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Efficiency of Intervention Programs and Psycho Socials Skills of Children with Mild Intellectual Disabilities Case of Autistic in Tunisia

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Abstract

This study aims to determine the effectiveness of intervention programs and management of psychosocial skills of children with mild intellectual disabilities in the case of autistic people in Tunisia. The study sample consisted of 28 students aged 6 to 12 years. Students were divided into three groups: a training group that applied an IPA intervention program, this group consists of 8 students (n = 8 with ASD) and a group that applied a TEACH intervention program, this group consists of 8 students (n = 8 with ASD with mild intellectual disabilities) and a third group consisting of 12 students (n = 12 who applied an ESDM intervention program). The objective of our study is to determine the most effective program for the development of psychosocial skills of children with mild intellectual disabilities case of autistics in Tunisia. In conclusion, the program (IPA) has increased the motor and social skills of students with ASD in Tunisia and has improved their motor skills and ensures improved communications and integration of autistic children much more than other modes of intervention.

Keywords: Autism Spectrum Disorder; Intervention Programs; Motor Activity, Motor Skills; Social Skills

Introduction

The development of skills in children with mild intellectual disabilities with ASD in communication and interaction with motor skills **[1]** prove that the poor social skills of people with ASD were also found to be lower in the deficits of participation in motor activity, which is an effective tool for developing communication and social interaction. According to the National Autism Center (2015), IPA is a method that is used not only to improve the physical sufficiency of students with ASD, but to decrease behaviors that are not appropriate such as increasing behaviors to give appropriate responses and take responsibility. However, participating in physical activities, games, or re-enactment activities with their peers children with ASD are not able to do so at the expected levels due to their communication and social interaction **[2]**. The social skills of people with ASD may be due to their inability to learn skills or lack of motivation **[3]**. In addition, the difficulties faced by people with ASD are mainly related to a lack of understanding of the behavior of others, such as the inability to interpret and respond to social and emotional signals given by others, including eye contact and facial expressions **[4]**. Pedagogy has never cured a biological disease **[5]**. Techniques such as "paking" have always been the subject of criticism, in fact orienting the child with permanent support by the professionals who accompanies this child, describes a field of pedagogical action identifying a method used with autistic people. The mode of training in social skills presented by the study (Liratni, Blanche, Pry, 2013) on the evolution of the symptomatology and socio-communicative skills of children, with autism with moderate mental retardation, has clearly shown that this mode of management is beneficial for developing socio-communication in autistic subjects. The observation of behavior is a very important step that is organized during structured activities in the presence of the adult to recognize the signs testifying to the atypical development of the early childhood period. It ensures the analysis of the nature and quality of interactions with parents, communication capacity, the nature and quality of one's games, autonomy, and nutrition as well as the level of adaptation of certain behaviors. This helps to foster a good appreciation of limits and resources in associated settings Family videos are support tools to facilitate the observation of the child's behaviors and especially the unusual behaviors that manifest themselves during the observer during the assessment sessions. These videos allow an identification of the early signs of autism, as well as the evolution of the child through the regular assessments that are practiced; they are instruments both of the family dialogue and with the educators. Socialization, communication and daily life coping skills and motor skills are determined by the Vineland Adaptive Behavior Scale. It is one of the tools currently used to measure the socio-adaptive behaviors of the child and it is carried out by a professional. The latter must assess the scale in order to obtain an age of development in each area of competence. Other tools for assessing the level of development of autistic children, among others such as the PEP-3 **(**Psycho-Educational Profile, 3rd version, Schopler et al, 2004**) [6]** (6 months to 7 years) This test makes it possible to establish the psycho-educational profile of the person assessed. It can be presented as the basis of the educational program in the care of the child. The evaluation makes it possible to describe the developmental profile and emerging capacities of the person in order to best adapt his support project. Language is often the first source of concern and concern of the parents of the autistic child, it is necessary to note that about 50% of autistic people do not have functional language and all types of language development disorder are observed for the autistic during comprehension. Among these language problems, we note echolalia. Allowing to differentiate a specific disorder of language development of autism from the presence of an impairment of the pragmatics of verbal and non-verbal language.

The second source of concern **[7]** includes symptoms of withdrawal and relationship disorders such as avoidance of gaze, lack of pointing...). The speech-language assessment of a non-verbal autistic child collects the necessary information

