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## **KNOWLEDGE ABOUT ADHD AMONG TEACHERS IN THE EDUCATIONAL SYSTEM (THE STATE AND STATE RELIGIOUS SECTORS) IN ISRAEL**

ABSTRACT. Liviatan Sarit Albaldes, *Knowledge About ADHD Among Teachers in the Educational System (The State and State Religious Sectors) in Israel* [Wiedza o ADHD wśród nauczycieli szkół państwowych i religijnych w Izraelu]. *Studia Edukacyjne* nr 36, 2015, Poznań 2015, pp. 443-463. Adam Mickiewicz University Press. ISBN 978-83-232-2958-2. ISSN 1233-6688. DOI: 10.14746/se.2015.36.25

The educational system in Israel copes with children with Attention Deficit Hyperactivity Disorder (ADHD) in two sectors: the state sector and the state religious sector. This research examined whether there is a difference in the level of knowledge on ADHD between teachers in the two sectors. ADHD is a neurodevelopmental disorder, defined by disorder on the level of attention, lack of organization, and/or hyperactivity/impulsivity. The school framework, which requires the child to sit continuously and quietly, to be organized and orderly, and to focus, causes the disorder to surface. The ADHD child is excessively active and impulsive and has difficulties focusing in class. The pattern expected in the research, differences in the level of knowledge of teachers about ADHD between the two sectors, was found to be positive but weak. The average level of knowledge was indeed higher, although not significantly so, among teachers in the state schools than among teachers in the state religious schools. The level of knowledge about ADHD was found to be low in some of the ADHD parameters in both sectors. Educators need to increase their awareness and further their understanding of the disorder. It is important that teachers have at least the basic knowledge and possibility to identify the children and plan for them an educational program that will meet their needs and help them become successful and proactive citizens.

**Key words:** ADHD, teachers, educational system

### **Theoretical Introduction**

Attention Deficit Hyperactivity Disorder (ADHD) is a neuro-developmental disorder, which is defined by disorder on the level of the attention, lack of organization, and/or hyperactivity/impulsivity<sup>1</sup>.

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<sup>1</sup> American Psychiatric Association (APA) *Diagnostic and Statistical Manual of Mental Disorders (DSM)* (5<sup>th</sup> ed.), Washington D.C. 2013.

The disorder is classified into three groups: attention disorder, hyperactivity-impulsivity, and integrated disorder (attention disorder with hyperactivity-impulsivity). For the diagnosis of ADHD, the appearance of the symptoms must occur before the age of twelve. Some of the symptoms are supposed to appear at least half a year preceding the diagnosis and to be characterized as unsuited to the individual's age, to exist in at least two environments (for instance, in the home and at school) and to disrupt the social, academic, or occupational functioning<sup>2</sup>.

In the research of the causes of ADHD and its expressions, a number of approaches are prevalent today: the heritability approach, the neurological approach, the cognitive approach, and the environmental approach. Every approach has its own outlook for the explanation of the disorder, from which methods of assessment and intervention are derived. These approaches do not necessarily contradict one another<sup>3</sup>.

Research studies performed over time consistently found that ADHD symptoms for the most part appear in the early stages in life, and in most cases they continue to appear throughout life<sup>4</sup>.

The development of the symptoms of ADHD, which appear already in the early stages in life, is influenced by the attachment figure, which constitutes a most significant factor in the child's development<sup>5</sup>.

Cognitive representations of the infant-child and his human environment are created on the basis of early attachment experiences<sup>6</sup>. The system of attachment is a main early developmental factor in processes of regulation in general and regulation of emotions in particular. Deficiency in the ability to regulate attention, emotions, and behavior is the basis for the neuropsychological mechanism that enables ADHD. Therefore, disorders in attachment may harm the proper development of this basic ability<sup>7</sup>. A contemporary research study found that 91% of the children with insecure at-

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<sup>2</sup> T. Heyman, *Attention Deficit Hyperactivity Disorder*, The Open University, 2013.

<sup>3</sup> Ibidem.

<sup>4</sup> R.A. Barkley et al., *The Side Effects of Ritalin in ADHD Children: A Systematic Placebo-Controlled Evaluation of Two Doses*, *Pediatrics*, 1990, 86, p. 184-192; J. Biederman et al., *Predictors of Persistence and Remission of ADHD into Adolescence: Results from a Four-Year Prospective Follow-Up Study*, *Journal of the American Academy of Child and Adolescent Psychiatry*, 1996, 35, p. 343-351; M. Fischer, *Parenting Stress and the Child with Attention Deficit Hyperactivity Disorder*, *Journal of Clinical Child Psychology*, 1990, 19, p. 337-346.

<sup>5</sup> A. Saruf, R. Cooper, J. Dehart, *Development of the Child: Nature and Course*, The Open University, 2004.

<sup>6</sup> V. Ferio, D. Glazer, *Understanding Attachment and Attachment Disorders*, 2012.

<sup>7</sup> I. Manor, S. Tiano, *Living with ADHD*, 4<sup>th</sup> Ed, 2012.

tachment and only 22% of the children with secure attachment presented similar symptoms to those of ADHD<sup>8</sup>.

