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To cite this article: Kholoud Adeeb Al-Dababneh, Eman K. Al-Zboon & Haitham Baibers (2016): Jordanian parents’ beliefs about the causes of disability and the progress of their children with disabilities: insights on mainstream schools and segregated centres, European Journal of Special Needs Education, DOI: 10.1080/08856257.2016.1240341

To link to this article: http://dx.doi.org/10.1080/08856257.2016.1240341

Published online: 11 Oct 2016.
Jordanian parents’ beliefs about the causes of disability and the progress of their children with disabilities: insights on mainstream schools and segregated centres

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ABSTRACT
This study aims to identify the beliefs of Jordanian parents of children with disabilities (CWD), including intellectual disabilities, specific learning disorders and Autism Spectrum Disorder: both in terms of the causes of these disabilities, and the ability of their children to make progress. A qualitative interpretive methodology was employed. Interviews were used to collect data from 63 parents of CWD. Two major themes emerged concerning beliefs about the causes of disability and children's progress. Results showed generally that disabilities were attributed to supernatural and biomedical causes; also, most parents had positive expectations about their children's progress, especially in education skills, and had hopes for their children's futures. Conclusions and implications are presented in the light of the study findings.

Introduction
Historically, Arab societies have harboured negative attitudes and beliefs towards children with disabilities (CWD), considering them as burdensome and shameful (Nagata 2008; Turmusani 1999). This has been associated with lack of knowledge of the needs and potential of CWD. As a result, many such children are locked away in institutions or kept at home without receiving appropriate support (Hadidi and Al-Khateeb 2015). These beliefs represent a major barrier to the adjustment of CWD and their families, significantly impede their inclusion and have adverse effects on the quality of services provided to them (Hadidi and Al-Khateeb 2015). Therefore, raising awareness about these beliefs is a first step towards creating more accessible environments for CWD (WHO 2011).

Parents across the world hold different beliefs about disability. In India, for example, some hold negative beliefs and attitudes towards both disability and the capacity of CWD to develop educationally and live independently (Im-Bolter, Zedeh, and Ling 2012). In contrast, other parents in India feel that their child's intellectual disability could be improved with appropriate treatment (Edwardraj et al. 2010). Such beliefs can also be common in Arab countries (Hadidi and Al-Khateeb 2015) including Jordan, especially in urban areas (Nagata 2008). However, in other cultures such as South Asian, some believe that their children could
become completely ‘normal’ in future (Daudji et al. 2011), and are therefore not willing to consider treatment options unless these are likely to result in the child ‘overcoming’ their disability (Edwardraj et al. 2010).

Many researchers have studied the origins of such parental beliefs (Algood, Harris, and Hong 2013; MacDonald 2012), which occur at the interface between culture, family and childhood disability. Over the years, the meaning and understanding of disability has varied significantly across different cultures (Dura-Vila, Dein, and Hodes 2010). In some cultures, individuals with disabilities were rejected; they hid away and felt ashamed (MacDonald 2012), while in other cultures, they were given respectable status and encouraged to participate (Munyi 2012). More specifically, some African societies attribute disability to verbal abuse or supernatural causes (Dura-Vila, Dein, and Hodes 2010); witchcraft (Munyi 2012); improper relationships of family members; or even God, as well as biomedical causes (Gona et al. 2015). Whereas in India, mothers tend to view disability through a medical prism, attributing it to genetic reasons, or psychological trauma (Edwardraj et al. 2010). Danseco (1997) reviewed research from a variety of cultures, and concluded that parental beliefs about disability reflected biomedical and spiritual or sociocultural perspectives and these beliefs affected parents’ decisions about intervention.

In multi-cultural settings, religion is a major factor in building parents’ beliefs about disability (Dura-Vila, Dein, and Hodes 2010; Gona et al. 2015). Thus, parents who characterise disability as a test of their faith (Matt 2014), a ‘gift’ or blessing, and sent to them for a purpose from God, have positive beliefs and attitudes towards CWD; and this is seen in parents from North America, Europe, Australia, South America such as Nicaragua (Matt 2014), Mexicans living in the US, South Asians (Daudji et al. 2011) and in Arab countries including Jordan (Abu-Hamour and Al-Hmouz 2013). In contrast, parents who see their child’s disability as a punishment for previous sins may build negative beliefs (Gona et al. 2015).

