

The Effectiveness of Emotional Schema Therapy on Improving Emotion Regulation and Reducing Neurotic Perfectionism Among University Students

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Received: 3 Jul. 2022, Revised: 31 Jul.2022, Accepted: 20 Sep.2022.

Published online: 1 Apr. 2023.

Abstract: The aim of the study was to examine the Effectiveness of emotional schema therapy (EST) on university students experiencing Difficulties Emotion Regulation and Neurotic Perfectionism. Researchers found that individuals who have experienced Neurotic Perfectionism (NP) have emotional dysregulation than others. 14 males' students were randomly assigned to experimental group (n=7, M =18.09, SD =3.7) and control group (n=7, M =18.05, SD=3.8). Participants in the experimental group received 14 sessions of group emotional schema therapy. Difficulties in Emotion Regulation Scale by Bjureberg et al. (2016), The Big Three Perfectionism Scale by Smith et al. (2016) were measured pre, post, and at 2-month of follow-up. Results indicated that emotional schema therapy was effective in improving emotion regulation at post-test and follow-up in experimental group. In addition, participants showed significant reducing Neurotic Perfectionism at post-test and follow-up. Our results suggest that emotional schema therapy may be useful in Emotion Regulation and Neurotic Perfectionism.

Keywords: Emotional Schema Therapy, Emotion Regulation, Neurotic Perfectionism, university students.

1 Introduction and Theoretical Background

Students seek to establish and develop their skills and knowledge in university education, the factor of mastery and excellence in performance appears as a complete differentiation among students, they develop aspirations and desires that exceeds their capabilities, Perfectionism arises from a person's drive to achieve perfection. As a result, perfectionism causes people to set high standards for themselves as well as for others. This drives them to reject imperfection after exerting effort and to pursue perfection in all spheres of their lives. Perfectionism has been studied in different ways, depending on the study's interpretation of this term. Perfectionism does not represent something that some possess and others lack, it is something that all individuals possess on varying levels.

Perfectionism represents a psychological combination include maladaptive behavior such as self-criticism, low self-esteem, and adherence to "unrealistic" high levels of aspiration and aspiration lead to neuroticism [1], it refers to having very high expectations of oneself or others to achieve a goal, maladaptive behavior of effort to achieve achievement or success, Perfectionism has been linked to negative cognitive, affective, and behavioral outcomes [2]. Jaber and Kafafi [3] defined it as the compulsive tendency to demand from others and self the highest level of performance, or higher than the level required by the situation.

Perfectionism means these smart and successful individuals, due to their intelligence and talent, always see more than one solution to the problem, insist and feel uncomfortable until finishing works, always know that there is more to do, often avoid new experiences related to fear of failure, afraid of others seeing them as inadequate, and have high expectations of others and of themselves. This may lead them to workaholic syndrome. On the social level; there are conflicts at work or home [4], as it has been divided into adaptive perfectionism that refers to the individual's view of his work and effort as being as good as he really is, feeling happy for the effort expended in difficult work, and appreciating himself as a result of his performance, and Neurotic perfectionism (NP) that the individual views his efforts and actions as not good enough despite the quality of this performance, sets unrealistic levels for himself, exerts more effort to achieve them, and unable to feel satisfied with his performance [5].

Hamachek [6] suggest perfectionism consists of multiple dimensions; normal and neurotic; Normal perfectionists hold themselves to reasonable standards, take pleasure in their laborious efforts, and have the option of being less exact in certain situations, and neurotic perfectionists set unrealistic performance standards for themselves, feel their efforts fall short, and are unable to lower their standards. Some of the symptoms describe both normal and neurotic perfectionists, but neurotic perfectionists experience them with greater intensity and for a longer duration. Development of neurotic perfectionism tends to occur in one of two types of emotional environments; Lack of or inconsistent which the parents

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fail to establish explicit performance standards for the child, or Parental expressions of positive, conditional acceptance far exceed those of positive, unconditional acceptance.

Perfectionism includes three main criteria: setting onerous criterion, being self-critical, and striving to meet onerous standards despite negative effects; self-evaluation on these difficult criteria. It causes the development of mental disorders, these reasons are the effects of interaction with others; Parental roles, impressions, and authority patterns [7, 8].

