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The psychometric properties of perfectionism scale and its relation to depression and anxiety

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Abstract: The aim of the study was to explore the psychometric properties of the positive and negative perfectionism (PANP) on the Jordanian students. The first sample ($N = 485$) students, all of them completed the scale of (PANP) in its original version after performing the translation procedures and verifying the content. The second sample ($N = 353$) was used to investigate the confirmatory factor analysis, while the third sample ($N = 487$) students (males = 254, females = 233) completed the revised positive and negative perfectionism scale (RPNPS) and the depression anxiety stress scale-21 (DASS-21). The results of factor analysis and Pearson correlation coefficient showed that the scale of (RPNPS) enjoyed good stability with two valid separate factors, as well as there were a negative relationship between positive perfectionism (PP) and negative perfectionism (NP), depression and anxiety. While there were a positive relationship between (NP), depression and anxiety. The results of multivariate analysis revealed that there were significant differences between Arts and Sciences specialization over (PP) and (NP). Additionally, the results showed effect for the interaction between gender and specialization upon (PP), (NP), depression and anxiety. Finally, there were no significant effects for gender on all dependent variables.

Subjects: Health Psychology; Cognitive Psychology; Counseling Psychology

Keywords: positive and negative perfectionism; depression; anxiety and college students

ABOUT THE AUTHOR



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The author is licensure and practitioner of counseling from the Ministry of Health of Jordan and specialized in counseling at the level of bachelor, master and PhD, I got the associate professor rank at Mutah University and the distinguished researcher gift at the level of education department in the University of Nizwa. I participated in preparing, arranging and presentations of many conferences around the global. I have published about 35 articles in international indexed journals. I am still working as a supervisor as well as external and internal examiner for many dissertations and thesis at Sultan Qaboos University, University of Nizwa and Mutah University, for both of Master and Ph. D degrees.

PUBLIC INTEREST STATEMENT

Perfectionism in psychology is a personality trait characterized by a person's striving for flawlessness and setting high performance standards, accompanied by critical self-evaluations and concerns regarding others' evaluations. It is best conceptualized as a multidimensional characteristic, as psychologists agree that there are many positive and negative aspects. In its maladaptive form, perfectionism drives people to attempt to achieve an unattainable ideal or unrealistic goal, while their adaptive perfectionism can sometimes motivate them to reach their goals. In the end, they derive pleasure from doing so. It is important to know that perfectionism is associated with a host of negative, even dangerous, consequences. These include self-harm, chronic fatigue syndrome, obsessive-compulsive disorder, insomnia, post-traumatic stress disorder, social anxiety disorder, anxiety and depression.

1. Introduction

Perfectionism is one of the characteristics of the personality that referred to the tendency to exaggerate the criteria that the individual sets for himself, which are supposed to be completed by self-assessment criteria with concern those others can evaluate him negatively and inferiorly (Blankstein & Dunkley, 2002; Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990; Zhou, 2016).

The concept of factors of perfectionism is basically refer to Burns (1980: 35), who emphasized that perfectionism is one integrated concept, and that it is best to look at it on this basis. Perfectionism is defined as “the high standards that individuals decide for themselves and strive to reach, which may be to achieve impossible goals, and therefore to protect themselves”. Another simpler definition that Frost et al. (1990, p. 451) defined as “the control of the tyranny of shoulds and the task of making a person impose high standards on his behavior”.

Traditionally, the emphasis on perfectionism is associated with negative feelings, failure, procrastination and ignorance because of its components and nature (Afshar et al., 2011). However, perfectionism has other adaptive and healthy aspects, and it promotes the tendency towards achievement and excellence. This type of perfectionism is called neurotic perfectionism. Individuals with high standards of uncertainty and concern about mistakes are called neural perfectionism. Neurotic perfectionism involves the pursuit of unrealistic standards and difficult goals, leading to failure and eventually to feeling depressed and anxious (Flett & Hewitt, 2006; Wang, Slaney, & Rice, 2007).

