Original Article

Cognitive Emotion Regulation in aged people: Standardization of Cognitive Emotion Regulation Questionnaire in Iran

Asghar Dadkhah, PhD.; Peymaneh Shirinbayan*

University of social welfare and rehabilitation sciences, Tehran, Iran

Objectives: Emotional regulation refers to strategies that reduce, maintain or increase an emotion in people. The purpose of this study is to standard the Cognitive Emotion Regulation Questionnaire in Tehran aged population.

Method: The sample was selected randomly from 20 Jahandidhgan associations and consisted of 500 aged people from whom 338 people remained till the end of study. In order to define the dimensional structure a Principal Component Analysis with Varimax-rotation on item level was performed.

Results: The alpha coefficients of the various subscales across the diverse populations was 0/798 but the items 5,7,31,6,8,32,30,29,and 12 had week co efficiency (0/84) which was consider as subscale.

Discussions: After some steps of analysis with Varimax-rotation, 7 factors was created and the 8th factors which was categorized as subscale was named as "acceptance of negative happenings". These results prove that the cognitive coping strategies can be used in Iranian aging population.

Keywords: Emfotion Regulation, Cognitive Emotion Regulation, Aged people, Iran

Introduction

Emotional regulation refers to strategies that reduce, maintain or increase an emotion in people. Emotional regulation strategies is in all aspects of personal and emotional, cognitive and social development is desired. The work on emotion regulation began with descriptive psychodynamic studies of defense mechanisms, which in the 1960s the study on the factors influencing an individual's ability to cope with stressful situations and today continue to inspire developmental studies of children's ability to self-regulate. Building upon these studies, contemporary models conceive of emotions as arising from brain systems that appraise the significance of stimuli with respect to our goals and needs. The regulation of emotions through cognitions is inextricably associated with human life. Cognitions or cognitive processes help people regulate their emotions or feelings and not get overwhelmed by the intensity of these emotions (1, 2, 3).

The CERQ (Cognitive Emotion Regulation Questionnaire) is a multidimensional questionnaire constructed in order to identify the cognitive coping strategies someone uses after having experienced negative events or situations. Contrary to other coping questionnaires that do not explicitly differentiate between an individual's thoughts and his or her actual actions, the present questionnaire refers exclusively to an individual's thoughts after having experienced a negative event. The questionnaire has been constructed both on a theoretical and empirical basis and measures nine different cognitive coping strategies. The CERQ makes it possible to identify individual cognitive coping strategies and compare them to norm scores from various population groups. The questionnaire consists of 36 items, each referring exclusively to what someone thinks and not to what someone actually does, when experiencing threatening or stressful life events. The items are divided up proportionally over the nine scales (4, 5).

There have been many studies in the field of emotion regulations. Emotion regulation and internalizing symptoms in different groups has been investigated by Dr. Rieffe and her colleagues (6, 7) and emotion-regulation strategies across psychopathology were reviewed through a meta analytic study (8). Cognition and emotion has a

strong relation (9). Urry and Gross (2010) found that older adults achieve well-being by selecting and optimizing particular emotion regulation processes in order to stabilize the changes in their inner and outer resources (10).

Due to the growing needs of the elderly involved organizations to cognitive strategies for identify solutions and determining appropriate interventions, this study aimed to standard the Cognitive Emotion Regulation Questionnaire in Tehran aged population.

Method

Participants - The participants were the elderly men and women in Tehran who have been referred from Jahandidgah centers. A. Total of 500 persons, aged 60 years old, from 20 centers were randomly selected. During the study some participants dropped out and finally 338 were remained. The Persian form of the questionnaire was examined in a sample of 50 elderly participants and obtained a Cronbach's alpha (86/0), indicating satisfactory internal consistency for Persian Cognitive Emotion Regulation Questionnaire. The questionnaire was reviewed and the final version of cognitive emotion regulation questionnaire was used in the main study.

Cognitive Emotion Regulation Questionnaire (CERQ) - The CERQ was developed in 1999 and measures the specific cognitive emotion regulation strategies in the target groups. It is both on theoretical and empirical bases and was the first questionnaire explicitly uses in response to the experience of threatening or stressful life events (11). This questionnaire refers to the way of thinking after a happening. It is used for the children above 12. The copping strategy plays a role as regulating the emotions through cognitive ability and responses to the stressful events which people experience after an event and feel worse (12).

