The inclusion of Pupils with Autism: The effect of an intervention program on regular pupil burnout, attitude and quality of mediation

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Abstract

In recent years, with the emphasis on quality of life, the aim of inclusion is seen to be to provide children with and without disabilities with opportunities to experience meaningful social encounters (Culham, 2003, Reiter, 1999 & Ainscow, 1995, McChale & Gamble, 1986). While the literature presents ample evidence of the positive influence of inclusion on children with special needs, the effect of inclusion on the regular children involved, who play a decisive role in the process, is hardly ever mentioned.

The aims of the study were:

- 1. To examine the relationship between the attitudes of the regular children and the level of their burnout during inclusion, and the quality of their mediation in class and during school activities.
- 2. To examine the effect of an intervention program for the regular children on their attitude and level of burnout during inclusion, and the quality of their mediation.

Introduction

One of the characteristics of the population of autistic children is their difficulty in interacting socially with others and understanding interactions: difficulty in understanding language, in initiating social contact and responding appropriately (American Psychiatric Association, PDD, Pervasive Developmental Disorders, 1994). By means of social interactions with regular children, children with autism are exposed to normative social behavioral models. However, there is research evidence that the physical placement of children with special needs within a society of regular children is not sufficient to generate a process of acceptance of 'the different' by the regular children. The inclusion of children with special needs necessitates relating to their unique needs, not ignoring their disabilities. Disregard for their unique needs may lead to their social isolation (Ochs et al, 2001).

A number of studies have examined the behavior of pupils with autism in their interaction with regular pupils, as compared to their interaction with other children with autism. The findings revealed a significant difference in their behavior. In the presence of regular pupils, the pupils with autism displayed fewer autistic behaviors and more normative behaviors (McGee et al., 1998; Carr & Darey, 1990; Charlap et al., 1983; Egel & Roeyers, 1996; Gradel, 1988; Garrison-Herrell & Kamps, 1997). Another study found differences in the response of pupils with autism and their participation in interaction with an adult partner, as compared to interaction with a child similar in age. The communication created with an adult was merely physical, whereas that with regular pupils included the expression of feelings by means of functional use of language (Ihrig & Worchik, 1988; Hauck et al., 1995; Braverman et al., 1980; Fein, 1995).

Several studies examined the effect of programs preparing regular pupils for the inclusion of pupils with autism. Lord (1986) taught regular pupils how to interact with pupils with autism and found that the interactions with regular pupils who had undergone preparation and

practice were of higher quality (eye contact, response, initiative etc.) than interactions with pupils who had no preparation. Odom and Strain (1984) found that pupils who had undergone appropriate preparation exerted a positive influence on the social functioning of the children with autism. Royers (1995) found that when regular pupils were given instruction on how to create contact and play with pupils with autism, the included children's interactions lasted longer and they acquired more social skills than those whose partners had not received such instruction.

Included children with autism are not accepted and given support as a matter of course; they may be ignored, rejected or even nagged by some of the others. An ethnographic study (Ochs et al., 2001) followed the interactions between regular pupils and high functioning pupils with autism, included in a regular class. The research revealed that the pupils with autism, in spite of their difficulty in interpreting the intentions and feelings of others, were aware of being rejected, ignored and nagged by the regular pupils. In response to the negative experience in inclusion, the pupils with autism reacted in various ways, by ignoring the regular pupils, by trying to imitate them and assert themselves, or even by sharing their negative experiences of inclusion with their parents.

In summary we may say that the contribution of regular pupils to pupils with autism within the inclusive framework is very significant. The regular pupils can, in fact, function as 'young teachers', helping their peers with autism learn various school subjects and social skills, encouraging and modeling behaviors, and above all serving as mediators vis à vis reality, perceived by children with autism as extremely complex (Royers, 1996; Damps et al., 1994). However, at the same time, such diverse interactions may, in the long term, generate a process of burnout in the fulfillment of the task of inclusion on the part of the regular pupils.