on how to communicate and understand the difficulties to develop a readable profile and to be able to build a therapeutic plan adapted to a specified level of development. The profiled of communication. For "Le Reynell", another tool used by speech therapists to evaluate the language development processes of children between 12 months and 5 years old and establish a sensor motor assessment. This assessment makes it possible to examine the visual system and vestibular modalities as well as tactile modalities. Motor assessment is done by examining tone, postures, manual coordination, stereotypes, praxis. Other autism rating scales, such as the CBCL, explore areas that are carefully examined in the light of the specificities of autistic people. And the ACE or summary evaluation scale of autistic behavior, which consists of twenty items whose first ten items correspond to the most characteristic manifestations of autism; autistic withdrawal, verbal and non-verbal communication disorders, bizarre reactions to the environment. This scale can be repeated as part of educational or therapeutic follow-up, longitudinal observation or prospective research. Several scientific studies have shown a decrease in stereotypes and an improvement in social skills as well as academic performance through physical activity programs. Motor disorders and coordination disorders for children with autism spectrum disorders are expressed by poor coordination of the upper limbs in vaso-motor tasks or dexterity tasks and poor coordination of the lower limbs in balance, agility or speed tasks. The correlation between motor disorders and communication disorders is still a relevant object of research. As a result, movements have a role in early communication and the motor plane improves the communicational prognosis of autistic children, the decrease in running speed and the appearance of instability in the sagittal plane during activities involves a double task in autistic people, especially in football: running + control of the ball at the foot ect ... . In fact there is no significant difference between the groups when walking, there is a difference in speed only. Studies have shown a decrease in stereotypes with exercise. Some show a short-term effect of intense aerobic exercise (such as running). And others show longer-term effects (up to 1 month later), with a decrease in stereotypes after a 14-week Program of Learning Kata Techniques **[8]**. Hence the similarity in the movement pattern between stereotyped movements and movements performed during exercise **[8]**. The gestures requested during the exercise according to stereotypes would make it possible to reinvest the function of the limb and more particularly of the movement concerned. Studies observing short-term effects (90 minutes) cite the effect of fatigue and the role of neurotransmitters such as serotonin and dopamine **[**8]. Social behaviours have been improved in several studies **[9]**. Meta-analysis by Sowa and Meulenbroek showed superiority of individual interventions over group interventions. An early diagnosis of autistic children is very sensitive sand especially in terms of the future of this child. An adapted and rapid intervention is therefore more effective for a better management of his disorder and helps his family to cope with the difficulties encountered on a daily basis. To obtain an early diagnosis the experience of professionals can also be involved especially with the lack of specialized structures, diagnosis for the youngest age, especially that. Early signs can be inconspicuous and generally represent only slight deviations from normal development. Differential diagnosis is sometimes difficult, differential diagnosis is less important, because what will guide the type of services to be offered is rather the heaviness of the intellectual disability and these children probably need individualized support. The IPA program is a motor activity highlight to improve the FMS of students with ASD. The program was applied for 1 hour per day, 2 days per week for 12 weeks. The IPA program has been the framework for activities related to the development of physical and motor skills, perceptual motor development and movement skills, namely locomotor skills. At the end of each session, a general evaluation was carried out to assess the effectiveness of the session and the principles for the next session were determined. The IPA program used the collaborative learning approach as a teaching method to increase contact and social interaction between students with ASD and their peers. In order for students with ASD to benefit more from the IPY program, learning activities with the peer support method were also used. IPY program activities were implemented in four phases, which were similar to the preparation of the Preschool Physical Education Activity Plan. These steps were also: (i) immersive movements (5 min), (ii) functional exercises (10 min), (iii) group activities (35 min), whole group activities (10 min). The first stage consisted of warm-up movements, including enjoyable activities with different levels of walking, running and jumping. The second step was to move the joints of the body, strengthen the muscles and flexibility to prepare the body for the activities of the group. In the third stage, the development of FMS was supported by activities involving mattresses, ropes, balls, hoops, etc. In the last stage, games were held in which all the students participated. Throughout the four stages, special attention was paid to physical contact between students. The ESDM methodology is an assessment tool whose criteria are based on the sequences of skill development belonging to eight different domains: receptive and expressive language, social interactions, gross and fine motor skills, imitation, cognition, and play skills. This curriculum consists of 480 items organized into 4 levels: several periods from 9-12 months to 48 months (first level 9/12-18 months, second level 18-24 months, third 24-36 months and fourth level 36-48 months). This tool has been designed specifically for children with ASD. The organization of the items and their place in the different levels was determined by research on the typical development of the child, and by the clinical observation of the development of the child with ASD. The curriculum is administered to the child either by a single professional or by the entire interdisciplinary team that shares the different areas, and this every twelve weeks. The administration must be similar to the intervention: that is to say, it is necessary to structure the room as for the care, and to set up an interactive style based on the game (choice of materials and favorite activities). All areas should be evaluated; items at the lower or higher level should be examined if necessary. Parents are asked to provide information: about the child's skills, about the routines he knows his favorite activities by direct interview. The behaviors thus observed are coded according to a defined code, then quitted and finally compared to a checklist. Thus this tool makes it possible to identify the current levels of the child in each skill, but also to know advanced skills (the strengths of the child). This makes it possible to identify the strengths and needs of the child by establishing his development profile in the different areas. The ESDM uses the principles of different methods. Indeed, this model borrows certain principles belonging to the DENVER method **[10]** the modulation of the child's awakening, the dyadic commitment, the quality of the development of routines, the combination of the different objectives, the use of communication in all activities, varying the functions, favoring non-verbal communication, and the use of the rule of one more word (use one more word compared to the number of words used by the child). It also uses prT principles: follow the child's example, give him the choice (activities, materials), use the turn, and reinforce all the child's attempts. Finally, it also uses the principles of ABA: attention, the ABC format (SRC in French), the application of behavioral teaching techniques, the repetition of actions, and the management of undesirable behaviors. The child and the therapist carry out together, from session to session, the same routine activities. These routines are short-term activities (2 to 4 minutes) that are selected according to the preferences, and interests of the child. They have several objectives in different areas. The implementation of routines goes through several stages: from the choice of the activity, to the learning of the routine, by developing the turn and the collaboration between the two protagonists, to the complex of the routine action to expand the repertoire of activities of the child and develop his mental flexibility, until the cessation of the routine, to move to a new routine. There are several types of routines. Routines with objects make it possible to work on the alternation of attention, on triadic commitment (child-object-therapist) and joint attention. Sensory routines are part of a positive effect, in order to promote dyadic engagement, including the sharing of pleasure activities. These sensory routines make it possible to

