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The level of knowledge of special education teachers of behavior modification methods in Al-Kharj Governorate schools

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The aim of the study was to identify the level of knowledge of special education teachers of behavior modification methods in public schools in Al-Kharj governorate. The study sample consisted of (91) special education teachers randomly selected from the study population of both sexes. The researcher prepared a test consisting of (40) paragraph,used as a tool of the study and includes concepts, strategies and principles of behavior modification. The results indicated that the level of knowledge of special education teachers of behavioral modification methods came in a medium degree. It was also indicated in the results that there were statistically significant differences due to the gender variable in favor of females, while the study did not show any significant differences due to both years of experience and scientific qualification.

Keywords: Behavior Modification, Special Education Teachers, Behavior Modification methods, Al-Kharj Governorate

INTRODUCTION

The progress of nations and their advancement is represented by the effectiveness of educational systems and their coping with modern methods. The most important thing in the educational system is two main elements: student and teacher, and the relationship between them. The process of preparing teachers in educational institutions is of great importance if not the most important because the function of the teacher is not limited to the transfer of science and knowledge, but to help to develop the personality of the learner and the impact of their behavior into the best.

The emergence of new disciplines in educational systems such as the teacher of special education has raised the question of who is responsible for controlling the behavior of students by increasing adaptive behaviors and reducing non-adaptive behaviors. The development of theories of psychology and learning theories, including behavioral theory and practical applications has clearly contributed to the interpretation of human behavior and the process of influencing it, which has made it remarkably easy to find scientific and practical methods to deal with students within the educational institutions.The researchers claimed that behavior modification is of the most important knowledge that the teacher of special education must acquire because of the impact in transferring of knowledge to the student in a correct and stimulating way and also in controlling student behavior and refining the personality of learners.

Problem of the Study

The researcher found through his work in the field of special education that behavioral problems of the most widespread problems in our societies, especially in our schools, which limits the ability of students to learn and social adaptation, which must be methods and strategies to deal with them,where the methods of behavioral modification most commonly used by them with these

categories and therefore the problem of study in the following main question:

What is the level of knowledge of special education teachers of behavior modification methods?

The following questions stem from the previous question:

1. Are there any statistically significant differences in the level of knowledge of special education teachers of behavior modification methods due to gender variable?
2. Are there any statistically significant differences in the level of knowledge of special education teachers of behavior modification methods due to experience variable?
3. Are there any statistically significant differences in the level of knowledge of special education teachers of behavior modification methods due to scientific qualification variable (PhD, Master, Bachelor, and Diploma)?

As far as the researcher's knowledge that there is no previous studies that dealt with the level of knowledge of teachers of special education research in other variables such as gender and the number of years of experience so the researcher has conducted this study and the viewer to the literature of special education finds it necessary to evaluate the permanent level of knowledge of this category with behavioral modification methods.

Objectives of the study

The objective of this study is to assess the level of knowledge of special education teachers in the public schools affiliated to the Directorate of Education of Al-Kharj governorate of behavioral modification methods by constructing a test prepared for this purpose, which is knowledge of the general principles of behavior modification and methods of strengthening behavior on the one hand, and methods of weakening behavior on the other hand, the study tested the extent of knowledge of behavioral modification methods according to gender and years of experience.

Significance of the Study

This study contributes to the assessment of the level of knowledge of special education teachers of behavioral modification methods according to various variables such as gender and years of experience. It is therefore useful to assess the training needs of these groups in order to increase their knowledge of these methods which gives decision makers the opportunity to know the level of knowledge of teachers of methods that help to improve the level of performance of students and how to deal with their behavioral and educational problems,as there is a new trend to integrate students with disabilities in all their categories in ordinary students' schools, there must be trained people within these schools to help complete this process.

The Limits of the Study

This study included a sample of (91) special education teachers in the schools affiliated to the Directorate of Education of Al-Kharj Governorate in the Ministry of Education in the Kingdom of Saudi Arabia, they were randomly chosen. The test was applied between 25/3/2016 and 25/5 / 2016.

Definition of Study Terms

***Special education teachers**:* The teacher of special education is the person qualified to deal with students with special needs, who are in schools within the so-called learning resource rooms, which mostly includes students with learning difficulties.

***Behavior Modification Methods**:* Methods and procedures which are based on the laws and theories of learning used to change human behavior in order to form and increase adaptive behaviors, and to reduce and eliminate non-adaptive behaviors.

