




THE LEVEL OF BEHAVIOR MODIFICATION TECHNIQUES UTILIZED BY ACADEMIC ADVISORS IN PUBLIC ELEMENTARY SCHOOLS

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ABSTRACT

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The current study aims to identify the level of behavior modification techniques utilized by academic advisors among elementary students of public schools in the city of Mecca, Saudi Arabia, according to years of experience and specialization. The descriptive survey approach was applied to (30) intentionally selected academic advisors through purposive sampling technique. The researcher prepared a 39-item scale comprising (3) domains, i.e. Cognitive, Action, and Evaluation domains. The study results indicated a high degree of utilizing the Cognitive domain of behavior modification by academic advisors, followed by the Action and the Evaluation domains, respectively. In terms of behavior modification techniques utilized by academic advisors, artificial reinforcement was ranked first, while punishment was ranked last. Moreover, there were no statistically significant differences in the participants' responses attributed to years of experience or specialization in all domains. The study recommends boosting cooperation between school administrations and academic advisors to develop and implement behavior modification plans based on student behavior evaluation and appropriate modification techniques.

Contribution/Originality: This study is a pioneering attempt to establish a relationship between school management and academic advisors with the objective to design and implement behavior modification plans among the elementary students of public schools. For this purpose, this study relied upon student behavior evaluation and appropriate modification techniques.

1. INTRODUCTION

Psychologists have emphasized that most emotional disturbances begin in childhood, where children may face very serious psychological issues such as anxiety, anger, jealousy, shyness, and low self-confidence as well as behavioral issues such as aggression, theft, lying, bullying, and school phobia. Cases of severe disorders may require the intervention of a specialist who can handle the impact of these disorders on the child and its classmates. A qualified academic advisor can play this role by dealing with or reducing various types of behavioral problems. Counseling is no longer an art or practice, but a science applied within educational institutions (Atoum & Ibrahim, 2016).

The academic advisor is an essential pillar of the educational process who represents a significant behavioral paradigm that embodies the socially desirable values, principles, and morals and which boosts student motivation towards learning. As emphasized by Al-Awaidi (2018), educators agree that the academic advisor is integral to the

educational environment since s/he influences the behavior and personality of students throughout good educational situations.

In the field of counseling, behavior modification programs and services get much attention, because they ensure giving proper care to students by upgrading desirable behavior and modifying undesirable behavior in line with students' attitudes and intentions. To accomplish the goals of educational process, both the academic advisor and the instructor need to practice and implement certain techniques that ensure the results of behavior modification inside a school (Al-Baraghathi, 2013).

Several behavior modification techniques are successfully utilized in educational systems of developed countries. These techniques provide specialists with important information about how to deal with children on scientific bases. Educational psychologists believe that in the past most academic advisors had insufficient experience of behavior modification techniques, however; today they are taught only to education practitioners due to their proven effectiveness in dealing with children (Al-Zahir, 2004).

1.1. Statement of the Problem

Most parents, academic advisors and teachers have observed that children face behavioral or emotional disorders because of biological, environmental, or social pressures. In most cases, these disorders are accidental and they suddenly vanish. But in other cases, they prolong as a manifestation of aberrant behavior and interfere with the child's normal development (Muammrah, 2009).

Rambha (2011) confirmed that behavioral and emotional problems are more prevalent among female teenagers than males in all age categories, which illustrates the differences of problems detected in various educational stages.

Al-Baraghathi (2013) indicated a weakness among elementary school teachers in using behavior modification techniques while dealing with behavioral problems, especially aggressive behavior. The study also referred to teachers' inability to handle these problems, which were transferred to the academic advisor continuously.

Al-Mahrag (2011) concluded that there are different types of student problems in the varied educational stages. Psychological problems are more prevalent in elementary and middle schools than secondary school, while moral problems are more prevalent in middle and secondary schools. Therefore, it is important to identify the degree of knowledge of behavior modification techniques among academic advisors and to provide them with the techniques appropriate to correct undesirable behaviors among students (Al-Zarea, 2012).

Human behavior cannot be changed by passive listening to guidance, advice, and preaching. But and as indicated by Abu and Deeb (2009) real behavior modification and attitude change remains limited, unless it is linked to behavioral actions and patterns that continue for long periods and are supported by the surrounding environment. Thus, by ensuring frequency and stability, human behavior slowly turns into habits (2009).

