



Weronika Molińska\*, Anna Olechowska\*\*

Maria Grzegorzewska University, Warsaw, Poland

## What is related to the choice of coping strategies? – functional relationship between a sense of self-efficacy, self-regulation and strategies for coping with stress

### KEYWORDS

self-regulation, coping strategies, self-efficacy, srqj, cope

### ABSTRACT

Weronika Molińska, Anna Olechowska, *What is related to the choice of coping strategies? – functional relationship between a sense of self-efficacy, self-regulation and strategies for coping with stress*. Culture – Society – Education no. 2(22) 2022, Poznań 2022, pp. 213–223, Adam Mickiewicz University Press. ISSN 2300-0422, ISSN (Online) 2719-2717. DOI 10.14746/kse.2022.22.11

Self-efficacy can affect an individual's thoughts and emotions. It can be related to self-regulation processes and coping strategies. The aim of the study was to try to answer the question of whether there are correlations between the mentioned variables. To test this, an online survey was designed on the Google Forms platform, which included sociodemographic questions and three questionnaires: General Self-Efficacy Scale, COPE Inventory, Self Regulation Formative Questionnaire. The survey was prepared in English. The survey included 470 participants from Poland and Spain. The study was conducted during increased stress, which is the exam session. The result of the statistical analysis confirmed the accepted hypothesis. Strategies used in coping with stress are related to the level of self-regulation and self-efficacy. The higher the sense of self-efficacy, the more frequent the selection of favorable coping strategies, as well as the higher the level of self-regulation, the more frequent the selection of adaptive strategies and

---

\* ORCID: <https://orcid.org/0000-0002-8319-7149>.

\*\* ORCID: <https://orcid.org/0000-0001-6143-9082>.

the rarer the selection of adaptive coping strategies. The results obtained are discussed in relation to the literature on the topic and previous studies, and it is suggested that further studies be conducted in a different context, taking into account that the results of self-efficacy or self-regulation could be different during intensified stress, for instance before or after an exam.

---

## 1. Introduction

### 1.1. Self-Regulation

Self-regulation is a well-known term, but it is not easy to find one that is the current definition of this concept. Most often, this term is used to cover an independent person's self-control. It is believed that someone who has good emotional self-regulation can control their emotions and resist any impulsive behavior that might worsen the situation and may improve their mood on its own, for example in a depressing situation. Such people have a flexible range of emotional and behavioral responses that are well suited to the requirements of the environment (Bell, 2016). Albert Bandura is considered a pioneer of research on self-regulation and according to him, self-regulation is an active process inextricably linked with self-esteem effectiveness that affects our thoughts and emotions. It distinguishes three main activities, which lead to effective self-regulation. The first activity is monitoring your own behaviors and consequences of this behavior. The second one - their assessment is based on personal principles and general standards. And finally, a specific response behavior (Bandura, 1991). Barry Zimmermann introduces the theory of self-regulation as well as the "Self-regulated learning" model which describes self-regulation in learning. This model constituted also the basis for the development of the Self Regulation Formative Questionnaire, which was used in this work. In his concept, Zimmermann presents the learning process of a student or pupil, who takes responsibility for learning something or simply for your educational path. As learners start the learning process by regulating it on their own, they have the opportunity to achieve better results. It is worth emphasizing that the process of self-regulated teaching takes place in three steps: planning, implementation, monitoring, and reflection. The results of studies (Dębska & Guła-Kubiszewska, 2005) about learning strategies and young adults' styles of coping with stress led to three main conclusions. Concentration and active effort are essential for the emergence of self-regulatory measures based on motor behavior. Emotional focus, self-regulation, and avoidance strategies can

be difficult for people who deal with severe stress. However, with a high overall self-effectiveness assessment, the possibility of self-regulation is more effective (Dębska & Guła-Kubiszewska, 2005).

