

USING THE POSITIVE REAPPRAISAL COPING INTERVENTION TO CHANGE STUDENTS APPRAISAL AND ATTITUDES TOWARD NURSING

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Jaafar Sadiq Jaafar¹, Hayder H. AL-Hadrawi²¹COLLEGE OF NURSING, NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, NASIRIYAH, IRAQ²UNIVERSITY OF BABYLON, BABYLON, IRAQ

ABSTRACT

The aim: This study aimed to evaluate the effect of positive reappraisal intervention model in changing nursing students' attitudes toward nursing profession.

Materials and methods: A quasi-experimental study design (one group pretest-posttest) to achieve the study objectives. The emotional regulation questionnaire (ERQ-10) and the students' attitudes scale were used pre and post applying the positive reappraisal intervention in a random sample of 165 undergraduate nursing students, male and female, in their sophomore level to senior level. The process of collecting student's data took place in July 2020 – February, 2021.

Results: A statically significant difference in students' appraisal ($t = -26.320, p < .0005$) and their attitudes towards nursing ($t = -15.460, p < .0001$) were registered after applying (compared to the results before) the positive reappraisal intervention.

Conclusions: The positive reappraisal coping intervention is proved as an easy model to apply and is highly effective in terms of changing students' cognitive appraisal, which in turns changes their attitudes toward nursing. This assumption is concluded, basing on the significant increase in the level of appraisal and attitudes of nursing students after applying the intervention model; their levels are increased to about (96%) positive appraisal and about (94%) positive attitude level.

KEY WORDS: Cognitive appraisal, intervention model, students' attitudes, positive reappraisal, nursing students

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INTRODUCTION

Human behaviors are determined by their emotions that are formed and extracted by their evaluation (appraisals) to the experienced situations [1]. Two dimensions of cognitive appraisal have been identified in researchers' studies which are positive appraisal and negative appraisal. Positive appraisal describes the action, when a person looking at the bright side of an event or situation; whereas, negative appraisal is described as perceiving and thinking negatively, which can impose stress on the individual, who experience the situation. Thus, stressful life events can be results of cognitive appraisal specifically negative appraisal [2-3]. Cognitive appraisal in general has direct effects on the psychological and the physical health of individuals as it is approved by empirical studies. For instance, when the appraisal is positive, stress, anxiety, and depression can be avoided [4]. Furthermore, positive appraisal leads to positive emotions and better emotional response to the situation and that leads to positive affect and action [5]. Attitudes are learned tendencies for positive or negative reaction toward a specific situation, object, institution, concept, or other people [6]. Nurses attitudes toward their profession, work, organization, and administration can serve as a valid predictor to their behaviors in the practice settings; therefore, changing students' attitudes in a positive way can have great influence on the quality of

healthcare services [7]. The quality of healthcare services has found to be linked to professionals' mental elements including, but not limited to appraisal level, since that appraisal and performance significantly correlated [8]. Negative appraisal and students' attitudes toward nursing also have undesirable effects on students' academic performance and the future of the nursing profession as it results in job dissatisfaction and poor patient health outcome. Globally, there is gap in nursing research concerning the use of positive reappraisal model to manipulate the attitudes of individuals [9], which means that professionals have lost the benefits of an essential element for positive change. Therefore, this research is designed to measure the effectiveness of the positive reappraisal model in changing students' appraisal level and their attitudes towards nursing as their future career. Two main research questions were developed in this study as follow: Is positive reappraisal intervention model effective in changing student appraisal level and attitudes toward nursing? And is there a gender difference in people, when we are talking about respect to their appraisal and attitudes level?

One of the major challenges, facing students among the university period is stress, which has negative consequences on students' academic performance; it, mostly, shows up as decreasing. In addition, negative attitudes toward their future profession inhibit student's motiva-

tion to develop knowledge or optimize their academic performance. All these challenges can be the result of their cognitive appraisal [10-11]. In some countries, over 45% of nursing students reported depression symptoms associated with levels of stress they experience as a result of seeing various health conditions during their clinical practice [12]. Depression leads to consequences affecting their social functioning as it effects their ability of emotional regulation [13]. Positive reappraisal is considered one of the most suitable way to manipulate individuals' response to stress and change their thoughts and emotions in a positive way [14]. Studies have found a link between academic satisfaction among nursing students and the coping strategies they use. Hirsch et al. (2015) stated that "students, satisfied with the course, used positive coping strategies targeting the problem, whereas dissatisfied students used negative strategies focusing on the emotion" [15]. Therefore, it has become necessary to design effective intervention programs and to stop stress and depression in college students, because of the fact that they are the most risk age groups that could be affected negatively by stress from their early point in their school [16].