The problem of the current study was formulated in the following main question: What is the level of behavior modification techniques utilized by academic advisors among public elementary school students in Mecca?

The following sub-questions were derived:

1. Are there statistically significant differences in behavior modification techniques utilized by academic advisors among public elementary school students in Mecca due to years of experience?
2. Are there statistically significant differences in behavior modification techniques utilized by academic advisors among public elementary school students in Mecca due to specialization?

1.2. Objectives

The current study aims to identify the level of behavior modification techniques utilized by academic advisors among public elementary school students in Mecca, Saudi Arabia. It explores the most frequently utilized techniques by academic advisors for modifying the behavior of elementary students in Mecca. It also seeks to highlight differences in the behavior modification techniques utilized by academic advisors among public

elementary school students due to years of experience. Finally, it identifies differences in the behavior modification techniques utilized by academic advisors among public elementary school students due to specialization.

1.3. Significance

From a theoretical perspective, the current study is of great significance since it conceptualizes the need for adopting behavior modification techniques in student counseling. It also studies the extent of practicing behavior modification among elementary students. Personnel in charge of counseling can benefit from the study recommendations with reference to the utilization of behavior modification techniques in student counseling. In practice, the study conclusions may help in developing counseling and training programs in the field of behavior modification to provide academic advisors with the necessary expertise. In the current study, the researchers developed a construct to scale the level of behavior modification techniques utilized by academic advisors.

1.4. Terms

Behavior modification: It is the method or the approach adopted by the teacher for enhancing the desirable behaviors, reducing the undesirable behaviors, or building new behaviors among elementary students. It comprises reinforcement, punishment, stimulation, modeling, extinction, shaping, excessive correction, and behavioral contracting. It is the degree obtained by the participant on the scale of the level of behavior modification techniques utilized by academic advisors, ranging from very weak to very high level.

Techniques of behavior modification can be procedurally defined as follows:

Reinforcement: It indicates the occurrence of positive consequences or the removal of negative consequences following the behavior, so it increases the possibility of repeating such behavior in similar situations in the future (Al-Khatib, 2014).

Punishment: A measure aimed at reducing the possibility of repeating the behavior in similar situations in the future. There are two degrees of punishment:

- First-degree punishment: by exposing the grounded to repulsive stimuli.
- Second-degree punishment: by depriving the grounded of the reinforcement directly after the behavior (Al-Khatib, 2014).

Modeling: A learning process aimed at changing the individuals' behavioral patterns or acquiring new behavioral patterns by observing, listening, or reading about the behavior of others (Damrah, Amira, & Asha, 2007).

Extinction: stopping or canceling reinforcements that have been following unacceptable behavior in the past and also have been maintaining its continuity (Al-Khatib, 2014).

Shaping: promoting the behavior that is gradually approaching the desirable behavior or the baby steps that facilitate it (Saad, 2011).

Behavioral Contracting: It is a regular use of reinforcement in order to facilitate the process of mastering and acquiring the targeted behavior, or reducing the undesired one (Damrah et al., 2007).

Behavioral contract: It is a documented agreement between the therapist and anyone in charge of the individual or the individual himself, which clarifies the behavior desired to be acquired and explains the rewards or the reinforcers that the individual will get (Damrah et al., 2007).

Academic advisor: The person appointed by the Ministry of Education and has a specialization in Psychology, Sociology, or Social Work. An academic advisor should be qualified to help the academic advisors in schools in order to achieve good social adaptation inside and outside the school.

1.5. Limitations

Objective limitations: It is confined to behavioral modification techniques utilized by academic advisors.

Spatial limitations: It is confined to Saudi Arabia, the city of Mecca, public elementary schools.

Temporal limitations: It focuses only on the academic year 2018/2019.

Human limitations: The sample is limited to academic advisors in public elementary schools with a specialization in Psychology, Sociology, or Social Work, they were intentionally selected from (100) academic advisors with varied specializations.

2. THEORETICAL FRAMEWORK

Counseling is a technical process with specific basics, rules, tools and techniques. Therefore, a counselor should get sufficient academic study and practical training to master this profession and enhance appropriate positive performance by providing objective and scientific guidance for individuals. Counseling thus helps the individual to identify himself/herself, to learn about the surrounding environment, and understand the relationship between the self and the environment. It is essential to have professional academic advisors to assist students who come forward to seek academic advice (Al-Saddi & Ibrahim, 2003).