## **1.2. Self-efficacy**

In 1997, Albert Bandura, dealing with the subject of human behavior modification, introduced the concept of the so-called perceived self-efficacy. The author of the theory defined self-efficacy as a particular set of beliefs of a person that determines how well a plan of action can be carried out in future situations (Bandura, 1977). In other words, self-efficacy is a person's belief in their ability to succeed in a certain situation. People form self-efficacy beliefs by interpreting information mainly from four sources: mastery experience, vicarious experiences, social persuasion (including verbal persuasion), and emotional states (Bandura, 1986). Self-efficacy according to psychologist Albert Bandura, who originally proposed this concept, is a personal assessment of how well the actions can be performed, which is necessary to deal with future situations. Perceived sense of self effectiveness relates to people's beliefs about their ability to influence events affecting their lives. This basic belief is the basis of human motivation, achievement and emotional well-being (Bandura, 2010). Coping in various situations, especially in difficult situations, can take both adaptive and non-adaptive forms. For this reason Carver, Scheier and Jagdish K. Weintraub (1989) presented an approach to cope with stress, in reference to previously presented theory of Richard Lazarus and Suzanne Folkman.

## **1.3. Coping with stress**

Coping with stress is the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them (Folkman & Lazarus, 1980). Coping actions can be regarded by their focus on different elements of a stressful encounter - we can distinguish problem-focused coping and emotion-focused coping. Problem-focused coping can be defined as an attempt to change the person-environment realities behind stress or negative emotions. Emotion-focused coping is more related to internal elements and trying to reduce a negative emotional state, or change the appraisal of the demanding situation (Lazarus & Folkman, 1984).

Taking into account the focus of coping with stress, Carver et al. (1989) identified 15 strategies that could both be considered as a trait - an individual's tendency and behavior in a specific situation. Active coping, planning, suppression of competing activities, restraint coping and seeking of instrumental social support are

included in problem-focused coping. Whereas seeking of emotional social support, positive reinterpretation, acceptance, denial and turning to religion are considered as emotion-focused coping (Carver et al., 1989)

## **2. Current study**

Taking into account the theory described above and the previous research results, our main aim was to answer the question: Are the strategies used to cope with stress related to the level of self-regulation and self-efficacy of students depending on their year of study? To test this question, we compared the groups in terms of differences in self-regulation of stress and self-esteem effectiveness and selection of a coping strategy.

## **3. Method**

### **3.1. Procedure**

The procedure was the same for both Polish and Spanish participants. The participants of this study were students starting and graduating from universities in Spain and Poland. The students were tested in classrooms at the universities before or during classes. The screen displayed a link and a QR code to the online questionnaire, which the respondents completed on their computers. The study was conducted online through Google Forms. The study was conducted before the upcoming exam session to increase the likelihood of perceived stress, in order to measure stress during the stressful situation which the participants experienced, regardless of nationality, country of study or year of education. They received the same online questionnaire in the original language (English) to reduce the possibility of error due to differences in adaptation in different languages. Before starting to complete the questionnaires, the participants had to declare fluency in English, as the original versions of the study tests had been selected.

The participants were recruited via social media. They were informed about the general aim of this study and presented with the questionnaires such as General Self-Efficacy Scale, COPE Inventory, Self Regulation Formative Questionnaire as well as demographic questions. After filling the questionnaire and counting the results, the respondent received information about the strategy they were dominant in.

### 3.2. Participants

Overall, 470 participants completed the study. The samples consisted of 323 women (68.7%) and 147 men (33.3%) aged 18–29 ( $M = 22.1$ ). The study involved 242 respondents (51.5%) from Poland and 228 (48.5%) from Spain. Each of the surveyed student declared fluency in using the English language, which was necessary to participate in study.

### 3.3. Materials

The following questionnaires were used: *General Self-Efficacy Scale* (GSES, Schwarzer & Jerusalem, 1995) was used to evaluate participants' self-efficacy and ways of coping in difficult situations. It contains 10 items for instance, "I can always manage to solve difficult problems if I try hard enough", "Thanks to my resourcefulness, I know how to handle unforeseen situations" or "I can usually handle whatever comes my way". The respondent answered to every sentence a 4-degree Likert scale (1 – "Not at all", 4 – "Exactly true"). Alpha reliability for this questionnaire was high,  $\alpha = .78$ , *COPE Inventory* (Carver et al., 1989) measured strategies of coping with stress. This multidimensional tool consists of 60 items to which the respondent answered with a 5-degree one Likert scale (1 – "Not at all true", 5 – "Exactly true"). Alpha reliabilities for the dispositional form of the COPE ranged from .45 to .92. Thanks to this study, in shape self-description, 15 strategies emerged, which include: *Active – coping*, *Planning*, *Suppression of Competing Activities*, *Restraint – coping*, *Instrumental Social Support*, *Positive reinterpretation*, *Acceptance*, *Denial*, *Turning to Religion*, *Emotional Social Support*, *Focus on & venting emotions*, *Behavioral disengagement*, *Mental disengagement*, *Substance use*, *Humor*. Example items include "I try to get advice from someone about what to do", "I use alcohol or drugs to make myself feel better" or "I seek God's help".