However, there are many studies that found that perfectionism is not one factor but several factors and several aspects of perfectionism personality characteristics (Hewitt & Flett, 1991). Some studies have found that perfectionism is only two factors. Hamacheck (1978) found that there are two kinds of perfectionism neurotic and normal perfectionism. Normal perfectionism is the rational criteria that the individual sets for himself, which can be reflected in happiness and pleasure as a result of carrying out the difficult tasks. The neural perfectionism is the perfectionism requirements that are difficult to achieve satisfactory and unhappy.

Frost et al. (1990) and Hewitt and Flett (1991) analyzed the perfectionism scale using the factor analysis of only two factors. The first factor was called maladaptive (evaluation), while the second factor called positive (striving). These two factors have shown that perfectionism consists of both the maladaptive (negative) and the adaptive (positive) factor.

In view of these health factors of the factors of perfectionism, Terry-Short, Owens, Salde & Dewey (1995) differed between the sources of (PANP) based on Skinner’s theory of behavior (1968), similar behaviors may lead to different emotional responses, depending on whether the behavior is positively or negatively reinforced. Positive perfectionisms aims at achieving positive results by recognizing their positive expectations, while negative perfectionisms aims at avoidance and focusing on the negative outcomes.

Thus, it seems clear that there is an effect for perfectionism on the mental health of people. Bell, Stanley, Mallon, and Manthorpe (2010) found that perfectionism might cause feelings of failure and lack of help, which lead to depression and anxiety. On the other hand, some researchers found that positive perfectionism is positively correlated with positive feelings and satisfaction with life, while negative perfectionism is negatively correlated with those feelings and symptoms (DiBartolo, Li, & Frost, 2008). The results of the Hasse, Parapavessis, & Owens (2002) study showed that the negative and positive perfectionism scale showed acceptable psychometric properties as the value of the Cronbach’s α .

Around the world, the main conducted studies on the factors of perfectionism among university students showed that there were two main factors for the perfectionism scale. This measure also showed the ability to predict for the anxiety and stress in favor of maladjustment factor (Hibbard & Davies, 2011; Moloodi, Pourshahbaz, Mohammadkhani, Fata, & Ghaderi, 2017; Suddarth & Slaney, 2001; Zhou, 2016). Another studies of perfectionism and goal setting conducted by Chan (2009) the results showed that both learning and setting social goals have a statistically significant ability to predict the positive perfectionism. Furthermore, Egan, Piek, and Dyck (2015) found a strong relationship between negative perfectionism and neurotic symptoms. Owens and Slade (2008) examined the implications of psychological compatibility and psychological incompatibility with both negative perfectionism and positive perfectionism.

On the other hand, the study of Egan, Piek, Dyck & Kane (2011) showed that there were two main factors associated with (PANP), the factor of positive perfectionism was statistically associated with all sub-factors of the multidimensional perfectionism scale, and was statistically associated with the symptoms of depression among the group members.

In the United Kingdom, Dittner, Rimes, and Thorpe (2011) found that depression had an effect on the second telemetry of the relationship between negative perfectionism and symptoms of physical or psychological confusion and fatigue. Recently in Turkey, Muyan and Chang (2015) conducted a hierarchical regression analysis, which indicated that certain dimensions of perfectionism, namely, doubts about actions and parental criticism, accounted for significant variance in both depressive symptoms and suicide ideation.

In the Arab region there are a limit studies on the theme of multifactorial perfectionism in light of different variables and subjects (Abdelbaqi, 2016; Al-Sulaiman, 2016; Al-Zaghalil, 2008; Darawsha, 2013), while there was one study about the neurotic and normal perfectionism (Baza, 1996), but there were no studies on the topic of the (PANP).

However, it is important to differentiate between positive perfectionism and negative perfectionism in a single scale suitable for the Jordanian environment. The main objective of this study is to translate the scale of (PANP) into Arabic depending on the positive and negative scale of perfectionism in its original and modified version, which is adopted in English and to provide the Jordanian environment with a valid and stable scale. Furthermore, some of Jordanian youths suffering from the irrational perfectionism beliefs and we need a diagnostic instrument to define them, as well as the need to differentiate between the rational beliefs from the unhealthy beliefs (Aldahadha, 2018). Therefore, we hope this article will be the basic of future research on the subject of (RPNPS), in addition to further studies of different cultures in the Arab countries.

