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Attitudes Towards Autism Among Israeli Arab Teachers' College Students

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Additional information is available at the end of the chapter

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1. Introduction

The rise in the prevalence of autistic spectrum disorder has increased world-wide (Flood, Bulgrin and Morgan, 2012). This phenomena calls for the expansion and development of teachers preparation courses to work with this population as well as providing specific courses to professionals in the medical and health professions such as speech therapists, occupational therapists, art therapists etc. that focus on the needs of children and adults with autism. It also calls for the development of community services to children and families, such as early diagnosis, counseling parents, education of school aged children and as they graduate from school, creating community living arrangements for adults along with opportunities for employment, social and leisure time activities. The development and use of appropriate services must be based on awareness of the autistic spectrum disorder as a subgroup of persons with developmental disabilities that is distinguished from other disabilities such as intellectual disabilities or mental illness. It is also based on openness and positive attitudes towards these persons as equal members of society who have the right to live in the community in a respectful manner.

The present chapter will describe a survey done of the attitudes regarding persons with autism in the Israeli Arab community, according to Arab students attending an Arab teachers' training college.

Future teachers were chosen for the study as leaders of the young generation who will be the citizens of the future. The aim of the study was to assess the current views and attitudes among would be teachers in the Israeli Arab community regarding the autistic spectrum disorder so that we can develop suitable teachers' preparation courses along with suitable services for the families population and for children and adults with autism.

The importance of preparing teachers in the Arab world in the area of autism is emphasized by Al-Shammari Zaid (2006) in his paper on *Special Education Teachers' Attitudes Toward Autistic Students in the Autism School in the State of Kuwait*. He states that though a special school for children with autism was established in 1999 in the State of Kuwait, the Kuwaiti universities which prepare future teachers lack courses and curricula to help pre-service and in-service special teachers understand issues related to autism. According to Al-Shammari Zaid teachers, are ill-prepared to teach students with autism in Kuwait. Also, since the diagnosis of autism is relatively new to Kuwait, teachers are not fully equipped on how to best teach students with autism.

Lack of teachers' preparation coursed and professional know how is becoming acute in the Arab world since in the past decade there has been a constant increase in family health care. In Saudi Arabia for example, Amr Mostafa (2011) in his paper on *Addressing autism in the Arab world* notes that "In the Middle East and North Africa there has been a fivefold decrease in child mortality in recent decades."

Also, the high rates of prevalence of Autism in the Arab world may be due to genetics. For example, in Saudi Arabia almost one third of children with autism were born to parents who are close relatives, usually first cousins. This is dependent on location – higher in rural communities (up to 80%) and lower in urban and suburban settings (34%). This phenomenon suggests that families in Saudi Arabia have a higher incidence of autism. Inter related family marriages are actually the norm in most Muslim countries so that this might result in a higher prevalence in other Arab nations as well.

In spite of this, Amr Mostafa (ibid) notes that the condition of autism has long been hidden in much of the Arab world. Furthermore, he also suggests that it is often difficult for a child with autism to be diagnosed properly, because of poor professional knowledge in this area. Pediatricians are relatively inexperienced in the diagnosis and management of psychiatric disorders including children with autism and there are few psychiatrists specializing in childhood development problems. He also notes the lack of awareness among parents, a failure to recognize symptoms and seek diagnosis and treatment. His conclusion is that both under-diagnosis and under-reporting may play a role in the disparity in prevalence and consequently, scarcity of appropriate services.

A similar picture is portrayed by Hanan, Elbahnasawy and Naglaa, Girgis (2011) from Egypt. In their paper "Counseling for Mothers to Cope with their Autistic Children", they point to the fact that there has been a dramatic increase in the incidence of autism from the 1970's through 2008 – the prevalence of autism in Egypt is increasing, with one child out of every 870 Egyptian children being diagnosed as having autism.

Apart from lack of professional knowhow, the authors add another factor that hinders the appropriate care of families and children in the Arab world. According to them, caring for a family member with autism costs money and places a burden on family finance. A recent study in Egypt found that 83.3% - 91.3% of people with autism live at home with their families well into their adult years since there are no appropriate services for them. Autism care in Egypt is usually home-based with less than a quarter being enrolled in schools. They are informally

taught by parents, siblings, grandparents or friends. Some non-profit organizations such as Arab autism societies, try to address this problem by offering specialized education.