*Self Regulation Formative Questionnaire* (Gaumer Erickson & Noonan, 2018) measures 4 components of self-regulation based on Zimmerman's theory (1986): Planning (setting goals), Monitoring development (checking progress), Controlling changes (implementation of specific remedial strategies when the target is not met as planned) and Reflection (thinking about what has brought results and what needs to be improved next time). It consists of 22 items. Answers are given on a 5-point Likert scale, from 1 – "Not very like me" to 5 – "Very like me". Example items are "If an important test is coming up, I create a study plan", "Before I do something fun, I consider all the things that I need to get done", "As soon as I see things aren't going right, I want to do something about it.". This measure showed relatively high levels of reliability and validity, with Cronbach's alpha .89.

## Results

The first step in the statistical analysis was to check the level of reliability of all the described dependent variables. Subsequently, descriptive statistics for the analyzed subjects were calculated. Values of asymmetry and kurtosis statistics distribution did not indicate divergence of the distributions of the analyzed dependent variables normal distribution (skewness and kurtosis  $-1.5 < x < 1.5$ ). Therefore, further analysis to verify the hypotheses put forward in this study was carried out at parametric statistics help.

In order to be able to answer the question whether there are relationships between the respondents' variables, the correlations between the self-efficacy scale (GSES) were calculated and all self-regulation components (SRFQ) and the total score were also calculated

within the SRFQ range, by taking the sum of all scores for each of the four dimensions of self-regulation. This result was correlated with the strategies of coping with stress (COPE). Statistical analysis showed that there is a statistically significant relationship ( $p < 0.001$ ) between self-efficacy (GSES) and self-regulatory components (SRFQ), shown in Table 3. There is a clear relationship between the variables – the correlation is low on horizontal (0.2–0.4). So it can be concluded that the higher the sense of self the effectiveness the better results in each of the components of self-regulation, i.e. in the *Planning, Monitoring, Control, Reflection* (table 1).

**Table 1.** Pearson r correlation for GSES and the four dimensions of the SRFQ

		Planning	Monitor	Control	Reflection
GSES	r Pearsona	.209**	.292**	.363**	.374**
	Relevance	.000	.000	.000	.000

\*\* Correlation significant at the level of 0.01 (two-sided).

There is also a statistically significant relationship between self-esteem efficiency (GSE), and self-regulation following strategies (COPE): *Active Coping, Planning, Instrumental Social Support, Emotional Social Support, Suppression of Competing Activities, Positive Reinterpretation Acceptance, Focus on & Venting Emotions, Denial, Mental Disengagement*. However, there is no relationship between self-efficacy and the choice of strategy self-regulation: *Turning to Religion* ( $p = 0.608$ ) *Restraint - Coping* ( $p = 0.832$ ) *Substance Use* ( $p = 0.283$ ). We can see a significant correlation with moderate correlations (0.4–0.6) variables *Active*

*Coping* ( $p = 0.448$ ), *Planning* ( $p = 0.414$ ), *Positive Reinterpretation* ( $p = 0.405$ ). The higher the sense of self-efficacy, the better the results in each of these adaptive coping strategies. Correlation low (0.2–0.4) occurs between a variable and a variable GSES *Behavioral Disengagement*. There is a low negative correlation between them, that is, with an increase in the respondents' level of self-efficacy there was a decrease in ceasing to act. Weak positive correlations between variables appear in GSES and *Instrumental Social Support*, *Emotional Social Support*, *Suppression of Competing Activities*, *Acceptance*, *Humor*. The higher the level of self-efficacy, the more often the above stress coping strategies were chosen. On the other hand, weak and a negative correlation was observed between self-efficacy and sense: *Focus on & Venting Emotions*, *Denial*, *Mental Disengagement*. When the test subjects were more certain of their effectiveness, the less often they chose these strategies coping with stressful situations (the results are presented in table 2).