As for the relationship between (PANP), depression and anxiety, there are some studies that show negative perfectionism is strongly associated with depression and anxiety (Afshar et al., 2011; Bieling, Israeli, & Antony, 2004; Dittner et al., 2011; Frost et al., 1990; Grzegorek, Slaney, Franze, & Rice, 2004; Hamachek, 1978; Hewitt & Flett, 1991; Saboonchi & Lundh, 2003). The results showed that the two factors of (PANP) were strongly correlated with symptoms of depression and anxiety, which explains that positive perfectionism, contributes to greater mental health and vice versa for negative perfectionism.

The objective of this study is to explore the psychometric characteristics of the positive and negative perfectionism measures, along with the discovery of the cross-sectional relationship of the (RPNPS), depression and anxiety, in a sample of the students of Jordan in the light of gender variable and specialization. Additionally, the study aimed to answer the following questions:

- (1) What is the structural and confirmatory validity as well as the reliability of the (PNPS) among the Jordanian sample?

- (2) What is the correlation relationship between the (RPNPS) scale, depression and anxiety?
- (3) Is there a significant effect for gender, specialization and interaction between them upon depression, anxiety, and (RPNPS)?

2. Method

2.1. Participant

The study population was consisted from all colleges of Mutah University in Jordan for the academic year 2016/2017. In order to select the sample of the study, population was divided into strata according to the study variables represented by gender and specialization and according to the number of students in each specialization, due to the department of admissions and registration reports. At least 5% of the students were selected randomly from these different classes. The total number of sample study was determined according to the gender and specialization variables in proportion to the size of the study population. Accordingly, (485) students from different strata of the study society were selected as the first sample; this sample was used to verify the psychometric properties of the (PANP) scale, including exploratory factor analysis. The second sample ($N = 353$) was used to investigate the confirmatory factor analysis, while the third sample was composed after excluding the incomplete data from (487) students who took the same procedures at the same time. The courses were subject to compulsory university requirements. This sample has been used to answer questions related to reliability, correlations and interactions. The primary data included the gender and specialization. All samples involved students from all different colleges (males and females); the mean age of these participants was 19.12 ± 1.89 years. The application of the study procedures got the approval by the administration of Universities and the college ethical committee. In purpose to promote the students and achieving the research ethics, all participants signed consent forms and got 3 different pens. Moreover, participants were informed about the voluntary nature of the study and they could withdraw from the study at any time without penalty.

2.2. Instruments

Positive and negative perfectionism scale (Terry-Short et al., 1995). This scale is used to measure the negative and positive perfectionism of students. This scale consists of (40) items, divided into (20) items for the positive perfectionism factor and (20) for a negative perfectionism factor. So that the examinees answer a gradient of five options according to the Likert scale, ranging from 1 = not strongly agree to 5 = strongly agree, and for correcting the scale, this is done for each factor separately and separately so that the upper degree indicates a high degree of positive or negative perfectionism. In a large number of studies on different cultures, the scale showed acceptable psychometric properties. As for the original version, the coefficient of internal consistency stability was $\alpha = 0.88$ and 0.92 , respectively, for (PANP) (Besharat, 2005). Nine questionnaires were excluded for incomplete data, while the students completed the study scale during the lecture time. 25 min is the average time to complete the instruments.

The Depression Anxiety Stress Scale-21 (DASS-21; developed by Lovibond & Lovibond, 1995; revised by Antony, Bieling, Cox, Enns, & Swinson, 1998). The DASS-21 is composed of 21 items divided across three subscales: depression, anxiety, and stress, which are rated on a 4-point Likert-type scale (0 = does not apply at all to 3 = applies all of the time). The total score for every factor ranges from (0-21), higher scores indicate that the respondents are more likely to be anxious or depressed. In previous studies, the scale has been shown to have good internal consistency (Cronbach's $\alpha = .77$, $.79$, and $.89$, respectively, for depression, anxiety, and total scale), construct validity, and criterion-related validity (Moussa, Lovibond, & Laube, 2001).