Neurotic Perfectionism affected by an irrational idea, that his performance must be perfect to obtain the approval satisfaction and acceptance of those around and links his accomplishment of any work assigned to him to his being [9]. Neurotic Perfectionism was an important predictor of depressive symptoms as well as ensuing psychosomatic symptoms, while higher levels of adaptive perfectionism had better control over their emotion regulation [10, 11]. Perfectionism, a multidimensional concept, includes an individual's striving for perfection and setting very high standards of performance, accompanied by inflated critical evaluations of oneself and fears of others' evaluations, doesn't accept the mistake, and persists Self-blame, close attention to mistakes, considers that any mistake is an abject failure, sets high levels of performance that do not suit his capabilities, reality.

Previous studies found inverse correlation relationship between neurotic perfectionism and self- esteem, the existence of an inverse correlation relationship statistically significant between neurotic perfectionism and achievement motivation, that the higher the neurotic perfectionism of the student, the lower their self- esteem scores, that the higher the neurotic perfectionism, the lower in the appreciation of the motivation to achieve them [12].

Mixed perfectionism content expressive suppression correlated expressive suppression; personal perfectionism content high standards or low concerns was associated with the highest ability to regulate emotions, and evaluative concerns perfectionism content low standards or high concerns with the lowest. As a result, in some cases, standards may exacerbate rather than inhabit concerns [13].

perfectionism was associated with the maladaptive cognitive emotion regulation strategies of self-blame, catastrophization, and rumination, and it was correlated negatively with the adaptive cognitive emotion regulation strategies of putting into perspective and positive reappraisal [14]. Correlation between perfectionism and severity of the emotional disorder symptoms, perfectionism component can predict the emotional disorders severity [15]. exhibit perfectionism emotional sensitivity and intensity failure (i.e., deviations from standards) and success (i.e., striving for high leading to high performance) more intensely [10].

Healthy perfectionism affected by emotional hyper-excitabilities, high emotionality, intellectual overexcitabilities, and low imaginative overexcitabilities. While Unhealthy perfectionism affected by high emotional excitability (concern about mistakes) and imaginative overexcitability (doubt about actions) [16]. Neurotic perfection correlation with Nonadaptive emotional cognitive organization strategies [17]. Perfectionism was associated with the maladaptive cognitive emotion regulation strategies of self-blame, catastrophization, and rumination, it was correlated negatively with the adaptive cognitive emotion regulation strategies of putting into perspective and positive reappraisal, and Emotional Dysregulation [14, 18, 19].

Individuals differ in the way they express their emotions, and they are determined by the nature of the situation, and they can appear in the form of positive or negative emotions. The Previous studies show that perfectionists have maladaptive cognitive emotion regulation tendencies [14]. emotional skills contribute to stimulating thinking, Positive emotion, helps in solving problems, works on identifying solutions and alternatives, helps in classifying and organizing information, raises students' achievement level and improves their relationship with others [20].

Emotion regulation (ER) refers to the processes that affect the formation of the emotions that the individual has, in terms of their origin and how they are expressed, it expresses concern about how emotions regulate themselves. it refers to changes that are associated with an individual's emotions, which are triggered by certain events or situations. The determination of this goal can be attributed to the individual himself or to others, and this determination in the first stage is external (childhood) by others and is referred to as Extrinsic Emotion Regulation, while in the second stage it is internal by the self (adolescence) and referred to as Intrinsic Emotion Regulation [21, 22].

Attempted to control emotions, regulation does not represent an individual behavior, but a variety of operations and strategies that aim to modify the emotion towards better social performance [23]. ability to regulate emotions and feelings and direct them to achieve achievement and excellence, and to use feelings and emotions in decision-making, and to understand how others interact with different emotions, and how emotions transform from one stage to another [24]. the ability to achieve emotional balance or the ability to calm oneself and restrain excessive emotion, positively or negatively, in an appropriate manner [25]. organizing emotions and feelings and directing them to achieve achievement using emotions in making better decisions [26].

