# SELF-CONFIDENCE DECREASES STRESS LEVELS AMONG YOUNG PEOPLE

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**Abstract:** Mental disorders are an important indicator for the quality of public health. Data from the second nationally representative epidemiological survey of the most common mental disorders in Bulgaria EPIBUL-2 shows that the risk to develop anxiety or depression is three times higher among young people in the age group 18-36 in comparison to the people in the age group above 65 years of the Bulgarian population (NCPHA, 2017b).
Contemporary young people have been found to experience higher levels of stress in comparison to previous generations (Twenge, 2006). It is essential to find out the predictors of stress as it is one of the most common reasons causing depressive symptoms in modern society (Cohen et al., 1997). Previous research shows that self-confidence supports individuals in coping with stress in everyday life while the perception of personal inefficacy is related to depressive episodes (Bandura et al., 1999).
The aim of the present work is to study the impact of self-confidence consisting of self-competence and self-liking on perceived stress levels in a sample of young people in Bulgaria. Regression analysis were performed to test the relationship between the two variables. The scale "Self-confidence" consisting of the subscales "Self-competence" and "Self-liking" is used for the first time on a sample of Bulgarian respondents, so its psychometric characteristics will be presented in the article.
Results indicate that self-competence and self-efficacy are statistically significant predictors of the levels of perceived stress among young people, explaining a significant percentage of the variation of the dependent variable. The more confident young people feel in their capabilities, the better they cope with stress in everyday life.
**Keywords:** stress, young people, self-confidence, self-competence

## 1. INTRODUCTION

Meta-analyses of research data indicate that anxiety and depression levels among students have risen by one standard deviation for a couple of decades - from 1950 to 1990, thus changing the norm for what anxiety is (Twenge, 2000). The correlations with social indicators such as divorce and crime rates suggest that decreased social connectivity and increased environmental danger might be among the factors explaining the high anxiety levels. Nowadays, the global health crisis with the coronavirus and the following economic recession can be added to the equation.

In Bulgaria statistics for mental disorders is scarce. According to Eurostat data, 7.9% of the Bulgarian population report the presence of depressive symptoms (Eurostat, 2020). The European Health Interview shows that the percentage of people suffering chronic depression rose from 0.8% in 2008 to 3.2% in 2014 (NSI, 2020a). Another study examining work-related health problems found that 24.6% on the interviewed employed people in 2013 indicate *"Stress, depression and anxiety"* as a major work-related health issue (NSI, 2020b).

In the annual "Healthcare" report of the National Statistical Institute and the National Centre for Public Health and Analyses it is indicated that 5101 people were accepted into a hospital because of a depressive episode in 2018 in Bulgaria, and 7314 - because of a recurrent depressive disorder (NSI, 2020c).

According to a National Health Report from 2015 by the National Centre for Public Health and Analyses the indicators for the spread of mental disorders do not show a tendency to improve. In the period from 2007 to 2015 a steady tendency is observed for an increase in the number of suicide attempts as well as a steady decrease in the average age of the people attempting suicide from 45 in 2007 to 41 years of age in 2015 for both sexes. The reasons for this are the complex factors determining mental health - the natural environment, the stress levels in everyday life, working conditions, family relations, quality of life, social well-being (NCPHA, 2015).

Youth mental health is a significant research topic as according to data from the WHO depression is the second most common reason for death for youths 15-29 years old after traffic accidents (NCPHA, 2017a). Results from the second nationally representative epidemiological study of common mental health disorders in Bulgaria shows that the risk to develop anxiety or depression in the age group 18-36 is three times higher compared to the people above 65 years (NCPHA, 2017b). Stress as a source of mental issues and its predictors are a topic worth researching in social sciences. This work aims to study how the personality trait self-confidence is related to stress among young people.

## 2. METHODOLOGY

According to Lazarus' interactional approach stress is the reaction that arises when personality interacts with the environment (Lazarus, 1981). For this reason, the individual's abilities to cope with the challenges of the environment play a key role in this interaction and they define whether a stress reaction will be developed or not. Stress is caused when the challenges from the environment surpass the abilities of the individual to adapt and thus impair their psychological balance (Lazarus, 1981).

The individual process of assessment of the situation and the personal coping resources is key for the occurence of stress. For this reason, it is key how the individual assesses their personal competence to solve problems and cope with challenges. Perceived stress is related to the development of depressive symptoms (Cohen & Willis, 1985; Cohen et al., 1997). The instrument used in this study to measure stress levels of respondents is based on this approach (Naydenova & Ilieva, 2006).