The CERQ is a 36-item questionnaire, consisting of 9 subscales: 1) Positive Refocusing, 2) Positive Reappraisal, 3) Self-blame, 4) Other-blame, 5) Rumination, 6) Catastrophizing, 7) Putting into Perspective, 8) Planning, 9) Acceptance. Each

subscales consisting of four items. Each subscale measures cognitive emotion regulation and coping strategy. Cognitive Emotion Regulation Questionnaire was used in five groups: early adolescence, late adolescence, youth, elderly and psychiatric patients used (13). The CERQ is a self-report questionnaire and can measure cognitive strategies that characterize responding to stressful situations and stressful events. Nine subscales of the questionnaire with the number of questions and Cronbach alpha reliabilities of each of item are shown in table (1).

Table 1. Subscale items and Cronbach's alpha reliabilities in aged group

no	Subscale	Questions	Cronbach's alpha
1	Self-blame	4	0.77
2	Acceptance	4	0.82
3	Rumination	4	0.78
4	Positive Reappraisal	4	0.82
5	Planning	4	0.77
6	Positive Refocusing	4	0.80
7	Putting into Perspective	4	0.76
8	Catastrophizing	4	0.80
9	Other-blame	4	0.80

Results

Construction of the CERQ - In order to define the dimensional structure a Principal Component Analysis with Varimax-rotation on item level was performed. First, reliability analyses were performed on the nine subscales then reliability analyses were considered.

Reliability - Internal consistency and test-retest reliability study was used for reliability analyses (14). The result of the validation of the method on a set of internal consistency of subscales was presented. The alpha coefficients of the various subscales across the diverse populations was 0/798 but 9 items had week co-efficiency (0/84). These items were considered as subscale. The means, standard deviations and alpha reliabilities of the original 27-item is shown in Table (2).

Table 2. Scale of the CERQ: Cronbach's alpha reliabilities; means and standard deviations

Item	M	SD	Correlation	α	Item	M	SD	Correlation	α
1	1.86	0.849	0.193	0.840	20	2.80	1.146	0.568	0.827
2	1.63	0.771	0.220	0.839	21	3.22	1.101	0.506	0.830
3	1.94	0.848	0.172	0.841	22	3.06	1.205	0.501	0.830
4	2.04	1.09	0.178	0.842	23	2.65	1.120	0.340	0.836
9	2.23	0.960	0.126	0.843	24	2.45	1.137	0.448	0.832
10	2.42	0.982	0.143	0.843	25	3.21	1.026	0.459	0.832
11	1.88	0.942	0.161	0.842	26	3.23	1.020	0.446	0.832
13	2.51	1.111	0.460	0.832	27	3.18	1.034	0.439	0.833

Item	M	SD	Correlation	α	Item	M	SD	Correlation	α
14	2.42	1.108	0.481	0.831	28	3.36	0.920	0.487	0.831
15	2.49	1.116	0.449	0.832	33	1.69	0.777	0.241	0.839
16	2.56	1.09	0.446	0.832	34	1.71	0.745	0.243	0.839
17	2.83	1.148	0.542	0.828	35	1.84	0.777	0.277	0.838
18	2.84	1.102	0.542	0.829	36	1.73	0.850	0.173	0.841
19	2.69	1.138	0.513	0.513					

Investigate the nature and content of the questions that have been removed from the collection will be comprised of a separate subscales and Cronbach's alpha coefficients (0.0791) Confirms this issue. As can be seen in Table 3 the deleted questions are deleted had high discrimination power and this can be named as "accept negative events".

Table 3. Removed items with means and standard deviations

Item	M	SD	Correlation	α
5	3.1	1.0	0.48	0.802
6	2.7	1.1	0.010	.817
7	2.6	1.1	0.084	0.801
8	2.6	1.1	0.014	0.817
12	2.0	0.97	0.093	0.840
29	1.3	0.71	0.97	0.810
30	1.4	0.74	0.82	0.811
31	1.4	0.72	0.58	0.800
32	1.5	0.75	0.096	0.810

Validity - In order to implement principal component analysis (PC) and demonstrate that the correlation matrix is not zero at the Bartlett test of sphericity was used. Cognitive emotion regulation questionnaire was validated using exploratory factor reliability.

After some steps of analysis with Varimax-rotation, 7 factors was created and the 8th factors which was categorized as subscale was named as "acceptance of negative happenings" (table 4).