Emotion regulation determines the explicit or implicit strategies responsible for emotion directive processes, many of

stereotypes emotion regulation profiling are explicit, and conscious, emotion regulation processes can be implicit and subconscious, it also works by influencing the dynamics of emotion depending on the individual's goals, emotion regulation may increase or decrease the latency, time, magnitude, and duration of arousal, or displace the emotional response (comparing the emotional response that would have occurred in the absence of emotion regulation), it may change the degree of contribution of the components of the emotional response that increase the intensity of emotion, for example, the emotional and physiological experiences of the response change in the absence of directed behavior [21, 27]. In comparison to suppression, reappraisal has a better profile of immediate affective, cognitive, and social effects. Reappraisal is more effective at regulating emotions than suppression at promoting healthier affective, social, and psychological patterns [28].

Gratz and Roemer [29] included six dimensions of emotion regulation: a lack of awareness of emotional responses, a lack of clarity in emotional responses, a refusal to accept emotional responses, a lack of availability of effective emotion regulation techniques, problems with impulse control when experiencing negative emotions, and problems with goal-directed behavior when experiencing negative emotions. according to the study Perrone-McGovern et al. [10] cognitive reappraisal emotion regulation was associated with high level of subjective well-being. Thompson [30] refers to emotion regulation as the extrinsic and intrinsic processes in charge of keeping track of, assessing, and controlling emotional responses, particularly their intensity and temporal characteristics, to accomplish goals.

Emotion dysregulation factor was created by the three different emotion processes that was emotional understanding, dysregulated expression of sadness and anger, and ruminative responses to distress, it predicted increases in anxiety symptoms, aggressive behavior, and eating disorders [31]. Social Anxiety, Mindfulness, Psychological Resilience, Academic Burnout, Academic Competence, Psychological Well-Being, depression, Hoarding Behavior, Obsessive Compulsive Disorder [32, 33, 34, 35, 36, 37]. Negative relations between neurotic perfectionism and adaptive strategies, and a positive relation between neurotic perfectionism and non-adaptive emotion regulation strategies [17].

Studies uses therapeutic interventions for emotion regulation such as: the Elective Theory, Mindfulness, Dialectical Behavior Therapy, Reality Therapy [38, 39, 40, 41]. training on some Emotion Regulation in Support Psychological Resilience and Contribution Positive Social Behavior [42, 43].

The Emotional Schema Model is a social cognitive model of how people perceive, understand, assess, and react to their own and others' feelings. Although everyone has the potential to experience a wide range of "problematic emotions," such as jealousy, envy, resentment, anxiety, melancholy, and despair, not everyone goes on to acquire a psychiatric disease. According to the emotional schema therapy, people have different ideas about emotion and emotion regulation, and these psychological theories might cause people to employ unhealthy coping mechanisms including drug use, blame, avoidance, rumination, and suppression to deal with their emotions. If the person accepts these emotions as normal, is able to put up with unpleasant and "conflicting" sentiments, connects them to the significance of the connection, understands that these feelings are fleeting rather than hazardous, and is not ashamed of them. It is unlikely that long-term emotional issues will arise if the person learns to normalize these emotions and is able to tolerate unpleasant and "conflicting" feelings, connects these emotions to the value of the relationship, understands that these emotions are fleeting rather than dangerous, and is not ashamed of these feelings [44].

Emotional Schema Therapy (EST) approach proposes that: One goal of therapy is to assist the person in recognizing various emotions, labeling them, and relate them to events and thoughts, the emotional schema therapist assists the person to recognize physical sensations and emotions, differentiate and label a range of emotions, and recognize events, thoughts and behavioral tendencies that elicit these emotions, assess the patient's beliefs and strategies (schemas) for interpreting, judging, controlling, and acting on emotions, and identify and modify the patient's interpretation of them, determine what the patient feels about having an emotion, and what actions follow from the emotion [45]. increased positive emotional schemas (increased reappraisal) and decreased negative emotional schemas (decreased suppression) [46].

EST effective intervention to modify some dimensions of emotional schemas with child abuse and neglect history [47], cognitive emotion regulation strategies related of post-traumatic stress disorder [48], reducing worry and anxiety's signs and symptoms [49], reducing severity of depression and rumination in people with major depressive disorder [50], on emotional schemas' modification and difficulties of emotion regulation [51], on clinical syndromes of individuals with obsessive-compulsive symptoms [52], and improve adaptive cognitive emotion regulation strategies [53].