ADHD changes with the child's development, changing its nature as the child grows up. What worked at the age of six may not work at the age of sixteen. Till now, about 80% of the children of school age who were clinically assessed as having ADHD will continue to suffer from the disorder during adolescence, and 30% to 65% will suffer during adulthood, according to the way in which the disorder is defined in the different types of research<sup>9</sup>.

Children of elementary school age are the primary group that comes for assessment and treatment on the background of the beginning of the studies in the school and according to the development of scholastic and social difficulties<sup>10</sup>.

The school framework, which requires the child to sit continuously and quietly, to be organized and orderly, to focus and to have learning practices, causes the disorder to surface. The ADHD child is excessively active and impulsive and has difficulties focusing in class<sup>11</sup>.

From the moment children with ADHD enter the school, they bear on their shoulders a social burden. The ability to sit in place, to listen, to concentrate, to obey, to restrain impulsive behavior, to cooperate, to be organized, and to perform the instructions, as well as to share, to play nicely, and to form pleasant relations with other children, is an important condition for success in the studies. Young children with ADHD go to the elementary school when they are already behind the rest of their age group in academic skills<sup>12</sup>. The three most common correlations of ADHD are underachievement, a high rate of disobedience and of aggression, and difficulties creating relations with members of their age group<sup>13</sup>. ADHD has an impact on main developmental aspects, including executive functions, reflective abilities, and social cognitions<sup>14</sup>.

The educational system in Israel copes with children with difficulties in attention in two sectors: the state sector and the state religious sector. The

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<sup>8</sup> H. Niederhofer, *Attachment as a Component of Attention Deficit Hyperactivity Disorder*, Psychological Reports, 2009, 104(2), p. 645-648.

<sup>9</sup> R.A. Barkley, *Controlling ADHD: Complete and Authorized Guide to Understanding Attention Deficit Hyperactivity Disorder*, Glila, 2003.

<sup>10</sup> I. Manor, S. Tiano, *Living with ADHD*.

<sup>11</sup> S. Tagansky, *Who Is Afraid of ADHD?* Tel Aviv 2006.

<sup>12</sup> M.J. O'Reilly, *Early Literacy Skill Development of Kindergartners and First-Graders At-Risk for Externalizing Behavior Disorders*, Unpublished Ph.D. dissertation, Amherst 2002.

<sup>13</sup> G.J. DuPaul, G. Stoner, *ADHD in the Schools: Assessment and Intervention Strategies*, 2010.

<sup>14</sup> A. Bonstein, *Use of Hypnosis to Treat Attention Deficit and Hyperactivity Disorder*, Hebrew Psychology, 2005.

educational system in Israel determines shared goals for the schools in the two sectors. However, in state religious education there are aspects and emphases that differ from those of state education and that address the traditional lifestyle, the outlook, and religious and value-oriented aspects. The researcher thinks that it is possible that these aspects have a certain impact on children with ADHD and on their social skills, as well as on their teachers and parents.

The educational system in general and the teachers in particular have a main role in the shaping and formation of the scholastic and social functioning of students with ADHD, and they fill a main role in the shaping and formation of the students' social constellation both in the creation of conditions for the development of social relationships between the students and in their contribution to the social crystallization in the classroom<sup>15</sup>. The development of social skills may help the students who lack social abilities to develop positive social relations with the family, with friends, and with the peer group and to contribute to their success in the school<sup>16</sup>. These abilities are essential in each one of the areas of life: they are the basis of the individual's independent functioning, and they constitute a factor that is essential to his success in the environment where they live<sup>17</sup>.

In light of the ongoing nature of the disorder and the concomitant long-term risks for a large percentage of the children with ADHD, there is the steadily increasing risk about the need to integrate a number of ways of treatment throughout the years of school<sup>18</sup>.

From the research literature and the accumulated clinical knowledge, factors of mediation are apparent, both for the nature of the disorder and the conditions of the environment in which the disorder develops. The conditions of the environment that are adjusted to normal emotional development for beneficial functioning of children with ADHD form in the space of the relationship between the main systems that surround the student in his everyday coping – the family, the school, and society. The relationship space, in each one of the systems and between them, must include knowledge, understanding, inclusion, and support that will allow the child with ADHD to use his strengths and advantages and to minimize the influence of the harmful elements of ADHD. Both parents and teachers have a critical role in the

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<sup>15</sup> T. Heyman, *Attention Deficit Hyperactivity Disorder*, The Open University, 2013.

<sup>16</sup> C.D. Bremer, J. Smith, *Teaching Social Skills*, Information Brief, 2004, 3(5), p. 1-6.

<sup>17</sup> J.S. Leffert, G.N. Siperstein, *Assessment of Social Cognitive Processes in Children with Mental Retardation*, American Journal on Mental Retardation, 1996, 100(5), p. 441-455.

<sup>18</sup> R.A., *Barkley Attention Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, 2<sup>nd</sup> Ed, New York 1998.

shaping of the personality of students with ADHD. The teachers on their part are responsible for helping shape the school environment adjusted to the student's needs and to the creation of a shared dialogue with parents<sup>19</sup>.