modulate the awakening of the child and to attract his attention, to promote reciprocity and social exchanges. The objectives of these different routines are the development of communication, cognitive and motor skills, but also to promote imitation, joint attention and exchange. To summarize the pedagogical practices used in the ESDM **[11].** The adult must be sensitive and receptive to the child, and adapt to the child's language skills. The activities chosen should promote joint attention and cognitive development. Learning is based on the establishment of routines and repetitions, but also by the introduction of variations within these routines. Nevertheless, it happens that despite the respect of all these principles the child does not progress. In this case, this model established a decision tree, a hierarchy of measures to be implemented according to the situations. The TEACCH17 model is a mode of intervention used with autistic people since 1972. It is the first public health program in the United States to diagnose, treat and educate children with autism. This model is completely opposed to what Bettelheim advocated, who proposed separating children from their parents. Rather, this model offers parents the right to become co-therapists for their child. The management of this model is based on individualized education and addresses all aspects of the child: cognitive, emotional and social. This program recognizes that there is a difference between autistic and neurotypical people, especially when it comes to problems with communication, interactions, and interpretations of emotions. The goal of the TEACCH strategy is to use the strengths and interests of autistic people to develop their skills and give them compensation strategies. There is therefore a complementarily of the collaboration between parents and children. The professional helps parents understand the reasons for the behaviors and the parents, for their part, knowing their child more, help the professional to elucidate certain behaviors in order to develop strategies to develop certain skills. This strategy shows how unique and different each individual is from others. In an academic setting, this approach advocates individual teaching adapted to the particular profile of each child. It has even shown that it is possible to reduce disabilities and allow children with disabilities to become adults who can eventually function more easily socially, each at their own pace. In addition to requiring the rigorous involvement of stakeholders and parents in a communication and therapy process, the TEACCH model is also reflected in certain planning choices. It offers a well-structured organization of space and clear boundaries for each type of activity. By giving to the child a way to anticipate changes, it is given a way to accept them more easily. Also, this structure allows the child to understand what the teacher is asking for. The spaces are organized in such a way as to minimize ambient noise and finally, places of individual isolation are also proposed to allow the individual to focus on what they are doing. These various development proposals make it possible to reduce the level of stress of autistic people. Because these people can be exceptionally anxious and they often feel insecure. Several techniques have been used to promote the well-being of autistic people.

Methodology

Study Population

The study involves 28 children; their ages are between 6 and a half and 12 years, taken care of at the private centers of the child with intellectual disabilities of the sousse region, benefiting from motor activity sessions several times a week. This over a period of 2 months. An initial assessment is conducted and then a reassessment takes place at the end of this period. This reassessment is to verify whether an improvement in abilities: imitation, shared attention, interaction, behavior regulation, perception has been made by applying a specific intervention program for each category to determine the most effective program of motor intervention ensuring a development of qualities of integration and cooperation. The analysis of the child's interaction with the environment will be considerably observed to check whether the children accept the novelties of the environment, and better tune their behavior. These testify to the improvements following this intervention, promotes the development of the child. This study used the mixed sequential exploratory design which consisted of two stages: the quantitative stage and the qualitative stage. This is to determine for Group 1 the effect of the API program on the FMS and social skills of students with ASD and changes in FMS and TD peer attitudes towards students with ASD were measured in the quantitative step. In addition, a focus group interview design was used to determine the views of teachers, peers and parents of students in special education in order to obtain more detailed information on the effects of the API program on ASD and TD peers. Individual interviews were conducted with volunteer physical education teachers, who conducted the 8-week API program. The second program applied is the ESDM. The ESDM methodology is an assessment tool whose criteria are based on the sequences of skill development belonging to eight different domains: receptive and expressive language, social interactions, gross and fine motor skills, imitation, cognition, and play skills. This curriculum consists of 480 items organized into 4 levels: several periods from 9-12 months to 48 months (first level 9/12-18 months, second level 18-24 months, third 24-36 months and fourth level 36-48 months). This tool has been designed specifically for children with ASD. The organization of the items and their place in the different levels was determined by research on the typical development of the child, and by the clinical observation of the development of the child with ASD. The curriculum is administered to the child either by a single professional or by the entire interdisciplinary team that shares the different areas, and this every twelve weeks. In our research this program was applied only for 8 weeks given the situation of the COVID epidemic. The third program applied is the TEACCH program which was to use the strengths of the interests of autistic people to develop their skills and give them compensation strategies. There is therefore a complementarily of the collaboration between parents and children. The professional helps parents understand the reasons for the behaviors and the parents, for their part, knowing their child more, help the professional to elucidate certain behaviors in order to develop strategies to develop certain skills. This strategy shows how unique and different each individual is from others.