Therefore, it is essential to prepare academic advisor by providing him/her with a broad scientific knowledge about varied humanities courses, especially Psychology, Sociology, and health, in addition to a comprehensive study of the counseling profession pertaining to its nature, philosophy, principles, techniques, processes, and ethics. Further, practical training under institutional supervision is also essential since it provides the advisor with the practical experience, enabling him/her to link theory to practice and to acquire the basic skills required (Skinner & Kristonis, 2008).

The academic advisor needs to deal with students according to their needs, problems, adaptation aspects, and plans. Therefore, the academic advisor should be able to understand the behavior of students and their surrounding environment and to have sensitivity to student's manifestations. The ability to analyze student's environment in relation to his/her present and future is of great significance in counseling services (Abdulaziz & Alawi, 2004).

Field studies in the Arab world show that there is an urgent need to include counseling services in modern schools and at different educational stages. Counseling is an educational and social pillar for the development of the educational system and the learner's personality since it helps overcome school problems, specifically those relevant to low-achievers and students with disabilities. The academic guide can help students deal with their growing-up changes, shape their behaviors and values inside and outside the school, overcome the obstacles that may hinder their achievement, and enhance their adaptation (Al-Khawaja, 2002).

Due to its prevalence in almost every educational institution, educators show more concern about problematic behaviors and behavior modification techniques. Behavior modification is a set of procedures utilized to alter any behavior in any situation (Al-Khatib, 2014). It is a scientific approach devoted for dealing with problematic behaviors. Moreover, analyzing and modifying behavior is based on the relationship between the behavior and its consequences, i.e. negative consequences reduces the behavior in the future, while positive consequences increases it (Al-Khatib, 2014).

Reinforcement is another most common techniques utilized to increase the desirable behavior contingency. As defined by Al-Khatib (2003) reinforcement is the action of increasing the positive consequences or decreasing the negative consequences of the desirable behavior resulting in a higher frequency of that behavior in future. There are many types of reinforcers, including physical reinforcers such as toys and photos; artificial reinforcers such as points, stars, and coupons; nutritional reinforcers such as preferred food and drink; social reinforcers such as smile, kissing and praise; activation reinforcers which include the individual's preferred activities, and so on (Saad, 2011).

Other techniques of behavior modification comprise modeling, shaping, and instruction, which can be in therapeutic intervention for instilling new behaviors. Through modeling, the individual intentionally or unintentionally acquires behaviors by observing parents, friends, teachers, or celebrities. Modeling is an essential

part of behavior modification programs. It is based on the assumption that people can learn by regularly watching and observing of the behavioral models conducted by others (Abu., 2015).

Al-Khatib (2008) defines shaping behavior as a continual positive reinforcement of responses that successively approximate the final target behavior. It thus increases the frequency of a novel behavior, which previously has a zero to low existence, and further enhances and predicts its relevant conduct.

Instruction is necessary during the initial training that intends to help people acquire new behaviors. It includes verbal instruction i.e. giving verbal instructions; gestural instruction i.e. using signs, eye contact, or body movement; and physical instruction i.e. to physically help the individual do a certain behavior.

Techniques for reducing the future frequency of undesirable behaviors include punishment, extinction, and response cost. Positive punishment is the presentation of aversive stimuli directly following the behavior. Negative punishment is the removal of desirable stimuli directly following the behavior (Al-Khatib, 2014).

According to Peter (2010) extinction means the withdrawal of positive reinforcers for a specified period directly after the behavior. Procedures of extinction include putting the child away from the reinforcing environment by isolation in a special room without reinforcement, called the extinction room. It may also occur by not providing the reinforcer for a specific time after the undesirable behavior.

Response cost contributes to eliminating an unacceptable behavior by withdrawing desirable stimuli, for example; when a student hits a peer, he may lose a number of desirable stimuli (Al-Zahir, 2004).

According to Zelizer (2000) behavior modification techniques used in elementary education include: traditional techniques and modern techniques. Traditional techniques refer to those methods that alienate students from school or any element of the school environment, comprising physical punishment, such as beating; or psychological punishment, such as discounting marks, detention, extra assignments, reprimand, or warning. Modern techniques are the psychological methods used for dealing with negative behavior, including overlooking or disregarding some aberrant behaviors that may not cause any harm, and deprivation i.e. preventing the student from engagement in favorite activities.

