

Investigating the Relationship between Cognitive Distortions and Academic Stress for Intermediate School Teachers before and during Work

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Abstract

The current study aimed to investigate the correlation between cognitive distortions and academic stress among intermediate school teachers before and during admitting work at Dilam region in Saudi Arabia. The sample comprised of 120 females, with 63 trainee students from Education College, fourth year, and 57 intermediate school teachers with various years of experience. The sample aged from 20 to 23 years for trainee students, and from 30 to 50 years for intermediate school teachers. Cognitive distortions Scale, (Qurashi, 2016) and the Academic Stress Scale (Hussain,2015) were used to assess the major variables of the study. The study adopted a descriptive design to test the correlation between variables. The results showed that teachers of the intermediate stage before and during admitting actual work have moderate cognitive distortions and academic stress level. Analysis of variance showed that no statistically significant difference in cognitive distortions attributed to specialization and that experience was not a significant factor. Futher, interaction between specialization and experience was not significant. Similarly, results implied that there were significant differences between specialization and experience on academic Stress. Also the results indicated that all coefficients were statistically significant. It showed the strong direct correlation between cognitive distortions and academic stress.

Keywords: cognitive distortions; academic stress; intermediate school teachers; specialization

1. Introduction

Cognitive distortions are wrong or rationalized attitudes towards, opinions of, and beliefs in, their own or others' social behaviors. According to Beck (1976) many disorders stem from negative thoughts about themselves, their surroundings, and their future. The cognitive structure in Beck's model was formed mostly for disorders like depression and anxiety (Yavuzer,2015& Wilson et al., 2011). Barriga, Hawkins and Camelia (2008) asserted that cognitive distortions facilitate both internalizing and externalizing behavior, but differentially cognitive distortions of internalizing individuals inaccurately debase the self directly or indirectly, and may contribute to self-harm, whereas cognitive distortions of externalizing individuals have been described mainly as biased processing tendencies, such as attributing hostile intent to others (Finne & Svartda,2017). However, Whisman and Friedman (1998) have stated that interpersonal cognitive distortions would cause problems at interpersonal level and make one avoids other people. (Kalkan, 2012).

Beck (1976) outlined the key cognitive distortions as follows. (1) Arbitrary inference means that a specific conclusion is drawn arbitrarily, for example, when somebody does not call his sick classmate, and the latter concludes that the former has decided not to be friends with the latter any more. (2) Selective abstraction means that the client focuses on some details taken out of context and conceptualizes the whole experience on the basis of that fragment, for example, if one aspect of the day did not go well then, the whole day is seen as a failure. (3) Overgeneralization means to derive a general rule from an isolated incident, for example, if one particular girl does not want to go out with a sick person, the latter deduces that no girl will ever want to go out with him. (4)

Magnification and minimization, sometimes called catastrophizing, mean to over- or under- value the significance of an event, for instance, failing to get promotion, one might conclude that they are not doing good at their job. (5) Labelling means to infer one's whole personal characteristics from one interaction. (6) Personalization means that the client tends to blame themselves, or other persons when things go wrong. (7) Mind reading means to believe that we know what someone is thinking of. (8) Emotional reasoning means to believe that your negative feelings affect the way that a situation really is. (9) Fortune telling means to believe that you know how things are going to turn out. (10) Dichotomous thinking signifies a tendency to place things in opposite categories (e.g. success or failure with no grey area in-between). Although this list has attained validity in that all of us can recognize the cognitive distortions identified, and they are useful clinically, there is no theoretical background to support the categories of cognitive distortions mentioned in this list. No reasons are offered as to why someone should suddenly start to think in a distorted way or where the particular shape of the distortion comes from. Matte Blanco (1988) offered a link between emotions and cognitions and a model which explains why these particular distortions might occur (Sacks, 2007). Alternately, Meichenbaum (1975) suggested that one's internal dialogue is the fundamental mediator of affect and behavior. Finally, it has been postulated that emotional disorders result from maladaptive cognitive processing, manifested by dysfunctional core beliefs and associated cognitive distortions (Rosenfield, 2004).

Academic stress can be defined as the experience of the unpleasant, negative emotions, such as anger, anxiety, tension, frustration, and depression resulting from one's work as a teacher (Kyriacou, 2001; Gowrie et al., 2015). This is the definition I adopted to do this research. Gowrie et al. (2015) showed that the correlation between professional development and curriculum-related stressors. Further, curriculum, personal, professional stressors had the greatest influence on overall student-teachers stress (Gowrie et al., 2015). The findings suggested that there was a strong correlation between professional development, curriculum and assessment-related stressors, and the sampled teachers were of the view that assessment which is followed by curriculum and professional development affected them the most.