Instruments

In this study, focus groups and individual interviews were conducted using a semi-structured technical interview. To this end, interview forms were prepared to explain and support the quantitative results. Then, these questions were finalized by consulting the opinions of academicians, who had previous experience in the field. Focus groups and individual interviews were conducted with parents, special education teachers, and motor skills teacher. The interviews were recorded on audio and video by a researcher, who was a knowledgeable expert who knew the entire research process. Full approval of all participants was obtained with forms.

Questionnaire

The questionnaire is a means of "obtaining data collected systematically and suitable for quantitative analysis". The survey consists of asking parents of autistic children a set of questions about the effectiveness of the motor intervention system when teaching their children. However, it must be stressed that the representativeness of this method is never absolute, that it is always limited by a margin of error and that it only makes sense in relation to a certain type of question; those that have an unequivocal meaning for all respondents. The tool used is presented in the form of an individual questionnaire of 5 items of which the majority of the response modalities were presented in the format of an ordinal scale with four categories called likert scale. The latter was developed from a questionnaire already validated **[12]**. We have ensured that the questioning for the collection of transversal and retrospective information (allows to take into account certain temporal parameters), is imperatively anonymous **[13]** and relatively flexible. Thus, to allow

respondents to be more comfortable, we asked two types of questions:

- Closed questions: This is a very practical model that presents simple questions to which the subject must make a choice between two answers (yes, no for example). It has the advantages of ease of coding and counting.
- Multiple choice questions: These are questions with a possible answer or range of answers. These responses are usually drafted in the form of proposals designated by items. The advantage of these multiple choice questions is defined by the considerable help of the respondent's memory thanks to the large choice of answers provided, while their major disadvantage is to collect non-spontaneous opinions.

Structure of the Questionnaire

The questionnaire includes two parts: A part will contain information on the individual characteristics of students, their parents and their socio-economic positions (age, gender, educational level, ...), which will allow us to see, during our analysis, the influence of its independent variables on the learner's behavior in the face of the phenomenon of the effectiveness of the motor intervention program of autistic subjects. The second part will include the dependent variables. These variables are presented in the format of the Likert scale, which is an ordinal scale with four categories. It will allow us to see, from the way of intervening during the application of a specific motor program, the factors that they can lead them to integrate, communicate and imitate. The choice of this type to four categories of responses that reflects the attitude of autistic children: 1) never, 2) rarely, 3) quite often and 4) very often; we will serve to avoid the effects of escape that give them the opportunity not to position themselves by answering with "moderately". The modalities are reproduced by a treatment index, quoted in point. Each response is assigned a score to facilitate statistical processing of the data. The questionnaire included sections on motivators and strategies for possible learning **[12]**. In the questionnaire, the latent variable was measured using indicators observed for the items presented in the questsionnaire. The questionnaire was designed using Likert's scale responses containing five points from "1" to "5".

Data Analysis

The statistical analysis of the quantitative step of the data was performed using SPSS version 21.0. Data analysis performed with the Mann Whitney U trial and the Wil-Coxon placement test aimed to determine statistically significant differences between test scores obtained before and after the 8-week API program, before and after the 8-week ESDM program, and before and after the 8-week TEACH program. For the qualitative stage of the data, descriptive and content analysis techniques were used. To this end, first, the interview recordings were transcribed and all interviewees were given code names. Then the texts were read line by line, the coding was done and the themes were created. In the last step, the data were interpreted. In interpreting the data, descriptive narrative was applied to participants' feelings and thoughts by giving the direct quotes in this study. Overall, this qualitative analysis of the data was followed by the review of the research objective throughout the process.

Results

Our study aims to determine the effectiveness of intervention and life skills management programs for children with mild intellectual disabilities. The study sample consisted of 28 students aged 6 to 12 years, it is noted that four children in group 3 dropped out. The students were divided into three groups: a training group that applied an IPA intervention program, this group is composed of 8 students (n = 8 with ASD) and a group that applied a TEACH intervention program, this group is composed of 8 students (n = 8 with ASD with mild intellectual disabilities) and a third group composed of 12 students (n = 12 who applied an ESDM intervention program of which 4 students have leave the classes and consequently this group consists of 8 students who have completed the experiment). The objective being to determine the most effective program for the development of psychosocial skills of children with mild intellectual disabilities case of autistics in Tunisia The average percentages of the frequencies of the factors of development of psychosocial skills are very convincing, the value of learning willpower, imitation, communication and adaptation with the environment show an effectiveness in learning that varies according to the Applied program. Efforts in learning are also less concerned with low intellectual stimulation. They are not sure about their learning methods **(Table 1)**.