2.3. Procedures

The process of translating the scale has begun by taking the approval to translate the scale from the author. By preparing and translating the Arabic version of the English version. The scale has

been presented to two psychologists who have mastered Arabic and English to translate the original scale into Arabic in addition to two other translation specialists. In a subsequent step, the four versions were compared to each other. The decision was made to paraphrase some items, modify some, and change some words with more precise and specialized options.

The Arabic version was then translated back to English and then compared to the original version to verify the conformity of the meaning and translation. Finally, to make the scale suitable for the Arab environment in general and for the Jordanian environment in particular the scale was presented to (10) reviewers in field of psychology, all of them have confirmed that the measure is appropriate in its current form of the Jordanian environment.

2.4. Data analysis

Data from the preliminary trial were analyzed using SPSS version 20.0 and AMOS version 5.0. The exploratory and confirmatory factor analysis test used as well as Cronbach's α and stability through internal consistency and test-retest. In addition, correlations and multivariate analysis was used to investigate the effects of dependent variables gender (male or female) and specialization (Arts colleges or scientific colleges) over the independent variables (PP, NP, depression, and anxiety). The Kaiser-Meyer-Olkin (1974) test was used as well as the Barlett's test of Sphericity test.

3. Results

To answer the first question related to discovering the construction validity of the (PANP) scale, the factors of the scale were encoded and inserted in its original version after translation and decision on language safety and its conformity with the Jordanian environment. In order to determine the adequacy and suitability of the sample to conduct the construction validation procedures, The Kaiser (1974) test was used and the result was 0.88, which means that the data are suitable for the construction validation analysis exceeding the recommended value of .75 (Kaiser, 1974). The Barlett's test of Sphericity test was used to determine whether there was indeed a general factor in the total correlation matrix, the result indicated that there were differences between the correlations, which means that there is more than one factor and continuity in the detection of the factors analysis ($\chi^2 = 4320.29$, $df = 475$, $P < 0.001$). The results showed that there were two main factors, as in Table 1. Nine items were canceled because they received a loading value of less than 50%. Additionally, the items that loading more than 40% were found in one of factors, but originally from the other factor according to the original scale was deleted because it did not correspond to the distribution of the items adopted in the original scale. For example, item (10) on negative perfectionism was higher than that on positive perfectionism "The problem of success is that I must work even harder" (Terry-Short et al., 1995). This item was deleted because it showed a higher loading in the positive perfectionism factor as originally included in the negative perfectionism factor.

The number of items adopted according to the results of the factor analysis is (30) items. Which resulted in the presence of two factors for the perfectionism scale (positive perfectionism and negative perfectionism). These factors explaining in the total (48.11%) of the total variance. The loading values ranged between 0.51 and 0.81 for the positive perfectionism factor, while it was ranging between 0.50 and 0.79 for the negative perfectionism factor, which consequently became distributed (15) items for the positive perfectionism factor with positive affect items loading strongly, and (15) items for the negative perfectionism factor with negative affect items loading strongly.

On the other hand, the analysis of confirmatory factors analysis was used, using the AMOS version 5.0 to show the construction of the two factors. Because the results were positive and statistically significant from multivariate normality, we calculated goodness-of-fit index (.90), comparative fit index (.90), normed fit index (.89), non-normed fit index (.88), and root mean

Table 1. Results of exploratory analysis of the (RPNPS) scale

Items	PP factor	NP factor
30	.81	
25	.80	
6	.79	
18	.78	
21	.77	
3	.75	
29	.69	
24	.65	
35	.58	
23	.57	
37	.56	
9	.56	
19	.54	
14	.52	
28	.51	
31		.79
20		.78
27		.77
38		.75
8		.68
5		.68
26		.59
11		.58
26		.57
22		.56
7		.54
12		.53
17		.52
4		.50
13		.50
Eigenvalue	4.891	4.750
% of variance explained	24.21%	23.90%

Note: PP, positive perfectionism, NP, negative perfectionism.

square error of approximation (.05). Therefore, we accepted the two-factor structure of the original confirmatory factor analysis as the final model for the (RPNPS) scale revised.

