

Strategies of Emotion Regulation in Students – Future Human Relations Professionals

Abstract

In the presented study, selected emotion regulation (ER) strategies were designed in accordance with Gross and Thompson's model. Students of primary education ($n = 116$), social pedagogy ($n = 72$) and preschool education ($n = 54$) – future human relations professionals – assessed the frequency of the use and efficiency of these ER strategies. Students use various ER strategies, the most frequent and efficient being physical activation and social support, and the least frequent and efficient being substance use. Correlations between the use and efficiency of ER strategies within the groups of students are mostly moderately high or high. There are only a few differences between the student groups in terms of perception of the use and efficiency of ER strategies.

Keywords: *emotion, emotion regulation strategy, efficient emotion regulation, students, education*

Introduction

Emotion regulation (ER) has become a central topic in psychological research (Gross, 1998; Matsumoto, 2006), as it has many important implications for a broad spectrum of the individual's functioning. For instance, ER is positively associated with a good social relationship with peers (e.g., Eisenberg, Hofer, & Vaughan, 2009; Lopes, Salovey, Cote & Beers, 2005) and the quality of the student-teacher relationship (e.g., Chang, 2013; Meyer & Turner, 2007). Since the students in our sample are future human relations professionals (future preschool and primary

school teachers as well as social pedagogues), who will be working with various groups of people, the issue of ER is particularly relevant to them. There are various perspectives on emotions and ER, with the cognitive perspective being one of the most accepted. From this perspective, emotions can be understood as a response to a subjectively important event that is appraised by an individual (Frijda, 1988; Lazarus, 1991) and includes a sequence of different processes: appraisal of the situation, and an experiential, behavioural and physiological response (Gross & Feldman Barrett, 2011; Prosen, Smrtnik Vitulić, & Poljšak-Škraban, 2013). In this perspective, ER can occur in any situation-attention-appraisal-response sequence. The contemporary model of ER by Gross and Thompson (2009), which represents a basis of our study, complies with this perspective. This model will be described in greater detail, as it encompasses the ER strategies in our research.

The process model of ER views emotion regulatory acts at five different points in the emotion generative process (Gross & Thompson, 2009): (1) *situation selection* refers to the actions an individual makes to avoid situations that are expected to give rise to unpleasant emotions; (2) *situation modification* refers to the efforts made to change a situation and its emotional potential; (3) *attentional deployment* refers to ER via redirecting attention in an emotion-eliciting situation; (4) *cognitive reappraisal* refers to changing the appraisal of the situation – either its meaning or its importance; and (5) *response modulation* refers to influencing experiential, behavioural or physiological response tendencies once they arise.

Among ER strategies derived from the aforementioned model, only reappraisal and suppression – the process by which outward signs of emotion are inhibited (Gross, 1998) – have been studied more extensively. Reappraisal is generally considered to be a more effective ER strategy protective against psychopathology, whereas suppression is considered a less effective ER strategy connected with psychopathology (e.g., Aldao, Nolen-Hoeksema, & Schweizer, 2010; Gross, 1998). In our study, we explore ER strategies derived from all of the five emotion regulation points mentioned in Gross and Thompson's (2009) model. These points will be presented in greater detail in the methodology section below.

In addition to the frequency of the use of particular ER strategies, their efficiency is also explored in our study. The efficiency of a certain ER strategy may be determined by its *functionality*, defined as goal accomplishment, and its *adaptability*, defined as accordance with the individual's specific contexts (Scherer, 2011; Thompson, 2011). Another criterion of ER efficiency can be its level of *automation*, as automated responses are fast, consistent, and reliable (Bargh & Williams, 2009). Efficient ER is also *flexible*, referring to the capacity to produce context-dependent emotional responses (Westphal, Seivert & Bonanno, 2010). In the presented study,

however, efficiency is not assessed by the above specific criteria, but by a holistic assessment of “what is helpful for me”, as previously suggested by Loewenstein (2009).

The issue of the use and efficiency of ER strategies is important for everyone, but it is especially relevant for individuals who work with other people. The students participating in our study fit into this category, as they are future human relations professionals. The characteristics of human relations professionals should include sensitivity towards others and cooperation in interpersonal relationships. Efficient ER strategies are crucial in order to accomplish these goals. Despite the importance of ER strategies for human relations professionals, data on this topic is rather scarce. The results of empirical studies indicate that teachers often experience and express a variety of pleasant and unpleasant emotions (e.g., Chang, 2013) and develop a range of ER strategies in the classroom, e.g., situation modification, attention deployment, cognitive reappraisal (Sutton, Mudrey-Camino, & Knight, 2009). Teachers believe that the use of efficient ER strategies makes them more effective in achieving academic goals, in building quality social relationships, and in discipline practices (Sutton et al., 2009). Similarly, the use of efficient ER strategies is also important for other (future) human relations professionals, such as the social pedagogues participating in our study.