The author argues that elementary students of public schools need special counseling skills to understand them based on their framework and behaviors. This role can be done by the academic advisors who establish a simple understanding with the students and encourage them to have successful counseling skills, especially concerning behavior modification. The author prepared a scale comprising (3) domains, i.e. the Cognitive, Action, and Evaluation domains among the academic advisors to identify their ability to use the methods and techniques of behavior modification among elementary students of public schools in Mecca, Saudi Arabia.

3. LITERATURE REVIEW

Al-Bishri (2004) revealed the role played by the academic advisor in reducing school violence and identified its manifestations and causes. Using the descriptive approach, a questionnaire was administered to (133) academic advisors of middle and high schools. The study highlighted the significance of cooperation between administrators and teachers for improving the educational process and decreasing the prevalent undesirable behaviors such as extremism to a certain club or team, writing bad items on walls, and bullying.

Al-Otaibi (2010) used the survey and a questionnaire to investigate the contribution of the academic advisor in the treatment of problematic behavioral in middle school. According to the study results, the implementation of guidance and counseling programs and services faces many challenges such as low funding, the insufficient ratio of academic advisors to students, weak home-school communication, and the lack of professional academic advisors.

White and Kelly (2010) identified the role played by academic advisors to decrease dropout and highlighted both risk and flexibility factors that may affect the student's decision to stop studying. They also suggested some supportive strategies for academic advisors to address the problem of dropout.

Takrouni (2012) adopted the descriptive approach to identify the contribution of academic advisors in developing the personalities of elementary student and the main techniques they employ. The results demonstrated that role model, good advice, dialogue, persuasion, proverb striking, education through events, invitation and intimidation, and stories are the main techniques employed. The study confirmed the contribution of the academic advisor in developing many aspects of students' personalities.

In order to identify behavior modification techniques adopted by secondary school teachers, Abu and Deeb (2009) applied the descriptive analytical approach and a questionnaire to 212 principals and educational supervisors in Gaza district. The results showed a variety of behavior modifying techniques adopted by the teachers. Further, there were statistically significant differences in the degree of using behavior modification techniques due to profession and gender, in favor of principals and females.

Abu Al-Basel (2013) explored behavior modification-based programs and plans adopted by academic advisors in public schools. A questionnaire for measuring behaviors modification strategies was developed and administered to (80) academic advisors. Using the descriptive analytical approach, the results showed that the participants possessed a high level of knowledge about behavior modification. There were no statistically significant differences in the degree of knowledge of behavior modification strategies due to gender. There were however statistically significant differences in the degree of knowledge of behavior modification strategies due to years of experience, in favor of ten years and more.

With reference to using reinforcement as a behavior modification technique, Narges, Abkenar, Ashoori, and Mirzamani (2014) compared the effectiveness of tangible reinforcers and social reinforcers in academic achievement in Science among eighth graders with intellectual disabilities. The Wechsler test as well as a Science achievement scale were applied to a sample of (45) students with intellectual disabilities. The results found a statistically significant difference in the mean achievement, in favor of the group to which the physical reinforcers were applied. It concluded that the use of physical and social reinforcers in classrooms made a positive impact on academic progress among students with mental disabilities.

Al-Saddi. (2016) aimed at identifying reinforcement and punishment techniques adopted by teachers in modifying the behavior of elementary students. The descriptive exploratory approach and a questionnaire were applied to (230) teachers. The results showed that common punishment methods included calling the guardian, reprimanding, and standing during the class, while common reinforcement methods were smiling, applause, showing off high marks, giving extra marks for good conduct, and using artificial reinforcers.

4. COMMENT ON THE LITERATURE REVIEW

In the light of the above literature review, we conclude that the current study is the first Arabic study to examine the level of behavior modification techniques utilized by academic advisors among elementary students. The elementary stage was selected for this study since it is critical for the formation of the child's personality. Previous studies have emphasized the importance of using behavior modification strategies for the treatment of negative and aggressive behaviors among students. The use of appropriate procedures helps effectively in instilling desirable behaviors and changing undesirable behaviors. As most relevant studies, we adopted the descriptive approach and prepared a scale as the study tool. However, the sample selected for the current study, i.e. academic advisors, is different from the samples of the previous studies.