The Emotional Schema Therapy model suggests that issues with coping with life's unavoidable emotions are caused by three characteristics of perfectionism. existential perfectionism, which holds that life should always be fulfilling, happy, cheerful; Emotional Perfectionism is the belief that one should only experience pleasant emotions, minimum frustration, and avoid negative emotions; and Pure Mind, which states that everything should make sense and that one's mind, consciousness, thoughts, and emotions should all be clear and always point in one direction (either positively or negatively) [54].

Al-Bari [55] Found that there are direct positive effects of negative emotional schema on the expressive suppression strategy and negative affection, direct negative effect of negative emotional schema on life satisfaction, direct positive effects of the positive-positive experiences on the two strategies of emotional regulation and the positive affection, direct negative effect of negative-negative experiences on the positive affection, and direct positive effect of the cognitive reappraisal strategy on positive affection, Al-Ghamdi and Al-Zein [17] found that Emotion Regulation Mediator Variable between Neural Perfectionism and another variables.

Based on the above neurotic perfectionism is a problem in university, it causes a lot of emotional disorders, decrease in self-confidence. The current study aims to investigate The Effectiveness of Emotional Schema Therapy on improving Emotion Regulation and reducing Neurotic Perfectionism among university students, based on the above conceptual framework, this research established the following two hypotheses for further empirical examination:

H1. There are statistically significant differences in emotion regulation and Neurotic Perfectionism between the experimental and control groups post-test.

H2. There are statistically significant differences in experimental groups for emotion regulation and Neurotic Perfectionism between Pre-test, Post-test, and Follow-up.

2 Methods

2.1. Participants

The research was conducted in two stages. In the first stage, 230 volunteer students at King Khalid University responded to the scales. The inclusion criteria were degree on scales and being interested in participating and verify the psychometric characteristics of the research Measures. In the second stage, 17 male students' volunteers at King Khalid University participated in a group, after first and third sessions; 3 students withdrew due to unavoidable circumstances. The researcher uses a quasi-experimental study having a control group and pre-test, post-test, and 2-month follow-up, it randomly assigned equally into the experimental group ($M = 18.09$, $SD = 3.7$) and control group ($M = 18.05$, $SD = 3.8$). There was no significant difference between the experimental and control groups in the pretest scores of both emotion regulation, and Neurotic Perfectionism. The intervention was conducted on experimental group in a psychological lab at the faculty of education which had a quiet atmosphere. After the finished sessions, all the participants were reassessed on the scales.

2.2. Measures

2.2.1 Difficulties in Emotion Regulation Scale (DERS)

The DERS Scale prepared by Bjureberg et al. [56], translated to Arabic language by Abbady et al. [57]. It consists of a 16-item, and five domains: Lack of Emotional Clarity (2 items); Difficulties Engaging in Goal-Directed Behavior (3 items); Impulse Control Difficulties (3 items); Limited Access to Effective Emotion Regulation Strategies (5 items); Nonacceptance of Emotional Responses (3 items). Responding from 1 (strongly disagree) to 5 (strongly agree), Higher scores reflect more Difficulties in Emotion Regulation. This scale has good reliability in current research (total: $\alpha = 0.91$, clarity: $\alpha = 0.89$; goals: $\alpha = 0.87$; impulse: $\alpha = 0.90$; non- Strategies: $\alpha = 0.88$; Nonacceptance: $\alpha = 0.88$), the Cronbach's alpha was 0.93.

2.2.2 The Big Three Perfectionism Scale (BTPS)

The scale measures neurotic perfectionism in a three-dimensional model, it was prepared by Smith et al. [58], the BTPS Scale consists of 45-item self-report questionnaire designed to measure three global perfectionism factors: rigid perfectionism (10 items), self-critical perfectionism (18 items), and narcissistic perfectionism (17 items), each item using a 5-point rating scale from 1 (strongly disagree) to 5 (strongly agree). Higher scores reflect more neurotic perfectionism. The researcher translated the scale into Arabic language, then presented it to three specialists in the English language. He also presented the scale in its revised version to a specialist in the Arabic language to adjust the linguistic formulation. This scale has good reliability in current research (total: $\alpha = 0.84$, rigid perfectionism: $\alpha = 0.84$; self-critical perfectionism: $\alpha = 0.87$; narcissistic perfectionism: $\alpha = 0.88$), the Cronbach's alpha was 0.89.

