources. In contrast, young adults typically have strong social support structures and other coping resources (Plovsing et al. 1983). Against this backdrop, it is important and interesting to investigate which effects the contemporary financial crises may have on the individual well-being of persons in different age groups. This study will also analyze potential differences between the sexes and between employees and students. As theoretical framework conservation of resources theory (Hobfoll, 1998) this study will be used to formulate general predictions regarding the relationships between the economic crisis, health status and psychological well-being.

Prediction # 1.

Due to an overall drop in financial markets' asset values and increasing unemployment rates, it is reasonable to assume that the financial situation of many households deteriorated over the last years. It could also be predicted that people already in the labor force (i.e., employees) would have been affected more in terms of their income losses than college students (Wang et al. 2010).

Prediction # 2.

The transition from university to employment is often perceived as stressful by students (Humphrey & McCarthy 1998) and an economic crisis may even increase this burden. Two competing predictions with respect to subjective employability assessment will be proposed. On the one hand, we assume that students will appraise their employability as less certain than persons in secure job positions. However, we hasten to add that due to generally advantageous job market conditions in Germany for highly qualified professionals, college students may actually estimate their employability as higher than persons in secure job positions.

Prediction # 3.

Typically middle-aged persons take on more responsibilities in life (e.g. job, family) than younger adults. We therefore assume that mature people will estimate their psychological well-being as lower than younger adults from university (Thompson et al. 1993). Yet again, an alternative prediction could be suggested: Because of the plethora of stressors associated with academic demands (Humphrey & McCarthy 1998), college students may perceive their

psychological well-being lower than employees. In accord with prior literature, we also assume that women will report a lower degree of psychological well-being than men (Tapsell & Tunstall 2001).

METHOD

Procedure and participants. This cross-sectional study took place after the 2008 economic crisis. A questionnaire was developed for an international student survey in Europe, Australia, Asia and North America at York University in Canada. In Germany, the survey was distributed between April and September 2010. Sampling, recruitment, and screening were conducted in different communities in Germany. For this study, a simple random sample of German pedagogy students at the University of Wuppertal was selected. They filled out a paper and pencil version of the questionnaire. Additionally, some students and employees were recruited via common social networks. For the online version of the survey the platform unipark.com was used. Overall, 38% of respondents filled out the paper and pencil survey and 62% of respondents provided information via the online questionnaire.

The original sample included 255 respondents of which 51% (n = 130) were college students and 29% (n = 75) were employees of different businesses and companies. The remaining 20% (n = 50) of participants did not provide any information concerning their occupational status. The data set used for this study only consisted of students and employees (n = 205; 69% females). Table 1 presents the descriptive statistics on age and income (in Euros).

MEASURES

General Health was measured by the General Health Questionnaire (Kalliath, O'Driscoll, Brough 2004) examining general aspects of mental health. The questionnaire includes 12 items, e.g. "been feeling unhappy and depressed?" or "been able to enjoy your normal day-to-day activities?" which were assessed by respondents using a scale from 0 = never to 5 = all the time. Negative items were recoded before constructing the scale, so the higher the result, the higher the general health. The Alpha coefficient was .88, range 0.73 to 4.92. The values of all used scales were relativized by the number of scale items to keep the value range constant.

Depression and Anxiety were studied with the correspondent Scale of Derogatis (1993). The inventory is organized into two sub-scales: Depression (7 Items) and Anxiety (6 Items). Depression was reflected by items like "feeling lonely" or "feeling blue", Anxiety by statements like "suddenly scared for no reason". Respondents were asked to assess their approval to each item using the following scale: 1 = not at all to 5 = extremely. A higher value showed a higher symptomatology of Depression and Anxiety. Because of a very high inter-correlation between the two subscales and an improved Alpha coefficient of .91 (range: 1.00 to 4.85), a common scale of depression and anxiety was constructed. The measure of Depression and Anxiety is equivalent to distress in this paper.

Financial change was recorded by the question "over the last few years, has your financial situation changed?" answering on a scale from 1 = greatly worsened to 5 = greatly improved (M = 3.1, SD = 1.0).

Financial Threat was measured by Financial Threat Scale (Marjanovic 2009), indicating people's feelings regarding their current financial situation by questions like "how much do you feel at risk?". The scale included 6 Items with a range from 1 = not at all to 5 = extremely. The higher the result the higher the financial threat was. The Alpha coefficient was .85, range 1.00 to 4.40.

