EFFECT OF A TOKEN ECONOMY TRAINING PROGRAM IN REDUCING INATTENTION AND HYPERACTIVITY AMONG FEMALE STUDENTS WITH LEARNING DISABILITIES IN SAUDI ARABIA

WAFA FAWWAZ M. AL JAWABRA

UNIVERSITI SAINS MALAYSIA

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by

WAFA FAWWAZ M. AL JAWABRA

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DEDICATION

I dedicate this humble work to the springs of loyalty, affection and

virtue, my father, mother and my husband, Omar, who has always been there

for me, to my dear children

Joman, Sohaib and Saad.

Wafa Fawwaz AL Jawabra

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In the name of Allah, the Most Gracious, the Most Merciful Praise and thanks be to Allah, Who has seen me through to this level in my academic achievement, and for helping me accomplish this scientific research.

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LIST OF ABBREVIATIONS

LD   Learning Disabilities

NJCLD   National Joint Committee on Learning Disabilities

LDAA   Learning Disabilities Association of America

ADD   Attention Deficit Disorder

APA   American Psychological Association

DSM   Diagnostic and Statistical Manual of Mental Disorders

CTRS-R   Conner Teachers Rating Scale – Revised

CBCL   Child Behavior Checklist

BBRS   Burks Behavior Rating Scales

ADHDT   Attention Deficit Hyperactivity Disorder Test

BASC   Behavioral Assessment System For children

ADHD   Attention Deficit Hyperactivity Disorders

NLD   Children Without Learning Disabilities

CBT   Cognitive Behavioral Therapy

KESAN PROGRAM EKONOMI TOKEN DALAM MENGURANGKAN KETIDAKPERHATIAN DAN HIPERAKTIVITI DALAM KALANGAN MURID PEREMPUAN BERMASALAH PEMBELAJARAN DI ARAB SAUDI

ABSTRAK

Kajian ini bertujuan untuk menilai kesan Program Ekonomi Token dalam meningkatkan perhatian dan dalam mengurangkan hiperaktiviti murid perempuan bermasalah pembelajaran di bilik sumber. Bagi kajian kuasi-eksperimenin, sampel kajian terdiri daripada murid perempuan bermasalah pembelajaran yang mendapat gred tertinggi dalam skala marginal masalah tingkah laku yang berkaitan dengan ketidak perhatian dan hiperaktiviti. Mereka diklasifilcasikan secara rawak ke dalam dua kumpulan. Pertama, kumpulan eksperimen (kumpulan yang menerima Program Ekonomi Token) terdiri daripada 30 orang pelajar. Kumpulan eksperimental terbahagi lagi kepada dua kumpulan. Dalam kumpulan eksperimen 1, pemboleh ubah bersandar yang diperhatikan adalah ketidak perhatian, dan dalam kumpulan eksperimen 2, pembolehu bah bersandar yang diperhatikan adalah hiperaktiviti. Seterusnya, kumpulan kawalan, juga terdiri daripada 30 orang pelajar (15 murid dalam kumpulan kawalan 1, dan 15 lagi di dalam kumpulan kawalan 2). Kumpulan kawalan didedahkan dengan strategi yang biasa digunakan oleh guru dalam rawatan masalah tingkah laku. Kajian ini menggunakan kaedah kuantitatif. Data yang terkumpul dianalisis menggunakan ujian t, ANCOVA (analysis of covariance) dan ANOVA pengukuran berulang. Dapatan kajian kuasi-eksperimenin menunjukkan bahawa secara statistiknya terdapat perbezaan yang signifikan pada tahap ($p=0.05$) dalam pemboleh ubah ketidak perhatian dan pemboleh ubah hiperaktiviti di antara

kumpulan eksperimen dan kumpulan kawalan selepas intervensi, dengan keputusan yang memihak pada kumpulan eksperimen. Secara statistiknya, terdapat perbezaan yang signifikan pada tahap (p=0.05) dalam pemboleh ubah ketidak perhatian dan pemboleh ubah hiperaktiviti antara kumpulan eksperimen dengan kumpulan kawalan merentasi semua jenis sesi (pra-intervensi, pasca-intervensi, susulan). Keputusan memihak kepada sesi pasca-intervensi.