5. METHODOLOGY AND PROCEDURES

5.1. Method

The descriptive survey was adopted to identify the level of behavior modification techniques utilized by academic advisors among elementary students in the city of Mecca. The descriptive approach is appropriate for

collecting, classifying and tabulating data and facts to obtain significant conclusions and reach generalizations regarding the phenomenon under study.

5.2. Sample

The study sample consists of (30) academic advisors in public elementary schools, specialized in Psychology, Sociology, or Social Work. They were selected through purposive sampling from (100) academic advisors from public elementary schools in Mecca. Table 1 and Table 2 illustrate the demographic distribution of the participants.

Table-1. Sample distribution according to specialization.

S.	Specialization	Frequency	Percentage
1	Psychology	4	13.3%
2	social work	19	63.4%
3	Sociology	7	23.3%
Total		30	100%

Table-2. Sample distribution according to years of experience.

S.	Years of Experience	Frequency	Percentage
1	1-3	5	16.7%
2	4-6	14	46.6%
3	7-9	2	6.7%
4	10 and above	9	30.0%
Total		30	100%

5.3. Tool

After reviewing the relevant literature, such as Al-Zarea (2016) and Al-Khatib (2004) the researchers constructed a scale for measuring behavior modification techniques utilized by academic advisors. It aimed at identifying the level of behavior modification techniques utilized by academic advisors among public elementary school students in Mecca.

The initial form of the scale comprised of two main sections. The first section included preliminary data about the participants, i.e. specialization and years of experience. The second section included (42) items distributed to three domains: the cognitive domain with (12) items, the action domain with (19) items, and the evaluation domain with (11) items .

Table-3. Pearson correlation coefficients between each item score and the domain total score (N= 10).

I. Cognitive domain					
Item	Correlation coefficient	Item	Correlation coefficient	Item	Correlation coefficient
1	0.87**	5	0.82**	9	0.70*
2	0.66**	6	0.80**	10	0.77**
3	0.87**	7	0.71**	11	0.73**
4	0.64**	8	0.80**	12	0.71**
II. Action domain					
13	0.74**	19	0.64**	25	0.88**
14	0.73*	20	0.87**	26	0.80**
15	0.78**	21	0.87**	27	0.70**
16	0.85**	22	0.74**	28	0.88**
17	0.88**	23	0.78**		
18	0.73**	24	0.74**		
III. Evaluation domain					
29	0.82**	33	0.73**	37	0.86**
30	0.85**	34	0.81**	38	0.89**
31	0.89**	35	0.76**	39	0.86**
32	0.89**	36	0.76**		

Note: ** statistically significant at the level of (0.01).

To verify its psychometric properties, the scale validity and reliability were calculated, as follows:

Validity: The initial form of the scale was submitted to (4) examiners specialized in Psychology and Special Education. In light of their suggestions, some items were reformulated, deleted, or merged to better suit the purpose of the study. The construct validity was calculated according to the responses of the pilot sample consisting of (10) academic advisors. Pearson correlation coefficients between the score of each item and the total score of the domain were displayed in Table 3.

Table 3 illustrates that the correlation coefficients between the items and its domain total score are all statistically significant at the level of (0.01). It indicates a high degree of internal consistency of the items of the scale domains.

To verify the construct validity of the scale domains, the correlation coefficients between the total score of each domain and the total score of the scale are obtained as showed in Table 4.

Table-4. Correlation coefficients between each domain total score and the scale total score.

S.	Domain	Correlation coefficients
1	Cognitive	**0.72
2	Action	**0.96
3	Evaluation	**0.92

Note: ** statistically significant at the level of (0.01).

It shows high correlation coefficients of the domains of the scale, ranging from (0.72-0.96), i.e. statistically significant at the level of (0.01). It thus indicates a high degree of the construct validity of the domains of the scale.

Reliability: To verify the scale reliability, Cronbach's Alpha coefficients of the scale domains were obtained and illustrated in the following table:

Table-5. Cronbach's Alpha coefficients for the scale domains.

S.	Domain	Items	Cronbach's Alpha
1	Cognitive	12	0.98
2	Action	16	0.86
3	Evaluation	11	0.88
Total		39	0.92

Table 5 indicates high reliability coefficients of the scale domains, ranging from (0.86-0.98). The total reliability coefficient for the scale domains reached (0.92), verifying the scale validity and reliability for application. The final form of the scale consisted of (39) items with three domains: the cognitive domain with (12) items, the action domain with (16) items, and the evaluation domain with (11) items.