Employability was measured by items suggested by DeCuyper, Bernhard-Oettel, Berntson, DeWitte and Alacro (2008). The constructed scale included 4 items. They focus on the (future) employment situation of the respondent using questions like “I am optimistic that I would find another job if I looked for one”. Items were answered on a scale 1 = strongly disagree to 5 = strongly agree. The higher the result, the higher the personal assessment of his or her employ-ability was. The Alpha coefficient was .88, range 1 to 5.

Worry was measured by the Penn State Worry Questionnaire (Meyer, Miller, Metzger & Borcovec 1990). The questionnaire included 16 items, i.e. “I worry all the time”. Items were answered on a scale from 1 = not at all typical of me to 5 = very typical of me. Positive items were recoded before constructing the scale, so the higher the result, the higher the worry of the respondent. The Alpha coefficient was .91, range 1.25 to 4.88.

Self Efficacy was reflected by the General Self Efficacy Scale of Jerusalem and Schwarzer (1992). The scale included 10 items, i.e. “I can solve most problems if I invest the necessary effort”. Items were assessed on a scale from 1 = not at all true to 4 = exactly true. The higher the result, the higher the general self-efficacy of the respondent was. The Alpha coefficient was .89, range 1.00 to 4.00.

Self Esteem was measured by the Self-Esteem Scale of Rosenberg (1965). The scale included 10 items, e.g. “I take a positive attitude toward myself”. Items were assessed on a scale from 1 = strongly disagree to 5 = strongly agree. The higher the result, the higher the self-esteem of the respondents was. The Alpha coefficient was .87, range 1.44 to 4.10.

RESULTS

Table 2 shows the means, standard deviations and mean differences of the dependent and independent variables according to gender and status. The dependent variables are General Health and Distress, the independent variables are Financial Change, Financial Threat, Employability, Worry, Self-Efficacy and Self-Esteem. It is conspicuous that the means of the female students differ from all other groups. The mean differences for all variables were F-tested.

Financial change and threat. Female college students appraise the change of their financial situation lower than all other groups ($M = 2.9$). The difference between female students and female employees is statistically significant with $p < 0.001$. Female college students estimate the financial threat higher than all other groups ($M = 2.8$). The differences between the female students and the female employees and between the female students and the male employees are also significant with $p < 0.05$.

Employability. Female college students estimate their employability highest ($M = 3.65$). There are no significant differences between the groups.

Worry. Female college students show more fear than the other groups and estimate their worry particularly high. They indicate more symptoms of worry in comparison to all other groups ($M = 3.31$). The results differ significantly between female students and female employees with $p < 0.01$, between female students and male employees ($p < 0.01$) and also between female students and male students ($p < 0.05$).

Self-Efficacy. Female college students appraise their individual confidence in response to specific actions and their ability to perform in these actions as lowest ($M = 2.92$).

Self-Esteem. Female college students indicate that their self-esteem is lower than all other groups ($M = 3.94$).

General Health. With respect to general health, college students differ from employees. Especially female students estimate their level of general health lower than all other groups ($M = 2.92$). The results differ significantly between female students and employees with $p < .01$ and

between female students and male employees with $p < 0.001$.

Distress. Concerning depression and anxiety female students estimate their level higher than all other groups ($M = 2.36$). Male employees have the lowest mean with 1.88. There are significant differences between female students and male students with $p < 0.05$ and also between female students and all employees with $p < 0.05$.

The model conducted two regression analyses with general health and distress scores as out-come variables. The predictor variables were entered into the equations in two blocks. First, gender (male = 1) and occupation status (student = 1) were included. The equation also involved predictors of the financial and employment situation and personality/individual attributes. The section financial and employment situation contains the annual income, financial change, financial threat and employability. The section personality/individual attributes contains worry, self-efficacy and self-esteem. Second, the regressions predict the dependent variables general health and distress scores using demographic data, individual resources and individual attributes as independent variables.

Table 3 presents standardized regression coefficients and corresponding t-values from both analyses. Men were generally healthier than women and women were more distressed than men. The occupational status (student versus employee) did not predict the variance in our outcome variables. Greater perceived financial threat was associated with more distress. Not surprisingly, those respondents evidencing greater worry reported lower levels of general health and more symptoms of distress. Self-efficacy was positively related to general health. Higher self-esteem increases the reported general health and reduces symptoms of distress. The adjusted R-squared are relatively high for the two models (55% of the variance explained in general health and 51% of the variance explained in distress).