The study found a moderate positive correlation (0.4–0.6) between self-regulation (SRFQ) and the following coping strategies: *Active coping*, *Planning*, and a negative correlation between the SRFQ and *Behavioral Disengagement*. Accordingly, there are significant factors between those variables' dependencies. The higher the results on the self-regulation scale, the more frequent decisions were made for dealing with stress, such as *Active Coping* and *Planning* and the rarer *Behavioral Disengagement*. Moreover, low correlations were also noted between positive and self-regulation strategies: *Instrumental Social Support*, *Emotional Social Support*, *Suppression of Competing Activities*, *Positive Reinterpretation*. The more often the respondents chose these strategies of coping with stress, the higher the results were obtained in terms of self-regulation. Statistical analysis also showed weak positive correlations between self-regulation and strategies for coping with stress, such as: *Restraint – Coping*, *Acceptance*, *Focus on & Venting Emotions*. The higher the level of self-regulation the more frequent the selection of these strategies. On the other hand, weak negative correlations showed that the higher level of self-regulation is a rarer selection strategy: *Mental Disengagement*, *Substance Use* and *Humor* in coping situations stress (table 2).

Comparing the collected correlation with each other, one can notice the dependence that the higher the level self-efficacy and self-regulation, the more frequent selection of coping strategies stress such as *Active Coping*, *Planning*, *Instrumental Social Support*, *Emotional Social Support*, *Suppression of Competing Activities*, *Positive Reinterpretation*; and the higher the level of self-regulation and self-efficacy, the rarer *Distraction* from the stressful situation. It can therefore be said that self-

regulatory competences correlate unanimously with predictions, that is, people with higher self-regulatory competences more often use constructive, and less often non-constructive, strategies of coping with stress and have a higher sense of self-efficacy. These dependencies only confirm coexistence of relationship between selected variables, not a causal relationship, which will be discussed in more detail in the next part of the work.

**Table 2.** Pearson r correlation for SRFQ and COPE

		<b>GSES</b>	<b>SRFQ</b>
Active – coping	r Pearson Relevance	.448** .000	.556** .000
Planning	r Pearson Relevance	.414** .000	.562** .000
Instrumental social support	r Pearson Relevance	.145** .002	.205** .000
Emotional social support	r Pearson Relevance	.105* .023	.203** .000
Suppression of competing Activities	r Pearson Relevance	.196** .000	.371** .000
Turning to religion	r Pearson Relevance	.024 .608	.017 .707
Positive Reinterpretation	r Pearson Relevance	.405** .000	.355** .000
Restraint coping	r Pearson Relevance	.010 .832	.129** .005
Acceptance	r Pearson Relevance	.153** .001	.022 .637
Focus on emotions	r Pearson Relevance	-.180** .000	.047 .313
Denial	r Pearson Relevance	-.149** .001	-.030 .513
Mental disengagement	r Pearson Relevance	-.135** .003	-.139** .003
Behavioral disengagement	r Pearson Relevance	-.317** .000	-.420** .000
Substance use	r Pearson Relevance	-.050 .283	-.157** .000
Humor	r Pearson Relevance	.160** .001	-.156** .001

\*\* Correlation significant at the level of 0.01 (two-sided).

\* Correlation significant at the level of 0.05 (two-sided).



## **Discussion**

The hypothesis assumed by the researchers was confirmed. Among the respondents, people who are characterized by a higher level of competence self-regulation also have a higher sense of self-efficacy and use it more often in constructive, and less often in non-constructive strategies for coping with stress. In the study (Chirivella et al., 2013) comparing strategies of coping with dispositional optimism and mental well-being in a group of footballers from Poland and Spain, intercultural differences were noticed. In this study, Spaniards obtained significantly higher results in terms of using the strategy of coping with emotions than Poles. We expanded the topic about differences between Poles and Spaniards also in another article (Molińska & Katra, 2022). The results of these studies show that the level of self-efficacy and self-regulation, as well as the choice of coping with stress, is related to gender and nationality. Spaniards more often than Poles chose adaptive strategies of coping with stress and had a higher level of self-efficacy. Men differed from women in terms of the level of self-effectiveness, while women more often chose adaptive strategies of coping with stress. These differences in different strategies (focusing on emotions and their expression) are another example of how people can differ according to socio-cultural characteristics and, consequently, how to influence the thoughts, actions or strategies of people of different nationalities.