Statistical values and meanings of the analysis of covariance and simple variance of individual and collective skills during the period of activity

Comparaison				IPA programme			
				Simple covariance analysis, Regression and correlation			Analysis of variance
				A	R	F1	F2
Individual skills	MOTOR SKILLS			0,94	0,62	35,83**	37,78**
	Adaptation with the environment			0,76	0,41	11,35**	34,43**
	understanding Realization and imitation	Individual		1,08	0,49	18,11**	50,57**
		with help		1,03	0,37	9,23**	25,59**
Collective competences	cooperation			1,09	0,68	14,58**	17,19**
	Collective competences			0,89	0,65	12,36**	14,81**
Comparaison				ESDM			
				Simple covariance analysis, Regression and correlation			Analysis of variance
				A	R	F1	F2
Individual skills	MOTOR SKILLS			1,22	0,73	64,04**	3,98
	Adaptation with the environment			1,12	0,48	17,39**	1,59
	understanding Realization and imitation	Individual		1,45	0,55	24,74**	2,42
		with help		1,51	0,48	16,81**	0,54
Collective competences	Collective competences			1,84	0,86	50,26**	0,67
	Collective competences			1,4	0,81	31,76**	1,06
Comparaison				TEATCH			

				Simple covariance analysis, Regression and correlation		Analysis of variance	
				A	R	F1	F2
Individual skills	MOTOR SKILLS			0,94	0,62	35,05**	8,29**
	Adaptation with the environment			0,94	0,6	31,29**	25,94**
	understanding Realization and imitation	Individual		1,16	0,52	20,61**	25,38**
		with help		0,98	0,31	5,90**	12,73**
Collective competences	Collective competences			1,04	0,81	32,14**	20,05**
	Collective competences			1	0,87	53,88**	22,96**

Table 1: Statistical Values and Meanings of the Analysis of Covariance and Simple Variance of Individual and Collective Skills during the Period of Activity.

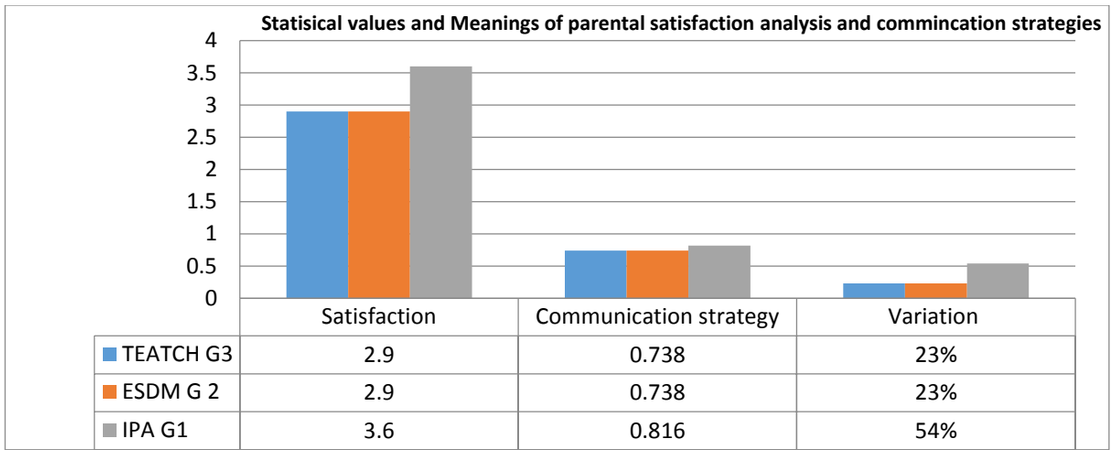
We see from the statistics given appear in the tables below, the F values of autistic children who applied the intervention programs of development of motor and psychosocial qualities calculated at the level of the different variables of the three groups Reflecting the subjects tested at the level of the three groups and in the general population are significantly different at the level of the previous trial. The analysis of the covariance gives us a very significant F1 at $p < 0.01$ in the different individual and collective skills, testifying in parallel a strong correlation between the tests and the post-tests. Similarly, F2 is very significant, which explains why the three groups showed significantly different improvements, which turns out that the t-test is very significant in the set of skills tested. Similarly, we find that the covariance analysis reflects a superiority of the averages in favor of the test groups in the different competences, which proves that the skills acquired at the end of the first period positively influence the learning progress in the second period which testifies, the existence of a positive adaptation and an increase in the acquisition of technical and psychosocial skills between (IPA program, the TEATCH program and the ESDM). We note that F2 is not significant in solving the problem of collective competence for cooperation, which shows that all three groups have made the same progress in these competences. On the other hand, at the level of other individual and collective skills F2 is significant at $p < 0.05$ reflecting a significant difference between the two groups 2 and 3 on the scale of progress. Similarly, we distinguish that the different averages of these skills mark a superiority that favors group 1 having applied an IPA motor program. These differences in progress show that the didactic organization of the knowledge to be taught has a much greater influence on the transfer of knowledge during the application of the IPA program than for the ESDM and the TEATCH program in terms of student progress, this leads us to deduce, on the one hand, that despite the three groups having significantly similar progress in terms of acquisitions at the end of the first learning period, on the other hand during the execution of the second learning period we find that both groups 2 and 3 have progressed , but these differences in progress are not due to the specificity of the programs because each group performs two periods of learning of the activity taught during the second period . This improvement allows us to conclude that these differences in progress are at the origin of the influence of acquisitions at the end of the 1st period on learning during the execution of the 2nd period which is positive at the level of the three groups but with a differential degree in favor of the G1. These results clearly show that there is a positive adaptation with the appropriate environment for research and it is at the level of didactic organizations that the rate of knowledge transfer favors the organization of knowledge acquisition in the various skills selected as well as at the level of the resolution of individual and collective problems which is explained by the beginner level of the students facing the intended program. Reference situations give meaning to learning situations and allow the student to engage in an action project. They are often the situation of entry into the activity and the situation of formative and summative evaluation. They allow the teacher to determine the learning needs of students and to have a diagnostic assessment to situate the student's progress in relation to a given objective as well as a formative assessment to take stock of the student's skills in a coherent way. The results of determining the effectiveness of a motor-based intervention program are thus expressed in **(Table 2)**, which presents the results of the questionnaire distributed to parents of autistic children who have performed three different motor programs, it should be noted that all parents of participants were present during the application of the three programs and that our questionnaire aims to classify the three intervention programs according to the degree of satisfaction parents of autistic children.

