ADAPTATION OF THE EMOTION REGULATION QUESTIONNAIRE IN EGYPTIAN ADOLESCENTS

Abstract: The aim of this study was to assess the reliability and validity of ERQ in a group of Egyptian adolescents. 648 adolescents from middle schools in Nasr city, Egypt were recruited. These adolescents aged 14-15 years old (M=14.4, SD=2.22). Of which,400 were females (61.72%) while 248 were males (38.27%). Exploratory Factor Analysis, with CFA and Structural Equation Models (SEM) used to assess the fitness of two-factor structure of the original (ERQ) questionnaire among those adolescents. Cronbach's alpha coefficients for the two subscales of the questionnaire were .84 and .82, respectively. Confirmatory Factor Analysis was conducted for testing item-factor structure of the scale. Maximum likelihood estimation through AMOS 24 program was conducted with 648 adolescents. Model fit indices showed acceptable goodness of fit values for 2-factor structure of 10 items of the scale.

Keywords: emotion regulation questionnaire, egyptian, adolescents

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INTRODUCTION

Emotion regulation(ER) is regarded as extrinsic and intrinsic processes. These processes are responsible for monitoring, evaluating, and modifying some if not all the components of the emotional experience in order for accomplishing one's goals(Jose et al.,2018). Emotional regulatory processes can be automatic or controlled, conscious or unconscious, and it is increasingly recognized that it integrates management of both positive and negative emotions. Regulatory mechanisms also include skills and strategies that modulate the specific emotion experienced and its emotional dynamics (e.g., intensity, duration, lability)(Ana et al.,2015). The process model of emotion regulation proposed by Gross (1999) posits that emotion regulation can occur either before or after the generation of emotion; such emotion regulation is referred to as antecedent-focused and response-focused, respectively(Rosario et al.,2012).

The process model of Emotion regulation (Gross, 1998) emphasizes that an emotion can be uncovered over time. This will happen in a series of different steps, that is, this model distinguishes between two types of strategies: antecedent-focused and response-focused Emotion regulation strategies. That depends totally on whether these occur before or after the full activation of the emotion. The most representative antecedent-focused strategy is cognitive reappraisal (CR), which is regarded as a form of cognitive change that allows reducing the emotional impact of a potentially emotion-eliciting situation . However, if the antecedent-focused ER strategies are not properly implemented and the emotion is fully activated, the person can still inhibit ongoing emotion-expressive behavior. This is called expressive suppression (SU), the most representative response-focused strategy within this model(Jose et al.,2018).

Emotion Regulation Questionnaire (ERQ) was developed by Gross and John(2003).It is a self-report questionnaire which assesses two dimensions: Cognitive Reappraisal and Expressive Suppression. The scale showed acceptable internal consistency (Cronbach's α values of 7.82 (mean 0.79) for Cognitive Reappraisal and 0.76 (mean 0.73) for Expressive Suppression. Test–retest reliability across three months was 0.69 for both CR and ES. Confirmatory Factor Analysis (CFA) showed good support for this underlying two-scale structure (Gross and John,2003).

Researchers from Finland (Minja&Pekka,2018), Kingdom of Saudi Arabia(Mogeda ,2018),Spain(Jose et al,2018), Trinidad (Sideeka& Nicole,2018),demonstrated that the scale had a good psychometric properties. Nevertheless, in Egypt, there is no study handled this issue and reported satisfactory internal consistencies for both subscales. Therefore, it can be said that more extensive studies are needed to conduct with the aim of examining validity and reliability of the ERQ in Egypt.

METHODS

PARTICIPANTS

648 adolescents from middle schools in Nasr city, Egypt were recruited. These adolescents aged 14-15 years old(M=14.4, SD=2.22).Of which,400 were females(61.72%) while 248 were males(38.27%).

RELIABILITY

Cronbach's alpha coefficients for the two subscales of the questionnaire were .84 and .82, respectively. As shown in Table 1, the item-total correlations were between .59 and .69 for the reappraisal subscale, and between .56 and .63 for the suppression subscale. The test-retest reliability was .83 for the reappraisal and .86 for the suppression subscales.

Table 1. Corrected item-total correlations of all items

Items	Corrected item-total correlations
Reappraisal Items 1.When I want to feel more positive emotions (such as joy or amusement), I change what I'm thinking about.	.66
3. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.	.62
5. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	.59
7. When I want to feel more positive emotion, I change the way I'm thinking about the situation.	.64
8. I control my emotions by changing the way I think about the situation I'm in.	.68
10. When I want to feel less negative emotion, I change the way I'm thinking about the situation	.69
Suppression items 2. I keep my emotions to myself	.61
4. When I am feeling positive emotions, I am careful not to express them.	.63
6. I control my emotions by not expressing them.	.58
9. When I am feeling negative emotions, I make sure not to express them.	.56

CONFIRMATORY FACTOR ANALYSIS

Confirmatory Factor Analysis was conducted for testing item-factor structure of the scale. Maximum likelihood estimation through AMOS 24 program was conducted with 648 adolescents.