Theoretical Framework

Behavior modification is one of the most important applied sciences in the field of dealing with human behavior, where behavior modification is currently widely used in various fields, not only education, but extends to law, sport and even politics. Behavior modification has evolved over the last period and has become more interested in cognitive behavioral aspects.

Behavior modification is defined as: the science derived from the laws of learning and basic research in psychology and aims to change behavior for the better academically, psychologically, educationally and socially, using behavioral modification procedures (Abu Asaad, 2014). Cooper and Howard (1987) defined behavior modification as the science that involves the systematic application of the methods that have emerged from behavioral laws in order to effect a fundamental and beneficial change in academic and social behavior, Kazden (1984) defines behavior modification as: the field that derives its origins from learning research and its laws, which in essence is an adaptation to and reorganization of environmental and social conditions, behavior modification is seen as one of the areas of psychology that are concerned with the analysis and modification of human behavior. It is defined procedurally as a process of strengthening desired behavior on the one hand and weakening or eliminating unwanted behavior on the other hand (Abu Humaidan, 2003).

It can be pointed out through the previous definitions that behavior modification included two main themes:

Analysis: It means analyzing the functional relationships between the environment and the specific behavior in order to understand why the behavior occurs or to determine why the person behaves in this way.

Modification: means the development and application of procedures that help the individual to change behavior and this includes modifying the events of the environment in order to influence the behavior.

Concepts and terminology in behavior modification

Behavior: Human behavior is defined as any activity of human being, whether actions can be observed and measured, such as physiological and motor activities, or activities are carried out in an unnoticed manner, such as thinking, remembering, obsession and others, which is the phenomenon that is concerned with by the science of human behavior, and human behavior affects the environment and is affected by it, and it is a feature of human beings and is related to their survival. Behavior has two types: respondent behavior and operant behavior, each of which can be clarified as follows:

- Respondent Behavior: The patterns of responses that are triggered by the tribal stimuli that alerts it, the relationship between such stimuli and responses is called reflection, the examples of this behavior are many, such as closing the eyelid when exposed to a whiff of air, falling eye tears when slicing onion slices, Knee tremor when knocking on it slightly, salivation when seeing food and others. Such patterns represent a small proportion of human behavior patterns.
- Operant behavior: behavior determined by environmental factors such as economic, social, educational, religious, geographical and other factors, so as to introduce an adjustment to the environment in which the individual lives, rather than through prior stimulus, since there are in fact no prior stimulus that are subject to procedural behavior , but there are exciting opportunities to appear, called discriminatory stimuli, driving or riding a bike or walking to reach a place, are procedural behavior and issued without the need for supposing assumption. Procedural behavior represents most types of human behavior, procedural behavior does not always occur on its own, but it is the human being that causes it.

Environment: A group of circumstances in which the individual lives and is affected by it and affects it, the environment is divided into stimuli and that the meaning of the stimulant refers to any event or circumstance or change in the environment and stimuli of various types, including what happens inside the body and what happens outside, and the interest in the behavioral modification focuses on adjusting external conditions because they are directly observable and easily controlled (Khatib 2013).

Criteria for judging behavior in terms of being normal or abnormal

There are several criteria used in this regard and one cannot be judged entirely to determine whether or not the behavior is normal or not, among these criteria:

1. Social criterion: It depends on the determination of behavior according to the standards of society of customs, traditions and values.
2. Self-criterion: the judgment of behavior through the self, what an individual feels satisfaction or dissatisfaction during his behavior is the criterion by which normal behavior is characterized from the abnormal.
3. The objective psychological criterion: that the behavior according to this criterion has a functional appearance, each behavior must have a function to perform and a purpose for it.
4. Statistical Criterion: This criterion is based on the idea of the natural distribution of normal and abnormal human behavior as the distribution of intelligence according to natural distribution, and the behavior that deviates from the arithmetic average (for what the majority of people do) is abnormal behavior (Al-Zahir, 2004).

Basic principles of behavior modification

The field of behavioral modification is based on some basic principles, including:

- Reinforcement: It forms the cornerstone of behavioral modification and reinforcement is a general term that refers to the reinforcement of behavior by adding positive stimuli or removing excitatory stimuli.
- The principle of punishment: a process of weakening the behavior through the addition of Antipathetic stimuli or removal of positive stimuli.
- The principle of extinction: To weaken the behavior through the cancellation of reinforcements that maintains its continuity.
- Stimulus control: to promote behavior with a certain stimuli (positive excitatory stimulant) and not to reinforce it with other stimuli (negative discriminating stimuli).
- The principle of discrimination: the process of learning to differentiate between similar stimuli and respond to the appropriate stimulant.
- The principle of generalization: the performance of the conditional response that is learned in a particular situation in other situations similar to it.