	TEATCH	**ESDM**	**IPA**
	G3	G 2	G1
Satisfaction	2,900	2,900	3,600
Communication strategy	0,738	0,738	0,816
Variation	23%	23%	54%
N	8	8	8
DDL	14		14
T Student	0,000000		1,783696
P	1,0000		0,0962
Decision	NS		NS

Table 2: Statistical Values and Meanings of Parental Satisfaction Analysis and Communication Strategies during the Activity Period.

The results of the study focusing on analysis of parental satisfaction and communication strategies during the period of activity proved that the parents of the participants in this survey are more satisfied with the application of the IPA program for their children with a value of 54%. Participants in the EDSM have a higher activation when viewing objects and also have a faster response to social stimuli but the application of this method is difficult and this is due to the degree of comprehensibility and sharing tasks with parents. In addition, this study found a correlation between activation levels for social stimuli and levels of social engagement for the three programs applied. However, the significant differences between group 1 and groups 2 and 3 in terms of social activity, guide us to focus more on the communication variable and language as well as adaptive behavior. Four children in the ESDM group no longer met the criteria for an autism diagnosis, however these changes were considered not significant. There was no significant difference. In our study, parents received 20 to 30 minutes per week of training, coaching and feedback on their implementation of ESDM teaching techniques over 6-week

periods. The parents then used the skills they learned with their own children at home. However, it should be noted that parenting skills are improved compared to baseline measures but their levels of education influence their degrees of understanding of the tasks required which show a variation determined by the communication functions presented in **(Figure 1)**.



	Satisfaction	Communication strategy	Variation
TEATCH G3	2.9	0.738	23%
ESDM G 2	2.9	0.738	23%
IPA G1	3.6	0.816	54%

Figure 1: Statistical Values and Meanings of Parental Satisfaction Analysis and Communication Strategies during the Activity Period.

The relationship of the individual with his physical environment is a determinant of the degree of information and the adaptation retained on this environment. The practitioner tends to adjust his motor behaviors according to the information taken. This type of interaction requires the presence of other partners during the game and this is how these applied programs show their effectiveness in ensuring a wide base of communications resulting from an early adaptation with the various determinants of its strategies. Each practitioner constantly tries to collect information about the behaviors of other practitioners. The information provided by the subjects provides information about their decision-making and intentions during the game; it is an uncertainty that relates to the conduct of others. In addition, the interaction that takes place between practitioners revolves around two types of motor communication: motor communication (cooperation) and motor counter-communication (opposition). Unlike verbal communication, which relies on the socio-emotional register to determine whether the content of the message is positive or negative between the two interlocutors, motor communication during sports practice is of greater originality. Indeed, confusion is not possible between the two types of communication that clearly and unequivocally illustrate the relationships of antagonism and cooperation between practitioners. The communication that exists between autistic children and those with mild intellectual disabilities is at the service of performing a motor task. The exchange that occurs is fundamentally driving. By means of a machine (such as a balloon), this transmission of the object according to the favorable location of the partner induces a cooperative interaction and converges towards the completion of a common project. On the other hand, the interception of the object (the ball), the unfavorable placement in relation to the opponents during the game, reflects an interaction that is based on an opposition relationship between the two. These interactions take place on a framework of laws specific to the game and make it possible to codify the relationships and modalities of exchange between the different actors. These concepts of communication and counter-communication offer the opportunity to draw up an inventory of the relationships that exist between practitioners, to determine the communication network of the motor-based game and to interpret, therefore, the modalities that underlie these structures of sports duels. This highlighting of the interaction systems during the games presents a double constraint: on the one hand, that of the subject playing, deciding and acting in interaction with his environment, but also with other players. These relationships give him one of the laws of the game structured by the three programs IPA, ESDM, and TEATCH which condition his motor behaviors and give them all their meaning.

Every game is the reflection of its society of belonging and thus testifies to an ethno-playfulness. Thus, our study agrees that the structural analysis of socio-motor and psychomotor games as practiced by the specified centers of autistic children and children with intellectual disabilities makes it possible to detect certain norms and certain cardinal values of the society concerned. An organization carried out for the structuring of the interaction components of learning brings us closer to certain characteristics of the teaching-learning process, the result of a model consisting of factors identified from the general context determining the task, information, skills, interactions and personal construction of knowledge. The encounter of a new situation is a conceptual change, it is a motivating factor, which, in context and in the environment, ensures that the learner adopts this knowledge and skills in favor of the proposed context valuing the task that will be proposed to him by eliminating the elements of the facts and which promotes a decoding of this new situation, hence it can be said that conceptual change is a decisive sign of intelligibility, the stage of the integration of a new regulation has specified the behavior of the learner because some students were without reference during the first session of the practice of motor activity in the associated environment. This aspect tends to interpersonal relativism orienting the effort of education in the face of complexity and information overload, the solution was progressive learning is to let the learner build tools for information search and structuring, comparison and confrontation.