It is important and required that the educational staff know what ADHD is, know its characteristics and its expressions, as they are observed in the educational system, and the direct and indirect factors of the different behaviors, and understand the implications on the different areas of life on the level of the individual and his environment. The awareness of the educational staff of the existence of ADHD sheds new light on the child and his behavior and creates understanding of the need to look behind the child's words and/or actions. The understanding that grows from knowledge enables a look into the child's internal work and the understanding of processes that lead him to behavior that is not appropriate. Lacking knowledge, awareness, and understanding, the educational staff cannot cope on an objective level with the difficulties of the child with ADHD and approaches treatment from a place of anger, insult, and vulnerability and solves problems in an ineffective manner. In other words, the educational staff attacks the outside expressions of the child's difficulties, instead of connecting to the difficulties themselves, and from there creating an effective alternative method of coping<sup>20</sup>.

The more the treatment is based on teamwork, the more it will be effective for the child. It is important to ascertain that all the professionals in the school are aware of the nature of the ADHD, know how to identify students who may need intervention, and know methods to treat problems related to the disorder. Teachers need to understand that the behaviors that accompany ADHD are chronic and that it is possible only rarely to prevent them entirely, certainly not in a framework of one school year. Teachers are required to learn how to cope with educational and behavioral needs of children with ADHD. As of today, many teachers are not willing to actually cope effectively with the needs of these children, even after they participated in workshops or read the relevant professional literature. Educators need to increase their awareness and further the depth of their understanding of the disorder. All educators and professionals encounter children with ADHD daily in the school. Therefore, it is important that all the educators have at least a basic knowledge and possibility to identify the children and to plan for them an educational plan that will meet their needs and make them successful and proactive citizens<sup>21</sup>.

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<sup>19</sup> S. Chessner et al., *To Touch beyond the Armor*, Ministry of Education, 2009.

<sup>20</sup> I. Manor, S. Tiano, *Living with ADHD*.

<sup>21</sup> G.J. DuPaul, G. Stoner, *ADHD in the Schools*.

When the educational team is not very knowledgeable, then the interpretations given to certain behaviors and even the proposed solutions may be misleading and worsen the relations instead of improving them. Frequently the educational staff responds to the behavior of children with ADHD with excessive authoritativeness and assertiveness, which causes negative interactions between the staff and the child, the intensification of the poor achievements in the studies, problematic social relations, reduction of the motivation and poor self-image of the child, and repeated failures over time<sup>22</sup>.

The teacher who constitutes a significant figure in the relationship with the student has the role of a 'significant other' to create a relationship space in which there is the potential for growth and development, for better coping with the client, for the shaping of the self-image, and for the increase of the ability to endure different situations. This relationship space, which is the secret of success of the students with ADHD, means openness, flexibility, sensitivity, and creativity. It primarily allows the children and the different situations in which they function to be observed everyday anew. The teacher has a main role in the integration of the student with difficulties – in essence he is the model of the presentation of a positive attitude and position. The perception that says that children with difficulties should be handled in the framework of regular education requires of the educator to look differently at his role, both in general and specifically, regarding the children with specific needs<sup>23</sup>.

Teachers in regular education who enrich their knowledge on the topic of learning disabilities evince more positive attitudes towards the learning disabled students who are integrated in their class and perceive themselves as more responsible for the promotion of these students<sup>24</sup>. Hence, it is possible to conclude about the importance and essentialness of the learning of this topic – for the purpose of the continuation of the work and everyday coping of teachers in regular education with these students in the classroom.

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<sup>22</sup> I. Manor, S. Tiano, *Living with ADHD*.

<sup>23</sup> S. Chessner et al., *To Touch beyond the Armor*.

<sup>24</sup> A. Dror, A. Wiesel, *Organizational Climate, Self-Efficacy of Teachers, and Attitudes towards the Inclusion of Students with Special Needs*, Issues in Special Education and Rehabilitation, 2003, 18(1), p. 5-18; O. Krispal, G. Simon, Y. Frish, *Change of Attitudes of Teachers in Regular Education*, Shaanan Religious Academic College Annual Journal, 2008, 13; S. Reiter, *Ways of Coping in Special Education*, Issues in Special Education, Unit Number 11, Tel Aviv 1990; Ts. Shechtman, *Change of Attitudes of Teachers in Regular Education towards the Inclusion of the Special Needs Student in Regular Frameworks – Empirical Frameworks and Intervention Program*, Pages, 1991, 13, p. 54-59.

The researcher chose this topic to acquire insight into the teachers' knowledge about ADHD. This insight will constitute a significant basis for proactive intervention to the guidance of teachers regarding the best way to work with children with ADHD.

## **Method**

### **Research Question**

Is there a difference in the level of knowledge about ADHD between teachers in the state sector and teachers in the state religious sector?

### **The Expected Patterns of Results**

There will be differences in the level of knowledge of teachers about ADHD between two sectors: the state sector and the state religious sector. Various demographic variables – age, seniority, gender – have an impact on the level of knowledge about ADHD.

### **The Current Study**

The design used in this study is a correlative one. It is used to describe the different variables and to test the correlations between the variables and also their directions. The data was gathered by using questionnaires that were filled by the participants in the research.