Research Problem

In the presented study, we explored some ER strategies of future human relations professionals: students of primary education, preschool education and social pedagogy. Specifically, we sought to explore: (1) how frequently they used selected ER strategies and how effective they found them; (2) whether there were any differences between groups of students with regard to how often they used selected ER strategies and how effective they found them; and (3) what the correlation was between the use the selected ER strategies and their efficiency.

Methodology

Sample

The study sample consisted of 242 students from the Faculty of Education in Ljubljana, Slovenia – 116 students of primary education, 72 students of preschool education and 54 students of social pedagogy – enrolled in the first year of the study programme in 2011. The age of the students ranged from 18 to 24 years, and

the majority were female (94.6% for primary education, 92.0% for social pedagogy and 98.7% for preschool education).

Instrument

For the purpose of the study, ER strategies were selected following Gross and Thompson's (2009) model of ER: (1) *situation selection*, (2) *situation modification*, (3) *attentional deployment*, (4) *cognitive reappraisal* (of situation meaning and importance), and (5) *response modulation* (experiential, physiological and behavioural). All of these groups of ER strategies are described in the introduction to the presented article. However, within the behavioural response modulation strategy we further distinguished between (a) physical activation, (b) suppression that entails the reduced expression or non-expression of emotions, (c) finding social support in others, (d) comfort eating, and (e) psycho-active substance use, as some possible behavioural ER strategies. All of these ER strategies are gathered in the questionnaire, each represented by one item. When completing the questionnaire, the students indicated how often they used each ER strategy on a five-point Likert-type scale (1 – *almost never* to 5 – *always*), while also indicating how efficient each ER strategy was for them (1 – *not at all* to 5 – *very much*).

Procedures

The students of primary education, social pedagogy and preschool education completed the questionnaire during a lecture on developmental psychology. Their participation was based on their informed consent, and was voluntary and anonymous. One of the authors of this article was present during completion of the questionnaire.

Data Analysis

Firstly, the normality of distribution for each item in the questionnaire was tested. Since the normality was not confirmed (Shapiro-Wilk tests: all $ps < .00$), a set of non-parametric statistical procedures was applied. Medians were calculated for the use and efficiency of each ER strategy for each group of students, and Kruskal-Wallis tests were used to compare the use and efficiency of each ER strategy by all three groups of students. If the differences between groups were significant, Mann-Whitney tests were applied to determine the differences between each pair of the student groups. Spearman's rhos were used to identify the correlations between the use and efficiency of ER strategies within each group of students.

Results and Discussion

In the results and discussion section, the frequency and efficiency of the self-assessed use of the selected ER strategies, as well as correlations between use and efficiency, will be presented (Table 1) and commented on for the primary education, social pedagogy and preschool education students. Possible differences between the groups of students with regard to the use (Table 2) and efficiency of ER strategies will also be identified.

Table 1. Medians for the use and efficiency of ER strategies, and correlations between the use and frequency, in groups of students.

ER strategy	Primary Education (<i>n</i> = 116)			Social Pedagogy (<i>n</i> = 72)			Preschool Education (<i>n</i> = 54)		
	<i>Me_{use}</i>	<i>Me_{eff}</i>	<i>Sp.rho</i>	<i>Me_{use}</i>	<i>Me_{eff}</i>	<i>Sp.rho</i>	<i>Me_{use}</i>	<i>Me_{eff}</i>	<i>Sp.rho</i>
<i>Situation selection</i>	4.0	3.0	.54**	4.0	3.0	.39**	4.0	3.0	.44**
<i>Situation modification</i>	4.0	3.0	.45**	3.5	3.0	.43**	4.0	3.0	.41**
<i>Attentional deployment</i>	4.0	3.0	.68**	3.0	4.0	.61**	4.0	3.0	.61**
<i>Cognitive reappraisal</i>									
Meaning	3.5	3.0	.63**	3.0	3.0	.59**	4.0	3.0	.68**
Importance	3.0	3.0	.58**	2.5	2.0	.41**	3.0	2.5	.41**
<i>Response modulation</i>									
Experiential	2.0	2.0	.55**	2.0	2.0	.52**	2.0	2.0	.57**
Physiological	3.0	3.0	.69**	2.0	3.0	.76**	2.0	2.0	.79**
<i>Behavioural</i>									
Physical activation	4.0	4.0	.58**	4.0	4.0	.69**	3.0	4.0	.66**
Suppression	3.0	2.0	.21*	4.0	3.0	.03	3.0	4.0	.21
Social support	4.0	4.0	.69**	3.5	4.0	.49**	4.0	3.5	.69**
Comfort eating	3.0	3.0	.68**	2.0	3.0	.72**	3.0	2.0	.73**
Substance use	1.0	1.0	.41**	1.0	1.0	.38**	1.0	1.0	.55**