EFFECT OF A TOKEN ECONOMY TRAINING PROGRAM IN REDUCING INATTENTION AND HYPERACTIVITY AMONG FEMALE STUDENTS WITH LEARNING DISABILITIES IN SAUDI ARABIA

ABSTRACT

This study aimed at evaluating the effect of the token economy training program in reducing inattention and hyperactivity among female students with learning disabilities in resource rooms. In this study, a quasi-experimental method was used. The sample of the study consisted of female students who had been identified from those who gained the highest grades on the marginal scales of the behavioral problems related to inattention and hyperactivity. They were randomly classified into two groups: The first was an experimental group that received the token economy program and consisted of 30 students, experimental group 1 (15 students) and experimental group 2 (15 students). In experimental group 1, the dependent variable observed was inattention, and in experimental group 2, the variable observed was hyperactivity. Correspondingly, the second group was a control group which included about 30 students, control group 1 (15 students) and control group 2 (15 students). The control group was exposed to the mild reprimand strategy commonly used by teachers in the treatment of behavioral problems. This study used quantitative methodology. The collected data analyses were carried out using, independent t-test, analysis of covariance (ANCOVA) and repeated measures analysis of variance (ANOVA). The results of the quasi-experimental study showed that there were statistically significant differences at level ($p=0.05$) in the inattention measure and the hyperactivity measure between the experimental group (that used

the token economy program) and the control group after intervention, which favoured the experimental group. Statistically significant difference at level (p=0.05) in the inattention measure and the hyperactivity measure of the experimental group (that used the token economy) across all session types (pre-intervention, post-intervention, follow-up) were also obtained, which were in favour of the post-intervention session.

Chapter One

Introduction

1.1 Introduction

The problems that students with learning disabilities face are not limited to academic problems but are usually accompanied by various social and behavioral problems (MacMillan & Siperstein, 2001). As the purpose of special education is to maximize the students' potential to the optimal level, different educational methods, and behaviour modification methods were applied to improve all developmental aspects such as behavioral, social and academic functions of the special education population. Therefore, scientific studies in the western countries were interested in identifying the behavioral problems related to students with learning disabilities, and have designed appropriate remedial programs towards achieving this purpose.

Lerner (2003) and Dyson (2003) pointed out that children with learning disabilities are characterized by hyperactivity, inattention, mobility problems, affective problems, and memory problems, in addition to cognitive and academic difficulties such as in reading and math. Attention problems and hyperactivity occupy a focal point among these different learning problems, which prompted many stakeholders in the field of education to consider inattention and hyperactivity as major sources of academic learning problems in reading, reading comprehension, and math among students with learning disabilities.

Despite the correlation between attention deficit disorder, hyperactivity and learning disability (Lerner, 2003), there is still ambiguity surrounding this subject in the Arab World where children with learning disabilities who have problems such as

inattention and hyperactivity are dealt with as if they were suffering from only academic learning problems. The source of their learning disability, which could arise from more basic problems in attention behavior are not given due attention. Instead, their learning problems are mostly treated by traditional strategies that do not suit the nature of this disorder (Lerner, 2003). In order to tackle the problems of inattention and hyperactivity that underlie academic problems among students with learning disabilities in Saudi Arabia, a behavioral intervention program is investigated in this research.

1.2 Background of The study

Students with disabilities in Saudi Arabia did not obtain any type of special education services till 1958. Instead, their parents were responsible for providing any assistance to their children (Al-Ajmi, 2006). The first experience of teaching students with disabilities was students with visual impairment in special institutes (Alquraini, 2012). In 1972, students with hearing impairment and those with mental retardation had their first institute. According to the Ministry of Education (2008), 88% of students with mild disabilities (e.g., learning disabilities, hearing impairment) during the 2007/2008 academic year received their education in an inclusive institute. However, 96% of students with multiple and severe disabilities (e.g., autism and moderate to severe mental retardation) received their education in private institutions (Alquraini, 2012).

The year 1992 was the beginning of the learning disabilities domain in KSA when the Special Education Department in King Saud University (KSU) constructed a teacher training program offering a progression of courses leading to a Bachelor degree in learning disabilities (Al- Musa, 2012).

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The main hurdle faced by the first group of learning disability teachers who graduated from KSU was the lack of information about the phenomenon of learning disabilities in the Saudi community. The learning disabilities experts worked to make the Ministry of Education aware of the condition of students with learning disabilities, and =the awareness of learning disability was synchronous with the heightening international interest in the educational needs of students with learning disabilities (Al- Musa, 2012).

According to Moisan and Thersa (1998), the behavioral problems among students with disability are about 75%. Wallace and Moloughlin (1998) pointed out that the most widespread behavioral and affective characteristics that accompany the learning problems among students with disability are attention dispersion and hyperactivity, and other behavioral problems such as, inappropriate repetition of a behavior, noisy, withdrawal and anti-social conduct, quick to get angry, irritability, and lack of social understanding. In addition, development and maintenance of positive social relations are also weaknesses among students with learning disability (Shireen & Richard, 2000). The token economy programs are considered among the most commonly used behavior modification approaches (Zirpoli, 2008). Token economy programs have been used successfully with many different ages and populations, including preschoolers; and students with various behavioral challenges; as well as students with learning disabilities (Higgins, Williams, & McLaughlin, 2001; Zirpoli, 2008). Lack of understanding of the social signals will in turn lead to expressions of negative aggressive behaviors or introversion when they are rejected by their typically developing peers. Literature generally shows that students with learning disability suffer psychological and behavioral disorders as a result of lack of

social skills, affective imbalance and inattention (Finlan,1994) and that they participate less in social activities, and suffer depression, non-communication, aggression and hyperactivity (Mclonaughy & Ritter, 1986).