In addition to financial difficulties that can be a barrier to appropriate care, cultural beliefs and attitudes can be a hindrance too. There are two interrelated attitude sources towards persons with disabilities, the religious source and common prejudices held by the general public and transmitted from one generation to the next in the form of stereotypes (Reiter, 1999).

Estela Dimes (2012) a Filipino American married to a Jordanian American have a child with autism and she describes the way cultural traditions, values and beliefs can affect how people deal with this disability. She compares two different views. According to her, in the Filipino culture, having a child with a disability is viewed in a positive way even as "a blessing or gift from God". In comparison Middle Easterners, especially among the older-generation, believe that a disability is a form of God's punishment for sins or perhaps the result of a curse. She continues to describe the attitudes of 'Middle Easterners' as exhibiting shame and embarrassment. Because of that the author assumes that they tend to overlook developmental differences in their children with autism trying to avoid the stigma attached to it. She concludes that this social attitude often causes delay in diagnosis, until the child is of school age, thus preventing early intervention crucial to treatment of developmental disorders.

This fatalistic attitude is also addressed by Al-Shammari Zaid (2006) who further describes the cultural beliefs about disability in the Arab society. Actually, he observed that caring for a child with autism can bring the family closer to God. This is based on the belief in Karatma, God's Will – or one's destiny. This belief is often invoked to provide an explanation to major life events, including the occurrence of disability. Like Estela Dimes (2012) he also suggests that an explanation for the occurrence of a disability in the family is the belief that it is a result of sinful behavior committed in the past. Thus, the family tends to accept their own disabilities, as fate due to God's will.

One direct outcome of this attitude is that since it was God's will that the child was born with a disability his life is in the hand of God. For this reason, Al-Shammari Zaid (2006) considers the most important problem when working with families in the state of Kuwait, is that even when a child is enrolled in a special education individualized program his family does not apply it at home but rather, continue to isolate the child in his personal life.

The other source of attitudes towards persons with disabilities are prejudices held by the public in the form of stereotypes. According to The American Heritage® Dictionary of the English Language, (Fourth Edition copyright ©2000) a prejudice is:

1. **a.** An adverse judgment or opinion formed beforehand or without knowledge or examination of the facts.
1. **b.** A preconceived preference or idea.
2. The act or state of holding unreasonable preconceived judgments or convictions.
3. Irrational suspicion or hatred of a particular group, race, or religion.

4. Detriment or injury caused to a person by the preconceived, unfavorable conviction of another or others.

Prejudices are expressed in cultural stereotypes affecting the discrimination of those seen as belonging to the group in question. Stereotypes obviously affect social judgments we make about others. They influence how much we like the person.

Prejudice is an attitude toward the members of some group based solely on their membership in that group (can be positive or negative), while stereotypes involve generalizations about the "typical" characteristics of members of that group. Prejudice and stereotypes lead to discrimination, i.e. the actual positive or negative actions toward the objects of prejudice. Children acquire negative attitudes toward various social groups through direct and vicarious learning experiences. Parents, teachers, friends, the mass media all play roles in the development of prejudice. The fact that prejudice is a learned reaction, enables the process of change – the unlearning of old views and attitudes and the relearning of new ones. Since stereotypes distort our perceptions and affect the information we note - we'll give more attention to stereotype-consistent information and stereotype-inconsistent information that activates attempts to disconfirm/reject, by imparting new knowledge concerning the group in question, we can introduce change in attitudes towards that group and achieve a breakdown of the stereotypes held about them. Thus we can reduce prejudice through cognitive interventions such as teaching and providing new information that is undistorted and scientifically based. For example, research on attitudes change towards persons with disabilities among Arab students who attended special education courses as part of their professional development, showed significantly more positive attitudes towards persons with disabilities than their colleagues who did not have such a background (Devine, 1989, Karni, Reiter, Bryen, 2011).

2. Arabs in Israel

The Arab population in Israel today numbers about 1.4 million residents, who comprise about 20% of the country's total population of approximately 8 million people. Among the Arab population of

Israel, Moslems comprise about 82.5%, Christians about 9%, and Druze about 8.5% (as of 2004). Most of Israeli Arab population live in the northern part of the country – the Galilee. They reside in small and large, purely Muslim, Christians or Druse villages, as well as in mixed towns.

Most of the Bedouins live in the Southern region of the country.