Notes: *Me_{use}* = median of frequency of ER strategy use; *Me_{eff}* = median of efficiency of ER strategy; *Sp. rho* = Spearman rho correlation; **p* < .05; ***p* < .01.

Table 2. Significant differences in mean ranks of the use of ER strategies in groups of students

ER strategy	Primary Education R	Social Pedagogy R	Preschool Education R	Results of Kruskal-Wallis test	Mann-Whitney test
<i>Attentional deployment</i>	128.79	126.61	99.02	$\chi^2(2) = 7.92$ $p = .02$	Pri>Soc Pre>Soc
<i>Response modulation</i>					
Physiological	132.72	111.69	110.48	$\chi^2(2) = 6.11$ $p = .05$	Pri>Pre
<i>Behavioural</i>					
Social support	130.41	127.36	94.55	$\chi^2(2) = 11.43$ $p = .00$	Pri>Soc Pre>Soc

Notes: R = mean rank; > the first group assessed the ER strategy as more frequently used than the second group.

The data is analysed following Gross and Thompson’s (2009) process model of ER, as the strategies in the presented study were also designed in accordance with this model. Each strategy is commented on with regard to its frequency of use and efficiency. When analysing the more and less frequent use and efficiency of ER strategies in the groups of students, the criteria of $Me \geq 4$ and $Me \leq 2$ were applied, respectively. If $2.5 \leq Me \leq 3.5$, it is referred to as moderate. Since almost all of the correlations between the use and efficiency of the ER strategies in our study are significant and moderately high,¹ only the high and low correlations are discussed. When commenting on the differences between the groups of students in the use and efficiency of ER strategies, only significant differences are mentioned.

In all the three groups of students, *situation selection* (avoidance of situations that could give rise to unpleasant emotions) and *situation modification* (efforts to change such situations) are more frequently used and considered moderately effective. The correlations of use and efficiency are high only in the primary education students, indicating accordance of the students’ assessments: they actually use the ER strategy that they find effective. It seems that the students quite often try to influence situational circumstances in order to regulate their emotional experience, and that they

¹ Cohen (1988) suggested that the values of correlations ≥ 0.10 and < 0.30 indicate relationships of a small magnitude, and the values between $0.30-0.49$ and > 0.50 indicate a moderate and high magnitude, respectively.

find these strategies quite efficacious. The results regarding situation selection and modification ER strategies may serve as encouragement to study these strategies more thoroughly, as they are not well represented in empirical research.

In the student groups, *attentional deployment* (redirecting attention from the emotional situation) is moderately or more frequently used, and it is considered moderately or more effective. The correlations of these two measures are high in all the three groups of students. The primary and preschool education students use this ER strategy significantly more often than the social pedagogy students. Perhaps education students are encouraged to apply this strategy when interacting with children, and consequently use it more often themselves.

Cognitive reappraisal of both meaning and importance is moderately used and considered moderately effective by the majority of the students. The correlations for reappraisal of meaning are high in all the groups of students, and for reappraisal of importance in the primary education students. The only moderate use and perception of the efficiency of reappraisal is somewhat surprising, as it is generally considered an effective ER strategy connected with well-being, self-esteem and having social support (Gross & John, 2003). In earlier studies, however, the reappraisal of meaning and importance was studied as a single unit, whereas our results suggest that this distinction should be taken into consideration in future research.

Response modulation refers to influencing emotional experiential responses (change in subjective emotional experience), physiological responses (change in processes such as breathing) or behavioural responses (physical activation, suppression, seeking social support, comfort eating and substance use). In our results, experiential response modulation is perceived as less frequently used and less efficient in all the three groups of students, while the use and efficiency of physiological response modulation are low or moderate in all the students. For both strategies, the correlations of frequency and efficiency are high in all the students. Furthermore, the results confirm that the primary education students use physiological modulation significantly more frequently than the preschool education students. It can be concluded that these two ER strategies are not as present in students, perhaps because it is difficult to modulate psycho-physiological processes.