Attention Deficit and Hyperactivity Disorder (ADHD) is considered to be the most widespread disorders in childhood. It is estimated that 3-7% of school students suffer from this disability (American Psychiatric Association, 2000). Other studies indicate that the rate fluctuates between 8-12% (Faroane, Sergeant, Gillberg, & Biederman, 2003). Some studies indicate that the rate of dispersion of inattention and hyperactivity among students with learning disability is between 19-25% (Tannock & Brown, 2000).

Apart from children who were positively identified with ADHD, many studies also pointed to the high rate of hyperactivity among students with learning disabilities. This rate of hyperactivity is cited between 33-80% (Wallace &Moloughlin, 1998; Hallahan, Kauffman, & Pullen, 2011). According to Abu Nayan (2001), the rate of hyperactivity among children who visited the resource room in KSA is estimated at 7%. DePaul, Guevremont and Barkley (1992) pointed out that inattention leads to difficulty in acquiring the basic social and academic skills.

Teachers' abilities in dealing effectively with students with learning disabilities who have behavioral difficulties vary. Some teachers have vast experience in the field and know how to deal with the behavioral problems but the majority of teachers suffer from the lack of practical experience in dealing with the learning and behavioral difficulties (Benner, 1987; Antoniou, Polychroni, Vlachakis, 2006). As a result, the student may not receive appropriate services that he/she needs

to succeed at school which forms a source of frustration for both the child and the family. A study conducted by Frank (2000) has confirmed this. It was conducted on 21 teachers from three regions in the United States of America (USA) to identify the experience level and the teacher's knowledge of inattention and hyperactivity and the appropriate learning strategies to help the children to succeed. Findings indicated that the teachers always try to ascribe the students' learning and behavioral problems in the class to environmental factors outside the school, which hinders their chances of improving their abilities and experiences. The study indicated that teachers did not have clear cut plans to deal with children who demonstrated symptoms of inattention and hyperactivity. Posavac, Posavac, and Scheridan (1999) pointed to the use of remedial behavioral methods as the most successful method in helping children who suffer from inattention and hyperactivity, since these methods increase their ability to concentrate and focus attention and control of their concurrent behavioral problems in the class. Some of these methods include token economy, response cost, and differential reinforcement of incompatible behavior, overcorrection and other behavioral methods (Lerner, 2003). The current study trains the resource room teachers on the use of token economy in reducing inattention and hyperactivity among students with learning disabilities. The current study evaluates the effectiveness of the behavioral program in reducing inattention and hyperactivity among sample of students with learning disabilities in Jeddah.

1.3 Statement of the Problem

The researcher is a lecturer in the Special Education Department in a university in Jeddah. She has supervised   pre-service teachers who are trainees in the resource rooms for five years. The Individualized Education Plan in these

resource rooms has only academic objectives. However, the pre-service teachers always complained to the researcher about the behavior problems among students with learning disabilities. The pre-service teachers' experience coincides with studies from western countries (Byson, 2003, Learner, 2003) their specific complaints are related to inattention and hyperactivity which cause low achievement for students with learning disabilities. A discussion with the main supervisor of resource rooms for teachers in Jeddah, Ahlam AL Bogamy (personal communication, 23 September, 2014) revealed that behaviour problems is currently not given due attention as the primary concern of the Special Education Department in Saudi Arabia Ministry of Education is focused on academic problems. Taking this issue into account, the researcher created a behavioral intervention program to modify the widespread behavioral problems (inattention and hyperactivity) among students with learning disabilities.

Non-adaptive problems that are associated to students with learning disability are considered as a source of concern to the family and the teachers who work directly with them. These problems result in a negative attitude towards learning disability among the community. For example, teachers feel frustrated due to their inability to find out a solution towards controlling such undesired behaviors in the class (Lerner, 2003; Dyson, 2003) as was experienced by the pre-service teachers in the Jeddah university Inability of teachers to control the class may force them to believe that they are ineffective and indicate their low personal ability. In the long run, their inability to control the class might lead to burn out which negatively reflects on their motivation to work with children with disabilities, and might cause these students to be abandoned (Brownell, Smith, McNellis, & Miller, 1997; Yahya,

2012). AL Hamed, Attia, Amrand, and Hassan (2008) conducted a survey study on 1287 male students in school. In this study, the findings showed that the rate of inattention was about 16.5%, whereas the hyperactivity factor was 12.6%. Even though there are studies in the Arab countries that dealt with the characteristics of students with disabilities (Alajmi, 2006), however, intervention programs on behavioral problems among those with learning disability in the resource rooms in KSA is still very scarce. The scarcity of intervention programs on behavioral problems could be attributed to the lack of knowledge and skills among teachers. Previous studies have confirmed this. For example, Abdelaziz (2013) focused on identifying the knowledge level of special education teachers concerning their behavior modification. The sample of the study included 68 male and female teachers in Jeddah, a city in Saudi Arabia. One of the major of findings of the study is that the knowledge level of special education teachers on behavior modification was generally mediocre. Therefore, teachers who deal with students with learning disabilities in particular need evidence-based methods and effective approaches to eliminate or alleviate these problems so that classroom instruction becomes more effective.