Based on the reports from past studies, it can be concluded that the results of the correlation study described in this text are significant for later studies, or even for understanding peoples' functioning. Effective self-regulation skills (including all its aspects: Planning Monitoring Development, Control of Change and Reflection) can be associated with a sense of control and efficiency in achieving goals, as well as in-depth conclusions about effectiveness of your plans and actions can also be associated with a better sense of your own effectiveness.

The controlled effects of previous activities will be the evidence for people about the quality and effectiveness of their methods, which can not only work for e.g. educational processes, but also self-regulation of stress. The person who monitors development, controls changes and contemplates their coping strategies, can deduce which of these are most beneficial – adaptive. Furthermore, in the literature, one can note a statistically significant relationship between one's own effectiveness and achievements (Hodges & Kim, 2010).

The above study confirms that strategies used to cope with stress are related to the level of self-regulation and self-efficacy. The higher self-efficacy, the more frequent selection of beneficial coping strategies stress, and the higher the level of self-regulation, the more frequent the selection of adaptation strategies and the less

frequent selection of non-adaptive stress coping strategies. Our studies were limited due to various factors. Participants' sample was homogenic regarding education, profession or age. Future studies should explore more heterogeneous groups. It would be worth checking whether these effects will also appear in the group of children and the elderly. Especially, as English was used for all the questionnaires in the study, it reduced the number of possible participants.

The participants of the study were people living in the territories of Poland and Spain, for this reason it would be necessary to investigate the presence of overlaps of intercultural differences between the participants. The research cited earlier highlights the cross-cultural differences in terms of the compared variables. So it is worth checking whether the obtained results are characteristic for specific groups (ethnic, social, cultural, etc.) This could be possible, for example, by controlling results of the Spaniards and Poles separately and determining the factors influencing a higher sense of self-efficacy, better self-regulation and adaptive selection coping strategies.

The study was conducted during increased stress, which is the exam session. The results of self-efficacy or self-regulation could be different during intensified stress, for instance before or after an exam.

Future research could also include experimental studies to dispose the positivity bias. The current study, as a self-report study, was exploring more a perspective of Spaniards and Polish not their real self-efficacy or self-regulation.

## Bibliography

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, 4(3), 359–373.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50, 248–287.
- Bandura, A. (2010). Self-Efficacy. The Corsini Encyclopedia of Psychology. <https://doi.org/10.1002/9780470479216.corpsy0836>
- Bell, A.L. (2016). *What is self-regulation and why is it so important?* Good Therapy Blog. <https://www.goodtherapy.org/blog/what-is-self-regulation-why-is-it-so-important-092816>
- Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267–283.
- Chirivella, E.C., Esquivá, I.C., & Budzynska, N. (2013). Coping, optimism and satisfaction with life among spanish and polish football players: a preliminary study. *Revista de Psicologia del Deporte*, 22(2), 337–343.

- Dębska, U., & Guła-Kubiszewska, H. (2005). Self-regulation, learning strategies and styles coping with stress in young adults. *Developmental Psychology, 10*(4), 83–94.
- Folkman, S., & Lazarus, R.S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*, 219–239.
- Gaumer Erickson, A.S., & Noonan, P.M. (2018). *Self-regulation formative questionnaire*. In *The skills that matter: Teaching interpersonal and intrapersonal competencies in any classroom* (pp. 177–178). Corwin.
- Hodges, Ch., & Kim, Ch. (2010). Email, Self-Regulation, Self-Efficacy, and Achievement in a College Online Mathematics Course. *Journal of Educational Computing Research, 43*(2), 207–223.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. Springer.
- Molińska, W., & Kutra, G. (2022). Differences in self-regulation of stress among student starting and finishing studies. The comparison of students of Polish and Spanish universities. *Kultura i Edukacja, 2*(136), 96–113.
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In: J. Weinman, S. Wright, M. Johnston (eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). NFER-NELSON.
- Zimmerman, B.J. (1986). Becoming a self-regulated learner: Which are the key subprocesses? *Contemporary Educational Psychology, 11*(4), 307–313.