The experience of disability results from the interaction between individuals and the contextual factors (environmental and personal); this is referred to as the bio-psycho-social model (WHO 2011). According to this model, with early intervention, appropriate services and education, developed laws and inclusion effort, many CWD can function productively and this can have a positive effect on changing social and cultural beliefs about disability (WHO 2011). For example, recent evidence from many Arab countries, including Jordan, have shown that parents have begun to adopt more positive beliefs (Hadidi and Al-Khateeb 2015) in tandem with intervention programmes being developed and national laws passed which ensure integrating CWD in communities and public schools, and involving parents (Hadidi and Al-Khateeb 2015; MacDonald 2012).

However, due to health-related stigma and lack of understanding of the abilities of people with disabilities, people in many countries equate disability with incapacity, and as a result such children may face unrealistic beliefs and social discrimination (WHO 2011). Social stigma still prevails in Arab countries societies and has negative effects on CWD and their families (Hadidi and Al-Khateeb 2015).

In addition to religious and cultural factors affecting attitudes to CWD, an important predictive factor appears to be the family environment, including family’s personal experiences, nurturing and friends. The pre-existing psychological composition of parents, mothers’ unmet needs, marital happiness, and familial and spousal support (Herbert and Koulouglioti 2010) are all important factors. Higher income parents (Chandramuki, Venkatakrishnashastry, and Vranda 2012), and those with higher levels of education are more likely to have higher
expectations and beliefs (Li-Tsang, Yau, and Yuen 2001). Children's demands and need for care are strongly associated with parental beliefs; with children who have less severe disabilities tending to be more accepted (Algood, Harris, and Hong 2013). Parents can have more positive beliefs and expectations towards boys than girls with disabilities (Chandramuki, Venkatakrishnashastry, and Vranda 2012), and this was found to be the case in Arab countries (Peters 2009).

Understanding beliefs about disability is clearly necessary, as they constitute important predictors of outcome for CWD (Wong et al. 2014). It is vital to help improve the ability of parents to cope with their child's disability and build realistic expectations about future progress (Dura-Vila, Dein, and Hodes 2010).

However, these beliefs have not been adequately investigated by research to date. In Arab communities, including Jordan, no qualitative studies exist which have compared different forms of disabilities, as served by mainstream schools (MS) or segregated centres (SC) (Hadidi and Al-Khateeb 2015). Thus, this study aims to address in considerable depth the beliefs of parents of children with Autism Spectrum Disorder (ASD), intellectual disabilities (ID) and specific learning disorders (SLD) about the causes of these disabilities, as well as their beliefs about the ability of their children to make progress in either MS or SC.

**Jordanian context**

In Jordan, CWD have the same rights as their peers without disabilities in terms of education through the adoption of inclusive education, according to the newest Jordanian Law (31) on the Rights of Persons with Disabilities. In Jordanian law, individuals with disabilities are defined as those with a total or partial failure in any of the senses or physical, psychological or mental abilities, to an extent that limits their possibility of learning, training or work so that they cannot meet the requirements of normal life, as experienced by their able-bodied peers (HCD 2012). Students in Jordan may also be referred to as having intellectual disabilities, learning disability or autism (Munyi 2012). These children are identified and classified according to the definition in the national legislation and the Ministry of Health classification of disabilities is applied according to diagnosis procedures at the diagnosis of disabilities centre (HCD 2012).

Jordan is achieving notable progress to achieve the goals of Education for All (MOE 2016). At present, CWD are provided with special education programmes in two settings: segregated and mainstream. With regard to segregated settings, children with a wide range of disabilities, including ID and ASD, are educated in centres under Ministry of Social Development supervision (Abu-Hamour and Al-Hmouz 2013). At MS, special education services are provided to CWD including SLD and mild ID from the second to sixth grades at part-time resource rooms in regular schools (MOE 2016).

It is worth mentioning that the categories and form of provision in Jordan have been influenced by the American view of special education, using similar definitions, compulsory education, recognition of the right of children with disability to enjoy educational opportunities free of discrimination, personality development, integrated education and similar approaches in training staff. But although the law now ensures that CWD are provided with appropriate comprehensive services within their family framework (Nagata 2008), and although internationally the role of parents in developing provision is understood to be important, this was not previously the case in Jordan (Abu-Hamour and Al-Hmouz 2013).
Historically, education was perceived as the responsibility of schools, and parental intervention was viewed as interference with what trained professionals were supposed to do; also, many parents believed that their participation was not helpful, and as a result, they separated themselves from the process (Abu-Hamour and Al-Hmouz 2013). So, there are only a limited number of parent support groups and pressure groups. However, more recently, civic society and NGOs such as UNICEF and UNRWA have been influential in the development of parents’ knowledge and attitudes towards disability (Turmusani 1999).