Teaching is a highly stressful profession, and many teachers experience serious emotional problems related to the stress of their job. Stress interferes with personal well-being and can weaken one's performance, leading to negative academic and behavioral outcomes for students (Herman et al., 2017).

Bandura (1993) argued that human behavior is influenced by the individual's beliefs regarding two classes of expectations: an outcome expectation (i.e. a person's estimate that a given behavior will lead to certain outcomes), and an efficiency expectation (i.e. the conviction that one can successfully execute the behavior required to produce an outcome). Bandura further noted that teachers who have a high sense of efficacy visualize scenarios that provide positive guides and support for performance. Numerous studies on teacher efficacy (e.g. Skaalvik & Skaalvik, 2007; Gowrie et al., 2015; Herman et al., 2017) have underscored the importance of a positive school environment that helps to reduce stress among both students and teachers. Hussein (2012) displayed the existence of significant passive effect of academic stress on occupational creativity, and the existence of significant passive effect of creative self-efficiency on academic stress.

Baker (1976) noted that the undergraduates are faced with immediate challenges that are the decisions they have to make about the presented career paths in addition to developing and negotiating new relationships, getting novel ideas that challenge their past-learned views, and moving away from home (Nakalema & Ssenyonga, 2014). Struthers et al. (2000) showed that college students faced many challenges in practical education course pursuit of their educational goals. When viewed as negative, these experiences can have an adverse effect on student motivation and performance. Moreover, if prolonged and deemed unmanageable, these experiences lead to academic stress, which endangers students' academic future. By comparison, other students have the ability to successfully withstand the harmful consequences of negative academic experiences. They are easily encouraged following minor setbacks and generally view negative. However, stress among trainee teachers is less well researched (Chaplain, 2008).

Consequently, this study is of much significance to verify the correlation between cognitive distortions and academic stress. Furthermore, this study sheds light on cognitive distortions among intermediate school teachers before and during work in Dilam schools in the Kingdom of Saudi Arabia. The topic under consideration can enrich the psychological scientific content of this phenomenon and its correlation to their academic pressure in addition to revealing the level of cognitive distortions and academic pressures for the intermediate stage teachers before and during work. Moreover, this study discloses the impact of experience and specialization on both cognitive distortions and academic pressure among intermediate school teachers before and during work. The significance of this study lies in focusing on an important class of society (i.e. female Saudi teachers) who constitute the main segment in human societies, and who are responsible for the growth and development of generations. The role played by the

female teachers in Saudi society and Arab societies cannot be overlooked. Thus, it can be noted that this research study is one of the few ones – according to the researcher's knowledge – which is conducted on teachers and students of field practicum at Prince Sattam bin Abdulaziz University. It was absolutely clear to the researcher, through reviewing literature on cognitive distortions and academic stress that there were no local, Arab or foreign studies that have dealt with this correlation (according to the researcher's knowledge), hence, comes up the subject of cognitive distortions and its correlation to academic pressure of intermediate school teachers before and during service in Dilam schools in the Kingdom of Saudi Arabia Saudi.

- [1] What is the level of cognitive distortions among the intermediate school teachers before and during actual work?
- [2] What is the level of academic stress for the teachers of the intermediate school before and during actual work?
- [3] Are there statistically significant differences in terms of cognitive distortions among intermediate school teachers before and during actual work, in terms of specialization (i.e. scientific majors and humanities) and experience (i.e. field practicum, less than 10 years, 10 to 20 years, more than 20 years)?
- [4] Are there statistically significant differences in academic stress among intermediate school teachers before and during actual work, in terms of specialization (scientific majors or humanities) and experience (i.e. field practicum, less than 10 years, 10 to 20 years, and more than 20 years)?
- [5] What is the direction and magnitude of the correlation between cognitive distortions and academic stress among intermediate school teachers before and during actual work?

2. Literature Review

Struthers et al., (2000) aimed to examine the extent to which college students' academic coping style and motivation mediate their academic stress and performance. The study sample included 203 college students. The findings showed that the relationship between college students' academic stress and course grade was influenced by problem-focused coping and motivation but not emotion-focused coping. As expected, greater academic stress co-varied with lower course grades; however, students engaged in problem-focused coping were more likely to be motivated and perform much better than those engaged in emotion-focused coping.