THE AIM

This study aimed to measure the effectiveness of the positive reappraisal model in changing students' appraisal level and their attitudes towards nursing.

MATERIALS AND METHODS

HYPOTHESES

H₁. Positive reappraisal intervention would have direct effect improving students' appraisal level.

H₂. Positive reappraisal intervention would have indirect effect changing students' attitudes toward nursing positively.

DESIGN

A quasi-experimental study design (one group pretest-posttest) was carried out to answer the study questions. One group retest-posttest design is one of the most common used designs in nursing research in which that pretest serves as control or comparison group.

SAMPLE, SAMPLING, AND SETTING

Probability sample, simple random sampling techniques, were used to enhance the representation of the target group (nursing students) and minimize the sampling error. The adequate sample size was determined, based on the 10 % condition, by which the study sample is recommended to be 90 participants out of the total population, which are 900 undergraduate nursing students. To increase the capacity of the recent study to discover the differences in the

attitudes of nursing students between pretest and posttest, a total of 165 consenting male and female nursing students were included in the study. The study was conducted at the University of Babylon, College of Nursing from July 2020 – February 2021.

STUDY INSTRUMENTS

The emotion regulation questionnaire (ERQ) and the student attitudes scale (SAS) were used to serve the study objectives. The emotion regulation questionnaire (ERQ) is a 10 items self-reported scale that is used to measure the cognitive appraisal of individuals. It has two parts: cognitive reappraisal (6 items) and the expressive suppression (4 items). This tool is originally developed in English by Gross & John in 2003 [17]. The questionnaire was translated to Arabic and tested for validity and reliability. The minimum content validity ratio (CVR) for each item was 0.80, and the content validity index (CVI) for the total items was 0.86. The Arabic version of (ERQ) was reliable at Cronbach's Alpha value 0.85 and the scale items were measured on a 7-point Likert scale, ranging from absolutely disagree - "1" to absolutely agree - "7". The higher scores indicating higher level of appraisal or emotion control. The second scale was the students' attitudes scale. It is a 55 items scale and originally developed in Arabic by Shakora in 2002 to measure the attitudes of nursing students toward nursing profession[18]. The attitudes scale was also reliable at Cronbach's Alpha value (0.94). Items are measures on a 5-point Likert scale, ranging from absolutely disagree - "1" to absolutely agree - "5", scoring of some items were reversed for statistical purposes. The higher scores indicate higher level of students' attitudes.

DESIGNING THE INTERVENTION

The positive reappraisal intervention is an effective strategy that is used widely to manipulate individual's thinking positively. In fact, there are no standardized guidelines to be used in all research studies that use the reappraisal intervention; therefore, the intervention guidelines can be tailored according to objectives of the programs. For this research, the appraisal theory of Lazarus and the strategies of cognitive appraisal and positive reappraisal were used as a guide to construct the scenario that helps applying the intervention in a simple way. The scenario was constructed and then reviewed by experts for modification and enhancements. The constructed scenario was recorded as video considering it would be short, clear, relevant, and easy to follow. The intervention video was sent to some students to verify its clarity, simplicity, and understandability before final use. Usually, the intervention is applied directly to target populations using various methods of application. However, the COVID-19 pandemic and the restriction order for social distance had limited the direct communication between the researchers and the target population; therefore, communication and applying the intervention were done online using various social media platforms.

DATA COLLECTION

Data collection (pre-test): Questionnaire was transformed to an electronic form (Google forms) and the link of the questionnaire was shared in students with one week to fulfill it. Students, who completed the questionnaire were 172; however, 7 students did not fill all scale items and some demographic information were missing. Therefore, only 165 questionnaires were valid for pre-test analysis.

Data collection (post- test): After students completed the pre-test questionnaire, the link for the intervention video was shared with students and students were asked to review the video in order to fill the post-test questionnaire. Students were also given one week to review the video and try the new ways of thinking about events. Then, the link for the post-test questionnaire was shared with students to complete after watching the video. Two questions were added to the post-test questionnaire to assure that same students who completed the pre-test survey also completed the post-test survey and watch the intervention video. The added questions were: "Have you watched the video? if you don't, please watch it then back to fill the questionnaire." "Have you filled this questionnaire before?" Number of students who completed the posttest survey were 169, one student did not watch the video, two students did not fill the pretest questionnaire, and one questionnaire was missing some information. Finally, 165 valid questionnaires were collected.