Discussion

Our study aimed to determine the effectiveness of intervention and psychosocial skills management programs for children with mild intellectual disabilities in the case of autistic people in Tunisia. Our study sample consisted of 28 students aged 6 to 12 years. Students were divided into three groups: a training group that applied an IPA intervention program, this group consists of 8 students (n = 8 with ASD) and a group that applied a TEACH intervention program, this group consists of 8 students (n = 8 with ASD with mild intellectual disabilities) and a third group consisting of 12 students (n = 12 who applied an ESDM intervention program). The objective of our study is to determine the most effective program for the development of psychosocial skills of children with mild intellectual disabilities case of autistics in Tunisia our results have guided us to identify communication strategies taking into account problem situations. P. MERIEU: "In a problem situation, the main objective of training lies in the obstacle to be overcome, not in the task to be carried out." To develop a problem situation, it is a question of proposing to the learners to continue a task that can only be carried out after overcoming

an obstacle. This obstacle is then a real objective of acquiring the trainer. Learning situations allow students to learn, to progress, to train in order to transform previous achievements, to acquire a new knowledge or a new skill necessary to solve the problem posed. J.P. FAMOSE defines 3 types of learning situations: The under defined situation No precision of the purpose and operations. Ex: the students have a balloon each and no instructions are given (except those of safety) the semi-defined situation Precision of the goal, operation not predetermined. Ex: "you have to go and mark as many baskets as possible", "go get an object at the bottom of the water with the help of a pole. Ex: "you have to go get an object at the bottom of the water and for that you take a maximum blocked breath, you tilt your head first, then you use the pole to go down by making ample movements. Each element of the situation must be thought out and anticipated in order to promote learning and the active participation of all. In addition, the name of the situation helps the student understand the meaning of the situation and motivate him. The objectives or skills targeted (by the teacher). These are the master's intentions in terms of the student's progress. The objectives can be the acquisition of motor skills but also objectives of attitudes and methods. In perspective, it seems appropriate to guide future research to clarify these objectives through the enunciation of competence: "This situation aims at the student being able to ... ». The goal (for the learner). This is what the student has to do, what motivates him, sets him in motion. In order to allow a quick and motivated start-up, the stated goal must be concrete, therefore understandable by the students and adapted to their level, the goal would be to have knowledge of the result fast and effective to make sense for the student. The success criteria allow the student to know the results of his action. They are essential if students are to manage their own learning. They also allow the psychomotor therapist to check the level of the students and to regulate the situation if necessary and especially to put the students in project. The comparison of the results thus makes it possible to identify the effects of the action and to establish rules of effectiveness. For this, the success criteria must be concrete and leave as little room as possible for interpretation. Quantitative success criteria allow a better analysis of the result than qualitative criteria that are often questionable. These are the conditions to be met in order to carry out what is requested. They are related to the regulation of the activity, safety and the problem we want to solve. They allow a secure but above all effective action to promote the application of the rule. The variables give directions in order to complicate, simplify and enrich situations. They are present in the preparation of the session, and they make it possible to anticipate reviving the situation. However, there are many factors that influence communication and learning strategies **[14]**. Variables are closely related to learning strategies **[15]**. However, the interdependence of these variables and their causal effects on one another is still unclear. Much of the recent research has focused on various aspects of communications and has investigated how motivational factors and learning strategies influence success, there are very few studies on the producers of nonverbal communication and self-regulatory behaviors derived from semiotic strategies in competitive confrontational situations. Learning for children with autism and intellectual disabilities, motivational factors, and anxiety are all interdependent for practitioners and their parents and are likely to impact learning strategies. It is argued that these forms mark a complex network that brings about changes in learning strategies **[14]** and inevitably influx on the active mode of interaction determined by a fusion of various types of communications.

Conclusion

The correlation between motor disorders and communication disorders is still a relevant object of research. As a result, movements have a role in early communication and the motor plan improves the communication prognosis of autistic children and makes it possible to solicit the rigorous involvement of stakeholders and parents in a process of communication and therapy, the model solicited for the development of psychosocial skills of children with intellectual disabilities and autistic children is also reflected through certain choices of arrangement from which an importance must be Given to the study of the learning environment and its effects on adaptation, a well-structured organization of the space and clear boundaries for each type of activity can lead to beneficial impacts for the acquisition and completion of the task asking and it is by giving the child a way to anticipate changes, this structure allows the child to fully understand what the teacher is asking for **[16-20]**. The assessment tool whose criteria are based on the sequences of development of skills belonging to the different domains: language on receptive and expressive, social interactions, gross motor skills and fine motor skills, imitation, cognition, and play skills. Several diversified interventions distinguish all the different practices of educational, pedagogical, therapeutic interventions lack the effectiveness of interventions and in particular institutional practices **[21-24]**, it is essential to adapt the proposed support to the specific impairment of communication and socialization as well as to the age of development, the relational peculiarities of young autistic children lead to discomfort to the installation of early interactions, generating reactive adaptive disorders that require collaboration and parental guidance in order to promote adaptation.