Chaplain (2008) aimed to examine the relationship between stress and psychological distress a group of secondary school trainee teachers. Chaplain determined three specific factors that shape such a relationship; these factors include: managing behavior, workload, and lack of support. The results showed that the differences were assigned among men and women in terms of stress factors and psychological distress. Results also showed that stress is attributed to students' disruptive behavior, and recognition. Occupational stress was found to be a great predictor of psychological distress.

Wilson et al. (2011) aimed to examine which particular cognitive distortions and symptoms of anxiety and depression are correlating with negative problem orientation in a sample of 285 young adults aged 18–25 years. The results showed that cognitive distortions and depressive symptoms were solid indicators in a regression model. The results also revealed that the relationship between cognitive distortions and negative problem orientation was strengthened as depressive symptoms became more severe.

Kalkan (2012) aimed to examine the connection between the problematic use of the internet and individual cognitive distortions amongst university students in a sample of 351 students. The scale of Cognition and Interpersonal Cognitive Distortions has been used to collect data online. Results revealed that a big positive correlation between problem use of the internet and interpersonal rejection, and unrealistic relationship expectations. Results also displayed that the problematic use of the internet was predicted of interpersonal cognitive distortions. Interpersonal repudiation and impracticable relationship expectations were predicted greatly among university students with problematic use of the internet.

Hussein (2012) aimed to identify the causal model of the relationships among teachers' occupational creativity, creative self-efficiency, and academic stress through identifying (a) the effect of creative self-efficiency on teachers' occupational creativity, (b) the effect of academic stress on occupational creativity, and (c) the effect of creative self-efficiency on academic stress. A descriptive method had been used. The research sample included 566 secondary stage teachers in Beni-Surf. Research results showed the existence of a significant positive effect of creative self-efficiency on occupational creativity, the existence of the significant passive effect of academic stress on occupational creativity, and the existence of the significant passive effect of creative self-efficiency on academic stress.

Nakalema and Ssenyonga (2014) aimed to examine the academic stress, study habits, and academic performance of 113 males and 83 female undergraduates of Mbarara University of Science and Technology in Uganda using a cross-sectional survey research design. Findings showed that daily academic hassles were found to be the most stressful while personal problems were reported as the least stressful. First-year students experienced greater academic stress from financial hardships, academic overload/time, and social expectations than the continuing students. The motivation was the most used study habit among the respondents, whereas studying a chapter was the least common study habit among the students. Students at Faculty of Development Studies had better study habits than other faculties/institutes based on grade performance. Age was a significant predictor of having supplementary exams.

Gowrie et al. (2015) aimed to examine student-teacher's perceptions of the most common indicators of stress. It sought, also, to develop separate stress categories and make comparisons among them. The sample of the study comprised 306 student- teachers from two campuses of the University of Trinidad and Tobago – Valsayn and Corinth. There were 36 males and 270 females in the study. Research results showed that there was no significant disparity in teacher stress according to gender. The results also found that a strong relationship between occupation development, curriculum, and evaluation-related stressors.

Yavuzer (2015) aimed to examine the connection between cognitive distortions, self-handicapping tendencies, and self-esteem in a sample of students teaching in a school of education. The sample of the study comprised 507 university students selected through random sampling from a total of 4,720 students who were teaching at Nigde University and Aksaray University, located in central Anatolia in Turkey. Results found that cognitive distortions (i.e. self-criticism, self-blame, hopelessness, and preoccupation with danger), and self-esteem significantly prophesied self-handicapping tendencies. Results also revealed significant findings related to the moderator role of self-esteem on the connection between cognitive distortions and self-handicapping.

Ali et al. (2019) aimed to examine academic and psychological stress among teenagers in the United Arab Emirates, the role of gender, age, depression, and high projections of parents. Results found statistically significant correlations between the total scores and age, gender, and grade. A multiple regression model of the questionnaire as predictors of the revealed that four variables were statistically significant predictors: the history of depression, content with academic achievement, a high academic projection of parents, and parental projections.

3. Methods

3.1 Study Method

The study adopted to achieve its objectives through descriptive research; the questionnaires were conducted electronically for all members of the study sample. Data were collected and analyzed using SPSS 18.0 program to determine the relationships between the cognitive distortions and academic stress for intermediate school teachers before and during work.

3.2 Population

The population of the study consisted of female intermediate school teachers before and during admitting actual jobs at Dilam region in Saudi Arabia. The participants were assured confidentiality of the information provided and the protection of their rights to privacy.