Correction: A five-point Likert scale (Never - Rarely - Sometimes - Often - Always) was adopted to identify the level of behavior modification techniques utilized by academic advisors among elementary students in Mecca's public schools. The correction key for responses to each item and domain obtained were : From 1 to less than 1.8 got (Very Weak), from 1.8 to less than 2.6 obtained (Weak), from 2.6 to less than 3.4 received (Medium), from 3.4 to less than 4.2 obtained (High), and from 4.2 to less than 5 got (Very High).

6. RESULTS & DISCUSSION

To answer the main question: What is the level of behavior modification techniques utilized by academic advisors among public elementary school students in Mecca? The arithmetic mean and the standard deviation for each domain of the scale were calculated. Then, the domains were ranked in a descending order according to the obtained arithmetic mean, as demonstrated in Table 5.

Table-6. Means and standard deviation for participants' responses to the scale of behavior modification techniques utilized among public elementary school students in Mecca.

S.	Domain	Mean	Standard Deviation	Response Degree	Rank
1	Cognitive	4.29	0.62	Very High	First
2	Action	3.99	0.69	High	Second
3	Evaluation	3.94	0.69	High	Third
Total		4.07	0.59	High	

Table 6 Demonstrates that the behavior modification techniques utilized by academic advisors in public elementary schools got high score, from the participants' viewpoint. The total scale mean was (4.07) with a standard deviation of (0.59). The standard deviations for the scale domains ranged from (0.62-0.69), i.e. low values indicating the convergence of the opinions of the sample regarding those domains.

The first domain, i.e. the cognitive domain, ranked first with (4.29) mean and a standard deviation (0.62). It was followed by the action domain with a mean of (3.99) and a standard deviation of (0.69). The third domain, the evaluation domain, ranked last with a mean of (3.94) and a standard deviation of (0.69).

Accordingly, academic advisors have a lot of knowledge of the procedures of behavior modification. Thus, they have a good chance to modify the undesirable behavior. As asserted by Al-Jarbou (2005) behavior modification is a major focus of guidance since its programs and services aimed at providing proper care and behavior promotion for students.

In the following section, we present the results of each domain of the scale to identify the level of behavior modification techniques utilized by academic advisors among elementary school students in Mecca from academic advisors' viewpoint.

6.1. Cognitive Domain

For the Cognitive domain, the arithmetic mean and the standard deviation were calculated and arranged in a descending order as shown in Table 7.

Table-7. Arithmetic means and standard deviations of the participants' responses to the level of utilizing the cognitive domain.

No.	Item	Mean	Standard deviation	Order	Response degree
8	I can identify desirable and undesirable behaviors	4.63	0.67	1	very high
12	I know the techniques of behavior modification (reinforcement, punishment, instruction, modeling, etc.)	4.63	0.77	2	very high
2	I can list the behavioral problems	4.47	0.82	3	very high
1	I know which target behavior affects the educational process	4.37	0.81	4	very high
3	I can prioritize behavioral problems	4.33	0.89	5	very high
6	I know how to set up the goals of behavior modification plan	4.27	0.87	6	very high
4	I know the procedural definition of the problem	4.23	1.14	7	very high
7	I know different techniques for behavior measure	4.20	0.96	8	very high
11	I know the procedures for shaping the desirable behavior	4.17	1.09	9	high
10	I know the procedures for reducing the undesirable behavior	4.13	1.11	10	high
5	I know the scientific definition of the problem	4.07	1.08	11	high
9	I know the procedures for increasing the desirable behavior	4.03	1.07	12	high
Total score of the first domain		4.29	0.62	-	high

According to [Table 7](#) the degree of utilizing the cognitive domain in modifying the behavior of elementary students by academic advisors is very high, from the participants' viewpoint. The grand mean for the first domain is (4.29) with a standard deviation (0.62). The standard deviations for the first domain items ranged between (0.62-0.96). These low values indicate the convergence of the opinions of the sample regarding these items.

This result may be attributed to the participants' belief that the fundamental rule for reducing undesirable behavior is knowledge and awareness of all aspects of the behavioral problem. In the same vein, [Abu Al-Basel \(2013\)](#) concluded that there is a high level of knowledge of behavior modification among academic advisors. Moreover, most of the participants are interested in applying different techniques of measuring behavior and acquiring knowledge about modern scientific and practical techniques of behavior modification. To achieve the goal of improving students' behavior, behavior modification techniques have become among the regular courses taught in the colleges of education ([Al-Zahir, 2004](#)).