Table 4 additionally presents correlations between income and financial change items and the outcome variables for employees and students. Among the employees, only the total annual income correlated with general health. Predictably, the correlation was positive. Among students, it was the change in their financial situation that correlated with outcome variables. The greater the positive change they experienced, the better they appraised their health and the lower their distress

DISCUSSION

Despite of the economic crisis no group indicated a significant loss in income. Students perceived their financial conditions as more severe than employees, but this result was not statistically significant. Regarding the employability appraisals, there were no significant differences between students and employees. Analyses concerning health and well-being as outcome measures revealed that female college students had lower levels of health than male and female employees. Female students also exhibited more depression symptomatology than all other groups. Psychological trait-like variables such self-esteem, self-efficacy, and pathological worry, were strong predictors on general and psychological health.

Overall, our predictions could only partly be confirmed. We predicted that due to the financial crisis the financial situation of many households would have deteriorated over the last years. Our results point to a different direction: Despite the economic crisis no group indicated a significant loss in income. There are no significant differences between students and employees. In this respect, this findings do not support the argument of Wang et al. (2010) who assumed that the direct effects of the economic crisis are the losses of jobs and income as well as pay cuts for the whole general public. When considering the general financial situation, female students perceived their financial hardship more threatening than the other groups.

Due to the good labor market conditions in Germany at the moment, we also assumed in prediction 2 that students could feel quite confident about their future and would therefore report higher degrees of employability than employees. The results do not point to significant differences between the two status groups employees and college students. This is also supported by the results of the regression analysis: the status “student” does not have a significant influence on general health or distress anymore. Instead, the differences can be observed between the sexes. With regard to psychological-well-being, female students indicated a lower health level than male and female employees. Female students also indicated a higher level of distress than all other groups. Nevertheless general health and distress are mainly determined by personality factors like self-esteem or worry.

Finally, this study assumed in prediction 3 that middle aged persons will estimate their psychological well-being as lower than younger adults from university. The contrary assumption was that college students perceive lower general health due to many stressors in academic student life (Humphrey & McCarthy 1998). With regard to the univariate ANOVA-results this study can note that female students estimate their mental health lower than male students and all employees. This could be an indication for female student vulnerability relating to academic stress. However the multivariate results show that the most important predictors for mental health are personal attitudes, i.e. self-esteem or worry.

As in every empirical study this investigation comes a several limitations. The cross-sectional design prohibited offering any causal inference about the influence of financial crises on health and psychological well-being. Our questionnaire did not assess parental financial support for college students, nor did we explore family burdens experienced by employees. Future work in this area should address these shortcomings. Furthermore, it would be relevant to examine in greater detail the sources of stress college students are facing today, especially in the context of the Bologna Process that attempted to standardize academic standards and exceptions throughout Europe. Particular attention should also be paid to differences between male and female students, since our results revealed significant differences between the sexes.

REFERENCES

- Aytaç, I. A., & Rankin, B. H. (2009). Economic Crisis and Marital Problems in Turkey: Testing the Family Stress Model. *Journal of Marriage and family*, 71 (3), 756-767.
- De Cuyper, N., Bernhard-Oettel, C., Berntson, E., De Witte, H., & Alarco, B.(2008). Employability and employees' well-being: Mediation by job insecurity. *Applied Psychology: An International Review*, 57, 488-509.
- Derogatis, L. R. (1993). *BSI: Brief Symptom Inventory administration, scoring and procedures manual*. Minneapolis: NCS Pearson.
- Hobfoll, S. E. (1998). *Stress, culture, and community*. New York: Plenum.
- Humphrey, R., & McCarthy, P. (1998). Stress and the Contemporary Student. *Higher Education Quarterly*, 52 (2), 221-242.
- Jerusalem, M., & Schwarzer, R. (1992). Self-efficacy as a resource factor in stress appraisal processes. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 195-213). Washington, DC: Hemisphere.
- Kalliath, T. J., O'Driscoll, M. P., & Brough, P. (2004). A confirmatory factor analysis of the General Health Questionnaire-12. *Stress and Health*, 20, 11–20.
- Krause, N. (1987). Chronic financial strain, social support, and depressive symptoms among older adults. *Psychology and Aging*, 2 (2), 185-192.

Marjanovic, Z. (2009). Development and validation of the Financial Threat Scale (FTS). Unpublished measure.

Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28, 487-495.

Pearlin, L. I., Menaghan, E. G., Liebermann, M. A., & Mullins, J. T. (1981). The stress process. *Journal of Health and Social Behaviour*, 22, 237-356.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton: Princeton University Press.