Previous survey studies confirmed the necessity of teachers to have behavior modification skills, especially skills in modifying undesired behavior (e.g. Al Hadidi, 1990; Alzaghlawan, Osrosky, & AL-Khateeb, 2007). In Al Hadidi's study, 130 special education teachers identified behavior modification methods as skills that they believe are crucial and should be taught in-service training programs. In this survey, teachers reported that practical behavior modification skills are not given due attention in pre-service training programs to enable them to address the

behavioral problems among students. They reported that the focus in their pre-service program leans more towards theoretical knowledge rather than practical skills. Based on that, more training to prepare in-service special education teachers on behavior modification methods is necessary (O'Neill, Johnson, Kiefer-O'Donnell, & McDonnell, 2001; Leblanc, Richardson & McIntosh, 2005). Taken together, behavior modification and its different strategies are of great importance in modifying the behavior which reflects positively on the learning process, and in improving the psycho and social adaptation among students with learning disabilities. Improvement in social adaptive skills will be reflected positively in academic achievement.

Non-adaptive behavior problems exemplified in inattention and hyperactivity are among the most common behavioral problems in students with learning disabilities (Miranda, Soriano, Fernandez, & Melia, 2008). The non-adaptive behaviors such as inattention and hyperactivity in children with disabilities limit the degree of interaction with their environment, and their response to stimulus and as a result, they face difficulties in acquiring basic adaptive skills. This might negatively affect the potential of learning. It can be said that the study of behavioral problems among children with learning disabilities is comparatively new in the Arab countries, particularly in Saudi Arabia which is the focus of this study. Children with learning disability are placed in the common academic problems category at the government schools in Jeddah. There are efforts to train teachers on behavioral modification programs, such as the token economy, in improving the students' attention and decrease hyperactivity. However, the effectiveness of such programs has not been studied. The researcher in this study focuses only on female students

because of the cultural factors and traditions that distinguishes Saudi Arabia from other countries. Females and males receive their education in separate buildings, with female teachers only being allowed to teach female students, and male students are taught only by male teachers. There is a need for female teachers to acquire the basic skills needed to deal with inattention and hyperactivity.

In this study, inattention and hyperactivity among students with learning disabilities is first identified. This is followed by training of teachers to use a behavior modification strategy, that is, token economy (Lolich, McLaughlin & Weber, 2012). The effectiveness of this strategy in the classroom is then assessed.

1.4 Purpose of the Study

The study will train female resource room teachers and their assistants on the token economy program to address attention and hyperactivity problems to help these students to interact positively with their peers and improve their learning. Second, the study aims to evaluate the effectiveness of this behavioral intervention program that uses token economy to reduce inattention and hyperactivity among a sample of students with learning disabilities. Finally, the study aims to follow-up on whether there are any gains obtained from the behavioral intervention program that is maintained after the intervention.

1.5 Research Objectives

The objectives of the current study are to:

1. Determine whether there is a significant difference in the inattention measure across the experimental group (that uses the token economy program) and the control group after intervention.

2. Determine whether there is a significant difference in the hyperactivity measure across the experimental group (that uses the token economy program) and the control group after intervention.

3. Determine whether there is a significant difference in the inattention measure of the experimental group (that uses the token economy program) during follow-up after intervention.

4. Determine whether there is a significant difference in the hyperactivity measure of the experimental group (that uses the token economy program) during follow-up after intervention.

5. Determine whether there is a significant difference in the inattention measure of the experimental group (that uses the token economy) across all session types (pre-intervention, post-intervention, follow-up).

6. Determine whether there is a significant difference in the hyperactivity measure of the experimental group (that uses the token economy) across all session types (pre-intervention, post-intervention, follow-up).

1.6 Research Questions

The current study tries to answer the following questions:

1. Is there a statistically significant difference in the inattention measure between the experimental group (that uses the token economy program) and the control group after intervention?

2. Is there a statistically significant difference in the hyperactivity measure between the experimental group (that uses the token economy program) and the control group after intervention?

3. Is there a statistically significant difference in the inattention measure of the experimental group (that uses the token economy program) during post-intervention and follow-up after intervention?

4. Is there a statistically significant difference in the hyperactivity measure of the experimental group (that uses the token economy program) during post-intervention and follow-up after intervention?

5. Is there a statistically significant difference in the inattention measure of the experimental group (that uses the token economy) across all session types (pre-intervention, post-intervention, follow-up)?

6. Is there a statistically significant difference in the hyperactivity measure of the experimental group (that uses the token economy) across all session types (pre-intervention, post-intervention, follow-up)?