6.2. The Action Domain

To identify the level of utilizing the Action domain in modifying the behavior of elementary students by academic advisors in Mecca, the arithmetic mean and the standard deviation were calculated for each item of the second domain and arranged in a descending order as shown in [Table 8](#).

Table-8. Arithmetic means and standard deviations for the participants' responses to the action domain.

No.	Item	Mean	Standard Deviation	Order	Response Degree
13	I define the target behavior	4.47	0.86	1	very high
17	I use artificial reinforcers like points & coupons	4.33	0.88	2	very high
22	I teach the student how to do things as I did (modeling)	4.33	0.96	3	very high
14	I procedurally define the behavior	4.23	1.04	4	very high
18	I use physical reinforcers like stamps & toys	4.20	0.93	5	very high
15	I measure the behavior in terms of (duration - intensity - frequency)	4.10	1.24	6	high
16	I use nutritional reinforcers like favored food (positive reinforcement)	4.07	0.98	7	high
19	I remove unpleasant stimulus directly following desirable behavior (negative reinforcement)	4.03	1.16	8	high
21	I use positive reinforcement of responses approximate the target behavior (shaping).	3.90	1.13	9	high
23	I reinforce the gradual decrease of unacceptable behavior (differential reinforcement)	3.90	1.19	10	high
27	I calculate the number of acceptable and unacceptable behaviors (behavior frequency)	3.87	1.22	11	high
24	I withdraw reinforcers after unacceptable behavior (response cost)	3.83	1.18	12	high
28	I calculate the behavior duration	3.80	1.19	13	high
25	I deprive reinforcers after unacceptable behavior (extinction)	3.77	1.19	14	high
20	I use extra differentiating stimuli to increase the target behavior frequency (verbal instruction - physical instruction - gesture instruction)	3.60	1.04	15	high
26	I raise my voice or I say "do not do it" to reduce the unacceptable behavior (punishment)	3.40	1.33	16	high
Total score of the second domain		3.99	0.69	-	high

[Table 8](#) indicates that the degree of using Action domain in modifying the behavior of elementary students by academic advisors is high. The grand mean for the second domain is (3.99) with a standard deviation (0.69). The

standard deviations for the second domain items ranged from (1.04 - 1.33). These high values indicate the divergence in opinions of the participants on those items.

The item 'I use artificial reinforcers like points & coupons' ranked first. According to Narges et al. (2014) the use of artificial reinforcers has a positive impact on academic progress. The item 'I raise my voice or I say "do not do it" to reduce the unacceptable behavior (punishment)' ranked last. Thus, the participants agree that the last action to take for modifying the behavior is raising the voice and it follows taking the appropriate scientific and practical actions. This result is inconsistent with Al-Saddi. (2016) which concluded that the most commonly used types of punishment are calling the guardian, student reprimand, and standing during the class, while common reinforcement methods were smiling, applause, showing off high marks, giving extra marks for good conduct, and using artificial reinforcers.

6.3. The Evaluation Domain

To identify the level of using the Evaluation domain by academic advisors in elementary schools, the arithmetic mean and the standard deviation for each item of the third domain were calculated and then arranged in a descending order according to the arithmetic mean as illustrated in the following table.

Table-9. Arithmetic means and standard deviations of the participants' responses to the evaluation domain.

No.	Item	Mean	standard deviation	order	Response degree
39	I summarize the final outcomes regarding the target behavior	4.27	1.05	1	very high
34	I measure behavior after starting its modification process	4.20	1.16	2	very high
36	I evaluate the importance of altering the target behavior	4.17	1.09	3	high
30	I procedurally define the behavior	4.07	1.02	4	high
29	I set up a good behavior modification plan	4.03	0.99	5	high
35	I follow up on the behavior after the treatment	4.03	1.16	6	high
37	I evaluate the effectiveness of the behavior modification actions	4.00	1.20	7	high
31	I analyze the behavior modification plan	3.93	0.98	8	high
33	I graph the behavior frequencies	3.90	1.21	9	high
38	I assess the goal accomplishment has	3.70	1.49	10	high
32	I measure the behavior after its modification process	3.07	1.39	11	high
Total score of the second domain		3.94	0.7	-	high

According to Table 9, the degree of using the Evaluation domain in modifying the behavior of elementary students by academic advisors is high, from the participants' viewpoint. The grand mean for the third domain is (3.94) with a standard deviation (0.7). The standard deviations for the items of the third domain ranged from (1.02-1.94). These high values indicate the divergence of the participants' views.