Behavior Modification Strategies

Rousan (2010) points out that the concept of behavior modification includes the following strategies:

1. Identify the current behavior (target) and define it procedurally, whether it is desired or undesirable behavior.
2. Determining the final behavior (desired or undesirable) to be achieved at the end of the behavior modification program and the importance of this program for behavior modification in order to compare it with current behavior at the beginning of the program.
3. Define the method of modifying the appropriate behavior. This is to identify the method that works to strengthen the relationship between stimuli and responses such as positive reinforcement, negative reinforcement, behavior formation, modeling, self-regulation, or choosing a method that weakens the relationship between stimuli and response such as punishment and erasure.
4. Evaluating the effectiveness of a behavior modification program is intended to assess the effectiveness of a program's success or failure. This program is usually assessed by comparing the performance or behavior of the individual before, during and after the program.

Al-Ayed and Abu Hawash (2011) conducted a study on the knowledge of teachers of special education and teachers of ordinary students and educational counselors in behavioral modification strategies. The sample of the current study consisted of (139) male and female teachers. The results of the study indicated that there is a low level of knowledge in behavior modification of special education teachers and ordinary teachers and educational counselors.The results also indicate that there is a clear difference in the level of knowledge in behavior modification according to the study variable (Special education teacher, regular teacher, educational counselor). The results indicated that there are statistically significant differences between teachers of special education and teachers of ordinary students in favor of special education teachers, there are also significant differences between the educational counselors and the teachers of ordinary students in favor of educational counselors.Al-Khatib (1993) conducted a study aimed at investigating the knowledge of the teachers of the mentally disabled in behavior modification methods and determining whether this knowledge differs according to the teaching experience and the scientific qualification, the study sample consisted of (74) male and female teachers working with children with mental disabilities. The results of the study showed that the teachers' knowledge of these principles did not reach the required level on any part of the test as a whole. The results also showed that there were no significant differences in the level of knowledge due to both teaching experience and scientific qualification. Orabi (2007) conducted a study aimed at evaluating the knowledge of the teachers of autistic children in the Syrian Arab Republic with behavior modification methods, which was applied to (77) male and female teachers, where the researcher developed a tool consisting of (44) items to measure the following main dimensions: Knowledge of the general principles of behavior modification, and knowledge of ways to strengthen desired behavior and knowledge in ways to reduce unwanted behavior.Gregg and Abu Al-Fakhr (2011) conducted a study aimed at knowing the knowledge of teachers of children with mental disabilities in behavioral modification methods and their relation to some variables in a field study in the centers of intellectual development in Damascus. The sample consisted of teachers of children with disabilities (152) teachers. The results of the study indicate that the level of knowledge of the bases of behavior modification and methods of increasing behavior methods and methods of reducing the behavior of teachers in the study sample did not reach the required level compared with the normative values that were developed by the arbitrators, the study pointed out that there are no statistically differences with regard to knowledge of behavior modification methods attributed to gender variable, the study also pointed out that there are significant differences with regard to the scientific qualification variable for the benefit of higher degree holders in their knowledge of the bases of behavioral modification methods and methods of behavior reduction. There are no statistically significant differences in the methods of increasing behavior, and with regard to years of experience variable, the study also found that there are no statistically significant differences in the years of experience and its impact on the level of knowledge of behavioral modification methods.Al-Zare' (2012) conducted a study aimed at revealing the level of knowledge of the teachers of autism disorders in behavioral modification methods in the light of some variables. The study sample consisted of (85) male and female teachers from the autism centers in Jeddah. The results of the study indicated that there are statistical significant differences in the knowledge of teachers of behavioral modification methods attributed to gender and in favor of females. While the results indicated that there are no statistical differences between male and female teachers attributed to the university qualification.

Albasel (2013) conducted a study aimed at measuring the extent to which the counselors knew about behavior modification strategies in Balqa Governorate, the study sample consisted of (80) randomly chosen teachers among the teachers working in public schools in the governorate. The results of the study indicated that there is a high level of knowledge among educational counselors about behavior modification methods, while there were no statistically significant differences in the extent of knowledge of the counselors due to gender variable,it also pointed to the existence of statistical significant differences in the level of that knowledge attributed to more than ten years of experience.