After the factor analysis of the original version of the (PANP) scale confirmed and accredited, the sample three was used to test the reliability of the scale across three weeks to test the reliability of internal consistent and test-retest reliability. The results of the test showed that the (RPNPS) scale were highly stable, with a stability coefficient of the scale as a whole were over 0.89. The results also indicated that the value of the Cronbach's α coefficient of the positive perfectionism factor 0.91 while the coefficient of stability of the negative perfectionism 0.90 and the scale as a whole 0.89. Finally the results indicated that the correlation coefficients of the test-retest was $r = 0.86$ for the scale as a whole and $r = 0.88$ for the positive perfectionism factor and $r = 0.90$ for the negative perfectionism factor.

Table 2. Correlation between depression and anxiety with positive perfectionism and negative perfectionism variables

Variables	A	PP	NP
D	.908**	-.889-**	.914**
A		-.917-**	.863**
PP			-.926-**

Note: D, depression, A, anxiety; PP, positive perfectionism, NP, negative perfectionism. df, 484, ** $P < 0.01$.

Table 3. Means, standard deviations, and numbers of the gender and specialization variables over dependent variables

Variables		Depression	Anxiety	Positive perfectionism	Negative perfectionism
Males N = 254	Mean	11.46	10.21	37.92	38.33
	Std. deviation	5.987	5.435	30.513	29.730
Females N = 233	Mean	11.67	10.23	40.02	36.01
	Std. deviation	7.425	6.703	31.102	31.615
Total N = 487	Mean	11.56	10.22	38.93	37.22
	Std. deviation	6.707	6.068	30.782	30.636
Arts N = 212	Mean	11.10	9.71	43.25	32.30
	Std. deviation	6.871	5.948	29.147	29.687
Sciences N = 275	Mean	11.92	10.61	35.59	41.01
	Std. deviation	6.568	6.142	31.635	30.870
Total N = 487	Mean	11.56	10.22	38.93	37.22
	Std. deviation	6.707	6.068	30.782	30.636

To answer the second question, Pearson correlation coefficient was used between the positive perfectionism factor and the negative perfectionism factor.

Table 2 shows that there are a statistically significant relationship between both of depression and anxiety among males and females. It has been shown that the factor of positive perfectionism is negatively correlated with statistical significance, while the negative perfectionism factor is positively correlated and statistically significant. As expected, the negative perfectionism factor plays a more active role than the positive perfectionism factor in the suffering of depression and anxiety.

To answer the third question means and standard deviations were calculated. See Table 3.

The results in Table 3 reveal that there are obvious differences between the means of the positive perfectionism, negative perfectionism, depression and anxiety. This result means that there were primary differences, which lead to examine the significance of these differences; a multivariate test was administered to answer the question 3. See Table 4.

Table 4 shows that there are significant effect for the specialization over PP $F(7.294) = .007, p < .01$, with a small effect size (eta squared = .015), in favor of Arts specialization ($M = 43.25$), and upon NP $F(9.767) = .002, p < .01$, with a small effect size (eta squared = .020), in favor of Arts specialization ($M = 32.30$). On the other hand, there is no significant effect for the specialization on D and A. Finally, there are no significant effects for gender on PP, NP, D, and A.

Additionally, results show that there are significant effects for the interaction between gender and specialization on PP $F(37.754) = .000, p < .01$, with a large effect size (eta squared = .072).