Depression can arise from the feeling of personal inefficacy and the inability to cope with the challenges of life. Assessing oneself as competent or incompetent is one of the aspects of self-esteem (Tafarodi & Swann, 2001). It has been found that the feeling of personal inefficacy contributes both directly and indirectly to depression (Bandura, 1997). The source of self-confidence and personal mastery is to learn to cope with challenges and to have personal achievements. It is personal mastery rather than groundless positive feedback that helps the individual to cope with the challenges of everyday life (Seligman, 1995).

Therefore, when a person assesses their personal mastery as insufficient, this can impact their perception of challenging situations and events. For this reason, this study will test the relationship between self-confidence as an independent variable in the theoretical model and levels of perceived stress as a dependent variable.

According to the literature review, self-liking was found to increase among younger generations while self-competence was found to decrease (Twenge & Campbell, 2008). In order to explore better the predictors of stress in our study, global self-esteem was divided into these two components. To measure self-esteem, Tafarodi and Swann's concept for the two components of global self-esteem was used (Tafarodi & Swann, 2001). They distinguish between self-evaluations based on personal competence (observable abilities and skills) on one hand, and appearance, character and social identity (attractiveness, social worth) on the other (Tafarodi & Swann, 2001). The instrument was used for the first time on a Bulgarian sample of respondents (N=203).

The instrument consists of two eight-item subscales, each balanced in positive and negative items - 16 items in total. Example items for the self-competence subscale include: *"I am highly effective at the things I do* (positive)" and *"I sometimes deal poorly with challenges* (negative)". Example items for the self-liking subscale are: *"I am secure in my sense of self-worth* (positive)" and *"I have a negative attitude toward myself* (negative)". The respondents were asked to rate their level of agreement with each of the 16 items on a 5-point Likert-type scale ranging from "1 - I totally disagree" to "5 - I totally agree".

As the scale was used for the first time on a sample of Bulgarian respondents, factor analysis was performed in order to check its factorial structure. It is a method for data reduction that assumes the existence of a few common factors driving the variation in the data. With the help of exploratory factor analysis using the principal components method and varimax rotation the following results were received.

*Table 1: Factor analysis of the "Self-confidence" scale*

| Component | Eigenvalue | % of Variance |
| --- | --- | --- |
| 1 | 4.620 | 28.874 |
| 2 | 1.599 | 9.994 |
| 3 | 1.505 | 9.403 |
| 4 | 1.041 | 6.506 |

KMO and Bartlett's test value is 0.821 (Sig.=.000, p<0.001). Together these four components having eigenvalues greater than 1 explain 54.777% of the total variance. The first component has an eigenvalue of 4.620 and explains 28.874 % of the whole variance. It includes items: *I have a negative attitude towards myself, I tend to devalue myself, It is sometimes unpleasant for me to think about myself, I do not have enough respect for myself, I am secure in my sense of self-worth, I never doubt my personal worth*. The second component has an eigenvalue of 1.599 and explains 9.994% of the whole variance. It includes items: *I perform very well at many things, I feel great about who I am, I am very talented, I am very comfortable with myself.* The third component has an eigenvalue of 1.505 and explains 9.403% of the whole variance. It includes items: *At times, I find it difficult to achieve the things that are important to me, I sometimes deal poorly with challenges, I sometimes fail to fulfill my goals, I wish I were more skillful in my activities.* The fourth component has an eigenvalue of 1.041 and explains 6.506% of the whole

variance. It includes items: *I am highly effective at the things I do, I am almost always able to accomplish what I try for.*

As we can see, this scale has a different factorial structure on a Bulgarian sample of respondents. All of these components are different aspects of self-confidence. In order to check their psychometric characteristics and their effect on stress, we will build and name the scales. Component one will be named "Self-worth", component two - "Self-liking", the third one - "Self-competence", and the fourth one - "Self-efficacy". The effect of these four constructs on perceived stress levels will be checked.