Shang (2008) conducted a study aimed at identifying how school principals, teachers and ordinary students deal with students with special needs and the ability to

deal with behavioral problems using scientific methods based on the principles of behavioral modification. The results indicated that teachers and principals have low knowledge of behavioral modification methods. it also pointed out that there are statistical significant differences in terms of knowledge in favor of teachers.

Study tool

The researcher prepared a 40-point test. (Multiple choice), which included key concepts, strategies and principles of behavior modification and governance standards for both normal and abnormal behavior.

Validity and Reliability of the tool

To verify the validity of the tool, the test was presented to a group of specialists, and after reviewing their suggestions and observations, where the researcher adopted the items that were adopted, after the deletion of some items that were not fully representative of the axis in which it was placed, items that have been agreed to be invalid or modified in accordance with the nature of the study.

In order to verify the reliability of the study instrument, the Kronbach Alpha equation was used to calculate the reliability coefficient of the test at (0.77). The researcher also extracted the coefficient of discrimination and difficulty of the test questions items as follows:

Table 1: The difficulty and discrimination coefficient for the test scores

Item N.	Difficulty coefficient	Discrimination coefficient	Item N.	Difficulty coefficient	Discrimination coefficient
1	0.64	0.57	21	0.54	0.5
2	0.39	0.36	22	0.32	0.5
3	0.54	0.64	23	0.61	0.36
4	0.54	0.5	24	0.5	0.43
5	0.46	0.5	25	0.46	0.64
6	0.54	0.64	26	0.46	0.5
7	0.57	0.43	27	0.5	0.43
8	0.64	0.43	28	0.57	0.43
9	0.75	0.36	29	0.43	0.57
10	0.46	0.64	30	0.46	0.64
11	0.68	0.5	31	0.36	0.57
12	0.54	0.36	32	0.61	0.5
13	0.57	0,43	33	0.64	0.57
14	0.36	0.57	34	0.39	0.36
15	0.64	0.43	35	0.39	0.5
16	0.68	0.36	36	0.61	0.5
17	0.36	0.57	37	0.46	0.5
18	0.46	0.36	38	0.54	0.36
19	0.5	0.43	39	0.61	0.36
20	0.68	0.36	40	0.39	0.36

The study sample consisted of (91) special education teachers chosen randomly. The test was applied at the beginning of the second semester 2016. The appropriate statistical tests were used to answer the study questions and test its hypotheses derived from the statistical package (SPSS), thus, means and standard deviations, and T-test were used.

THE RESULTS OF THE STUDY AND ITS DISCUSSION

Results related to the main question of the study: What is the level of knowledge of special education teachers of behavioral modification methods?

To answer this question, the researcher extracted the arithmetical means and standard deviations of the test scores, as shown in Table 2.

Table 2: means and standard deviations of the study instrument domains according to arithmetic means

N	Domain	*mean	Standard deviation
1	Test score	22.7582	5.21183

* The score out of (40)

The above table shows that the level of knowledge of special education teachers and ordinary teachers of behavior modification methods came to a moderate extent. The test rate was obtained for all respondents (22.75) and by standard deviation of (5.21183).This may be explained by the fact that most pre-service training programs, including those learned by special education teachers in their university education plans, contain some or some unsound psychological materials that contain theories that explain human behavior within the criteria for judging it, it also contains methods used in behavior Modification .But this percentage of knowledge is below the required level because of the importance of the impact of the problems on the educational process. This came in line with the study of Ayed and Abo Hawash (2011), indicating a low level of knowledge in behavior modification methods among special education teachers, ordinary teachers and educational counselors,it also consistent with the study of Khatib (1993), Greg and Abu Al-Fakhr (2011) and Shang (2008). These studies indicated that teachers' knowledge of behavior modification methods did not reach the required level compared to normative values by arbitrators, while it differed with the study of abualbasel (2013), which indicated a high level of knowledge of behavior modification methods among educational counselors.

The researcher also answered the following sub-questions:

Are there any statistically significant differences in the level of knowledge of special education teachers of behavior modification methods due to gender variable?

To answer this question, the researcher extracted the arithmetical means and standard deviations of the test scores according to gender, as follows:

Table 3: means and standard deviations of test scores according to gender variable

Gender	N	Mean	Standard deviation	T value	Sig
Male	38	20.6471	5.20421	-3.127	.002
Female	53	24.0175	4.83474		

The previous table shows that there are apparent differences between the male and female scores, where the average of the male scores was (20.64) and the average of female scores was (24.01), when the binary T-test was conducted between males and females, the results showed statistically significant differences in favor of the female category. This may be explained that females are more interested and closer to students and try to understand the causes of behavioral problems more than males, which is due to the social and emotional nature of females, especially if they are mothers of children and may have behaviors that require attention and they dealt with it previously.