Model fit indices showed acceptable goodness of fit values for 2-factor structure of 10 items of the scale. The indices found for the scale and acceptable ranges are presented in Table 2

Table 2. Model fit indices from measurement models of Emotion Regulation Questionnaire (ERQ)

Goodness of Fit Indexes	Measurement Model of Emotion Regulation Questionnaire (ERQ)
χ^2, df	314.2
χ^2/df	4.4
CFI	.91
TLI	.92
RMSEA	.07
GFI	.93

The factor loadings of all 10 items on the two subscales of the questionnaire are presented in Figure 1.

Figure 1. A Factor Loadings Diagram of the Emotion Regulation Questionnaire (ERQ)
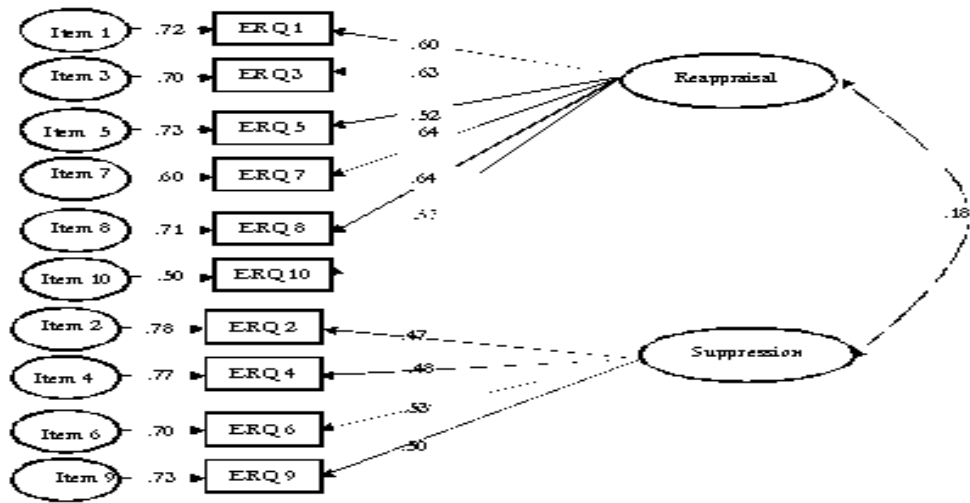
DISCUSSION

The aim of this study was to assess the reliability and validity of ERQ in a group of Egyptian adolescents. Exploratory Factor Analysis, with CFA[1]and Structural Equation Models (SEM) used to assess the fitness of two-factor structure of the original (ERQ) questionnaire among those adolescents. Cronbach's alpha coefficients for the two subscales of the questionnaire were .84 and .82, respectively. As shown in Table 1, the item-total correlations were between .59 and .69 for the reappraisal subscale, and between .56 and .63 for the suppression subscale. The test-retest reliability was .83 for the reappraisal and .86 for the suppression subscales.

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CONCLUSION

In conclusion, the ERQ is a reliable measure of emotion regulation in Egypt, as it has been in many other countries (e.g.Finland: Minja& Pekka, 2018, Kingdom of Saudi Arabia: Mogeda ,2018, Spain:Jose et al,2018 and Trinidad :Sideeka& Nicole,2018). This scale has two distinct emotion regulation strategies: cognitive reappraisal and expressive suppression. The ERQ is also a valid measure. we suggest that further research needs to be conducted on different samples.

References

Ana Teixeira, Eliana Silva, Dionísia Tavares &Teresa Freire" Portuguese validation of the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA):relations with self-esteem and life satisfaction" Child Ind Res ,2015, 8:605–621

Gross J, & John O. "Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being". *Journal of Personality and Social Psychology*, 2003, 85(2), 348-362.

Jose Martın-Albo, Sonsoles Valdivia-Salas, Andres Sebastian Lombas, and Teresa I. Jimenez" Spanish Validation of the Emotion Regulation Questionnaire for Childrenand Adolescents (ERQ-CA): Introducing the ERQ-SpA" Journal of Research on Adolescence, 2018, ***(*), 1–6

Minja Westerlund &Pekka Santtila "A Finnish adaptation of the emotion regulation questionnaire (ERQ) and the difficulties in emotion regulation scale (DERS-16). Nordic Psychology ,2018,70(1):1-20

Mogeda Elsayed El Keshky "Factor Structure, Reliability and Validity of the Arabic Version of the Emotion Regulation Questionnaire (ERQ) in a Sample of Saudi Children and Adolescents. International Journal of Psychology and Behavioral Sciences,2018, 8(2):22-30.

Rosario, Cabello, JoséM. Salguero, Pablo Fernᴗndez Berrocal, andJames J. Gross "A Spanish Adaptation of the Emotion Regulation Questionnaire" *European Journal of Psychological Assessment*, 2012, DOI: 10.1027/1015-5759/a000150

Sideeka, Ali and Nicole Alea "Validating the emotion regulation questionnaire (ERQ) in Trinidad" Journal of Psychiatry and Behavioral Sciences,2018, 1: 1003.