Table 4. A multivariate analysis of variance results of gender and specialization on dependent variables

Source	Dependent variable	Type III sum of squares	df	Mean square	F	Sig.	Eta squared
Corrected model	PP	40,054.191 ^a	3	13,351.397	15.338	.000	.087
	NP	49,031.761 ^b	3	16,343.920	19.390	.000	.107
	D	596.803 ^c	3	198.934	4.518	.004	.027
	A	277.891 ^d	3	92.630	2.539	.056	.016
Intercept	PP	772,133.300	1	772,133.300	887.001	.000	.647
	NP	592,560.947	1	592,560.947	703.010	.000	.593
	D	61,004.229	1	61,004.229	1385.610	.000	.742
	A	47,885.342	1	47,885.342	1312.664	.000	.731
Gender	PP	97.510	1	97.510	.112	.738	.000
	NP	124.867	1	124.867	.148	.700	.000
	D	39.123	1	39.123	.889	.346	.002
	A	9.471	1	9.471	.260	.611	.001
Specialization	PP	6349.415	1	6349.415	7.294**	.007	.015
	NP	8232.855	1	8232.855	9.767**	.002	.020
	D	81.693	1	81.693	1.856	.174	.004
	A	97.819	1	97.819	2.681	.102	.006
Gender * specialization	PP	32,865.195	1	32,865.195	37.754**	.000	.072
	NP	39,765.934	1	39,765.934	47.178**	.000	.089
	D	505.313	1	505.313	11.477**	.001	.023
	A	177.287	1	177.287	4.860*	.028	.010

Note: a. $R^2 = .087$ (Adjusted $R^2 = .081$), b. $R^2 = .107$ (Adjusted $R^2 = .102$), c. $R^2 = .027$ (Adjusted $R^2 = .021$), d. $R^2 = .016$ (Adjusted $R^2 = .009$); D, depression, A, anxiety; PP, positive perfectionism, NP, negative perfectionism. df = 1; ** $P < 0.01$, * $P < 0.05$.

Moreover, results reveal significant effect for the interaction between gender and specialization on NP $F(47.178) = .000, p < .01$, with a large effect size (eta squared = .089). Additionally, results came in favor of the interaction between gender and specialization over D. $F(11.477) = .001, p < .01$, with a small effect size (eta squared = .023), and over A. $F(4.860) = .028, p < .05$, with a small effect size (eta squared = .010), this significant interaction effect suggests that males and females respond differently to the two specializations.

4. Discussion

The objective of this study was to explore the psychometric properties of the (PANP) in terms of exploratory and confirmatory factor analysis, on the students of Jordan. The items of the original scale were reduced from 40 to (30), divided by (15) for the positive perfectionism factor and (15) for the negative perfectionism factor. The results showed that correlation coefficients have a good and reliable stability to do other Jordanian studies by using the (RPNPS) scale of the Jordanian version. The results of this study were agreed with the study of Zhou (2016) and the study of Enns, Cox, Sareen, and Freeman (2001), as agreed with Bieling et al. (2004), the results supports the scale has two main factors: the positive perfectionism factor and the negative perfectionism factor, and the difference between them is a logical and scientific difference. As for the nature of the interactions, they also agreed with Afshar et al. (2011). On the other hand, the results of the stability tests indicated that the scale had good and stable psychometric properties. The results of this study were also agreed with Bashara (2005).

The results showed that both (RPNPS) factors were associated with both depression and anxiety among Jordan students. The positive relationship was between negative perfectionism with

depression and anxiety. While the negative correlation was between positive perfectionism with depression and anxiety, which means that positive perfectionism is a productive and useful factor and helps to reduce the symptoms of depression anxiety and contributes to improving the level of mental health, and in contrast the negative perfectionism factor on the contrary. The results of this study are in good agreement with those obtained by Grzegorek et al. (2004) and Chang et al. (2007). Some studies have found that the positive perfectionism factor has an effective and productive effect on mental health and both sexes as a study Gilman, Ashby, Sverko, Florell, and Varjas (2005) and Kawamura, Hunt, Frost, and DiBartolo (2001).

Regarding the results of the third question, results reveal that there are significant effect for the specialization over PP and NP, while there is no significant effect for the specialization on D and A. Additionally, results show that there are significant effects for the interaction between gender and specialization on PP, NP, D, and A. Finally, there are no significant effects for gender on PP, NP, D, and A. We can say that specialization plays a vital role in the level of PP and NP in favor of Arts colleges, the interpretation of this result refer to the content of syllabus and courses of Arts colleges, which include specializations like counseling, psychology, social work, religion sciences, administration, and so on.