3. Prevalence of people with disabilities in the Arab sector in Israel

Notwithstanding the difficulty involved in obtaining accurate quantitative data on people with disabilities in the Arab sector there are indications that the percentage of people with disabili-

ities is higher in the Arab than in the Jewish sector. This can be attributed to several causes, including the high rate of interfamily marriages, hereditary diseases, and women giving birth at a relatively late age (among Bedouins, for example) and a general lack of awareness of various genetic problems.

In the last decade, Arab society in Israel has undergone continuous change, and as a result of the modernization process, a transition occurs from a collectivistic society to a more nuclear one. There is an increase in the level of education and an increase in the number of women joining the work force. These two major social factors cause changes in the social structure and social norms and values of Israeli Arab population. In spite of these changes, the traditional bonds still exist and have a strong hold on the individual. Traditionally the 'Hamula (Clan)' was the most binding collective social organization. As an extended family system, it provided economic social and psychological security for its members. It is a patriarchal system: fathers always have the upper hand especially in decision making and socialization of children in the family; women tend to be passive and conforming. Ideally, children are to be obedient and conforming too (Odeh, 2007, Al Haj, 1989, Mar'i, 1978). As Mar'i and Karayanni (1982) observed: the modernization process traditional structures and the values associated with them have weakened: and in their place new structures are evolving alongside the adoption of more modern patterns of social organization and new values and behaviors. However, this change has not been a smooth one or without inherent contradictions. Quite the opposite, contradictions and even clashes between the old and the new are so common as to suggest that the society is conflict-ridden in all that concerns conservation and change, continuity and discontinuity.

According to a comprehensive research report done in Israel concerning people with disabilities in Arab society in Israel (Sandler-Loeff, Shahak, 2006) they have to cope with numerous barriers. Some of the barriers are similar to those faced by all disabled persons, whereas others are specific to or exacerbated by the Arab socio cultural context. Surveys done in Israel (ibid) found that the attitudes towards people with disabilities in Arab society, show lack of knowledge and lack of services; lack of access for disabled individuals; a societal attitude that does not accept them as having equal rights; and lack of coordination between the various agencies that deal with the affairs of people with disabilities.

However, the past decade in Israel at large has witnessed important developments in the lives of people with disabilities, and they are also evident in Arab society. These developments can be largely attributed to changes in legislation and to the development of services.

However, Arab parents show a greater tendency than Jewish parents to be, they are overprotective of their disabled children and give these children less encouragement to be independent, make decisions and find employment. Arab parents of children with disabilities reported a greater feeling of shame and hypersensitivity to the reactions of others than did Jewish parents. Indeed Israeli Arab attitudes towards autism spectrum disorder are not unlike the ones found in the neighboring Arab countries. Religion has a powerful spiritual effect. It is both a source of comfort for Arab families and at the same time a barrier to 'normalization' and efforts to include the child in regular society. This was evident in a study done in Israel of Druze

mothers to children with Autism (Al-Shich, 2012). Al-Shich, herself a Druze conducted in depth interviews with 10 mothers who live in the villages in the northern part of Israel. The major theme that emerged was the strong religious beliefs attached to the disability of the child.

In Israel there are approximately 122,000 Druze. As indicated before concerning intermarriages in the families, here too intermarriage is high and reaches 47% of all marriages (Vardi-Saliternik, Friedlander, Cohen, 2002). They represent 8.3% of the Arab population in the country. They live in 18 villages in the Northern parts of the Israel, the Carmel Mountain, the Galilee and the Golan Heights (2009). The Druze community is a traditional society with a collectivistic orientation emphasizing the supremacy of the extended family and the community over the individual.

Though they are Muslims, they have a unique religious orientation. The core of their religious principles are known only to a small number of religious persons and are kept secret not only from outsiders but also from the common Druze. All Druze believe in incarnation according to which life on earth is temporary, once dead the spirit will be reincarnated in another body. This belief promotes an optimistic view of life since if you are not successful or handicapped in your present life, you can be very successful and with no disabilities in your next life (Kandel, Morad, Vardi, Press, & Merrick, 2004). Indeed, in a research done with Israeli Arab parents of children with developmental disabilities by Reiter, Mar'i and Rosenberg, (1986) comparisons between Muslim Arabs, Christian Arabs and Druze parents revealed that attitudes towards the child were most positive among the Druze. Indeed, in Meissa's study (ibid), eight mothers out of ten, said that having a child with Autism is God's Will and should be regarded as a trial of faith. One mother described it as a gift from God and one said it was a punishment for sinful behavior. Four mothers said that having a child with autism made them become more religious, or 'closer to God', one family actually converted from being atheists to believers.

