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Procedia - Social and Behavioral Sciences 33 (2012) 65 – 69

Procedia
Social and Behavioral Sciences

PSIWORLD 2011

Anger and hostility as indicators of emotion regulation and of the life satisfaction at the beginning and the ending period of the adolescence

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Abstract

In this paper, based on specific statistical methods (correlations, analysis of variance, multiple standard regression), we analyzed the relations between emotion regulation, various aggression forms, and life satisfaction. The study reveals the possibility of using impulse, non-acceptance, clarity, and goals as the most important indicators to be optimized in a method of life satisfaction improvement and personal development. The results show a significant relationship between anger and emotion regulation, hostility and life satisfaction. In this context, we obtained also a good agreement with existing literature for the variance of aggression and emotion regulation mechanisms as functions of gender and age.

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Keywords: Aggression; Emotion regulation; Life satisfaction; Adolescence; Anger; Hostility; Personal development

1. Introduction

Recent researches stated correlational links between relational aggression and emotion regulation. While some authors sustained that boys with lower emotion regulation are more likely to exhibit aggressive behaviors (Eisenberg et al., 2001), others suggested that there are not a significant relationship between emotion regulation and overt aggression, sustaining that for preadolescents girls lower emotion regulation was a predictor of later relational aggression (Bowie, 2009). It was also suggested that in intensely emotional situations, automatic emotion regulation was associated with less feelings of anger,

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without the cost of greater negative emotion or maladaptive cardiovascular activation (Mauss, Cook, Gross, 2007).

In our study we considered four types of aggression: physical, verbal, anger and hostility emphasizing the consistent correlation between anger and hostility with both life satisfaction and difficulties in emotion regulation factors. According to Melnik & Hinshaw (2000), we considered the conceptualization that emotion regulation implies the existence of at least four basic processes: awareness and understanding of emotions, acceptance of emotions; control of impulsive behavior, the use of appropriate emotion regulation strategies. The model for the evaluation of the difficulties in emotion regulations was a six factors model (Gratz & Roemer, 2004). For emotion regulation mechanisms (expressive suppression and cognitive reappraisal) we used the two factors model (Gross, 1998).

2. Purpose of study

This study intended to carry out a more detailed investigation regarding the correlations between the emotion regulation (both difficulties and mechanisms) and the various types of aggression, on one hand, and between the aggression and life satisfaction, on the other hand. In this context, we tried to suggest the possibility of improving life satisfaction by optimizing emotion regulation.

3. Method

Sample comprised 320 teenagers high school students and undergraduates, 219 (64%) females and 111 (36%) males, range 15 to 25 years of age, mean age 17.87, SD = 2.04.

Hypothesis: aggression forms are correlated with difficulties in emotion regulation and life satisfaction.

Instruments, in order to measure the study variables, were administered: 1) for aggression – Aggression Questionnaire (Buss & Perry, 1992); 2) use of the emotion regulation mechanisms – Emotion Regulation Questionnaire (Gross & John, 2003); 3) subjective well-being – Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985); 4) difficulties in emotion regulation – Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2003).

The AQ is an 29 items questionnaire, organized in four subscales, corresponding with the four forms of aggression: physical aggression (9), verbal aggression (5), anger (7), and hostility (8). As a reliability score, Cronbach's alpha was found as .81.

The DERS comprises 36 items and includes six subscales as follows: lack of awareness of emotional responses (awareness), lack of clarity of emotional responses (clarity); non-acceptance of emotional responses (non-acceptance); limited access to effective strategies (strategies); difficulties in controlling impulsive behaviour when experiencing negative affect (impulse); difficulties in engaging goal directed behaviour when experiencing negative affects (goals). As a reliability score, Cronbach's alpha was found as .92 for the total scale, implying high internal consistency, and alpha coefficients ranged from .73 to .88 for the subscales, indicating adequate internal consistency.

The ERQ comprises 10 items and includes two subscales: suppression of expressive emotional behaviour (suppression) and cognitive reappraisal of a situation (reappraisal). Cronbach's alpha was found as .76 for the total scale.

The SWLS is a 5 items scale. Cronbach's alpha was found as .83 for the total scale, and inter- items correlations ranged from .39 to .61.