Burnout – definitions

There are several ways of defining **burnout**, most of them mention that lasting daily pressures gradually lead to mental fatigue and reduced functioning (Friedman, 1995; Talmor et al., 2005). There is a clear conceptual distinction between pressure and burnout. When a person is under pressure, he/she perceives a demand being made of him as surpassing his/her resources, while burnout is an experiential/emotional response to this pressure (Fruedenberger, 1974; Shirom, 1989). Nevertheless there is a connection between pressure and burnout, burnout is perceived as the result of lasting unrelenting pressure, with no outside help or alternative, i.e. as the pressure continues unmediated and no way of coping with it is in sight, it turns into burnout (Farber, 1991). Maslach and Jackson (1981), in defining burnout, relate to the helping professions, requiring close contact with the clients; service providers supposedly tend to feel mental fatigue, leading to the clients' depersonalization and a sense of a lack of self-fulfillment on their part.

Mental fatigue relates to emotional exhaustion and reflects an important underlying assumption that burnout appears mainly among people whose work calls for a great deal of emotional and physical involvement.

Depersonalization is manifested on various levels, ranging from a feeling of non-involvement in the problems of the clients, to relating to them as 'objects', not as people. A sense of **a lack of self-fulfillment** is a feeling that no real progress has been achieved in the work with the clients, in spite of the efforts invested. When the workers feel that that their efforts are ineffective, they cease to exert themselves (Cherniss, 1995; Jackson et al., 1986).

The Program

Clearly, we may relate daily pressure to the experience of burnout. Inclusion of children with autism in a regular class may be challenging and of great educational significance. In the course of time it may prove an additional burden for the regular children, owing to various difficulties and pressures they experience, and thus lead to burnout. An intervention program was implemented to prevent burnout or help the children cope with it, and the effect of the program on the children was examined. The program was based on the theory of mediated learning, proposed by Feuerstein, Klein and Tannenbaum (1991).

Mediated learning

There are two main ways to learn, learning by being directly exposed to the environment and the stimuli it provides, and mediated learning. When learning through direct exposure, the learners do so by themselves, through direct personal experience of people, objects and phenomena. Their behavior is influenced by the feedback they receive from the outside world. In mediated learning, a mediator intervenes between the learners and the world of stimuli surrounding them. Mediated learning is defined as 'a quality of interaction between an organism and its surroundings' and the experience is the product of the mediator's initiative and intentions, creating in the individual the tendency to learn in the wake of the interaction with the stimulus. The mediating agent does not constantly act between the person mediated with and the world; he leaves the person mediated with plenty of space for direct unmediated exposure to stimuli. When mediating a certain sphere of knowledge, the mediator changes the stimulus significantly and exposes the person mediated with to it in a controlled way, providing that person with the components and tools, enabling him to understand the phenomena and to seek relationships between them, thereby utilizing them and changing through learning (Feuerstein, Klein and Tannenbaum, 1991). Not all interpersonal interactions are mediating; according to Feuerstein, three parameters are essential for mediated learning to occur and they are responsible for the universal phenomenon of the human capacity to change, for the malleability characterizing humankind, as such. These are: intention and mutuality, mediation for transfer, and mediation of significance (Feuerstein, R. & Feuerstein S., 1991).

Research Hypotheses:

- 1. The more negative the regular children's attitude to inclusion, the greater their burnout.
- 2. With the introduction of the intervention program to facilitate the inclusion of the children with autism, the quality of the mediation by the regular children will improve by the end of the program.
- 3. With the introduction of the intervention program to facilitate the inclusion of the children with autism, the level of burnout on the part of the regular children will be lower by the end of the program.
- 4. With the introduction of the intervention program to facilitate the inclusion of the children with autism, the attitude of the regular children to the included children will improve by the end of the program.

Method

The sample

The research was carried out in a fourth grade class, numbering 23 pupils, 12 boys and 11 girls aged 9-10, and it included two children with autism since the first grade. The class was divided into two study groups. All the children came from the same socioeconomic background – kibbutzim. The school where the research was carried out is a primary school (grades 1-6) in Israel, in the northern district, comprising 300 children without disabilities from a number of kibbutzim in the area. There are two parallel classes for each age group.