Most participants seek to follow the scientific method of modifying students' behavior by committing to proper and correct evaluation of the target behavior and continuing the behavior modification process until its end. They endeavor to the pre- and post- evaluation of the behavior, so the success of the modification process assured.

To answer the first sub-question: Were there statistically significant differences in behavior modification techniques utilized by academic advisors among public elementary school students in Mecca due to years of experience? One-Way ANOVA was utilized to identify the significance of the differences in the participants'

responses, according to years of experience. Table 10 shows the results regarding the scale domains and the overall scale.

Table-10. Results of one-way ANOVA for the differences in the participants' responses due to years of experience.

Domain		Sums of squares	df	Mean square	F	P value
Cognitive	Among groups	1.56	3	0.52	1.41	0.26*
	Within groups	9.55	26	0.37	---	
	Total	11.11	29	---	---	
Action	Among groups	1.83	3	0.61	1.34	0.28*
	Within groups	11.88	26	0.46	---	
	Total	13.71	29	---	---	
Evaluation	Among groups	1.03	3	0.34	0.68	0.57*
	Within groups	13.11	26	0.50	---	
	Total	14.14	29	---	---	
Total scale	Among groups	1.34	3	0.45	1.29	0.30*
	Within groups	9.04	26	0.35	---	
	Total	10.38	29	---	---	

Note: *insignificant at the significance level of (<0.05).

According to the above results, there were no statistically significant differences at the significance level of (0.05) between the mean scores of the scale of behavior modification techniques utilized by academic advisors due to years of experience. This result can be explained by frequent interaction and cooperation, exchange of knowledge and experience about the cognitive, action, and evaluation domains of behavior modification among academic advisors. Further, it indicates professional competencies of academic advisors, and thus their ability to distinguish between the desirable and undesirable behaviors of elementary school students. The findings are consistent with Al-Zarea (2012) who concluded that there is no statistically significant differences in the level of knowledge of behavior modification among academic advisors attributed to years of experience.

To answer the second sub-question: Were there statistically significant differences in behavior modification techniques utilized by academic advisors among public elementary school students in Mecca due to specialization? One-Way ANOVA was utilized to identify the significance of the differences in the participants' responses, according to specialization. Table 11 shows the results regarding the scale domains and the overall scale.

Table-11. Results of one-way ANOVA for the differences in the participants' responses due to specialization.

Domain		Sums of squares	df	Mean square	F	P value
Cognitive	Among groups	1.16	2	0.58	1.58	0.22*
	Within groups	9.94	27	0.37	---	
	Total	11.11	29	---	---	
Action	Among groups	2.59	2	1.30	2.15	0.66*
	Within groups	11.12	27	0.41	---	
	Total	13.71	29	---	---	
Evaluation	Among groups	0.27	2	0.14	0.26	0.77*
	Within groups	13.87	27	0.51	---	
	Total	14.14	29	---	---	
Total scale	Among groups	1.29	2	64.	1.33	0.17*
	Within groups	9.09	27	34.	---	
	Total	10.38	29	---	---	

Note: *insignificant at the significance level of (<0.05).

Based on the results illustrated in Table 11, there were no statistically significant differences at the significance level of (0.05) between the mean scores of the scale of behavior modification techniques utilized by academic advisors due to years of experience. This result can be interpreted by the participants' approximate levels of knowledge of the domains of behavior modification, i.e. the cognitive, action, and evaluation domains. As asserted

by Al-Otaibi (2010) the existence of specialized academic advisors contributes to the treatment of behavioral problems and that the use of effective techniques of behavior modification among elementary students.

7. RECOMMENDATIONS

Positive cooperation between the school administration and the academic advisor is fundamental for developing and implementing proper behavior modification plans aimed at improving students' behavior by constant measurement, evaluation and taking the appropriate actions. It is highly recommended to develop individual or group guiding programs, activities and services, to improve students' behaviors.

7.1. Future Studies

The author recommends conducting further studies to identify the obstacles that hinder the application of behavior modification actions by elementary school teachers. Moreover, a program should be proposed to develop the performance of elementary school teachers in the behavior modification of their students.

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