### **Participants and Sampling Method**

This study included 50 teachers, 25 from the state sector and 25 from the state religious sector. The participants' age ranged from 24 to 61, and most of the participants were women. The sampling method was snowball sampling (or chain sampling) and convenience sampling, namely, teachers who consented to fill out the questionnaires.

### **Procedure and Ethical Considerations**

The questionnaires were distributed to teachers attending different cultural and educational activities held at private homes, to private teachers, to teachers the researcher encountered randomly, to teachers who attended different lectures and events, to teachers who study at the universities from different regions and sectors. The questionnaire was given with no time

limit, and some of the teachers returned the questionnaire during the same day it was given and some of the teachers returned the questionnaire a few days later. Participation in the study was voluntary, and participants did not receive any payment for their participation. Due to ethical considerations, some demographic questions were left out in order to ensure the anonymity of respondents and thus to make it easier to obtain the consent of the participants for the research. All the participants were briefed and received an explanation about nature of the study and the purpose of the questionnaire.

### **Measure**

The research design was correlative, and the main measure used was an ADHD knowledge questionnaire. The questionnaire included thirteen knowledge questions about ADHD, and two attitude questions. In addition, the questionnaire included four demographic and professional questions regarding the teachers' characteristics. The questionnaire was invented by the researcher and was designed to test the teachers' knowledge and views about ADHD. Knowledge questions were based on DSM-5 definitions and on other articles. They included knowledge about the causes of ADHD, the definition of ADHD, and symptoms and types of treatment that exist today.

### **Data Collection and Analysis**

The data was collected through printed questionnaires (hard copies), then encoded and inserted into an Excel worksheet, and then analyzed using SPSS (version 22).

### **Building and Encoding Variables**

The questionnaire included two types of questions: thirteen knowledge questions and two attitude questions. Regarding the knowledge score, knowledge questions were recoded into dummy variables (0 and 1), when a correct answer was recoded into the value 1. The total knowledge score was calculated as the sum of all thirteen questions and therefore ranged from zero to thirteen. Regarding the attitude questions, each attitude question had four nonexclusive answers, and a participant could choose one or more of the answers. Answers were recoded as a one\two\three\four digit number, which was assembled by the numbers of answers in contained. (For example: a pattern that included answers 1, 2, and 4 was coded as 124 etc.).

### Method of Analysis and Missing Values

The data gathered was analyzed with SPSS by the following steps. First, automatic response patterns were checked and removed from the data file. Second, unanswered questions were removed from the analysis. Third, answers to the knowledge questions were recoded into dummy variables (0 and 1, as mentioned above) according to a recode key. Fourth, the knowledge score variable was calculated as the sum of all the dummy variables in the questionnaire.

### Results

This section presents the research findings of the examination of the teachers' level of knowledge about ADHD in the state and state religious sector.

### Descriptive Statistics

#### Demographic Variables

Table 1

Demographic Dichotomous Variables

| Variable        | Frequency | Percentage (%) |
|-----------------|-----------|----------------|
| Gender          |           |                |
| Male            | 2         | 4              |
| Female          | 48        | 96             |
| Total           | 50        | 100            |
| School type     |           |                |
| State           | 25        | 50             |
| State Religious | 25        | 50             |
| Total           | 50        | 100            |

**distribution by gender**

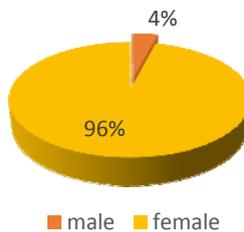


Fig. 1. Distribution by Gender

Table 2

## Demographic Quantitative Variables

| Variable   | Mean  | Min | Max | Standard Deviation |
|------------|-------|-----|-----|--------------------|
| Age        | 41.95 | 24  | 61  | 11.1               |
| Work years | 16.56 | 1   | 39  | 11.42              |

The mean age of participants was 41.7, ages ranged from 24 to 61, the mean number of work years (as a teacher) is 16.56, and ranged from 1 to 39.

## Research Variables

Table 3

## Knowledge Score Statistics

|                 | Number of Items | Mean | Standard Deviation | Min | Max |
|-----------------|-----------------|------|--------------------|-----|-----|
| Knowledge Score | 13              | 7.09 | 2.75               | 1   | 13  |

Table 4

## Answer Patterns for the Definition of ADHD (%)

| Sector \ answer               | State | State Religious | Total |
|-------------------------------|-------|-----------------|-------|
| Did not meet the definition   | 28    | 41.7            | 35.8  |
| Partially met the definition  | 68    | 45.8            | 56.8  |
| Met the definition accurately | 4     | 12.5            | 8.2   |

Table 5

## Correlations between the Research Variables

|                 | Age   | Work Years | Knowledge Level |
|-----------------|-------|------------|-----------------|
| Age             | 1     |            |                 |
| Work Years      | 0.88  | 1          |                 |
| Knowledge Level | 0.135 | 0.16       | 1               |

Weak positive correlations were found between work years and knowledge level. These correlations were found higher among teachers in the state sector; nevertheless, these positive correlations were found in both sectors. In addition, the correlation between the knowledge level and work years was found to be stronger than the one between knowledge level and

age. The meaning of the finding is that knowledge about ADHD increases with age and work years as a teacher.