The school also contains four classes and two kindergartens with a total of 30 children with autism, at various levels of functioning. Inclusion starts in the kindergarten and continues until the sixth grade, according to the functional and cognitive abilities of each autistic child. The children with autism participate in various lessons and school activities, accompanied by an adult, and then return to their homeroom. They learn within their own framework until 5.00 p.m. and participate in various therapeutic lessons such as occupational therapy, communication, drama and art.

An individual program for inclusion is prepared for each child with autism, and an inclusion plan is carried out according to the aims defined by a team comprising the child's educator, the teacher including the child in her class, and the homeroom teacher of the regular class. During the course of the year the aims and processes related to inclusion are evaluated and the decision whether to continue with inclusion is taken accordingly. Besides being included in regular classes, the children with autism also participate in the life of the school, such as breaks and cultural activities, and regular children also enter the classes of the children with autism, joining them on trips and so on.

Research instruments

Both quantitative and qualitative instruments were used in this study, in order to ensure internal and external validity (Schwandt, 2000).

Quantitative instruments

A burnout questionnaire, adapted from Friedman's (1999) questionnaire for adults. Friedman reported the following reliability: fatigue -0.90; lack of self-fulfillment -0.82; depersonalization -0.79; the whole scale -0.90. The questionnaire was adapted for use with regular children. It included 14 items: 5 dealing with fatigue, 5 with lack of self-fulfillment and 4 with depersonalization.

The questionnaire was amended by three experts, and subsequently administered to 15 children in another class at the same school to check the reliability of each component, with the following results: fatigue -0.80; lack of self-fulfillment -0.84; depersonalization -0.62.

A questionnaire dealing with the quality of mediation was constructed for the purpose of this study, in the light of the theoretical literature and in consultation with experts. It was built up according the six parameters of mediated learning, applicable to situations of inclusion and to the level of cognitive development of fourth grade children. The six parameters were: 1. Intention and mutuality. 2. Transfer of knowledge. 3. Mediation of meaning. 4. Sense of efficacy. 5. Participatory behavior. 6. Coping with challenges.

The questionnaire was amended by three experts, and administered to 15 children in another class at the same school to check the reliability of each component, with the following results: Intention and mutuality - 0.74; transfer of knowledge - 0.70; Mediation of meaning - 0.78; Sense of efficacy - 0.86; Participatory behavior - 0.79; Coping with challenges - 0.79.

An attitude questionnaire, (Rosenbaum et al., 1986) examining the attitudes of regular children to children with special needs was administered. It included 28 utterances based on children's familiar everyday experiences, relating to the affective, cognitive and behavioral dimensions, and includes both positive and negative utterances. Internal reliability was 0.91. While filling in the questionnaire, the children were asked to have in mind the children with autism included in their class and their relationship to them.

Qualitative instruments

Interviews with 10 pupils were carried out, 5 who had reported a very high level of burnout and 5 reporting a very low level. The aim of the interviews was to gather additional information about the inclusion and how it affected the regular children. The interviews were semi-structured, both focused and open to the children's own comments. The teachers involved in the inclusion in that particular class were also interviewed to provide insights into the processes that the regular children undergo, from the teachers' point of view.

Procedures

The research was carried out in three stages: First, after receiving permission from the school administration, the Ministry of Education and the children's parents, we explained the unique nature of the intervention program to the children and that they were chosen to participate in it. At the second stage, the children filled in the questionnaires relating to burnout, to the quality of their mediation and their attitudes prior to the intervention program. Then the intervention program was immediately introduced. It comprised 19 sessions, prepared on the basis of the six parameters chosen. The sessions included activities promoting group cohesiveness, experiential learning through role-play of familiar situations during inclusion, the presentation of measures of mediation, accompanied by simulations, modeling, practice of mediation and discussion. There were also some general sessions, the first one to introduce the subject, and two at the end for summing up and feedback.

At the third stage the researcher interviewed ten children (chosen as explained above) and two teachers.