ETHICAL CONSIDERATIONS

All participants were informed about the aim and contribution study could have on nursing. Students were also informed that taking part in the study is voluntary. Confidentiality of students' information was also taken into account through using of anonymous questionnaires. Students also informed that they could leave anytime during the study phases. Furthermore, all of the aforementioned steps were included in the informed consent form.

DATA ANALYSIS

The SPSS® version 27.0 was used to analyze the collected information. Variety of statistical tests was used to create best understanding about study hypothesis and the effectiveness of the reappraisal intervention. Frequency and percentages were computed to describe the socio-demographic variable, appraisal levels, and attitudes levels of nursing students who participated in this study. The dependent t-test (paired-samples t-test) was used to compare the results between pretest and posttest in respect to students' appraisal and attitudes. Independent t-test was also run to compare the results between male and female students.

RESULTS

Female students who participated in the study constitute more than three quarters (79.4%) of the total study participants. Also, more than three quarters (75.2%) reported that

they were living in urban areas. About (73%) of the nursing students reported no other nurses in their families (table I). In terms of the household income, nurses reported that their family income is ranged between rather enough and enough (47.9%; 46.1%), about two third (60%) of nursing students enrolled in the nursing school out of their interest.

A paired t-test analysis was used on a sample of (165) nursing students to determine whether there was a statistically significant difference between the appraisal level of nursing students before and after applying the positive reappraisal intervention (table II). A statistically significant difference was found in the appraisal scores before and after applying the intervention ($t = -26.320, p < .0005$). Nursing students show higher mean score on the appraisal measure (post-test) ($6.44 \pm .51$) as opposed to the appraisal measure (pre-test) ($4.25 \pm .93$); with significant increase in the mean score (2.198).

A paired t-test was also used to determine whether there was a statistically significant mean difference in the attitude measures before and after applying the reappraisal coping. Nursing students showed more positive attitudes after being exposed to the intervention strategy ($4.43 \pm .41$), as opposed to the pre-test ($3.62 \pm .48$), with a statistically significant increase in the mean scores (2.198). These results indicate a statistically significant difference in the score of students' attitudes toward nursing before and after applying the positive reappraisal intervention ($t = -15.460, p < .0005$).

Independent t-test was used to analyze the differences between male and female students in respect to their appraisal scores before applying the intervention. The findings show that there was no statistically significantly difference between male and female in respect to their appraisal scores with a low mean difference (0.132).

DISCUSSION

This quasi-experimental study aimed to measure the effectiveness of positive reappraisal coping in changing the appraisal level of nursing students and their attitudes toward nursing. According to Koushali et al. (2012) and Mai et al. (2018), nursing students are expected to have a good appraisal level and attitudes toward nursing [19-20]. However, the findings of the recent study showed that before applying the positive reappraisal intervention, there were only 25% of nursing students had positive level of cognitive appraisal and 75% had neutral level. The findings also indicate that more than 50% of the nursing students had levels of attitudes ranged between neutral and negative toward nursing profession, which highlight the need for meaningful strategy to enhance their attitudes toward their future career. There are several factors could influence student's cognitive appraisal. One of the possible factors is that nursing students have the passion toward nursing profession as thinking of helping others in need. However, students may also think that nursing is a highly stressful profession as a result of witnessing stressful situations through clinical practices, and this could influence their ways of thinking. Alhurani et al., (2018) highlighted

Table I. The descriptive statistics of the socio-demographic variables of the nursing students

Demographic Data		f.	%
Gender	Male	34	20.6
	Female	131	79.4
	Total	165	100.0
Residency	Rural	41	24.8
	Urban	124	75.2
	Total	165	100.0
Academic Years	First	23	13.9
	Second	30	18.2
	Third	49	29.7
	Fourth	63	38.2
	Total	165	100.0
Have a nurse in the family	Yes	45	27.3
	No	120	72.7
	Total	165	100.0
Income	Not Enough	10	6.1
	Rather Enough	79	47.9
	Enough	76	46.1
	Total	165	100.0
Interest in nursing	Yes	66	40
	No	99	60
	Total	165	100.0

Table II. Difference in the students' appraisal levels before and after applying the intervention

Paired Differences							t	df	Sig.
Mean difference	SD	Std. Error Mean	95% Confidence Interval of the Difference						
			Lower	Upper					
-2.198	1.072	.083	-2.363	-2.03	-26.320	164	.0001		

Table III. Difference in the students' attitudes before and after applying the intervention

Paired Differences							t	df	Sig. (2-tailed)
Mean Difference	SD	Std. Error Mean	95% Confidence Interval of the Difference						
			Lower	Upper					
-.8128	.6754	.0525	-.916	-.709	-15.460	164	.0001		

that when the level of stress is higher than individuals' tolerance level, their ability to use more rational coping is diminished [21].