2.3 Emotional Schema Therapy program

According to the Emotional Schema Model, unhelpful coping mechanisms like rumination, worry, suppression, and avoidance are caused by ideas about emotion, and they problematically endorse negative beliefs and strategies about their emotion. The therapeutic sessions consisted of 14 sessions, in 45-minute group sessions, including assessments in the first and the last session based on Leahy's manual [59, 60]. EST attempts to disposal negative person beliefs about emotional arousal, unhelpful strategies, and enhancing use of helpful strategies such as cognitive reappraisal, acceptance, mindfulness, and commitment to valued action, it includes focus on emotional validation (experience and

appraisals) rather than thought content, identify emotion dysregulation, increasing acceptance of emotions (non-judgment of emotions), reduce emotional distress and improve coping, distinguishing between emotion and action, improve emotional awareness, distinguish between thoughts and feelings, recognize negative beliefs emotions and their ineffective coping strategies to deal with difficult emotions..

3 Statistical Analysis

SPSS for Windows v. 28 program was used to analyses the data. Data analysis was through non-parametric analyses due to limited sample size. Analysis to detect differences of DERS, and BTPS in experimental group across multiple test attempts was used, the Friedman test at pre-test, post-test, and at the 2-month follow-up. Also, analysis of differences used Mann-Whitney U Test to compare means of DERS, and BTPS between experimental group and control group at pre-test, and post-test.

4 Results:

H1. There are statistically significant differences in emotion regulation and Neurotic Perfectionism between the experimental and control groups post-test.

Means, standard deviations and the differences between the experimental and control groups in DERS and BTPS posttest listed in Table 1.

Table 1: The results of Mann-Whitney U Test for comparing between Experimental and Control Group post-test in emotion regulation and Neurotic Perfectionism

Variable	Experimental Group		Control Group		Mann-Whitney U
	Mean	SD	Mean	SD	
DER	45.86	9.44	67.71	6.85	3.01**
Clarity	6.86	1.68	8.71	1.70	2.16**
Goals	8.86	3.18	12.86	2.12	2.32**
Impulse	7.57	3.36	11.71	3.15	2.18**
Strategies	14.71	2.81	21.14	2.54	2.90**
Nonacceptance	7.86	3.63	13.29	2.63	2.50**
NP	186.57	5.09	207.71	7.91	3.13**
Rigid perfectionism	39.57	2.37	44.29	3.50	2.37**
Self-critical perfectionism	73.14	2.73	81.86	3.34	3.08**
Narcissistic perfectionism	73.86	3.13	81.57	2.37	2.95**

** (P < 0.01), DER = Difficulties Emotion Regulation, NP = Neurotic Perfectionism

There was a significant difference between the experimental and control groups in the posttest scores of both DER components, and NP components (p < 0.01). The mean score for DER for the experimental group in the posttest (45.86) is significantly lower than the mean score of the control group (67.71). Additionally, the NP for the experimental group in the posttest (186.57) is significantly lower than the mean score of the control group (207.71).

H2. There are statistically significant differences in experimental groups for emotion regulation and Neurotic Perfectionism between Pre-test, Post-test, and Follow-up.

Means, standard deviations and the differences between Pre-test, Post-test, and Follow-up in DERS and BTPS Pre-test, Post-test and Follow-up listed in Table 2.

Table 2: The results of Friedman Test for comparing between Experimental Group Pre-test, Post-test and Follow-up in emotion regulation and Neurotic Perfectionism

Variable	Pre-test			Post-test			Follow-up			Chi-Square
	Mean	SD	Mean Rank	Mean	SD	Mean Rank	Mean	SD	Mean Rank	
DER	64.43	9.96	3.000	44.43 ^a	8.52	1.57	44.29	9.52	1.43	10.57**
Clarity	8.43	1.27	2.79	5.57 ^a	0.98	1.29	6.71	1.89	1.93	8.88**
Goals	11.57	3.10	2.86	8.86 ^a	3.18	1.64	7.71	3.50	1.50	8.72**
Impulse	11.57	3.36	2.86	7.73 ^a	3.26	1.57	8.14	3.24	1.57	8.31**
Strategies	20.29	3.73	3.00	14.71 ^a	2.81	1.71	14.00	3.11	1.29	12.0**
Nonacceptance	12.57	3.21	2.86	7.56 ^a	3.63	2.64	7.71	3.45	1.50	8.72**
NP	204.57	7.39	3.00	186.57 ^a	5.09	1.64	186.43	5.32	1.36	11.19**