1.7 Research Hypotheses

The research hypotheses are:

1. There is no statistical significant difference at level (α=0.05) in the inattention measure between the experimental group (that used token economy program) and the control group after intervention.

2. There is no statistical significant difference at level (α=0.05) in the hyperactivity measure between the experimental group (that used the token economy program) and the control group after intervention.

3. There is no statistical significant difference at level (α=0.05) in the inattention measure of the experimental group (that used token economy program) during post-intervention and follow-up after intervention.

4. There is no statistical significant difference at level (α=0.05) in the hyperactivity measure of the experimental group (that used the token economy program) during post-intervention and follow-up after intervention.

5. There is no statistical significant difference at level (α=0.05) in the inattention measure of the experimental group (that used the token economy program) across all session types (pre-intervention, post-intervention, follow-up).

6. There is no statistical significant difference at level (α=0.05) in the hyperactivity measure of the experimental group (that used the token economy program) across all session types (pre-intervention, post-intervention, follow-up).

1.8 Conceptual framework

Modification of behavioral problems is the primary focus of this research. It is anticipated that reduction in behavioral problems will have effect on students' inattention and hyperactivity. This study investigates the effect of the token economy strategy to modify behavior of students with learning disabilities in order to reduce inattention and hyperactivity. Token economy is considered as one of the positive incentives that have proven its effectiveness in behavior modification (Maag, 2004). It is called "token economy" because students earn the tokens through performing the desired behavior and then exchange them into incentives. The token economy programs are considered among the most commonly used behavior modification strategy. It is an exchange system where individuals are equipped with immediate feedback about the suitability of their behavior (Kazdin, 2012; Zirpoli, 2008). This strategy is based on the behavioral theory of learning (Zirpoli, 2008).

The behavioral problems for students with learning disabilities in resource rooms which is the focus of this research are hyperactivity and inattention. To deal with these problems, the researcher will train the resource room teachers and their assistants in workshops using modules and case studies on a behavioral program which is built on the token economy.

The researcher had created a checklist to check the accuracy and proper implementation of the teachers and their assistants for the intervention program during the actual intervention in the resource room. This is because of the modernity of the program and the lack of training courses for resource room teachers interested in modifying behavior. This checklist will be administered weekly by the researcher

during implementation. Fidelity of training covers the evaluation of resource room teachers and their assistants' ability to deliver an intervention as designed with an acceptable level of quality, or effectiveness.