### Between Group Differences

Table 6

Differences in Means between Sectors in Various Variables

| School Type     | Means |                 |
|-----------------|-------|-----------------|
|                 | State | State Religious |
| Age             | 41.6  | 41.9            |
| Work Years      | 14.36 | 18.63           |
| Knowledge Score | 7.52  | 6.66            |

Table 6 shows the differences between the sectors in different variables. We can see that the average knowledge score was higher among teachers in the state sector than among teachers in state religious ones. In addition, we can see that the average number of school years among teachers in state schools is lower than it is among state religious schools. No significant age differences were found between the different sectors.

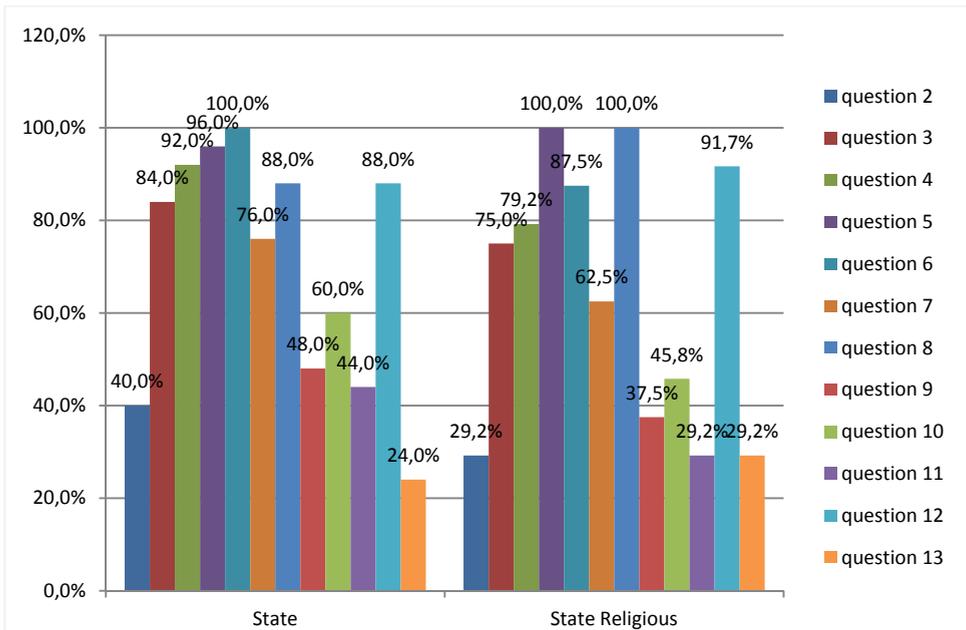


Fig. 2. Percentage of Response to Questions Examining Knowledge about ADHD in the Different Types of Schools

Figure 2 shows the differences in response patterns of the different sectors. It shows that the patterns of the two kinds of sectors did not differ significantly. In addition, we can learn that questions 13, 11, 9 and 2 had the lowest percentage of correct answers in both sectors.

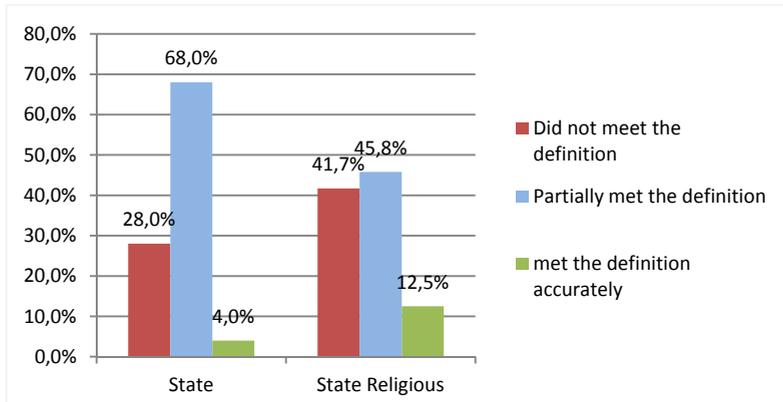


Fig. 3. Answer Patterns for the ADHD Definition

Figure 3 shows that teachers in the state sector answered more accurately on the definition of ADHD than did teachers in state religious sector.

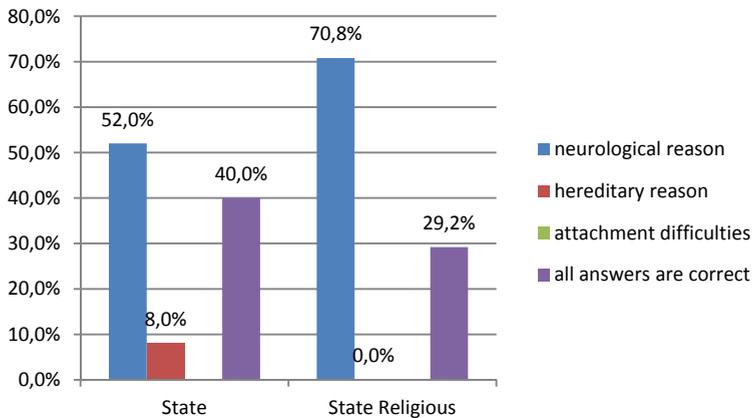


Fig. 4. Answer Patterns for the Source of ADHD Question

According to the figure, the percentage of teachers in the state religious sector who answered that the origin of the disorder (ADHD) is neurological

is higher than the percentage of teachers in the state sector. In addition, the percentage of teachers who responded that all answers are correct is higher in the state sector than in the state religious sector.