Table 4. Number of questions and factor loading in 8 subscales

Items	Questions	Factor loading
Positive Reappraisal	4	0.971
Planning	4	0.966
Putting into Perspective	4	0.939
Other-blame	4	0.851
Self-blame	4	0.778
Positive Refocusing	4	0.782
Rumination	3	0.67
Acceptance	9	0.791
Total	36	0.84

Conclusion

The results of the cognitive emotion regulation questionnaire validation which was based on Principal Component Analyses indicated that the reliability of subscales was acceptable, reproducible and can be consider reasonable. These findings are quite consistent with results Garnfsky (15), which was conducted by Garnfsky (15) in the Netherlands. The average for the nine subscales of cognitive emotion regulation questionnaire include: "self-blame = 7/35"; accept negative events = 11/37; Rumination = 8/95; positive thinking= 9/97; Planning= 11/20, positive reappraisal =11/42; Putting into Perspective =13/05; Catastrophizing, 5/75 and blame others 6/92. The highest average belonged to the subscale of Putting into Perspective and the lowest belonged to Catastrophizing. Also the Pearson correlation between cognitive emotion regulation questionnaire subscales and age was not significant. Pearson correlation test between subscales of cognitive emotion regulation and education is significant. Pearson correlation test between cognitive emotion regulation subscales and marital status were not significant. Correlation between age and number of children with total scores of cognitive emotion regulation is not statistically significant. The Pearson correlation between cognitive emotion regulation subscales gender test is not significant.

In this study besides the validation and reliability of cognitive emotion regulation questionnaire, emotional coping strategies were identified too. Results show that, unlike other questionnaires that cannot distinguish between the real thinking and person's action, this question only refers to the negative thoughts of the event experience.

Cognitive Emotion Regulation Questionnaire scores is also possible to characterize individual Cognitive coping strategies and to compare them with normal population. This questionnaire can be used as a measure of general cognitive style. These results prove that the cognitive coping strategies can be used in Iranian aging population.

References

1. Garnefski N, Kraaij V, Spinhoven P. Negative life events, cognitive emotion regulation and emotional problems. Pers Individ Differ. 2001;30(8):1311–27.
2. Garnefski N, Kraaij V, van Etten M. Specificity of relations between adolescents' cognitive emotion regulation strategies and internalizing and externalizing psychopathology. J Adolesc Lond Engl. 2005;28(5):619–31.
3. Garnefski N, Kraaij V, Gerwen L. Cognitive Coping and Anxiety among People with Fear of Flying. European Journal Assessment. 2006; 23(2): 126- 131.
4. Garnefski N, Rieffe C, Jellesma F, Terwogt MM, Kraaij V. Cognitive emotion regulation strategies and emotional problems in 9–11-year-old children. Eur Child Adolesc Psychiatry. 2007;16(1):1–9.
5. Jermann F, Van der Linden M, d' Acremont M, Zermatten A. Cognitive Emotion Regulation Questionnaire (CERQ). Eur J Psychol Assess. 2006;22(2):126–31.
6. Rieffe C, Oosterveld P, Terwogt MM, Mootz S, van Leeuwen E, Stockmann L. Emotion regulation and internalizing symptoms in children with autism spectrum disorders. Autism Int J Res Pr. 2011;15(6):655–70.
7. Rieffe C, Meerum M, Tolland A. Emotion awareness and somatic complaints in children. First European Conference on Emotion Research. Amsterdam: The Netherlands; 2004, pp:13-15.
8. Aldao A, Nolen Hoeksema S, Schweizer S. Emotion-regulation strategies across psychopathology: A meta-analytic review. Clin Psychol Rev. 2010;30(2):217–37.
9. Barrett LF, Gross J, Christensen TC, Benvenuto M. Knowing what you're feeling and knowing what to do about it: Mapping the relation between emotion differentiation and emotion regulation. Cogn Emot. 2001;15(6):713–24.
10. Urry H, Gross J. Emotion regulation in older Age. Current Directions in Psychological Science. 2010;19(6) :352-357.
11. Garnefski N, Kraaij V, Spinhoven P. Manual for the use of the Cognitive Emotion Regulation. 2002
12. Thompson R. Emotional regulation and emotional development. Educational Psychology 1991;3: 269–307.
13. Kraaij V, Garnefski N. The role of intrusion, avoidance, and cognitive coping strategies more than 50 years after war. Anxiety Stress Coping. 2006;19(1):1–14.
14. Hooman HA. [Descriptive Statistics in Behavioral Sciences (Persian)]. First edition. Tehran. Parsa Publication; 2010,
15. Kraaij V, Garnefski N, Vlietstra A. Cognitive coping and depressive symptoms in definitive infertility: a prospective study. J Psychosom Obstet Gynaecol. 2008;29(1):9–16.