3.3 Study Sample

This descriptive cross-sectional survey was conducted among intermediate school teachers before and during admitting actual work at Dilam region in Saudi Arabia. The sample comprised 120 females, with 63 trainee students from education college, fourth year, and 57 intermediate school teachers with various amount of experience years, aged range from 20 to 23 years for trainee students, and (30-50) years for intermediate school teachers, from September 2019 til March 2020 (there were 8 participants eliminated for incomplete Data).

3.4 Study Tools

Cognitive Distortions Scale (Qurashi,2016) and the Academic Stress Scale (Hussain,2015) were used. Questionnaire details were given below:

3.4.1 Cognitive Distortions Scale

The Cognitive Distortions Scale utilized in this study. It is a questionnaire consisting of 28 items in which the participants are asked to put a checkmark in the blank in front of any item.

Each statement has a 1 to 5 score on a five-point scale Likert type (i.e. was not = 0, rarely = 1, sometimes = 2, often

= 3, usually = 4). Cronbach's coefficient alpha for the questionnaire in general was tested in a sample of 100 participants. The Cronbach's alpha for all participants was (0.934). This score indicates good internal consistency for the cognitive distortions. Correlation coefficients was significant at $p < .001$, then, the construct validity was calculated by measuring the criterion-related validity in case of deleting some items and the following results were obtained.

Table 1. Construct validity via criterion-related validity for cognitive distortions scale

Item-Total Statistics				
Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
R1	81.01	424.265	.564	.932
R2	81.07	425.824	.534	.933
R3	81.06	422.535	.458	.934
R4	81.39	421.266	.547	.932
R5	81.09	413.145	.654	.931
R6	80.96	423.049	.502	.933
R7	81.54	414.062	.653	.931
R8	81.02	415.709	.609	.932
R9	80.94	424.569	.566	.932
R10	81.02	419.692	.628	.931
R11	80.90	417.494	.541	.933
R12	81.62	408.529	.744	.930
R13	81.50	418.765	.542	.932
R14	80.50	435.808	.274	.936
R15	81.75	411.490	.727	.930
R16	81.94	409.543	.711	.930
R17	81.70	411.732	.667	.931
R18	81.53	411.106	.714	.930
R19	81.64	414.419	.647	.931
R20	81.64	422.368	.509	.933
R21	80.83	424.826	.555	.932
R22	80.52	445.380	.116	.937
R23	81.81	407.372	.700	.930
R24	80.48	431.739	.404	.934
R25	81.53	422.832	.537	.932
R26	80.42	444.451	.141	.936
R27	81.35	419.630	.597	.932
R28	81.19	410.187	.692	.930

As shown in Table 1, the values of Cronbach's Alpha in case of deleting one of the items. Further, the values display how each item contributes to the whole score

3.4.2 The Academic Stress Scale

The Academic Stress Scale was utilized in this study. It is a questionnaire consisting of 23 items that comprising 5 dimensions: (1) The frustration subscale (seven items), (2) the struggles subscale (three items), (3) the stress subscale

(four items), (4) change in expertise subscale (three items), and (5) self-binding subscale (six items). The scale was presented to experts to officially evaluate each component as important in measuring academic stress, on a five-point scale Likert type (1 = very irrelevant, 2 = irrelevant, 3 = slightly Relevant, 4 = relevant, 5 = strongly relevant). Cronbach's coefficient alpha for the questionnaire in general was tested in a sample of 100 participants. The Cronbach's alpha for all participants was (0 .906). This score indicates good internal consistency for the Academic Stress. All correlation coefficients were significant at $p < .001$. The construct validity was calculated by measuring the criterion-related validity in case of deleting some items and the following results were obtained (see table 2 below).

Table 2. Construct validity via criterion-related validity for academic stress scale

Item-Total Statistics				
Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
R1	79.86	192.513	.692	.897
R2	79.86	195.530	.680	.898
R3	80.15	194.621	.656	.898
R4	80.61	187.815	.694	.897
R5	80.25	188.156	.758	.895
R6	79.82	196.288	.636	.899
R7	80.06	193.378	.655	.898
R8	79.38	202.271	.606	.900
R9	79.82	197.050	.642	.899
R10	79.63	198.252	.702	.898
R11	79.28	206.490	.399	.904
R12	79.13	208.982	.391	.904
R13	79.19	202.479	.528	.902
R14	79.29	199.308	.647	.899
R15	79.76	200.232	.560	.901
R16	79.71	200.447	.584	.900
R17	79.87	202.823	.438	.904
R18	79.08	217.240	.056	.910
R19	79.16	215.254	.131	.909
R20	79.08	209.833	.345	.905
R21	79.84	203.203	.440	.904
R22	79.07	213.572	.234	.907
R23	79.11	215.590	.116	.909

As shown in Table 2, the values of Cronbach's Alpha in case of deleting one of questionnaire items. Further, the values display how each item contributes to the whole score. Both male and female experts with 15-year-old experience in the area of education and educational psychology. Actually, 11 experts from the Faculties of Psychology and Educational Psychology at Sattam University were invited to participate in this study.