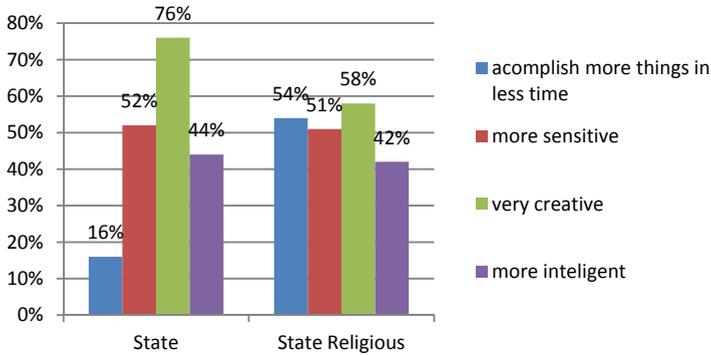


Fig. 5. Attitudes towards Children with ADHD

Figure 5 shows us that a higher percentage of teachers in the state sector said that children with ADHD are more creative. In contrast, a lower percentage responded that they accomplish more things in less time.

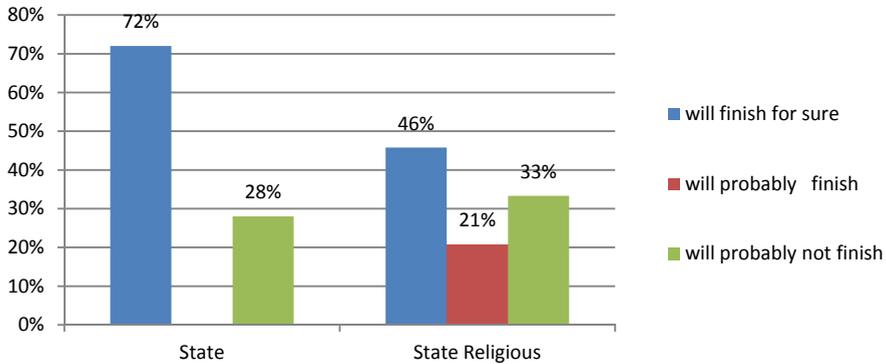


Fig. 6. Attitudes towards Children with ADHD - Will They Finish Their Academic Studies and Keep Their Jobs

This figure shows us that most teachers in the state sector believe that children with ADHD will finish their studies for sure. Teachers in the state religious sector are more skeptical about it.

## Differences between Genders

Table 7

Differences in Means between Genders in Various Variables

| Gender          | Male | Female |
|-----------------|------|--------|
| Age             | 30.5 | 41.7   |
| Work Years      | 4    | 16.76  |
| Knowledge Score | 7    | 7.11   |

Table 7 shows that there were no significant differences in knowledge level between men and women (7 vs. 7.11, respectively). It cannot be said that gender influences the knowledge levels about the disorder.

## Discussion and Conclusions

This research study examined whether there is a difference in the level of knowledge on ADHD between teachers in the state sector and teachers in the state religious sector in the educational system in Israel.

Meijer, Pijl, and Hegarty<sup>25</sup> maintain that there is a relation between outlooks that the teachers express in different topics and the value-oriented positions that are prevalent in the society to which they belong. These outlooks of the teachers are nurtured by the moral positions prevalent in the society to which they belong. In Israel differences were found in the outlooks between teachers who teach in the state sector and teachers who teach in the state religious sector, regarding the educational goals, the learning contents, and even the rules of behavior<sup>26</sup>.

The pattern expected in the research conducted by the researcher, that there are differences in the level of knowledge of teachers about ADHD between the two sectors, the state sector and the state religious sector, was found to be positive but weak. The average level of knowledge was indeed higher among teachers in the state schools than among teachers in the state religious schools, although not significantly so. The level of knowledge about ADHD was found low in some of the parameters about ADHD in both sectors, both the state sector and the state religious sector.

<sup>25</sup> C.J.W. Meijer, S.J. Pijl, S. Hegarty, *New Perspectives in Special Education: A Six Country Study of Integration*, London 1994.

<sup>26</sup> S. Goldstein, *The Teaching of Religion in Government Funded Schools in Israel*, Israel Law Review, 1992, 26, p. 36-77.

The expected pattern in the research conducted by the researcher that the different demographic variables – age, seniority, and gender – have impact on the teacher's level of knowledge in topics of ADHD was found to be positive. It was found that the correlation between seniority and level of knowledge was stronger a little than the correlation between level of knowledge and age. In other words, it can be said that as the experience increases, the level of knowledge increases, and this is true also for the age.

Teachers learn from practice – their own practice, their colleagues' practice, and their teachers' practice<sup>27</sup>. Moreover, a significant part of the learning does not occur in an institutionalized framework but spontaneously and as result of processes of maturation, experience, and different types of environmental contexts. From all of these, complex and multivariate processes of learning are depicted<sup>28</sup>.