Subsequently, the effectiveness of the token economy program is to reduce inattention and hyperactivity among students with learning disabilities which will be studied. Figure 1.1 below illustrates the conceptual framework of this research.

```
┌─────────────────────────────────────────┐
│          Female Students                 │
│       With Learning Disabilities         │
└─────────────────────────────────────────┘
        ↙                          ↘
┌──────────────────────┐   ┌──────────────────────────┐
│ 2 Experimental groups│   │    2 Control groups       │
│     30 students      │   │      30 students          │
│ (a)15 inattention    │   │ (a) 15 inattention        │
│  (b) 15 hyperactive  │   │  (b) 15 hyperactive       │
└──────────────────────┘   └──────────────────────────┘
        ↓                          ↓
┌─────────────────────────────────────────┐
│      Pre – Intervention (First phase)    │
│                 5 days                    │
└─────────────────────────────────────────┘
        ↓                          ↓
┌─────────────────────────────────────────┐
│       Intervention (Second phase)        │
│                 8 weeks                   │
│ Token economy program     Mild Reprimand │
└─────────────────────────────────────────┘
        ↓                          ↓
┌─────────────────────────────────────────┐
│   Follow up intervention (Third phase)   │
│                 5 days                    │
└─────────────────────────────────────────┘
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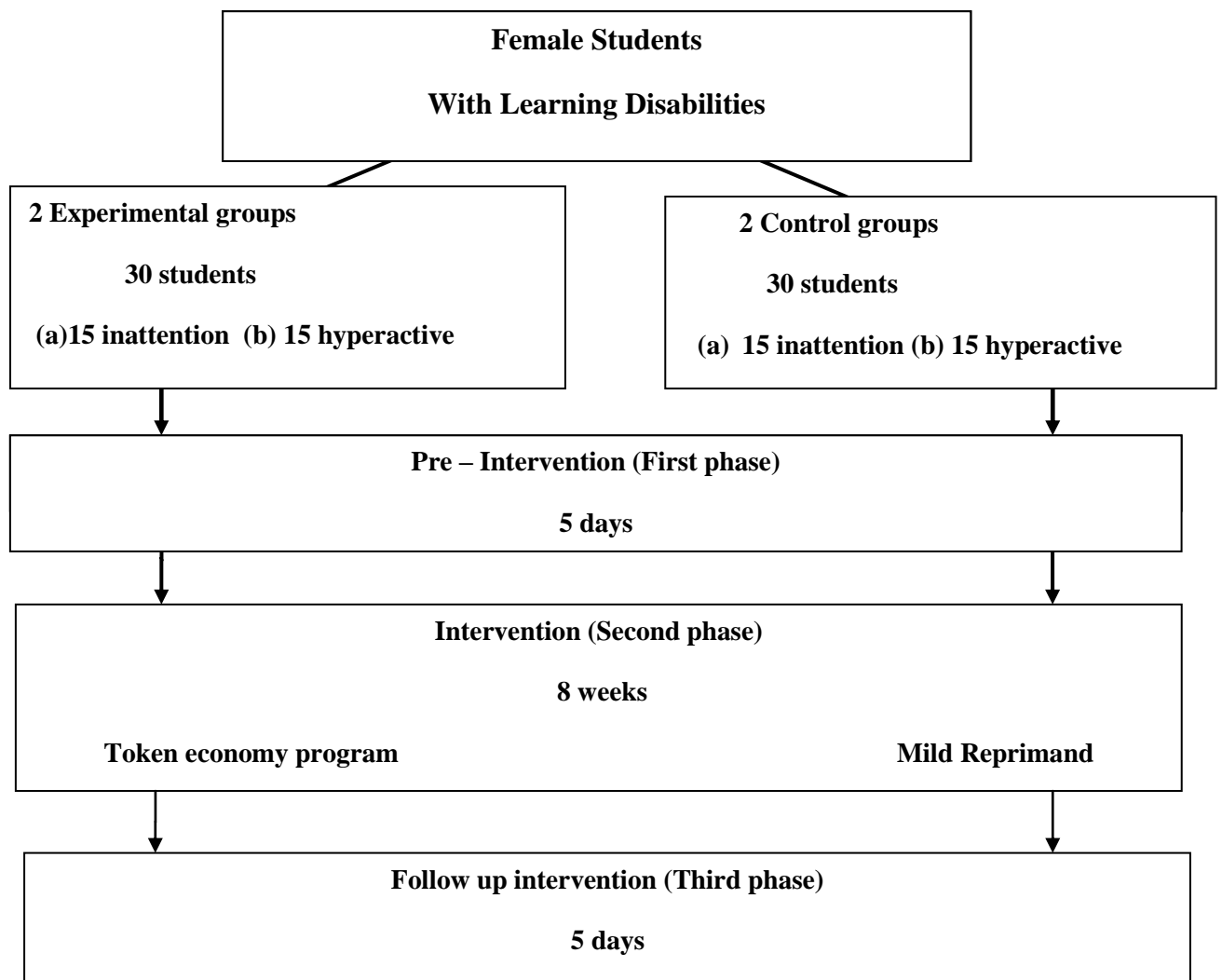
Figure 1.1 Conceptual Framework

1.9 Significance of Research

This study provides a behavioral intervention program which is applicable to be used by teachers which will help them in controlling the class and enable them to have effective classroom management skills. The remedial goals could be achieved within a short period of time with additional behavioral intervention support. Moreover, the token economy program which is based on the behavioral theory in redressing inattention and hyperactivity can be generalized to all students of resource rooms.

The finding of this study will also contribute towards the training of in-service and pre-service special education teachers. The importance of this study also lies in that it provides teachers with skills to deal with the behavioral problems by training them on the most important methods of behavior modification that are used to redress these problems.

1.10 Limitations of Research

The first limitation of this study was the small sample size. Specifically, the sample of the study was taken from only one city in KSA. Therefore, it is suggested that future research may include a larger size sample encompassing samples from other cities in KSA. This is because having a larger size sample may help future researchers to obtain results that will complement the findings of this study the second limitation of this study is related to the generalizability of the findings of the study because the sample of this study included only female students. Therefore, caution regarding the generalization of the findings should be considered. Furthermore, the token economy program was applied on only female students with

learning disabilities in the resource rooms in Jeddah. Therefore, one must take caution in generalizing the findings especially for male students.

1.11 Definitions of Terms

Learning disabilities (LD): LD is a general terms that describes a specific kind of learning problem that ranges in severity. Learning disabilities can result in a person having difficulties in learning and in using certain skills. The skills often affected are reading, writing, listening, speaking, reasoning and doing math (Fletcher, Morris & Lyon, 2003). It is operationally defined as the discrepancy in the students' academic achievement in the basic study skills such as reading, writing and math's according to the diagnostic criteria applied in the public schools in KSA.

Students with Learning Disabilities (students with L.D): Students that face academic problems especially in language and math. Each one of them needs the Individualized Education Program (IEP) to decrease the academic disabilities that he/she has (Lerner, 2003). They are operationally defined in KSA as students registered in the resource room at the public schools and show discrepancy in their academic achievement in the basic study of Arabic language skills such as reading, writing and math according to the diagnostic criteria applied in these schools.

Token Economy (Token Reinforcement): Token economy is a general term that describes a way in which students can earn tokens that can be exchanged for a variety of back-up reinforcers (Harris & Maag, 2005). It is operationally defined as a kind of reinforcement which depends on the giving of tokens to the student when they are attentive or when they are not hyperactive. These tokens are replaced by supportive reinforcements which are desired by the students in the study

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according to particular time intervals that are shorter at the beginning of the study, and are increased gradually.

Token Economy Training Program: A group of organized activities and procedures that depend on procedural conditioning in behavioral modification to increase the desired behavior and reduce the non- desired behavior by using the token economy (Khatib, 2011). It is operationally defined in this study as a behaviour modification program for resource room teachers in KSA to increase the desired behaviour of their students. In this token economy training program, teachers are taught to apply the token economy method in a resource room setting. Students will earn the tokens when they are attentive or when they are not hyperactive (based on a scale the researcher has prepared) in the resource room. The tokens can be exchanged into supportive reinforcements desired for by the study samples, such as toys and games. It is an organized training plan oriented for teachers to reduce inattention and hyperactivity of students with learning disabilities.