The students who studying in the Arts colleges learn how to deal with the problems of life and how to overcome them from all aspects of behavioral, emotional, social and cognitive. In addition we suppose that the courses contribute to provide students with life skills and helping them to cope well with activated events logically and rationally, but the students of Sciences colleges do not have the enough opportunity to learn social skills or personal growth as rich as the students of Arts colleges.

The fear of rejection and constant concern about the possibility of failure and mistrust with others may be the main cause of anxiety and stress, all of which may be due to negative perfectionism and these emotions may lead to defense and negative social relations with others. The results of several studies have shown that negative perfectionism has other bad outcomes, which are more psychological stress due to feelings of failure, loss of self-control, and fear of loss, followed by loss of motivation and procrastination (Antonia, Dittnera, Katharine, Rimesb, & Thorpec, 2011; Dunkley, Zuroff, & Blankstein, 2003).

Figures 1-4 show that the significant interaction effect suggests that males and females respond differently to the two specialization (Arts and Sciences). Figure 1 shows that female

Figure 1. Interaction of gender and specialization with positive perfectionism

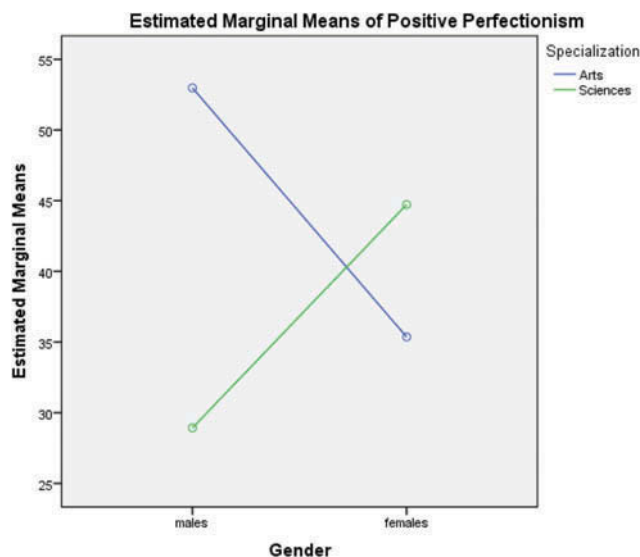


Figure 2. Interaction of gender and specialization with negative perfectionism

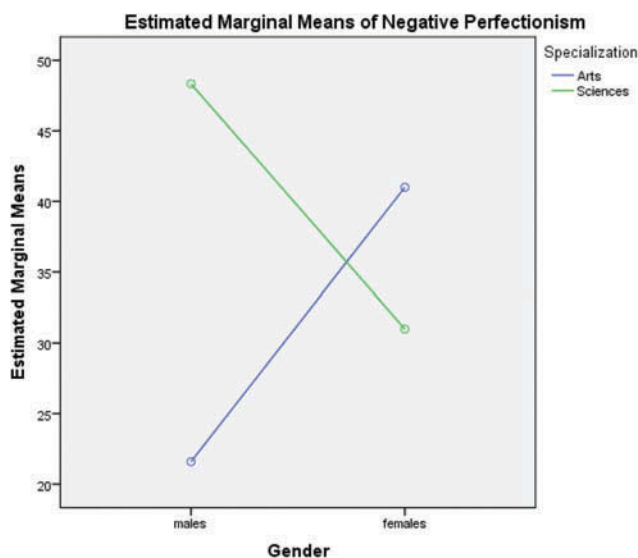
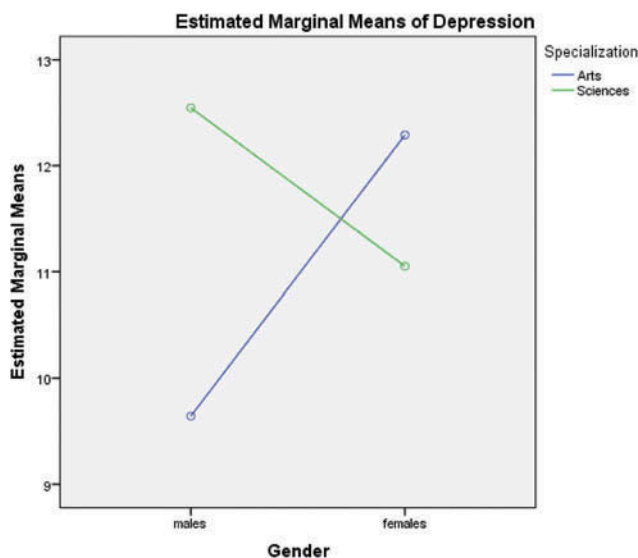