Research studies that compare between novice teachers and experienced teachers show that the knowledge of the experienced teachers is unique and in a specific field, organized in comprehensive units of knowledge (including metaphors, images, illustrations, accessible for problem solving and for the most part implicit). Experienced teachers develop rich and organized knowledge, which relies on previous experiences. This knowledge influences their professional identity and is expressed in their manner of action and conduct in the class<sup>29</sup>. The teacher's professional development is connected to his age but not necessarily conditional upon it. It is a result of developing professional knowledge, mastery of professional skills, formation of educational attitudes, insights, and so on. The teacher advances in stages or remains in one of them and does not advance, according to his professional development<sup>30</sup>.

In this approach a model of the following four stages was developed.

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<sup>27</sup> J.D. Bransford, A.L. Brown, R.R. Cocking (Eds.), *How People Learn: Brain, Mind, Experience, and School*, Washington D.C 1999, National Academy Press. Retrieved from: <http://www.Nap.Edu/Catalog/6160.Html>.

<sup>28</sup> J.S. Stark et al., *A Conceptual Framework for the Study of Preservice Professional Programs*, *Journal of Higher Education*, 1986, 57(3), p. 231-258.

<sup>29</sup> J. Calderhead, *Teachers: Beliefs and Knowledge*, [in:] *Handbook of Educational Psychology*, Eds. D.C. Berliner, R.C. Calfee, New York 1996, p. 709-725; D.M. Kagan *Professional Growth among Preservice and Beginning Teachers*, *Review of Educational Research*, 1992, 62, p. 129-169; R.J. Sternberg, J.A. Horvath, *A Prototype View of Expert Teaching*, *Educational Researcher*, 1995, 24(6), p. 9-17.

<sup>30</sup> P.R. Burden, *Teacher Development*, [in:] *Handbook of Teacher Education*, Ed R. Houston, McMillan, New York 1990, p. 311-328; K.A. Leithwood, *The Principal's Role in Teacher Development*, [in:] *Changing School Culture through Staff Development*, Ed B. Joyce, The Association for Supervision and Curriculum Development, Alexandria VA 1990, p. 71-91.

1. The stage of survival of the teacher, which is mainly coping with basic problems in teaching, accompanied by a sense of anxiety and tension.
2. The stage of growth in the different areas of the teacher's work, which is accompanied by a sense of satisfaction and aspiration for improvement.
3. The stage of maturation, which is characterized by a feeling of professional efficacy, by the ability to focus on the learner and on his needs, and by openness to innovation.
4. The stage of full professional functioning. The teacher has an integrative perception of teaching.

In teaching, like in other professions in which the experience and growth in the role enrich the constellation of the knowledge and the professional specialization, it is not possible to learn or to acquire in the initial training the constellation of knowledge, skills, and traits required for optimal functioning. These are acquired, developed, and improved primarily over the course of many years of work, with the accumulation of conscious experience<sup>31</sup>.

The level of knowledge of teachers on the topic of ADHD is very significant regarding the ability of coping of the teachers with these challenging children and has significant implications on the functioning of ADHD children in all the parameters. The level of knowledge about ADHD found in the research study was low in some of the parameters about ADHD in the two sectors, both the state sector and the state religious sector.

Children who suffer from ADHD encounter tremendous difficulties in the framework of the educational institutions<sup>32</sup>. The difficulties that children with ADHD experience in the school in the scholastic, behavioral, and social realms make their stay in the school difficult<sup>33</sup>. In a research study that examined differences in the teaching behaviors of teachers<sup>34</sup>, a gap between the existing situation and the desired situation was discovered in all that pertains to the instruction of learning disabled students who are integrated in regular classes. It appears that teachers prefer to use frontal teaching methods that refer to the class in general – more than methods that address specific students and this although on the declared level teaching adjustments

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<sup>31</sup> J.D. Bransford, L. Darling-Hammond, P. Lapage, *Introduction*, [in:] *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do*, Eds. L. Darling-Hammond, J. Bransford, San-Francisco CA 2005, p. 1-39.

<sup>32</sup> G.J. DuPaul, G. Stoner, *ADHD in the Schools*.

<sup>33</sup> R. Plotnick, *To Grow up Differently: The Emotional and Social World of Children with Learning and Attention Disabilities – A New Language for Parents and Educators*, 2008.

<sup>34</sup> A. Almog, *Attitudes, Perceptions, and Behaviors of Teaching of Teachers Who Include Special Needs Students in Regular Classes and Their Relations to the Students' Functioning*, Ph.D. Dissertation, Haifa 2004.

were perceived by the teachers as desired and their attitudes towards them were positive<sup>35</sup>. One of the possible explanations of this phenomenon is the lack of adequate knowledge and lack of training of the teachers in regular education in all that pertains to differential methods of coping with specific difficulties of students. Many additional researchers<sup>36</sup> showed that generally negative attitudes of teachers regarding integration are not focused on its educational importance but on the manner of implementation, such as, for instance, lack of knowledge on the students' background and lack of knowledge on the manner of coping with problems that arise in the class with a large number of students who need special attention. Research studies done in Israel and around the world indicate that despite positive attitudes, the main problem of most of the teachers is lack of knowledge and lack of tools to promote students with difficulties<sup>37</sup>.