Resource Room: A resource room is a special education service room allocated in the regular school to provide assessment and therapeutic education for students with learning disabilities according to a specific and regular timetable during part of the school day (Lerner, 2003). It is operationally defined in this study as a room in a regular school where students with learning disabilities receive individual education based on their disability for a period of time and continue the day in their regular class with the other students.

Inattention: The inability to deal with limited number of selected information from among a big amount of data provided by the senses (Sternberg, 2003). It is operationally defined in this study as a group of symptoms of inattention that is derived from literature review and condensed from empirical evidence. In this research, these symptoms are: finds it difficult to shift from one activity to another; easily distracted by any external stimuli; does not pay attention to details; avoids tasks that need concentration and attention; fails to end the tasks required of him/her; fails to pay attention to details related to the job required of them; continually forgets where he has placed his belongings.

Hyperactivity: This term points to a series of hyper bodily movements that seem to be aimless and inconsistent with the requirements of the situation or task a child is practicing (Wallace & Moloughlin, 1998). It is operationally defined in this study as a group of symptoms of hyperactivity that is derived from literature review and condensed from empirical evidence. These symptoms are: does a lot of movement, running and jumping; repeatedly leaves her chair, constantly moves things from one place to another; cannot wait for her turn; finds it difficult to play quietly; does not finish the tasks she has started; repeatedly leaves her chair. It is difficult to predict the student's behavior, and she becomes constantly and rapidly tired.

Mild reprimand strategy: Reprimand is the most common form of punishment used by teachers and parents to stop or reduce a child's misbehavior. Mild reprimand strategy consists of verbal and non-verbal reprimands (Martin & Pear, 2015). It is operationally defined in this study as an alternative   strategy that is used by teachers in the control group to reduce inattention and hyperactivity among

students with learning disabilities. The steps of the Mild Reprimand Strategy are: (i) Teacher explains the task to the student and the expected desired behavior. (ii) Teacher monitors the student. (iii) Teacher uses a soft tone (or whisper) to reprimand students who are not on-task. (iv) Teacher's facial expression should be appropriately stern or firm.

The Resource Room Teacher: A teacher who is specialized in the field of special education and deals with the academic and behavioral problems of the students with learning disabilities. This teacher is trained and will apply the token economy behavioral program that the researcher has developed.

The Assistant Teacher: A final-year pre-service special education teacher undertaking the bachelor of education course in one of the universities in Jeddah, Saudi Arabia. The assistant teacher will observe the behavior of the students and record it in the check list (which the researcher has developed). They will be responsible to exchange the tokens that the students with learning disabilities will earn with the desired material.

1.12 Summary

In this chapter, the researcher has introduced the background of the study, the statement of the problem, as well as the main purposes of this study. The chapter has also explained the research objectives, research questions, research hypotheses, conceptual framework, and the significance of the study. Finally, the operational definitions related to this study had been clarified.

Chapter Two

Literature Review and Related Studies

2.1 Introduction

This chapter presents a review of the literature. For the purpose of this study, this chapter has divided into six main sections. The first section presents a review of the special education and development in KSA. The second section is concerned with definition of learning disabilities. The remaining three sections deal with behavioral problems of students with learning disabilities especially inattention and hyperactivity. The fourth section discusses the principles of behavior medication, the fifth section talks about the reviews on token economy, and the final section reviews related studies conducted to determine behavioral problems of learning disabilities individuals and studies conducted to address the behavior of inattention and hyperactivity.

2.2 Special Education in KSA

Religion has an important function in education in KSA, even before the kingdom was established. In the past there were Kuttabs where children learned to write and read. Then the schools were located within mosques. According to Sheaha (2004) these schools were specifically designed to teach children how to read and write the Holy Koran. Al-Musa (2012) stated that education in the Arabian Peninsula was established when the founder of KSA himself, King Abdulaziz, established a school for his children and relatives long ago.

Fouzan (1986) reported that the Saudi education system in existence today was not developed until 1927, which was after the Saudi Education Legislation was passed in 1924. This closely corresponded to the founding of the Kingdom of Saudi Arabia in 1932. The education system as it exists today was not established until the 1950s (Saudi Directory of Education, 2006). Before 1950, girls in KSA were not provided with education, probably because of the gender segregation policy of the kingdom, or because there were no jobs for females at that time. Unfortunately, there is no available statistical data to justify these conclusions.