With this recognition of the strong religious beliefs attached to disability, a special program was designed in Israel to give training to Imams – the Muslim religious leaders, to change perceptions of mental illness, including autism in Arab Israeli society. The assumption underlying the program was that religious figures are in positions of influence in their communities. The public sees them as societal and spiritual guides and turn to them for advice and guidance. They are also figures of authority in their communities and can guide families in times of distress. As such they can act as agents of positive change (Imans receive training to change perceptions of mental illness in Arab Israeli society, Ynet News, Monday, November 22, 2010).

Some 40 imams from mosques in Israeli Arab communities participated in a unique training program for changing perceptions of mental illness in Arab Israeli society. Five weekly meetings dealt with issues like the religious aspects, ways of coping, getting to know persons with disabilities and their families, legal issues and service, the effects of medication, mental illness from a medical point of view and ideas for social change.

Prof. Hawala Abu Bakar from Emeq Yezreel College and Al-Qasemi Arab Teachers College who specializes in mental illness in Arab Israeli society comments that there is a gap between

the acceptance and compassion that the religions (Islam, Christianity and Druze) demand towards those with disabilities and the reality on the ground.

Attitudes range between two extremes – acceptance, which can even include encouragement to marry, and ostracism, especially towards those with rare deformities or those who are violent towards themselves or the environment. There is also a difference between attitudes towards men and women, with the tendency to isolate women more than men.

In Israel The most widely treated disability in Arab localities is mental retardation, which is given considerable attention, followed by sensory impairments (blindness and deafness), and physical impairments (handicaps and illnesses). Impairments and disabilities in the area of mental health, various behavioral, communication, and functional disorders and autism, are given relatively little attention and very few agencies deal with those areas.

The authors of the special report on people with disabilities in Arab Society in Israel (ibid) conclude that the lack of diagnostic capabilities together with insufficient knowledge and awareness about developmental problems in Arab society create a situation in which disabilities are insufficiently diagnosed, or that diagnosis occurs too late when early diagnosis could have prevented further disability or deterioration. There is inaccessibility and unavailability of mental health clinics in the Arab sector, coupled with language and cultural barriers within mental health clinics since most service providers are Jewish. Another explanation is that in Arab society there is insufficient acknowledgment or awareness of the benefits of psychological care and mental health services, as well as a preference for relying upon informal local resources within the community.

Assistance from formal agencies or organized efforts on the local level are a new developments seen over the past decade and are not yet firmly rooted in the society. The process of transition from a culture reliant on the nuclear and extended family as a pillar of society to a culture which promotes civil society, including initiatives on behalf of the disabled, has been gradual and difficult.

In recent years though there has been increasing awareness of the need to integrate people with disabilities into the community in the Arab sector (Karni, Reiter, and Bryen, 2011). It was the aim of the present survey to focus our understating on the way future Arab teachers attending an Arab teachers' college perceive 'Autism' and their attitudes towards persons, children and adults, with autism. Our secondary aims were to find out to what extent: previous contact, or having a family member with autism, affected attitudes;

- gender has an impact;
- age is a crucial factor;
- attending, or having attended a course(s) on autism and other developmental disabilities affected attitudes.

The first hypothesis related to attitudes toward the inclusion of persons with autism and the belief that they can achieve social and academic skills that will enable them to be socially included in the community.

The first hypothesis stated that there will be correlations between positive attitudes in the areas of knowledge about autism and emotional and behavioral willingness to be close to them, and positive conceptions of their abilities in the areas of life skills, academic skills and included social competence.

The second hypothesis related to **knowledge** about the syndrome.

The hypothesis stated that those who attended a course on autism will show better knowledge of the syndrome than those who did not.

The third hypothesis stated that there will be positive correlations between the background variables of previous contact and/or having a family member with autism and better knowledge of and positive attitudes towards them.

The forth hypothesis was divided into two parts: a. religion will be pointed out as the major factor underlying attitudes and conceptions regarding autism, more so than prejudice or personal experience with a person with autism, and b. religion will be correlated with the most negative attitudes and conceptions, more than prejudice and more than personal experience.