Table 3. (Cronbach's alpha) internal consistency coefficient

No.	questionnaire	Cronbach's alpha internal consistency coefficient
1	Cognitive distortions.	0.934
2	Academic Stress	0.906

Table 4. Cronbach's alpha internal consistency coefficient for the dimensions of the academic Stress scale and the total degree

Domain	Cronbach's Alpha	No. of Items
The frustration	0.922	7
The struggles	0.795	3
The stress	0.736	4
Change in expertise	0.707	3
Self-binding	0.551	6
Academic Stress total degree.	0.906	23

4. Results and Discussion

Data were analyzed using SPSS 18.0 program and were tested for normal distribution to determine the relationship among the means of cognitive distortions, and academic stress scores. Pearson Correlation analysis and ANOVA were employed to analyze the differences of cognitive distortions and academic stress scores. Statistical significance level was considered as $p < 0.05$. The first question this study attempts to investigate is: What is the level of cognitive distortions for the teachers of the intermediate school before and during actual work? To answer question raised above, means and standard deviation of cognitive distortion in addition to experience and specialization are shown in Table 5.

Table 5. Means, standard deviations and correlations among cognitive distortion, experience and specialization (n =120)

Item	Mean	Std. Deviation	Item Rank	Degree of use
R1	3.20	1.097	10	Medium
R2	3.13	1.092	12	Medium
R3	3.13	1.423	13	Medium
R4	2.81	1.259	17	Medium
R5	3.11	1.358	14	Medium
R6	3.24	1.283	8	Medium
R7	2.67	1.324	20	Medium
R8	3.18	1.358	11	Medium
R9	3.25	1.102	7	Medium
R10	3.21	1.173	9	Medium
R11	3.30	1.424	6	Medium
R12	2.58	1.351	22	Medium
R13	2.72	1.365	18	Medium
R14	3.72	1.210	3	high
R15	2.46	1.283	26	Medium
R16	2.26	1.375	28	low
R17	2.50	1.378	25	Medium
R18	2.66	1.325	21	Medium
R19	2.57	1.320	23	Medium
R20	2.55	1.295	24	Medium
R21	3.38	1.086	5	Medium
R22	3.71	.956	4	high
R23	2.39	1.468	27	Medium
R24	3.74	1.081	2	high
R25	2.68	1.203	19	Medium
R26	3.80	.949	1	high
R27	2.85	1.227	16	Medium
R28	3.03	1.387	15	Medium
	83.76	21.360	Total degree	

The scale was divided into three categories ranging from 1 (low score) to 5 (high score):

[1] (1 -2.3) low degree.

[2] (2.31-3.7) medium degree.

[3] (3.71-5) high degree.

As for the total degree, the scale was divided into three categories ranging from the lowest (28) to the highest degree (140):

[1] (28 -65.3) low degree.

[2] (65.31-102.6) medium degree.

[3] (102.61-140) high degree.

As shown in Table 5, item (26) stating (I think that all my decisions must be right) scored the highest mean ($M = 3.8$) and standard deviation ($SD = 0.949$), then item (24) stating (If someone lied to me at once, I would not trust him) rated ($M = 3.74$) and standard deviation ($SD = 1.081$); then item (23) stating (Others will refuse me if I try to enter into a relationship) rated ($M = 2.39$) and standard deviation ($SD = 1.468$); and item (16) stating (The others will reject me if I try to enter into a relationship with them) scored the lowest mean ($M = 2.26$) and standard deviation ($SD = 1.375$). The total mean score was (137,74) and total standard deviation ($SD = 21.36$). This means that the total ($M = 83.76$) which indicates that the general cognitive distortion is moderate. It should be noted that the items (26), (24), and (14) are rated with the highest degree. Items with a moderate degree are (1), (2), (4), (5), (6), (8), (9), (10), (11), (12), (13), (15), (17), (18), (19), (20), (23), (25), (27), and (28). The item that scored the lowest degree is (16).