The results of this study differed with the study of (Abu Orabi, 2007) and the study (Greg and Abo Al-Fakhr, 2011) and the study (abualbasel, 2013), which indicated that there are no significant differences in the Knowledge of behavioral modification methods due to the gender variable.

To answer the second sub-question, which is: Are there statistically significant differences in the level of knowledge of special education teachers of behavior modification methods due to the experience variable?

The researcher extracted the mathematical averages and the standard deviations of the test scores according to experience, as follows:

Table 4: means and standard deviations of test scores according to experience variable

Experience	N	Mean	Standard deviation
From 15 and above	16	22.7500	5.94979
10-15	22	21.3182	4.81453
5-10	41	23.7805	5.11132
Less than 5 years	12	21.9167	5.08935
Total	91	22.7582	5.21183

The above table shows the existence of apparent differences in the means of the scores according to the experience variable. To find out if there were statistically significant differences, the two researchers performed One Way Analysis of variance, as shown in Table 5.

Table 5: One Way Analysis of Variance of test scores according to experience variable

Source	Sum of squares	Df	Mean of squares	F value	Sig
Between groups	96.968	3	32.323	1.198	.315
Within groups	2347.714	87	26.985		
Total	2444.681	90			

The results of One-Way ANOVA analysis of variance according to the experience variable showed that there were no statistically significant differences at the level of significance (a≤0.05) according to the experience variable. This may be explained by the fact that the study was aimed at identifying the level of knowledge rather than the use of methods. Most of the knowledge is acquired prior to service through the university qualification programs and thus all of them acquired most of this knowledge prior to service and therefore there will be no differences due to the experience variable, this is consistent with the study of Al-Khatib (1993) and Abu Orabi (2007) and the study of Greg and Abu Al-Fakhr (2011), which indicated that there are no statistically significant differences between the level of knowledge of behavioral modification methods attributed to years of experience, while the results of this study disagreed with the study of abualbasel (2013) which indicated that there were statistically significant differences in the level of knowledge of behavior modification methods attributed to years of experience.

To answer the third sub-question, which is: Are there any statistically significant differences in the level of knowledge of special education teachers of behavior modification methods due to the scientific qualification variable?

The researcher extracted the mathematical averages and standard deviations of the test scores according to the scientific qualification, as shown in Table 6.

The Table 6 shows that there are apparent differences in the statistical averages of the scores according to the scientific qualification variable, to find out if there are significant differences; the researcher used One-Way analysis of variance, as shown in Table 7.

Table 6: Means and standard deviations of test scores according to scientific qualification

Scientific qualification	N	Mean	Standard deviation
PhD	3	24.0000	5.29150
Master degree	9	24.5556	5.76869
Bachelor degree	74	22.3919	5.28326
Diploma	5	24.2000	2.77489
Total	91	22.7582	5.21183

Table 7: One Way Analysis of variance of the test scores according to the scientific qualification variable

Source	Sum of squares	Df	Mean of squares	F value	Sig
Between groups	54.024	3	18.008	.655	.582
Within groups	2390.657	87	27.479		
Total	2444.681	90			

The results of One-Way ANOVA analysis of variance according to the scientific qualification variable showed no statistically significant differences at the level of significance (a≤0.05) according to scientific qualification variable. This may be explained from the perspective of the researcher and the reality of his work that most of the acquired knowledge included in the basic materials of the requirements of the university with all the qualifications and intermediate colleges studied by all the categories taken in this research, which does not create significant differences in the level of knowledge due to the scientific qualification variable.This is consistent with the study of Khatib (1993), which indicates that there are no significant differences in the level of knowledge due to scientific qualification variable, while the study of (Abu Orabi, 2007) and the study of (Greg and Abu Al-Fakhr, 2011) which showed significant differences in level of knowledge due to the scientific qualification variable were in favor of postgraduate studies.

In light of the findings of this study, the researcher recommends the following:

1. Conducting further research on the topic of behavioral modification due to the importance of this subject and to take other variables other than those taken in this study.
2. Conducting training courses for special education teachers to increase their knowledge and ability to use behavior modification methods.
3. Increasing the number of subjects taught in universities in terms of behavior modification because of their importance to teachers in controlling the educational process and transferring knowledge in a way that motivates the student and easy for the teacher.

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