Plovsing, J., Pruzan, V., & Mailund, J. E. (1983). *Social Network and Attitudes toward Social Benefits*. The Danish National Institute of Social Research, Copenhagen.

Tapsell, S. M., & Tunstall, S.M. (2001). The Health and Social Effects of the June 2000 Flooding in the North East Region. Report to the Environment Agency, Thames region. Flood Hazard Research Centre, Middlesex University.

Thoits, P. A. (1983). Dimensions of life stress that influence psychological distress: An evaluation and synthesis of the literature. In H. B. Kaplan (Ed.), *Psychological stress: Trends in theory and research* (33-103). New York: Academic Press.

Thompson, M. P., Norris, F. H., & Hanacek, B. (1993). Age differences in the psychological consequences of Hurricane Hugo. *Psychology and Aging*, 8, 606-616.

Wang, J. L., Smailes, E., Sareen, J., Fick, G. H., Schmitz, N., & Patten S. B. (2010). The Prevalence of mental Disorders in the Working Population Over the Period of Global Economic Crisis. *Canadian Journal of Psychiatry Revue Canadienne de Psychiatrie*, 55 (9). 598-605.

APPENDICES

Table 1. Sample descriptive statistics on age and income.

	Students		Employees	
	female	male	female	male
Number of participants	100	30	41	34
Average age	25.4 (4.4)	25.6 (2.6)	35.8 (11.1)	39.8 (9.2)
Average annual income	5845.6 (4347.5)	7018.7 (8859.2)	29073.5 (29827.0)	59367.7 (50713.4)

Table 2. Differences of mean of all tested variables according to gender and status.

Scale	Gender	Status	Mean	SD	F-Value	df
Dependent Variables						
General Health	Male	Student	3.37	0.85	9.34***	202
	Female	Student	2.92	0.85		
Distress	Male	Employee	3.65	0.77	6.51***	202
	Female	Employee	3.53	0.87		
	Male	Student	1.89	0.68		
	Female	Student	2.36	0.76		
	Male	Employee	1.88	0.78		
	Female	Employee	1.92	0.75		
Independent Variables						
Financial Change	Male	Student	3.04	0.84	4.48**	196
	Female	Student	2.90	0.91		
Financial Threat	Male	Employee	3.18	1.04	7.07***	202
	Female	Employee	3.55	1.09		
	Male	Student	2.43	0.76		
	Female	Student	2.80	0.77		
	Male	Employee	2.32	0.85		
	Female	Employee	2.22	0.77		
Employability	Male	Student	3.62	0.88	2.68*	180
	Female	Student	3.65	0.87		
Worry	Male	Employee	3.13	0.99	9.58***	202
	Female	Employee	3.57	0.99		
	Male	Student	2.82	0.66		
	Female	Student	3.31	0.72		
	Male	Employee	2.73	0.78		
	Female	Employee	2.77	0.68		
Self-Efficacy	Male	Student	3.07	0.41	7.71***	202
	Female	Student	2.92	0.50		
	Male	Employee	3.26	0.41		
	Female	Employee	3.25	0.44		
Self-Esteem	Male	Student	4.05	0.79	3.44*	202
	Female	Student	3.94	0.77		
	Male	Employee	4.30	0.58		
	Female	Employee	4.27	0.60		

Note. ***p<=.001; **p<=.01; *p<=.05

Table 3. Multiple regression analyses with general health and distress as dependent variables and demography, individual resources and attributes as independent variables.

	General Health	Distress
Demographics		
Sex (male)	0.12+ (1.88)	-0.13* (-2.04)
Student	-0.01 (-0.10)	0.01 (0.12)
Financial and Employment Situation		
Annual income	-0.00 (-0.08)	0.13+ (1.74)
Financial change	0.08 (1.16)	-0.09 (-1.29)
Financial threat	-0.10 (-1.36)	0.20* (2.57)
Employability	-0.01 (-0.19)	0.00 (0.02)
Personality/Individual Attributes		
Worry	-0.23** (-3.22)	0.15* (1.98)
Self-Efficacy	0.16* (2.06)	-0.02 (-0.28)
Self-Esteem	0.39** (4.85)	-0.50** (-6.00)
Observations	144	144
Adjusted R ²	0.548	0.510
Note. p<0.1; *p<0.0; **p<0.01		

Table 4. Correlation coefficients.

Variable	Employee		Student	
	General Health	Distress	General Health	Distress
What is your total annual income, before taxes?	0.23*	-0.03	0.09	-0.12
Over the last few years, has your financial situation changed?	0.09	-0.11	0.24**	-0.24**