Findings

Statistical findings:

To examine the first hypothesis that the more negative the regular children's attitude to inclusion, the greater their burnout, Pearson's rank order correlation test was administered to the pre- and post- intervention results. Table 1 presents the correlations between the children's attitudes and the level of their burnout before and after the intervention.

Table 1: Pupils' attitudes and level of burnout - Pearson rank order correlations before and after the intervention program (N = 23)

	Burnout				
Attitudes/ dimensions	Fatigue	Lack of self-fulfillment	Depersonalization	General Burnout	
Before					
Cognitive	.044	050	050	046	
Behavioral	700***	845***	158	829***	
Emotional	618***	636***	058	630***	
After					
Cognitive	175	142	073	148	
Behavioral	638***	517**	073	635***	
Emotional	574**	384	125	529**	

^{**} $p \le .01$ *** $p \le .001$

The data show that there is a significant (negative) relationship between the behavioral and affective measures and burnout on the fatigue and lack of self-fulfillment scales; no statistically significant relationship was found between the cognitive or depersonalization dimensions and burnout.

To examine the second hypothesis that in the wake of the introduction of the intervention program the quality of the mediation by the regular children would improve by the end of the program, the Manova multidimensional repeated measures analysis was applied. The Means and F values of the mediation scales are shown in Table 2.

Table 2: Scores given on the mediation factors: comparisons between scores given before and after the intervention program, means, standard deviations and level of significance (N = 23)

Mediation Factors	Mean (S.D)	Mean (S.D)	F
	Before	After	
Intention and	1.86	2.26	17.74***
Mutuality	(.56)	(.51)	
Meaning	1.71	2.23	24.00***
_	(.64)	(.69)	
Transfer of	1.64	2.01	6.07*
Knowledge	(.64)	(.69)	
Self Efficacy	1.61	2.10	21.37***
-	(.57)	(.62)	
Participatory	1.77	2.10	9.04**
Behavior	(.60)	(.60)	
Coping with	1.62	2.20	37.85***
Challengers	(.65)	(.59)	

^{*} $P \le .05$ ** $P \le .01$ *** $P \le .001$

Table 2 reveals a significant variance between the data before and after the intervention on each of the mediation measures: intention and mutuality, mediation of meaning, transfer of knowledge, sense of efficacy, participatory behavior and coping with challenges. Thus we may say that in the wake of the intervention a significant improvement in the mediation by the regular pupils took place and the second hypothesis was fully substantiated.

To examine the third hypothesis that following the introduction of the intervention program, the level of burnout on the part of the regular children would be lower by the end of the program, the Manova multidimensional repeated measures analysis was applied. The means and F values on the burnout scale are presented in Table 3.

Table 3: Levels of Burnout: comparisons between scores given on each subscale before and after the intervention program, means' standard deviations and level of significance (N = 23)

Burnout	Mean (S.D)	Mean (S.D)	F
	Before	After	
Fatigue	3.31	2.64	8.90**
	(1.31)	(1.09)	
Lack of	3.82	3.29	12.69**
self-fulfillment	(1.22)	(1.40)	
Depersonalization	1.95	1.57	4.14*
	(.82)	(.73)	
Burnout/ Total	3.15	2.57	24.68***
score	(.96)	(.92)	

Table 3 shows that there is a significant variance between the level of burnout before and after the intervention: F(3.21) = 6.79; p<.01. The one-dimensional Anova analysis, on each burnout measure, shows significant variance between the level of burnout before and after the intervention on each of the measures' fatigue' de-personalization, non self fulfillment and full scale. Thus we may say that the intervention program significantly reduced burnout among the regular pupils and that the third hypothesis was fully substantiated.

To examine the fourth hypothesis that after the introduction of the intervention program, the attitude of the regular children to the included children would improve by the end of the program, the Manova multidimensional repeated measures analysis was applied. Table 4 shows the means and the F values on the attitude scale.