Rigid perfectionism	43.29	3.04	3.00	39.57 ^a	2.37	1.43	39.86	2.12	1.57	12.33**
Self-critical perfectionism	81.00	3.42	3.00	73.14 ^a	2.73	1.64	72.86	2.79	1.36	11.19**
Narcissistic perfectionism	80.29	3.25	3.00	73.86 ^a	3.13	1.57	73.71	3.30	1.43	12.33**

** ($P < 0.01$), a= significant between Pre-test and Post-test, DER = Emotion Regulation, NP = Neurotic Perfectionism

There was a significant difference in experimental groups for DER and NP between Pre-test, Post-test, and Follow-up ($p < 0.01$). For DER, the Friedman Test indicated a significant improvement in the experimental group (Chi-square = 10.57, $p=0.01$), significant difference was found between Pre-test and Post-test in Pairwise Comparisons (Sig. 0.02), and significant difference was not found between Post-test and Follow-up in Pairwise Comparisons (Sig. 0.79). in NP, the Friedman Test indicated a significant improvement in the experimental group (Chi-square = 11.19, $p=0.01$), significant difference was found between Pre-test and Post-test in Pairwise Comparisons (Sig. 0.02), and significant difference was not found between Post-test and Follow-up in Pairwise Comparisons (Sig. 0.59).

5 Discussion:

The present study investigated the Effectiveness of Emotional Schema Therapy on improving Emotion Regulation and reducing Neurotic Perfectionism among university students. The results of the present study indicate an improvement in emotion regulation; In addition, the use of emotional schema therapy techniques significantly reduced Neurotic Perfectionism.

The findings that are consistent with the results of prevue's research were: emotional schema therapy effective intervention to modify emotion and emotion regulation [47, 48], modification difficulties of emotion regulation [51], and improve adaptive emotion regulation [53]. Validation of emotional experience in each session was an important component of the therapy for the students, by group therapy; they were not alone with these experiences. Group therapy helped to normalize emotion and reduce the sense of incompatibility by facilitating awareness that others have similar problems perfectionists use emotion regulation strategies [61].

Students with Neurotic Perfectionism often have high expectations of oneself or others to achieve a goal, maladaptive behavior of effort to achieve achievement or success, which is reflected on their negative cognitive, affective, and behavioral outcomes, in some cases, standards may exacerbate rather than inhabit concerns [13]. It was associated with the maladaptive emotion regulation, Emotional Dysregulation [14, 18, 19], and emotional disorder symptoms [15], while neurotic perfectionism correlation with low self-esteem and lower achievement motivation [12].

This effectiveness can be explained that the therapy was administered to the experimental group members combined education and training, various exercises and skills using many techniques, included, psych-education, generalization of meditation, self-monitoring, feedback, practice of some exercises, variety of techniques used in the sessions, role-playing, apply relaxation and breathing techniques. The exercises, workshops, activities inside the sessions, identify unhelpful thoughts, using thought diaries. Homework tasks were also used in all sessions in accordance with the therapy objectives and content. In emotional schema therapy, supporting students can enhance identifying physical sensations and emotions, differentiate, and label a variety of emotions, and recognize events, thoughts, and behavioral tendencies that elicit these emotions. also assesses the students' beliefs and strategies for interpreting, judging, controlling, and acting on emotions. The experimental group were dealt with cognitively, behaviorally, and emotionally techniques such as lecture, dialogue and discussion, brainstorming, cognitive reconstruction, imagination, and behavioral techniques such as homework, exposure and response prevention, and positive reinforcement. The diversity of techniques, commitment to sessions, and activities contributed to the continuation of the participants of the experimental group.

6 Limitations and future research

We may not be able to generalize the results because of the small sample size, our participants were males' students because of culture reasons, the challenge was keeping participants engaged in the sessions and doing homework, lastly data analysis was through non-parametric analyses due to limited sample size. Future research should focus on the comparative effectiveness of Emotional Schema Therapy compared to other types of therapy using a larger sample size and checking the applicability of applying the therapy on female students.

Acknowledgment

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through General Research Project under grant number (GRP/301 / 43).

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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