The following psychometric characteristics were received. For the subscale "Self-worth" the mean was 20.00 (SD=4.39) and Cronbach's Alpha coefficient was 0.75. For the "Self-liking" subscale the mean was 13.93 (SD=2.59) and Cronbach's Alpha coefficient was 0.67. The "Self-competence" subscale has a mean of 10.88 (SD=3.22) and Cronbach's Alpha coefficient of 0.70. The "Self-efficacy" subscale has a mean of 7.58 (SD=1.43) and Cronbach's Alpha coefficient of 0.60. Correlations between the subscales are as follows: the scale "Self-worth" correlates positively with the "Self-liking" scale (r=.464, Sig.=.000, $p<0.01$), with the "Self-competence" scale (r=.431, Sig.=.000, $p<0.01$), with the "Self-efficacy" scale (r=.372, Sig.=.000, $p<0.01$). Furthermore, the "Self-liking" scale correlates positively with the "Self-efficacy" scale (r=.484, Sig.=.000, $p<0.01$) and with the "Self-competence" scale (r=.327, Sig.=.000, $p<0.01$). Finally, the "Self-competence" scale correlates positively with the "Self-efficacy" scale (r=.430, Sig.=.000, $p<0.01$).

The stress levels of respondents were measured using the Perceived Stress Scale of Sheldon Cohen (Cohen et al., 1983). The scale was translated from English into Bulgarian (translation, back-translation and an expert comparative translation) and standardized for the Bulgarian population by Naydenova and Ilieva (N=709; Cronbach's Alpha=0.80) (Naydenova & Ilieva, 2006). The scale aims to measure the degree to which certain life situations are perceived as sources of stress. The construct shows high correlation with depression and health (Cohen et al., 1983). The scale has also a short 4-item version. The items directly ask for the current level of perceived stress. We used the short version of the scale but consequently added three more items of the long version to it. The respondents were asked to rate their answers to all 7 questions on a 5-point Likert-type scale ranging from "1 - Never" to "5 - Very often". The answer "Never" gets 0 points, "Seldom" gets 1 point, "Sometimes" gets 2 points, "Often" gets 3 points and "Very often" gets 4 points. Then, the end score is summed.

The authors received the following means: 23.83 (SD=7.99) for student males and 26.52 (SD=7.80) for student females (Naydenova & Ilieva, 2006). Example items are: *"How often do you have the feeling that you do not control important things in your life?"* and *"How often do you have the feeling that the difficulties are so many that you will never cope with them?"*. Of the 7 items 3 are reverse coded. In our sample, the mean was lower (21.26; SD=3.25) and so was Cronbach's Alpha coefficient (0.55). The analysis shows that deleting question 6 of the "Stress" scale - *"How often do you notice that you are thinking of things that are forthcoming?"* - will increase Cronbach's Alpha. The scale remains with 6 question and mean of 16. 88 (SD=3.23). Cronbach's Alpha coefficient is 0.61. The "Stress" scale has middle-level internal reliability but it is approaching the level of 0.65 recommended by Tabachnick and Fidell (Tabachnick & Fidell, 2001), so it will be used in the study.

### 3. RESULTS

**Sample**

The sample consisted of 203 people - the oldest is 35 years old, the youngest - 20 years old. The responses were gathered in 2015. Their mean age was 25.53. The gender distribution was unequal - 53 (26%) men and 150 (74%) women. Of the respondents 61 (30%) had general secondary education, 20 (10%) had secondary education with a specialization, and 122 (60%) had higher education. Furthermore, 147 (72.4%) of the respondents were students at the moment while 55 (27.1%) were not enrolled in any form of study. Next, 45 (22.2%) of the young people were unemployed at the moment, 110 (54.2%) were working full-time, 39 (19.2) were working part-time, 3 (1.5%) were employed in shift work and 5 (2.5%) had own business. Of the inquired respondents 18 (8.9%) had children while 185 (91.1%) had not yet have.

**Relationship between self-confidence and stress (Correlation analysis)**

As outlined in the literature review, the aim of the study was to check how self-confidence predicts perceived stress levels among young people. The factor analysis showed a different structure of the self-confidence scale in the Bulgarian sample of respondents. It consists of four subscales. As a next step, the correlation between each of the four subscales and the dependent variable stress will be checked in order to see which one is the best predictor of it.

*Table 2: Correlation between the Self-confidence subscales and the Stress scale (N=203)*

|  | Self-worth | Self-liking | Self-competence | Self-efficacy |
|---|---|---|---|---|
| Stress Pearson Correlation Sig. (2-tailed) | -.422** .000 | -.515** .000 | -.522** .000 | -.494** .000 |

** Correlation is significant at the 0.01 level (2-tailed)

The results indicate that all four subscales correlate negatively and statistically significant with the stress scale. The strongest correlation observed is between "Stress" scale and "Self-competence" scale - r=-.522** while the weakest one is between "Stress" scale and "Self-worth" scale - r=-.422**. The correlations are moderate to strong.