Table 4: Pupils attitudes: comparisons between scores given before and after the intervention program, means' standard deviations and levels of significance (N = 23)

Attitudes/ dimensions	Mean (S.D) Before	Mean (S.D) After	F
Cognitive	2.67	2.89	2.822
	(.51)	(.48)	
Behavioral	2.30	2.80	28.822***
	(.58)	(.61)	
Emotional	2.62	3.09	16.465***
	(.64)	(.52)	
General	2.51	2.95	3.200***
	(.52)	(.49)	

Table 4 shows that there is a significant variance between the regular children's attitudes before and after the intervention. The analysis of each subscale separately revealed significant variance between the attitudes before and after the intervention on each of the measures, except on the cognitive measure. Indeed, as we have seen with regard to the first hypothesis, there was no significant statistical relationship between the intervention program and the cognitive dimension of the attitude towards the pupils with autism. The fourth hypothesis was partially substantiated.

The comparison of the main data suggests that there is congruence between the various

categories in relation to the process of burnout and the effect of the intervention program on the level of burnout, on attitudes and on the quality of mediation of the regular pupils.

Qualitative findings:

The content analysis of the interviews with the pupils and the teachers raised several important issues. These were aspects such as: the definition of successful inclusion; changes in the perception of inclusion in the course of time; ways of coping with the difficulties involved in inclusion; and parents' attitude to inclusion. These topics proved useful in comparing the students' and the teachers' views. Both the pupils and the teachers related to the difficulties arising in the course of time and their influence on the nature of the inclusion. The interviewees asserted that it was not clear what was actually expected of the regular pupils. The difficulties were thought to stem from the complexity of the task of inclusion and the characteristics of autism, leading to fatigue and burnout. The way inclusion is experienced at its inception is very significant, and the homeroom teacher has great influence on the pupils' attitude to inclusion. Both the teachers and the pupils mentioned the need to learn mediating skills, which highlights the contribution of the program to the quality of the pupils' mediation and the change in their attitude to the children with autism.

Discussion

This study deals with the effect of long-term inclusion of children with autism on burnout of the regular pupils in the class. The subject of burnout had not been examined previously in relation to children, and it is of utmost importance both to the regular pupils and those being included in their classes. Pupils undergoing a process of burnout tend to show a lack of interest and concern for the children with autism, as well as impatience, weariness and boredom with the whole issue. Under these circumstances, children with autism become aware of negative feedback, in spite of their difficulty in interpreting other people's intentions and feelings, and experience 'negative inclusion', i.e. being rejected, ignored or pestered by the regular children (Ochs et al., 2001). Moreover, in a state of burnout and fatigue, mediation, if it exists at all, is on a low level, and obviously detrimental to the success of inclusion.

Children with a negative attitude to inclusion showed signs of apathy and did not participate actively in inclusion. Considering the fact that inclusion takes place on a long-term daily basis, these children will feel detached from the process and the general experience of inclusion, and therefore they may have increasingly negative feelings as time progresses.

The influence of the intervention program on the quality of the mediation, burnout and regular children's attitudes.

Improvement was found on each of the measures of mediation. This finding is congruent with the findings of other studies, dealing with similar tutoring of regular children and its effect on the quality of interactions (Lord, 1986; Odom & Watts, 1991). Unlike previous studies, in which the regular children were only trained in such skills as creating eye contact or providing examples, this research dealt with a systematic intervention program, based on the theory of mediated learning, including concepts and principles appropriate for any interpersonal communication (Feuerstein, R., Klein, P.S. & Tannenbaum, A.J. (Eds.), 1991).

Following the intervention program, the level of burnout dropped and the attitude of the regular children to the included children in the behavioral and emotional spheres improved, but not cognitively. This may be due to the structure and contents of the intervention program. It emphasized the mediation procedures and how to cope with inclusion emotionally and in practice.

In discussing and drawing conclusions regarding the contribution of the intervention program, we do not intend to claim that it is the preferred way of dealing with burnout among children participating in inclusion, since no comparison with other programs could be made.

Nevertheless we may presume that the program is effective in arresting burnout and improving the quality of mediation by regular children who have participated in the inclusion of children with autism for several years.

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