4. Results

4.1. Gender and Age Differences

We applied the method of simple analysis of variance Anova one way for analyzing the dependence between aggression forms, emotion regulation mechanisms, difficulties in emotion regulation factors, life satisfaction and both gender and age. For gender influence we considered two groups: females (145) and males (108). The significance of age was analyzed by applying the variance method to the two groups (15-18 and 19-25 years). For age influence was considered also Pearson correlation coefficient like a primary analysis.

The results proved the existence of a significant variance between gender and both physical aggression ($F = 32.14$; $Sig. = .00$) and anger ($F = 3.52$; $Sig. = 0.06$), confirming the existing results (Gini & Pozzoli, 2006) The age resulted strongly correlated with all types of aggression, except hostility (Table 1.), confirming the existing results (Côté, 2007). We applied the same type of analysis also to suppression and reappraisal. In this context, we noticed significant values for the variance of reappraisal with gender. The study reveals no significant differences in suppression between males and females confirming the existing results in the literature (Gross, John, 2003).

Table 1. Anova One Way/Aggression forms, Emotion Regulation Mechanisms, Difficulties in Emotion regulation factors /Gender and Age groups

	Gender Groups			Age Groups		
	Mean Square	F	Sig.	Mean Square	F	Sig.
Total aggression	575.34	1.80	.18	2128.94	6.56	.00
Physical aggression	1566.46	32.41	.00	254.57	4.78	.00
Verbal aggression	2.18	.16	.68	39.52	2.98	.05
Anger	116.58	3.52	.06	302.84	9.56	.00
Hostility	25.68	.65	.42	66.82	1.63	.19
Reappraisal	21.27	.52	.46	9.04	.23	.79
Suppression	248.36	13.11	.00	11.89	.58	.55
Clarity	33.57	2.60	.10	38.60	3.06	.08
Goals	33.12	1.14	.28	.66	.02	.88
Impulse	.33	.01	.92	2.55	.07	.78
Non-acceptance	.00	.00	.99	114.01	3.73	.05
Strategies	113.26	2.69	.10	5.28	.12	.72

The variance values showed no correlation between suppression and age. One can notice also there is no correlation between the two groups of age and reappraisal. As expected for difficulties in emotion regulation factors we noticed significant differences between the beginning and the end of adolescence. Significant values were obtained for clarity, awareness, and non-acceptance (Table 1). Our study suggests also that goals, impulse, and strategies do not substantially depend on age (Table 1). The life satisfaction seems also not strongly related to age.

4.2. Correlations among variables

DERS/AQ: For a primary analysis the Pearson correlation coefficient was calculated. The significant results regarding the relation between emotion regulation difficulties factors and aggression were presented in Table 2. The results verified a significant positive linear correlation between anger, hostility and clarity, goals, impulse and non-acceptation. This means that the level of aggression increases with emotion regulation difficulties.

Table 2. Correlations, Means, Standard Deviations/ ERQ, AQ ,SWLS

	Mean	SD	Reappraisal	Suppression	Anger	Hostility	Physical Aggression	Verbal Aggression
Reappraisal	29.95	6.36	-					
Suppression	14.62	4.34	.22**	-				
Anger	18.31	5.76	-.12*	-.18**	-			
Hostility	22.39	6.26	-.12*	.07	.62**	-		
Physical Aggression	19.00	7.25	-.07	-.06	.50**	.28**	-	
Verbal Aggression	15.96	3.69	-.01	-.09	.62**	.45**	.56**	-
Life satisfaction	23.92	5.70	.23**	.12	-.21**	-.33**	.08	.04

* $p < .05$. ** $p < .01$ (two-tailed)

Table 3. Correlations, Means, Standard Deviations/ DERS, AQ ,SWLS

	Mean	SD	Clarity	Goals	Impulse	Non-acceptation	Anger	Hostility
Clarity	10.28	3.61	-					
Goals	14.09	5.38	.34**	-				
Impulse	13.46	5.67	.28**	.65**	-			
Non-acceptation	11.55	5.59	.43**	.40**	.38**	-		
Anger	18.31	5.76	.27**	.40**	.55**	.27**	-	
Hostility	22.39	6.26	.28**	.42**	.43**	.41**	.62**	-
Life satisfaction	23.92	5.70	-.38**	-.32**	-.21**	-.26**	-.22**	-.33**

* $p < .05$. ** $p < .01$ (two-tailed)

ERQ/AQ: The Pearson correlation coefficient value showed also a negative linear correlation between: suppression and anger; reappraisal and anger; reappraisal and hostility, suggesting that a low reappraisal capacity maintains a high level of anger and hostility (Table 2).