The second question raised in this research study is “What is the level of Academic Stress for the teachers of the intermediate school before and during actual work?”

Table 6. Means, standard deviations and correlations among academic stress, experience and specialization (n =120)

Item	Mean	Std. Deviation	Item Rank	Degree of use
R1	3.37	1.315	18	Medium
R2	3.37	1.192	17	Medium
R3	3.08	1.271	21	Medium
R4	2.61	1.541	23	Medium
R5	2.97	1.414	22	Medium
R6	3.41	1.220	14	Medium
R7	3.17	1.337	20	Medium
R8	3.85	.950	10	high
R9	3.41	1.170	15	Medium
R10	3.59	1.025	11	high
R11	3.95	1.044	8	high
R12	4.09	.870	5	high
R13	4.03	1.061	7	high
R14	3.94	1.048	9	high
R15	3.47	1.137	13	Medium
R16	3.53	1.084	12	Medium
R17	3.36	1.222	19	Medium
R18	4.15	.923	2	high
R19	4.07	.914	6	high
R20	4.15	.895	3	high
R21	3.39	1.190	16	Medium
R22	4.16	.789	1	high
R23	4.12	.927	4	high
				Dimensions
The frustration.	21.98	7.721	2	high
The struggles.	10.85	2.659	4	Medium
The stress.	16.02	3.013	3	high
Change in expertise.	10.35	2.737	5	Medium
Self-binding.	24.03	3.157	1	high
Medium	83.18	14.765	Total degree	

It should be noted that the scale was divided into three categories ranging from 1 (low score) to 5 (high score):

[1] (1 -2.3) low degree.

[2] (2.31-3.7) medium degree.

[3] (3.71-5) high degree.

As shown in table 6, item (22) stating (I feel that I must find the best solution to my problems) scored the highest mean ($M = 4.16$) and standard deviation ($SD = 0.789$); item (18) stating (I like competition and winning) scored the highest mean ($M = 4.15$) and standard deviation ($SD = 0.923$); item (5) stating (I have daily frustration experiences) scored the medium mean ($M = 2.97$) and standard deviation ($SD = 1.414$); and item (4) stating (I am socially unacceptable) scored the average mean ($M = 2.61$) and standard deviation ($SD = 1.541$). It should be noted that items with the highest degrees included (8), (10), (11), (12), (13), (14), (18), (19), (20), (22), and (23). Items with an average degree included (1), (2), (3), (4), (5), (6), (7), (9), (15), (16), (17), and (21).

The questionnaire has been divided into some dimensions as follows:

The first dimension (i.e. Frustration) consists of seven items ranging from 7 to 35

[1] (7-16.3) low degree.

[2] (16.3-25.6) medium degree.

[3] (25.6-35) high degree.

The mean value of the first dimension is ($M = 21.98$) with a standard deviation of ($SD = 3.013$).

The second dimension (i.e. struggles) consists of three items ranging from 3 to 15.

[1] (3-7) low degree.

[2] (7.1-11) medium degree.

[3] (11.1-15) high degree.

The mean value of the second dimension is ($M = 10.85$) with a standard deviation of ($SD = 3.157$) scoring the highest.

The third dimension (i.e. the stress) consists of four items ranging from 4 to 20

[1] (4-9.3) low degree.

[2] (9.31-14.6) medium degree.

[3] (14.61-20) high degree.

The mean value of the third dimension is ($M = 16.2$) with a standard deviation of ($SD = 3.013$) scoring the highest in use.

The fourth dimension (i.e. Change in expertise subscale) includes three items ranging from 3 to 15

[1] (3-7) low degree.

[2] (7.1-11) medium degree.

[3] (11.1-15) high degree

The mean value of the third dimension is ($M = 10.35$) with a standard deviation of ($SD = 2.737$) scoring the average.

Fifth dimension (i.e. self-binding subscale) consists of six items ranging from 6 to 30.

[1] (6-14) low degree.

[2] (14.1-22) medium degree.

[3] (22.1-30) high degree.

The mean value of the fourth dimension is ($M = 24.03$) with a standard deviation of ($SD = 7.721$) scoring the highest in use.

Total degree ranging from 23 to 115

[1] (23-62.6) low degree.

[2] (62.61-93.2) medium degree.

[3] (93.21-115) high degree.

The mean value of the total degree is ($M = 83.18$) with a standard deviation of ($SD = 14.765$). It indicates that the total degree of academic stress in the sample was medium.