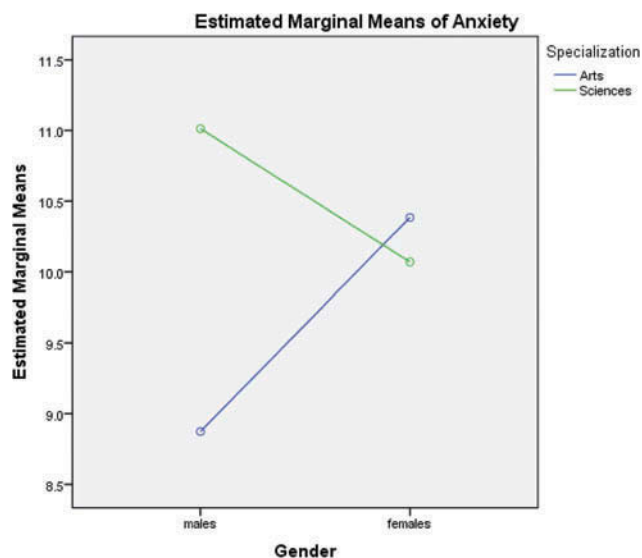
Figure 3. Interaction of gender and specialization with depression



students in the colleges of Arts show an increase over male students in Sciences colleges on the PP scale, while Figure 2 shows that female students in sciences colleges show an increase over male students in same colleges on the NP scale. On the other hand, Figures 3 and 4 show that female students in Sciences colleges showed an increase in male students in the colleges of Arts on the measures of depression and anxiety. These results can also be explained by the fact that all female students from all specializations are higher than male students on the scales of PP, NP, depression, and anxiety.

The results of the interaction that showed in Figures (2, 3) mean that students who have depression at a low level and have a positive perfectionism may be characterized by positive motivation, achievement and success, originally as a result of the positive perfectionism they enjoy (Bell et al., 2010). The continued success together with the positive characteristic of positive will create feelings such as happiness, satisfaction and productivity (Saboonchi & Lundh, 1997).

Figure 4. Interaction of gender and specialization with anxiety



As for Figures 1 and 4 which represent the graphical representation of the interaction results between the negative perfectionism and anxiety, the results showed that students who have high scores on the negative perfectionism factor also have a high degree of anxiety as well. The interpretation of this result may be because they are planning to achieve high standards, difficult to investigate and perhaps unrealistic, and may be dominated by failure to be unable to achieve their goals, causing them to lose hope and thus more feelings of anxiety and depression.

4.1. Conclusion and limitations

Although this study has positive results in the discovering of the psychometric properties of a new measure on the Jordanian environment, and the discovery of its relation to depression, anxiety, and the possibility of opening a new field for other Arab studies in the future. Some limitations must be referred to the students of Jordan for the second semester 2016/2017. It is also not possible to confirm the results of the interactions in Figures 1 and 2 and what is the main cause of negative perfectionism? Is it depression or anxiety? This is in addition to the importance of comparing perfectionism with other personality traits to discover (RPNPS).

Finally, this study has other important recommendations, which are to carry out more Arab countries studies under this subject, especially in relation to conducting studies on inpatient samples and comparing them with normal samples. Moreover, this study can help all people to test their perfectionism as a precaution of depression or anxiety. The results of this study also recommend experimental studies to deal with the symptoms of depression and anxiety through programs based on the theoretical framework of (RPNPS).

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Declaration of interest

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