4. Method

4.1. Sample

Students attending the Sakhnin's teachers education college were asked to fill in two questionnaires on their attitudes towards Autism. The sample included 321 students from all study levels, from the first to the fourth year of study. There were 82.3% females and 17.7% males. The mean age was 26.58 (range: 19 – 49). The wide age range was due to the fact that some students attend a special program for veteran teachers who wish to get a degree in special education.

4.2. Instruments

Two questionnaires were used in this study. One was an especially designed questionnaire including two parts: background variables such as: personal knowledge of a person with autism, autism in the family, heard about autism before studying from the mass communication media or from other people, cultural attitudes toward autism (positive, negative, indifference), reasons for cultural attitudes (religion, prejudice, personal experience), autism being different from intellectual disability (yes/no), the existence of services for children and adults with autism (yes/no). In the second part of the questionnaire the respondent was asked about his/her perceptions of the possibility of inclusion of persons with autism based on their ability to be independent by developing appropriate life skills, have the academic abilities for inclusion and being able to be socially included in the community. The total reliability score of the scale was high (Cronbach's $\alpha = .84$); life skills sub scale (Cronbach's $\alpha = .78$); academic skills sub scale (Cronbach's $\alpha = .69$); social inclusion sub scale (Cronbach's $\alpha = .71$).

The second questionnaire was the Hebrew translation of the Chedoke-McMaster Attitudes Towards Children with Handicaps (CATCH) scale (Rosenbaum et al., 1986; Tirosh, Schanin, Reiter, 1997). The questionnaire is a 28 – item self-administered scale scored on a Likert 4 point scale from 1 = always true to 4 = never. It was adapted to refer to the autistic spectrum disorder rather than disability in general. Items were worded as statements, for example: people with autism cannot be happy in their lives; I have no problem spending my leisure time with a person with a autism; I am ready to talk with a person with autism whom I do not know; I feel uneasy introducing a person with autism to my friends.

Factor analysis (Factor analysis with varimax rotation and the criterion of Eigenvalue greater than 1) revealed three sub-scales: willingness to be close to a person with autism (Cronbach's $\alpha = .83$); emotional reactions to a person with autism (Cronbach's $\alpha = .69$); knowledge of autism (Cronbach's $\alpha = .51$). The last sub-scale of knowledge has a rather low reliability score showing the fragmentation of knowledge respondents have in this area. The three subscales are in line with the three dimensions of attitudes, the emotional, the behavioral and the cognitive suggested by Reiter and Bryen (2010). Accordingly, attitudes are composed of three interrelated dimensions of personality: emotions, cognition and behavior. Each dimension is a complex interplay of several factors. Looking at the cognitive dimension, an attitude is a view or opinion that a person has towards a certain state of existence, of an object, an idea, of another person, or of other people. Attitudes are frequently swayed by emotional response. They can be positive, for example, happiness, pleasure, wanting to experience an event, be near the person, or get hold of the object of reference. Attitudes can also be negative, when a person feels he has a dislike towards a situation, object, or another person. In this case the person will likely feel unhappy, fearful, disgusted, sad, etc. The two dimensions of cognition and emotion may not always be congruent. The third dimension of attitudes is a behavioral one. Incongruence between cognition, emotion and behavior can be the outcome of cultural norms and commonly held prejudices.

The two questionnaires were administered to students during class time.

4.3. Results

The analysis of the background variables of our sample revealed that 66.5% of the total sample, took courses in special education including a course on autism, as compared to 33.5% who had not taken part in any academic studies in the area of disabilities. Most of those who took the course (84.1%) said that it changed their attitudes towards autism in a positive way. Before attending the course, most respondents did not know that autism was a different syndrome than intellectual disability (61.6%).

Nearly one half (43.3%) knew a person with autism, while only a very small number (7.2%) said there was a person with autism in their family. Asked about their opinion as to the reason for the common attitudes towards autism in the Arab community respondents pointed to prejudice as the main source of views (66.3%) others thought it was based on personal experience of people with persons with autism (22/1%) and some thought they were due to a religious outlook (11.6%).