The third question raised in this research study is “Are there statistically significant differences in cognitive distortions between intermediate school teachers before and during actual work in terms of specialization (i.e. scientific majors and humanities) and experience (i.e. field practicum, less than 10 years, 10 to 20 years, and more than 20 years)?

To answer this question, mean and standard deviation were presented for specialization and experience.

Table 7. Means and Standard Deviations

Specialization	experience	Mean	Std. Deviation
scientific disciplines	-practical education	79.00	18.865
	-Less than 10 years	93.10	22.391
	From 10-20 years-	83.88	27.378
	More than 20 years-	94.00	26.851
	-Total	83.52	21.459
Humanities	-practical education	79.69	24.864
	-Less than 10 years	85.46	16.231
	From 10-20 years-	89.50	21.065
	More than 20 years-	86.25	32.613
	-Total	84.42	21.687
Total	-practical education	79.14	20.025
	-Less than 10 years	90.09	20.269
	From 10-20 years-	86.69	23.776
	More than 20 years-	89.57	28.094
	-Total	83.81	21.444

As shown in table 7, one- way ANOVA was conducted to test the impact of cognitive distortions on specialization and experience.

Table 8. One –way ANOVA for specialization and experience in cognitive distortions

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	936.313a	7	133.759	.596	.758
Intercept	432901.424	1	432901.424	1929.145	.000
specialization	.058	1	.058	.000	.987
experience	508.237	3	169.412	.755	.522
Specialization* experience	124.166	3	41.389	.184	.907
Error	24908.477	111	224.401		
Total	847629.000	119			
Corrected Total	25844.790	118			

a. R Squared = .036 (Adjusted R Squared = -.025)

As shown in table 8, an analysis of variance showed that there were no statistically significant differences in cognitive distortions attributed to specialization as they were rated $F(0.171)$, $P=0.68$; and the effect of experience was not significant, $F(1.544)$, $P=0.207$. Regarding the interaction between specialization and experience, there were no statistically significant differences, $F(0.449)$, $P=0.718$.

The fourth question raised in this research study is “Are there statistically significant differences in academic stress between intermediate stage teachers before and during actual work in terms of specialization (i.e. scientific majors

and humanities) and experience (field training, less than 10 years, 10 to 20 years, and more than 20 years)? To answer this question, mean and standard deviation were presented for specialization and experience.

Table 9. Means and Standard Deviations

Specialization	Experience	Mean	Std. Deviation
scientific disciplines	-practical education	80.36	15.136
	-Less than 10 years	86.85	15.766
	From 10-20 years-	82.25	20.084
	More than 20 years-	88.67	16.743
	-Total	82.46	15.833
Humanities	-practical education	82.23	11.300
	-Less than 10 years	85.77	10.125
	From 10-20 years-	86.13	15.707
	More than 20 years-	84.25	19.033
	-Total	84.47	12.396
Total	-practical education	80.75	14.365
	-Less than 10 years	86.42	13.650
	From 10-20 years-	84.19	17.532
	More than 20 years-	86.14	16.737
	-Total	83.10	14.799

As shown in Table 9, One- way between subject's ANOVA test was conducted to examine the effect of academic stress on specialization (i.e. scientific majors and humanities) and experience (i.e. field practicum, less than 10 years, 10 to 20 years, and more than 20 years).

Table 10. One –way ANOVA for specialization and experience in academic Stress

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	936.313a	7	133.759	.596	.758
Intercept	432901.424	1	432901.424	1929.145	.000
Specialization	.058	1	.058	.000	.987
Experience	508.237	3	169.412	.755	.522
Specialization* experience	124.166	3	41.389	.184	.907
Error	24908.477	111	224.401		
Total	847629.000	119			
Corrected Total	25844.790	118			

a. R Squared = .036 (Adjusted R Squared = -.025)

As shown in table 10, an analysis of variance showed that there were no statistically significant differences in academic stress attributed to specialization with $F(0.00)$ and $P = 0.987$. The effect of experience was not statistically significant with $F(0.755)$ and $P=0.522$. The interaction between specialization and experience was not significant with $F(0.184)$ and $P=0.907$. Overall, the results showed that there were no significant differences in specialization, experience and interaction between them on academic stress.

The final question raised in this study is “What is the direction and magnitude of the correlation between cognitive distortions and academic stress among intermediate stage teachers before and during actual work?” To answer this question, correlation coefficient for sample responses ($N=120$) was calculated on the cognitive distortions and dimensions of academic stress scales.