Another study also mentioned that "experience of stress differs significantly between individuals, depending on how they interpret an event and the outcome of a specific sequence of thinking patterns, called appraisals" [22]. Furthermore, students' cognitive appraisal could be related to their personal experiences. Studies have highlighted those personal experiences shape the way that they react or think; in other words, it shapes their cognitive appraisal or psychological response. Therefore, it is highly recommended that effective strategies should be used to enhance

individuals' appraisal in a positive way [23] following a right shoulder dislocation. The 22 page narrative account provided by the athlete offered a holistic and integrated account of his experiences from the onset to return to play. A six step narrative analysis was analyzed by two qualified psychologists and two medical practitioners. Results: The themes are extracted to understand what was important to the participant. The cognitive appraisal and lived experiences are discussed within three dominant themes: 1. Students' attitude toward nursing, as their future profession, is influenced by several factors including, but not limited to social factors, economic factors, and student's ability of handling the change from the environment of secondary

Table IV. Gender difference in respect to student’s appraisal level (pre-test)

Appraisal Scores	Levine’s Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	1.621	.205	.731	163	.466	.132	.180
Equal variances not assumed			.674	46.773	.504	.132	.195

school teaching to the environment of college learning. Social factors are considered to be the one of the most and common affecting factors on nursing students’ attitude. In some cultures, nursing is a suitable profession for females only; while, others think that nursing needs hard work, therefore, it is suitable for males. Self-esteem also plays a significant role in determining individual attitudes; level of self-efficacy contributes in a low or high level of student’s attitude [10], [24].

Moreover, some studies indicate that nursing profession has little autonomy in their work environment, which negatively influences their attitudes. In other words, autonomy is essential in any profession to take decisions work freely and working the knowledge base, so lack of these authorities create low self-efficacy among professional nurses and among nursing students as they think and realize that concept and, in turn, resulting in low level of attitude [25]. After applying the positive reappraisal intervention, the findings of the recent study showed a significant increase in the students’ cognitive appraisal from neutral level (75.2%) to positive level about (96%), which reflects the great effect of the coping intervention in manipulating students thinking [26-27]. Therefore, it has become necessary to use coping intervention when there is high level of stress and low level of appraisal; since, it has been proven by the results of the recent study that the intervention strategy was effective in changing the way students think. Positive reappraisal is considered to be one of the best models that is simple to use and cost effective [28]. The changes that the intervention made in students’ appraisal level was expected, because of the intervention was originally designed to reduce stress through the way of changing individuals’ cognitive appraisal in positive way. The recent findings also showed a significant increase in the level of student’s attitude after applying the positive reappraisal intervention by effecting the cognitive appraisal of students. The significant improvement in the student attitudes toward nursing profession is moved from 49.7% to about 94% after applying the intervention. Also, posttest results showed no negative attitudes at all after applying the intervention; whereas, negative attitudes were reported in the pretest results. This improvement concludes the ability of the positive reappraisal intervention in changing individuals’ attitudes positively. Studies have shown that students stress creates negative appraisal, which leads to negative emotions and attitude; therefore, when stress is eliminated by reappraisal strategies, positive attitude level will result

[32-33]. After applying reappraisal intervention student’s appraisal level is improved, and because cognitive appraisal and attitude are linked together, attitude has changed too.

CONCLUSIONS

The positive reappraisal coping intervention is proved as an easy model to apply and highly effective in terms of changing students’ cognitive appraisal, which, in turns, changes their attitudes toward nursing. This assumption is concluded based on the significant increase in the level of appraisal and attitudes of nursing students after applying the intervention model; their levels are increased to about (96%) positive appraisal and about (94%) positive attitude level.

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ORCID and contributionship:

Jaafar Sadiq Jaafar: 0000-0003-0012-6378 ^{A,B,E,F}

Hayder H. AL-Hadrawi: 0000-0003-4525-0962 ^{D-E}

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CORRESPONDING AUTHOR

Jaafar Sadiq Jaafar

College of Nursing,

National University of Science and Technology, Nasiriyah, Iraq

e-mail: jaafar.s.jaafar@nust.edu.iq

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