In the research conducted by the researcher there was a prominent lack of beneficial knowledge of the teachers in the two sectors, the state sector and the state religious sector, regarding ADHD. This presents a difficulty and has significant implications on the proper and best coping with these children.

When the educational staff does not have much knowledge, the interpretations given to certain behaviors and even the proposed solutions may be erroneous and may exacerbate the relations instead of improving them. Frequently the educational staff responds to the behavior of children with ADHD with excessive authoritativeness and assertiveness, and this causes negative interactions between the staff and the child, the intensification of the poor achievements in the studies, problematic social relations, reduction

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<sup>35</sup> A. Almog, Ts. Shechtman, *Democratic Attitudes, Perception of Efficacy of Teaching, and Style of Coping of Teachers with the Behavior of Students with Special Needs*, Encounter for Educational Social Work, 2004, 20, p. 11-31.

<sup>36</sup> A. Almog, *Attitudes, Perceptions, and Behaviors of Teaching*; A. Dror, A. Wiesel, *Organizational Climate, Self-Efficacy of Teachers, and Attitudes towards the Inclusion of Students with Special Needs*, Issues in Special Education and Rehabilitation, 2003, 18(1), p. 5-18; E. Clayfield, *Factors that Influence Teachers' Attitudes regarding the Inclusion of Special Needs Children in Regular Education*, M.A. Thesis, Haifa 2002; S. Reiter, *Ways of Coping in Special Education*; Y. Rottenberg, *Changes in the Perception of the Special Needs Student and His Inclusion in the Regular School among Students in a College of Teacher Training in the Regular Training Programs, following Introduction Courses on the Topic of Special Education*, M.A. Thesis, Haifa 2001; Ts. Shechtman, *Change of Attitudes of Teachers in Regular Education*, p. 54-59; S. Vaughn, G.S. Schuma, *Middle School Teachers Planning for Mainstreamed Special Education Students*, Remedial and Special Education, 1996, 15, p. 152-161.

<sup>37</sup> T. Heyman, *Confused Teachers*, Echo of Education, 1999, 73(10-11), p. 24-27; S. Reiter, *Ways of Coping in Special Education*; Y. Rottenberg, *Changes in the Perception of the Special Needs Student*.

of the motivation and poor self-image of the child, and repeated failures over time<sup>38</sup>.

Educators need to increase their awareness and further the depth of their understanding of the disorder. It is important that the teachers will have at least the basic knowledge and possibility to identify the children and plan for them an educational plan that will meet their needs and help them become successful and proactive citizens<sup>39</sup>.

The development of knowledge causes a change in the perception of their role as responsible for the promotion on learning disabled students. A teacher must continue to develop during his career, both because his professional field continues to develop and because the nature of his occupation obligates this<sup>40</sup>.

Research studies show that practical work exposing teachers to students with different abilities without knowledge and preparation ahead of time instills in the teachers mistrust of their ability to deal with difficulties entailed by work with these populations<sup>41</sup>. It appears that the educational system must prepare and adjust an intervention program that will inculcate in the teachers knowledge and equip them with strategies and appropriate methods of teaching so as to instill in them confidence in their abilities and to enable them to work with these children<sup>42</sup>.

Horner et al.<sup>43</sup> identified 'support systems for the teacher' as a critical component for the teacher's functioning as a successful educator who copes with students with ADHD. This type of support will be accompanied by a team with knowledge and abilities in the areas of behavioral and educational support. In the schools in which this exists, the parents and the teachers can expect higher percentages of academic, behavioral, and social success among students with difficulties in attention.

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<sup>38</sup> I. Manor, S. Tiano, *Living with ADHD*.

<sup>39</sup> G.J. DuPaul, G. Stoner, *ADHD in the Schools*.

<sup>40</sup> T. Sander *Introduction: Problems and Origins of the Debate on Promoting Life-Long Learning Strategies for Teachers*, [in:] *Life Long Learning in European Teacher Education*, Eds. T. Sander, J.J.M. Vaz Jeremias, Osnabruck, Germany 1996, p. 9-38; J.J.M. Vaz Jeremias., *Life Long Learning in Teacher Education and the Wider World of Work and Industry: A Meeting Point*, [in:] *Life Long*, p. 210-217.

<sup>41</sup> S.J. Harasymiw, N.D. Horn, *Attitudes towards Handicapped Children and Regular Class Integration*. *The Journal of Special Education*, 1976, 101, p. 393-400.

<sup>42</sup> N. Maslovetti, Y. Taram, *Education for Diverse Instructional Values*, Tel Aviv 2002.

<sup>43</sup> R.H. Horner, R.W. Albin, R.E. Oneill, *Supporting Students with Severe Intellectual Disabilities and Severe Challenging Behaviors*, [in:] *Interventions for Achievement and Behavior Problems*, Eds. G. Stoner, M.R. Shinn, H.M. National Association of School Psychologists, Silver Spring MD 1991, p. 269-287.

Children with ADHD can succeed if around them there is somebody who knows to lead them to the correct destination. The development of the ability to listen to these children, to understand the meaning of the experience of the child who has ADHD, to understand their way of conduct, and to be the significant adult for them is the significant basis of the success of these children.

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