Table 11. Correlations between dimensions and the total score for the scales (N=120)

		The total score for the cognitive distortions scale.	The total score for academic stress.	The frustration .	The struggles.	The stress.	Change in expertise.	Self-binding.
The total score for the cognitive distortions scale.	Pearson Correlation	1	.789**	.712**	.685**	.494**	.565**	.421**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	120	120	119	120	120	120	120

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

As shown in table 11, the highest convergence occurring between cognitive distortions and academic stress was ($R=0.789$) and $P=0.00$; it implies that there is a strong direct correlation between cognitive distortions and academic stress dimensions.

The frustration (i.e. the first dimension) and cognitive distortions scored ($R=.712$); the struggles (i.e. the second dimension) and cognitive distortions rated ($R=.685$); the stress (i.e. the third dimension) and cognitive distortions recorded ($R=.494$); change in expertise (i.e. the fourth dimension) and cognitive distortions rated ($R=.565$); self-binding (i.e. fifth dimension) and cognitive distortions rated ($R=.421$). Results indicated that coefficients of all dimensions were statistically significant ($\alpha=0.01$) ranging from .421 to .712. It shows the strong direct correlation with cognitive distortions.

5. Discussion

The study results displayed that the level of cognitive distortions among intermediate school teachers before and during work was moderate. The results of the study were in accordance with the results of Alqrashi (2016) and El-Assar (2015). The results revealed that the level of cognitive distortions is generally average among the participants. Academic stress among intermediate school teachers before and during work was reported at an average level. The researcher attributed this result to the fact that female teachers may perceive academic pressures as challenges that must be faced, and think in a systematic way to overcome these obstacles instead of regarding them as risks or threats that must be evaded. The researcher also believes that the more the teacher realizes that he/she has the self-efficacy to deal with stressful academic situations, the lower his/her level of vulnerability to academic pressure (Pajares, 2002; Skaalvik & Skaalvik, 2007).

The results also clearly indicated the absence of statistically significant differences attributed to specialization, experience and interaction between them on cognitive distortions. The results of the study are consistent with the Raslan (2011), Ahmed (2014), and Alqrashi (2016) which indicated that there are no statistically significant differences in cognitive distortions due to specialization. The results also indicated the absence of statistically significant differences attributed to specialization, experience and interaction between them on academic pressures. The results are consistent with Al-Mamari (2014) that stressed the absence of statistically significant differences attributed to experience, but the results of the study are not in accordance with Hamaideh (2009) that showed the presence of statistically significant differences attributed to specialization in favor of teachers with medium experience. It also reported the absence of significant differences in cognitive distortions and academic pressures due to specialization, experience and interaction between them. The researcher conceives that it is due to the intermediate stage teachers before and during the work of the same gender, culture and contexts in which the teaching process takes place. It means that the intermediate school teachers will respond in the same way in the academic pressure.

The study results also showed that all the parameters of the five dimensions of academic stress reported a statistically significant correlation at ($0.01 = \alpha$) positively with the scale of cognitive distortions. Through my review of the concerned literature, no research studies support or oppose this finding. The researcher attributed this result to the fact that the greater the cognitive distortions of intermediate school teachers before and during work, the greater the academic pressures they have, and to the fact that the academic pressures are the result of the presence of false distorted patterns and beliefs they have about their awareness of environmental situations and events. Furthermore, the low level of cognitive distortions is due to a high level of mental health, self-efficacy and skills to deal with life experiences, all of which impact the way of thinking and dealing with events and stressful academic experiences (S. Hussein & T. Hussein, 2006).

6. Conclusion

Based on the previously mentioned results, it can be inferred that the level of cognitive distortions and academic stress among intermediate school teachers before and during the work is average. Purview, experience, and the interaction between them do not affect the cognitive distortions and academic stress. In case cognitive distortions are low, academic stresses are also low, and vice versa. Based on these conclusions, the researcher recommends studying cognitive distortions and their correlation with the academic pressures of all teachers (males and females) and to all levels of education in the Kingdom of Saudi Arabia because of their significance, as the study was limited to females only and to the intermediate schools in the Dilam region. Moreover, the researcher recommended the use of different methods to acquaint teachers with ways that help them to face the academic pressures to which they are exposed to, so that we can increase their professional creativity by designing the necessary programs to reduce the level of cognitive distortions severity. Attention should be paid to designing adaptive cognitive schemes and their inclusion in the curricula offered by colleges of education to increase the level of knowledge awareness for teachers, which can lead to a decrease in the level of academic pressure encountering them.

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