2.2.1 The development of special education legislations for KSA

Special education services for students with special needs in KSA began to emerge in 1958 when some students with visual impairment received their education in schools known as "scientific institutes." In 1962, the Ministry of Education in KSA established the department of special education to improve learning for three main categories of students with special needs: those with visual impairment, hearing impairment, and mental disabilities (Alquraini, 2012). In 1971, the Ministry of Education established the first institution in the KSA that focused on educating people with mental disabilities (Al Ajmi, 2006).

In 1974, a General Directorate of Special Education in the KSA was established to provide and improve services for individuals with special needs. Additionally, establishing the policies and legislation that ensure the rights of individuals with special needs (AlAjmi, 2006; Alquraini, 2012). The first institute for students with hearing impairment, and mental disabilities was established in 1972.

Students with mild learning disabilities study in the general education curriculum with some modifications and accommodations. They also receive their educations in regular classrooms with some support from special education services such as resource rooms (Alquraini, 2012). Students with mild and moderate mental retardation still receive their education in separate classrooms in regular schools. They can be with their normal peers in extracurricular activities. The schools provide special education curriculum to them, which is different from the general curriculum provided to their normal peers (Alquraini,2012; Al- Musa,2012). After they complete their primary and middle school education, most of these students do not have the chance to attend any further education except at some vocational training centers (Al-Ajmi, 2006). These centers try to provide these students with vocational training and employment skills that aid independent living (Alquraini, 2012; Al-Musa, 2012).

According to the Ministry of Education in KSA (2008), more than 94% of students with multiple and severe disabilities received their education in separate institutes in 2007–2008.The students stay at school all week and return home only on the weekends. (Alquraini, 2012; Al- Musa, 2012).

Finally, private institutes sometimes lack related services such as occupational therapists, physical therapists, and speech and language pathologists that enable these students to gain more benefits from their Individualized Education Plans and develop communication, physical, and other skills (Alquraini, 2012; Al-Musa, 2012).

In 1995, the General Secretariat of Special Education (GSSE) established the Learning Disabilities Department for the purpose of administering and expanding learning disabilities programs in the regular elementary schools across the KSA (AL Mosa, 2012). The Ministry of Education sponsored pilot projects in three major cities: Riyadh, Dammam and Jeddah. Special education teachers with expertise in learning disabilities were assigned to these schools to identify students with learning disabilities and to provide them with specialized instruction. After the success of this initial project, in 2005, the Saudi educational policymakers formally recognized learning disabilities as a distinct category of disability and acknowledged the right of student with learning disabilities to receive special education services (AL Mosa, 2012).

In 2008, KSA signed and ratified the Convention on the Rights of Persons with Special Needs and its Protocol. In 2009, KSA organized, in cooperation with the Arab League, a regional symposium to help Arab countries put forward a work plan to carry out the Arab Decade of Special Needs Persons and the Convention on their Rights (Al- Musa, 2012).

In KSA, there is a lack of research related to prevalence and incidence of disability. Al-Hazmy, Al Sweilan, and Al-Moussa (2004) carried out a study aimed to determine the prevalence, distribution and determinants of handicap among children in KSA. A field survey was carried out from (1997-2000) and the study sample consisted of 60,630 children under 16 years, selected from all regions of the country. The results pointed to the total sample, 3838 (6.33%) that were recorded as handicapped. The region with the highest proportion of children with disabilities was Jazan (9.90%); and Riyadh had the lowest (4.36%). Physical disability was the most

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common kind of disability (3.0% of the total sample), followed by learning disability (1.8%).

As of 2006, there were huge changes in the reported statistics of disabilities in KSA. The enrolment of children who were gifted and talented, with learning disabilities, hearing impairment, and with visual impairment increased. This is shown in Table 2.1

Table 2.1

Number of persons with special needs identified in the population census (2006)

Category	No. of institute Programs	No. of students
Learning disabilities	761	9065
Gifted &Talented	80	10824
Hearing impairment	298	6542
Visual impairment	136	3466
Mental Retardation	517	11163
Autism	35	330
Physical disability	1	1642
Multi-disabled	47	347
Total	1875	43379

According to the Ministry of Education of Saudi Arabia (2008), 88% of students with mild disabilities (e.g., hearing impairment, learning disabilities) during the 2007/2008 academic year received their education in an institute; however, 96% of students with multiple and severe disabilities (e.g., autism and moderate to severe