Asked about the existence of services for children and adults with autism, as far as they knew, more than one half (53.7%) said there were no services for adults and only slightly less than half (43.1%) said there were no Arab services for children. It should be noted though, that in relations to services for adults, indeed there is a scarcity of community living arrangements and sheltered workshops for them. However, regarding school aged children, all children in Israel, irrespective of any disability, must attend school by law. Thus, all school age children, including those with autism, from the age of 3 to 21 (for children with disabilities) attend either an Arab school or a Jewish school. It can be a special education school or a regular school, depending on the special needs of the child and parental wishes regarding the placement of the child. When indicating that there is lack of schools for the younger age, respondents referred to special education Arab schools for children with autism.

The first hypothesis stated that there will be correlations between positive attitudes in the areas of knowledge about autism and emotional and behavioral willingness to be close to them, and positive conceptions of their abilities in the areas of life skills, academic skills and included social competence.

Applying the Spearman Correlations test on scores obtained on the two questionnaires administered in the study, significant correlations were found between all the sub-scales of the questionnaires i.e. positive attitudes in the three areas of knowledge, behavior and emotions; correlated positively and significantly with perceptions of their ability to acquire life skills, academic skills, and social skills.

Table 1 presents the correlations obtained between attitudes and perceptions of skills.

		Attitudes				Perceptions / knowledge			
		Total attitudes	Closeness	Emotions	Cognitive	Total perceptions	Life skills	Academic skills	Social integration
Attitudes	Total attitudes		.90***	.77***	.48***	.39***	.24***	.29***	.39***
	Closeness			.60***	.16**	.37***	.20***	.27***	.41***
	Emotions				.26***	.15**	.03	.18**	.18**
	Cognitive					.28***	.28***	.22***	.18**
Perceptions / knowledge	Total perceptions						.82***	.68***	.87***
	Life skills							.38***	.52***
	Academic skills								.43***
	Social integration								

*p<.05, **p<.01, ***p<.001

Table 1. Spearman Rank Order correlations between full attitude scale and its sub scales and full perception scale and its subscales for the total sample (N= 321)

As seen from table 1 correlations were highly significant ($p<.001$) between the full scales scores and all sub scales of the questionnaires, indicating that positive attitudes towards persons with autism correlated with positive perceptions regarding the possibility of their inclusion in the community.

The second hypothesis related to **knowledge** about the syndrome.

The hypothesis stated that college students who attended a course on autism will show more positive attitudes towards persons with autism and more positive conceptions of their potential for inclusion than those who did not attend such a course. Furthermore, on a general question asking the students who attended a course on autism whether it changed their attitudes, most of them (84.1%) said that it did change their attitudes in a positive way.

Table 2 represents t-tests between scores obtained on the questionnaires by the students who attended a course on autism compared with those who did not attend such a course.

		Yes (n=211)	No (n=106)	F(1,315) (η^2)
Attitudes	Total attitudes	3.03 (0.38)	2.90 (0.43)	7.41** (.023)
	Closeness	3.19 (0.49)	3.02 (0.56)	8.04** (.025)
	Emotions	3.37 (0.54)	3.26 (0.62)	2.77 (.009)
	Cognitive	2.45 (0.51)	2.43 (0.53)	0.10 (.001)
Perceptions / knowledge	Total perceptions	2.59 (0.48)	2.54 (0.52)	0.55 (.002)
	Life skills	2.28 (0.65)	2.28 (0.69)	0.01 (.001)
	Academic skills	2.90 (0.68)	2.81 (0.76)	1.03 (.003)
	Social integration	2.67 (0.52)	2.61 (0.56)	0.90 (.003)

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 2. Multivariate analyses of variance between the students who attended a course on autism (N= 211) and those who did not attend such a course (106) on the full attitude scale and its sub scales and full perception scale and its subscales

From table 2 it appears that attending a course on autism significantly ($p<.01$) affected the total attitudes scale, especially the willingness of the respondents to have close relationships with a person with autism. However, the course did not make a difference on students' perceptions of the possibility of persons with autism to be included in the community.

Apparently, as the saying goes 'old attitudes die hard'.

The third hypothesis stated that there will be positive correlations between the background variables of previous contact and/or family contact with a person with autism and better knowledge and positive attitudes towards them.

Multivariate analyses of variance on the variable of '*I know a person with autism*' and the variable of '*there is a person with autism in my family*' revealed no significant differences between those who knew or had a relative with autism and those who did not know or did not have such a relative.

Thus, our third hypothesis was not confirmed.