WLSQ/AQ: The negative correlations between life satisfaction and emotion regulation, anger, and hostility are revealed by the Pearson analysis (Table 2). This study suggest that a decreasing of life satisfaction could be explained by the stress involved by anger and hostility. Hostility present the higher negative correlation with life satisfaction.

Trying to apply the standard multiple regression for anger, hostility, and life satisfaction dependent variables, one first step was to check the main assumptions of this method. We, thus, chose only the independent measures which correlate with the dependent variables (Pearson coefficient above .20). For anger we considered clarity (.27), goals (.40), impulse (.55), non-acceptation (.27), strategies (.48), life satisfaction (-.23), for hostility: clarity (.28), goals (.42), impulse (.43), non-acceptation (.41), strategies

(.54), life satisfaction (-.33), and for life Satisfaction: clarity (-.38), goals (-.32), impulse (-.21), non-acceptation (-.26), strategies (-.37), reappraisal (.23). (Table 3)

According to Tabachnick, & Fidell (1996) the independent variables with a bivariate correlation more than .70 should not be included in multiple regression analysis. Thus, for anger we excluded strategies, which correlates with impulse (.70). For hostility and life satisfaction the variable impulse (.70) was also excluded.

The colinearity diagnostics analysis provided by SPSS 15, indicates values of tolerance between .51 and .80 for all employed analyses. When this value is very low, near zero, this indicates that the multiple correlation with other variables is high. Thus, we proved that this assumption is also verified.

For anger, R Square = .33, which indicates that 33 per cents of the anger variance is explained by our model. The maximum absolute value of beta indicates the strongest unique contribution to explaining the dependent variable. Sig should be less than .05 in order to conclude that the variable is making a statistically significant unique contribution to the equation. Thus, for anger, the strongest predictor is the impulse variable. The same type of analysis indicate that hostility is 30 percents, and life satisfaction 20 per cents explained by our model. The stronger predictor for hostility is non-acceptance, followed by impulse and life satisfaction, while clarity and goals are the strongest predictors for life satisfaction.

5. Conclusions

In the previous described study we obtained an encouraging result for both the correlations between emotion regulation and various aggression types, and the correlations between aggression and life satisfaction. The multiple regression analysis suggested also the impulse, non-acceptance, clarity, and goals as the most important indicators to be optimized in order to increase life satisfaction and reduce anger and hostility. The dependence of aggression forms and emotion regulation mechanisms on age and sex are in a good agreement with existing literature.

References

- Bowie, B. (2009). Pathways to Social Deviancy: Relational Aggression and Emotion Regulation. *Archives of Psychiatric Nursing*, Vol. 0, No. 0 (May), 1-11.
- Buss, A., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452-459.
- Côté, S. M. (2007). Sex Differences in Physical and Indirect Aggression: A Developmental Perspective. *European Journal on Criminal Policy and Research*, 13(3-4), 183-200.
- Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Eisenberg, N., Cumberland, A., Spinrad, L., Fabes, A., Shepard, A., & Reiser, M. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behaviour. *Child Development*, 72(4), 1112-1134.
- Gini, G., Pozzoli, T. (2006). The Role of Masculinity in Children's Bullying. *Sex Roles*, 54, 585-588
- Gratz, K.L., Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26, 41-47.
- Gross, J., (1998). The emerging field of emotion regulation: An integrative review. *General Review in Psychology*, No.2, 271-299.
- Gross, J., John, O., (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, No.2, 348-362.
- Mauss, I., Cook, C., Gross, J. (2007). Automatic emotion regulation during anger provocation. *Journal of Experimental Social Psychology*, No. 43, 698-711.
- Melnik, S. M., Hinshaw, S.P. (2000). Emotion regulation and parenting in AD/HD and comparison boys. Linkages with social behaviors and peer preference. *Journal of Abnormal Child Psychology*, No.28, 73-86.
- Tabachnick, B.G., & Fidell, L. S. (1996). Using multivariate statistics (3rd edition). New-York: Harper Collins, p. 86.