**Predictors of perceived stress levels (Regression analysis)**

As a next step regression analyses were performed as they give a clearer picture of the specific factors that influence the dependent variable in the model. The performed regression analyses eliminate the multicollinearity of the independent variables. Thus, only predictors remain that have a significant impact on the studied constructs and this impact is independent of the variance of the other variables.

The "Stress" scale was included as a dependent variable in the regression equation and the subscales "Self-worth", "Self-liking", "Self-competence" and "Self-efficacy" as independent variables. Enter method was used. The results are presented in the tables below.

*Table 3.1 - Predictors of stress. Model summary*

| Model | R | R Square | Adjusted R Square | Std. error of estimate |
|---|---|---|---|---|
| 1 | .679a | .461 | .432 | 2.45 |

a. Predictors: (Constant), Self-efficacy, Self-worth, Self-competence, Self-liking
b. Dependent variable: Stress

R square of .461 means that 46% of the variability in stress is accounted for by the independent variables in the model, i.e. the different components of self-esteem. This means that the model has good predictability.

*Table 3.2 - Predictors of stress. Coefficients*

| Model | Unstandardized coefficients | | Standardized coefficients | | |
|---|---|---|---|---|---|
|  | B | Std. error | Beta | T | Sig. |
| 1 (Constant) | 30.532 | 1.799 |  | 16.971 | .000 |
| Self-worth | -.141 | .075 | -.186 | -1.888 | .063 |
| Self-liking | -.240 | .136 | -.191 | -1.765 | .082 |
| Self-competence | -.283 | .098 | -.277 | -2.891 | .005 |
| Self-efficacy | -.571 | .224 | -.266 | -2.545 | .013 |

The statistically significant predictors of stress are Self-competence (Beta=-.277) (Sig.=.005, p<0.01) and Self-efficacy (Beta=-.266) (Sig.=.013, p<0.05).

The other independent variables were not statistically significant predictors of optimism and they were removed from the regression equation in order to check if this changes the predictive power of the model.

The independent variables Self-worth and Self-liking were removed one by one from the regression equation. The results are presented in Table 4.

*Table 4.1 - Predictors of stress. Model summary*

| Model | R | R Square | Adjusted R Square | Std. error of estimate |
|---|---|---|---|---|
| 1 | .619a | .383 | .368 | 2.58 |

a. Predictors: (Constant), Self-efficacy, Self-competence
b. Dependent variable: Stress

R square of .383 means that 38% of the variability in stress is accounted for by the independent variables in the model, i.e. self-efficacy and self-competence. The model has good predictability.

*Table 4.2 - Predictors of stress. Coefficients*

| Model | Unstandardized coefficients | | Standardized coefficients | | |
| --- | --- | --- | --- | --- | --- |
| | B | Std. error | Beta | T | Sig. |
| 1 (Constant) | 26.512 | 1.426 | | 18.590 | .000 |
| Self-competence | -.362 | .094 | -.368 | -3.835 | .000 |
| Self-efficacy | -.741 | .195 | -.364 | -3.793 | .000 |

The statistically significant predictors of stress are Self-competence (Beta=-.368) (Sig.=.000, p<0.001) and Self-efficacy (Beta=-.364) (Sig.=.000, p<0.001).

## 4. DISCUSSION

One of the most prominent results of this research is the different factorial structure of Tafarodi and Swann's "Self-confidence" scale. Instead of two, it consists of four subscales when tested on a Bulgarian sample of respondents which were named "Self-worth", "Self-liking", "Self-competence", and "Self-efficacy". This scale is used for the first time on a Bulgarian sample of respondents and its use is worth repeating with a greater number of respondents to define its psychometric characteristics.

The results of the statistical analyses confirm previous findings in the literature that the feeling of personal mastery rather than the groundless positive attitude towards the self helps the individual assess their personal resources to cope with stressful events as sufficient. People who assess themselves as competent and able to achieve their goals, are less likely to develop depressive symptoms. When young people perceive themselves as skillful and able to cope with challenges, they develop less stress reactions to the challenges from the environment. When individuals assess their personal competence to solve problems and cope with challenges as high, this means that they assess their personal resources to cope with difficult situations and stress as sufficient. The source of self-confidence that decreases stress levels is based on developing skills and accomplishing goals rather than on groundless positive attitude towards the self and feeling comfortable with oneself. This explains why the increase in self-liking which is based on social worth and attractiveness does not lead to decrease of stress reactions.

Further research is needed on self-confidence and its predictors because it has been proven as an important personality construct in coping with stress and mental issues.

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