The forth hypothesis stated that among the factors underlying attitudes and conceptions regarding autism, religion will be pointed out as the major factor, more so than prejudice or personal experience with a person with autism, religion will be correlated with the most negative attitudes and conceptions, more than prejudice and more than personal experience.

Comparisons using Multivariate analyses of variance with Tukey's post hoc tests were applied in order to find out which among these variables was indicated by most respondents as the major factor underlying attitudes and conceptions and which affected mostly negative attitudes and perceptions.

		Religion (n=34)	Prejudice (n=195)	Personal experience (n=65)	F(2,291) (η^2)	
Attitudes	Total attitudes	2.82 (0.41)	2.99 (0.39)	3.07 (0.38)	4.79** (.032)	Personal experience + prejudice "> Religion
	Closeness	2.92 (0.53)	3.13 (0.51)	3.27 (0.48)	5.27** (.035)	Personal experience "> Religion
	Emotions	3.20 (0.70)	3.35 (0.55)	3.38 (0.55)	1.12 (.008)	
	Cognitive	2.23 (0.48)	2.44 (0.50)	2.52 (0.56)	3.60* (.024)	Personal experience "> Religion
Perceptions / knowledge	Total perceptions	2.56 (0.44)	2.58 (0.50)	2.61 (0.49)	0.13 (.001)	
	Life skills	2.35 (0.58)	2.24 (0.69)	2.33 (0.68)	0.59 (.004)	
	Academic skills	2.78 (0.70)	2.93 (0.70)	2.83 (0.74)	1.00 (.007)	
	Social integration	2.62 (0.45)	2.66 (0.54)	2.72 (0.53)	0.45 (.003)	

*p<.05, **p<.01, ***p<.001

Table 3. Comparisons on attitudes and conceptions regarding persons with autism in the community according to main reason underlying attitudes and conceptions: religion, prejudice, personal experience

From table 3 it appears that religion was the least chosen by respondents (11.6%) as being the underlying factor affecting attitudes and conceptions regarding autism. Most (66.3%) respondents pointed at prejudice as being the most common factor underlying attitudes and conceptions, followed by the factor of personal experience (22/1%). Thus the first part of hypothesis 4 was not confirmed. The second part indicated that the factor of religion will be exhibited by the most negative attitudes and conceptions. Indeed, as seen from table 3, the mean scores obtained by those who pointed at religion as being the main factor, was the lowest, indicating negative attitudes and conceptions. Comparing the scores obtained on the three factors of religion, prejudice and personal experience the most positive attitudes and conceptions regarding persons with autism was a combination of personal experience coupled with prejudice ($p < .01$). On the subscale of willingness to be close to a person with autism personal experience had a significantly greater impact than religion ($p < .01$).

No differences were found regarding the relative impact of religion, prejudice or personal experience on perceptions regarding their ability to be included in the community.

We were further interested to find out whether any of the background variables of age, gender or having heard about autism before starting academic studies affected attitudes and perceptions.

		Yes (n=182)	No (n=126)	F(1,306) (η^2)
Attitudes	Total attitudes	3.05 (0.38)	2.91 (0.39)	10.27*** (.032)
	Closeness	3.21 (0.50)	3.03 (0.51)	9.31** (.030)
	Emotions	3.43 (0.52)	3.24 (0.60)	8.94** (.028)
	Cognitive	2.47 (0.50)	2.42 (0.54)	0.61 (.002)
Perceptions / knowledge	Total perceptions	2.62 (0.47)	2.50 (0.52)	4.67* (.015)
	Life skills	2.32 (0.62)	2.18 (0.71)	3.17 (.010)
	Academic skills	2.96 (0.65)	2.75 (0.76)	6.34* (.020)
	Social integration	2.69 (0.53)	2.61 (0.54)	1.79 (.006)

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4. Comparison between respondents who heard about autism (N=182) and those who have not heard (N=126) about it on attitudes towards autism and conceptions on inclusion

No correlations were found between the background variables of age and gender however, respondents who had heard about autism before they started their academic studies – whether general or in special education, were more inclined to have positive attitudes and positive perceptions of their inclusion. A Multivariate analyses of variance was applied to all scores compared on having heard or not about autism.

Table 4 presents comparisons between the scores obtained by respondents who heard about autism (N=182) and those who have not heard (N=126) about it. Missing data – 13 respondents.