In our study, behavioural response modulation includes all of the five aforementioned ER strategies. Physical activation and social support seeking are more frequently used and considered more effective in almost all the groups of students, and the correlations between frequency and efficiency are mostly high. The students' high assessment of these two strategies concurs with the conclusions of many authors stressing the beneficial influence of physical action and having

social support when experiencing unpleasant emotions (e.g., Milivojević, 2008). Interestingly, the primary and preschool education students use the social support ER strategy significantly more often than the social pedagogy students. Given that the social pedagogy students will provide social support for the people they work with, it is somewhat surprising that they themselves use this strategy less frequently than the other groups of students.

Suppression is a moderately or more frequently used ER strategy in all of the groups of students. Perception of its efficiency, however, ranges from low to more efficient. Correlations between frequency and efficiency are low but still significant for the primary education students, but are non-significant for the other two groups. The low correlations may be indicative of a discrepancy between the students' actual use of this strategy and their opinion of its efficiency. Suppression is usually seen as less effective, as it creates a sense of discrepancy between inner experience and outer expression, and its frequent use is usually negatively linked to well-being and social functioning (Gross & John, 2003).

In our study, comfort eating is a less or moderately used ER strategy in all the three groups of students, while its efficiency is also perceived as such. The high correlations between these two measures indicate accordance of the students' perception of the use and efficiency of comfort eating. However, there is a significant difference in the perception of comfort eating efficiency between the groups of students (Kruskall-Wallis test: $\chi^2(2) = 6.46$; $p = .04$; $R_{\text{primary education}} = 124.71$; $R_{\text{social pedagogy}} = 110.45$; $R_{\text{preschool education}} = 131.37$), with the preschool education students assessing it as more efficient than the social pedagogy students. Even though comfort eating is not so frequent among the students, its occurrence demands attention, as this ER strategy is usually considered less adaptive (Evers, Stok, & de Ridder, 2010).

The last ER strategy in our study – substance use – is the least frequently used and it is perceived as the least efficient in all of the groups of students. The correlation between frequency and efficiency is high in the preschool students. These results show that the students generally do not apply this strategy, as they are probably aware of its negative consequences.

Conclusions

From all the above, it can be concluded that the primary education, social pedagogy and preschool education students participating in our study use various ER strategies that differ considerably in their frequency and efficiency. Physical

activation and social support are the strategies that stand out as the most frequent and efficient ones. In the case of the latter, the possible bias of our sample (future human relations professionals) must be considered. At the other extreme, the ER strategy of substance use stands out as the least frequent and efficient one.

Our results regarding the two previously most frequently studied ER strategies – suppression and cognitive reappraisal – do not entirely concur with the findings of other studies. Specifically, suppression is, interestingly, highly marked by the students in our sample, whereas cognitive reappraisal is not perceived by them as that frequently used and efficient ER strategy. Moreover, reappraisal was divided into meaning and importance in our study. Correlations between the frequency of use and efficiency of the ER strategies within the groups of students are mostly moderately high or high, indicating that the students use those strategies they perceive as efficient and vice versa. There are only a few differences between the student groups in their perception of the use and efficiency of ER strategies.

The strategies investigated in our study follow Gross and Thompson's model; for the first time, however, the whole model is studied simultaneously. Furthermore, the students in our study assessed ER strategies not only for their use but also for their efficiency. This kind of assessment is not usually found in other studies on ER and opens up an important window for future research. However, the specific characteristics of the sample (specific groups of students, mainly female) should be considered as a shortcoming of our study, allowing only limited generalisations of the results. Moreover, the ER strategies are evaluated on the basis of student self-assessment, and therefore the subjectivity of the participants should be taken into consideration.

As the students participating in our study are still developing their repertoire of ER strategies (their ER strategies may become increasingly more sophisticated and flexible), this presents an opportunity for study programmes at university to further encourage their development, perhaps by offering courses designed to teach effective ER strategies. Effective strategies to regulate emotions, particularly unpleasant ones, may help human relations professionals to improve their interactions with other people. The presented discussion on ER strategies may be taken further with the inclusion of the individual differences perspective, as each of us has a "window of tolerance" in which the intensity of emotional arousal is optimal, enabling us to function well (Siegel, 1999).

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