References

1. Bhat (2011) The interaction of fine motor, gesture, and structural language skills: The case of autism spectrum disorder, https://www.sciencedirect.com/science/article/abs/pii/S1750946721000994
2. Gorham LM, Gibson C, Irlbeck E (2016) Making a Case for McDonald's: A Qualitative Case Study Examining the McDonald's "Our Food Your Questions Campaign. Journal of Applied Communications 100: 04.
3. Centre national de l'autisme 2015. Stratégie nationale pour l'Autisme au sein des troubles du neuro-développement https://handicap.gouv.fr/IMG/pdf/strategie_nationale_autisme_2018.pdf
4. Konukman F, Yılmaz I, Yanardağ M, Yu JH (2017) Teaching Sport Skills to Children with Autism. Journal of Physical Education, Recreation & Dance 88: 65-66.
5. Sivaraman M, Fahmie TA (2018) Using common interests to increase socialization between children with autism and their peers. Research in Autism Spectrum Disorders 51: 1-8.
6. Sowa M, Meulenbroek R (2012) Effects of physical exercise on Autism Spectrum Disorders: A meta-analysis. Research in Autism Spectrum Disorders 6: 46-57.
7. Ionescu DC, Eichler J (1993) Production of free electron-positron pairs in relativistic heavy-ion collisions. Phys. Rev.A 48: 1176.
8. salehi A, Baghban I, Bahrami F, Ahmadi A (2012) the effect of emotion regulation training based on dialectical behavior therapy and gross process model on symptoms of emotional problems. Zahedan Journal of Research in Medical Sciences 14: e93581.
9. Bahrami F, Movahedi A, Marandi SM, Abedi A (2012) Kata techniques training consistently decreases stereotypy in children with autism spectrum disorder. Research in Developmental Disabilities 4: 1183-1193.
10. Eapen V, Crnčec R, Walter A (2013) Exploring links between genotypes, phenotypes, and clinical predictors of response to early intensive behavioral intervention in autism spectrum disorder. Front Hum Neurosci 7:567. doi: 10.3389/fnhum.2013.00567.
11. Fulton E, Eapen V, Crncec R, Walte A, Rogers S (2014) Reducing maladaptive behaviors in preschool-aged children with autism spectrum disorder using the Early Start Denver Model. Front Pediatr 2: 40. doi: 10.3389/fped.2014.00040.
12. Dunn KE, Lo WJ, Mulvenon SW, Sutcliffe R (2012) Revisiting the Motivated Strategies for Learning Questionnaire: A Theoretical and Statistical Reevaluation

of the Metacognitive Self-Regulation and Effort Regulation Subscales. Educational and Psychological Measurement 72: 312-331.

13. Ogien R (2012) Repenser les relations entre les faits, les normes et les valeurs. Rethinking the relationships between 45 : 17-31.
14. Linnenbrink EA, Pintrich PR (2004) Role of Affect in Cognitive Processing in Academic Contexts. 1st Edition eBook ISBN9781410610515.
15. Barnason S, Zimmerman L, Nieveen J, Schmaderer M, Carranza B, et al. (2003) Impact of a home communication intervention for coronary artery bypass graft patients with ischemic heart failure on self-efficacy, coronary disease risk factor modification, and functioning. Heart Lung 32: 147-158.
16. Sansi A, Nalbant S, Ozer D (2021) Effects of an Inclusive Physical Activity Program on the Motor Skills, Social Skills and Attitudes of Students with and without Autism Spectrum Disorder. J Autism Dev Disord 51: 2254-2270. doi: 10.1007/s10803-020-04693-z.
17. Merley M, Charles R, Blanchon YC, Rousselon V (2013) Interest of a sequential early care for young autistic children. Neuropsychiatrie de l'enfance et de l'adolescence 5 : 273-279.
18. Dunlap WR, Sands (1990) Classification of the Hearing Impaired for Independent Living Using the Vineland Adaptive Behavior Scale Am Ann Deaf 135: 384-388.
19. Boquelet R, Leclerc C (2018) Optimiser la prise en charge du patient handicapé mental avant l'anesthésieHow to improve the management of mentally disabled patient before anaesthesia. Le Praticien en Anesthésie Réanimation 3: 168-171.
20. Lozinski K, Guilé JM (2009) Place de l'écholalie différée dans le développement de la communication chez un enfant présentant un autisme de Kanner. Place de l'écholalie différée 48: 72-80.
21. Feilzer MY (2009) Doing Mixed Methods Research Pragmatically: Implications for the Rediscovery of Pragmatism as a Research Paradigm. Paradigms in Mixed Methods Research 4: 6-16.
22. Keklik D, Keklik I (2012) Motivation and learning strategies as predictors of high school students' math achievement. Psychology. DOI:10.14812/CUEFD.54284
23. Ginsberg DM, Contreras C, Adler D, Santonastasi A, Miller A, et al. (2016) Differences in academic self-efficacy and motivation in Irish and American college students. ProQuest Dissertations Publishing 10144327.
24. Hee SE (2008) Self-efficacy as a mediator in the relationship between self-oriented perfectionism and academic procrastination. An International Journal 36: 753-764.

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