From table 4 it appears that having heard about autism resulted in a more positive attitude towards them ($p<.001$) though it did not affect a better knowledge regarding the syndrome of autism, and a more positive perception of their overall ability to be included ($p<.05$) in the community, especially their life skills abilities and their academic skill, but not their social skills.

5. Conclusion

The major conclusion of our study is that the issue of attitudes towards persons with autism and perceptions regarding their abilities to be included in the community are complex and require further research in order to find out the most effective way to induce positive changes in this area. The fact that in our study correlations were highly significant between positive attitudes towards persons with autism and positive perceptions regarding the possibility of their inclusion in the community, indicate that a change in attitudes from negative to positive should be followed by a change in the opinion that persons with autism can be included in the community. However our findings revealed that this was not necessarily the case.

Attending a course on autism, though it affected a general change in attitudes, from negative to more positive attitudes towards autism, it did not affect a change in the perceptions regarding the capability of persons with autism to be independent and live in the community. So though a positive change occurred in the area of attitudes, it was not correlated with a similar positive change in one's acceptance of the fact that persons with autism can learn independent living skills, can acquire the academic skills necessary for a life in the community and can be socially included.

Apparently attending a course on autism turned out to be a necessary but not sufficient condition for a complete change of opinions regarding the possibility of persons with autism to live in the community. As the saying goes: 'old attitudes die hard'. Indeed incongruence between the different dimensions of attitudes, the emotional reaction, the behavioral aspect and the precision of knowledge regarding autism are not necessarily harmonious (Reiter and Bryen, 2010). Tackling the emotional dimension is highly important as it may pave the way for students to be ready to learn facts about autism that are not loaded with misconceptions and prejudices. Indeed, prejudice, more so than religion, was found to be the most significant force affecting attitudes and perceptions regarding autism. Another factor found to affect attitudes and conceptions was a personal experience with a person with autism. This finding suggests

that in order for an academic course on autism to succeed in changing negative conceptions it should be followed by an experiential process in which students should meet and interact with persons with autism and their families.

The findings of our research confirms what most publications regarding autism in the Arab world, such as Al-Shammari, (2006) point out, that religion is the major source of negative attitudes and perceptions regarding persons with autism. Also the report written by Estela Dimes (2012) indicates that religion can affect helplessness and passivity due to a belief that since having a child with autism is God's will, there is not much one can do about it. A person with autism is inflicted by a disability that gives him/her no chance of leading a 'normal' life.

However religion and faith can have two different and opposed outcomes as shown by the qualitative research conducted by Al-Shich with Druze mothers. In her study, some mothers said it gave them strength. Religion can be a source of strength, it can affect an attitude that it is God's way of testing me to be the best parent possible, and give me strength to provide my child with the best possible support for a life of quality.

In our study prejudice was found to be the most commonly cited factor underlying attitudes and conceptions regarding autism. Unlike religious faith, prejudice is one-sided. It is exhibited in negative attitudes and a rejection of persons with autism from the mainstream of society. The misconceptions that underlay prejudice are highly imbedded in our culture, starting from stories and legends told to toddlers and creating stereotypes followed by 'popular' derogatory and rejecting statements expressed by adults. Attitudes change calls for a comprehensive cultural reform and a change of outlook regarding disability in general and autism in particular. The findings that those among the respondents who heard about autism before starting their studies showed more positive attitudes towards them and the partial but significant effect of attending a course on autism are encouraging. Higher exposure of persons with autism and their families, more self-advocacy activities done by them, more courses provided in this area and better services, will hopefully contribute to a more positive attitude and more positive conceptions regarding their inclusion in the community.

Further research

Our study calls for more research in the areas of prejudice and attitude change regarding the Autistic Spectrum Disorders. Negative attitudes and lack of precise knowledge about the syndrome of autism is not unique to the Arab world. It is also not unique to the common 'person in the street', it affects service providers and professionals as well. In spite of the fact that there is a worldwide rise in the number of children diagnosed as having an autistic disorder, the medical knowledge about autism and its causes is still incomplete. Thus, there are a lot of unclear and unanswered questions regarding its causes, treatment, the best services needed to assist in their inclusion in mainstream society. One thing is though unquestionable, the rights of persons with autism for the best possible life with dignity and fulfillment (Reiter, 2008). A humanistic human rights philosophy should underlie not only our treatment and education of persons with autism but should also guide any future research in this area.

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