**Methodology**

**Participants**

63 formal interviews were conducted with parents of children aged 6–15, from Amman, all of whom had mild to moderate levels of ASD, ID or SLD. The total number of centres and schools was 15 (six SC, seven MS [three special classes, five resource rooms]). Table 1 below illustrates the demographics of the sample.

**Ethical considerations**

Taking ethical considerations into account, written permission to be interviewed was obtained from the participants. Prior to the interviews, participants were informed about the aims of the research and that their responses would be treated with confidentiality and used only for the purpose of the research. Interested parents completed a card informing the researchers of their interest in participating. All the interviews were conducted in a meeting room, as this was considered suitable for the participants. The study protocol was reviewed and approved by the Institutional Review Board at Hashemite University.

**Data collection**

Semi-structured interviews were chosen because of their greater flexibility over other interview techniques (Hitchcock and Hughes 1989). The interview schedule was designed by the researchers in order to guide the interviews. A series of open-ended questions was used to encourage discussion around a number of themes, including beliefs regarding the causes of disability and expectations about their children’s likelihood of making progress, in line with the literature (Dura-Vila, Dein, and Hodes 2010; Munyi 2012; Shobana and Saravanan

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**Table 1. The distribution of the sample by the study variables.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency and percentage of total (63)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parents</strong></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>54 mothers (54%), 9 fathers (14%)</td>
</tr>
<tr>
<td>Age</td>
<td>5[18–24] (7%), 22[25–34] (34.9%), 20[35–44] (31.7%), 10[45–54] (15.8%), 5 ≥ 54 (7%).</td>
</tr>
<tr>
<td>Level of education</td>
<td>10 primary schools (15.8%), 31 secondary schools (49.2%), 22 ≥ colleges (35%).</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td></td>
</tr>
<tr>
<td>Type of disability</td>
<td>MS: 17 SLD (26.9%), 17 ID (25.4) [9 Mild, 7 Moderate]</td>
</tr>
<tr>
<td>SC: 15 ID (23.8%) [5 Mild, 10 Moderate], 15 ASD (23.8%).</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>35 male (55.5%), 28 female (44.4%)</td>
</tr>
<tr>
<td>Age</td>
<td>19 (6–8) (30%), 25 (9–12) (40%), (13–16) (30%).</td>
</tr>
<tr>
<td>Placement</td>
<td>33 (52.4%) served MS; 30 (47.6%) served in SC</td>
</tr>
</tbody>
</table>
These questions were designed to be simple in structure and easy to understand, and included the following:

- In your opinion, what do you believe caused the disability in your child?
- What do you see for your child’s future?
- To what extent can your child make progress?

Each interview lasted approximately 60 min; all were tape recorded.

Data analysis

Interviews were transcribed verbatim through notes by the interviewer. The researchers read and independently coded transcripts using latent content analysis and constant comparison techniques (Glesne 2011).

Data were analysed through four stages. The first stage involved reading the interviews and coding the interview responses and transcripts according to themes, in order to facilitate data analysis of each service type. This was obtained through frequency counts from the transcribed scripts, before these were collected and formulated into several themes. The second stage looked for consistent themes examined across children with different types of disabilities within the two settings, and different codes were added. In the third phase, new codes and themes were identified by re-reading the interview transcriptions and field notes on beliefs about the causes of disability and the child’s progress. This assisted in interpretation of the data (Glesne 2011). The fourth stage interpreted the information and themes. Pattern coding was conducted, including analysis of how the participants answered the questions, and how direct quotes and observations related to previous literature (Glesne 2011).

Credibility of research

To promote empirical rigour and confidence in the results (Creswell and Miller 2000), an external evaluator compared the translated excerpts with the originals to verify their accuracy. Interviewers corrected transcripts where necessary. The researchers read and coded interview transcripts independently. This helped both to verify the accuracy of the main themes identified and to examine the credibility of the document analysis. Finally, credibility in this study was ensured through multiple reviews of the field notes and audiotapes, the neutrality of the interviewers and careful handling of emotional expressions.

Results

Beliefs regarding the causes of disability

Beliefs regarding children with SLD in MS

Half of the participants held beliefs that their child’s disability was due to biological causes (see Appendix 1). A parent of an eight-year-old boy explained: ‘Doctors said that my child’s disability was due to medicines I was taking at the beginning of pregnancy …’ On the other hand, several parents believed their child’s SLD was a product of environmental or societal deprivations: such as lack of an enriched educational environment, as well as psychological
difficulties which mothers had experienced. One mother of a nine-year-old girl said: ‘My child’s problems began after joining the school … I think that my child is normal … The problem is in the educational programmes which needs to be more accommodating to my child’s capacities …’

Half believed that their children were intelligent, but with some problems preventing them from performing well. Two of these participants attributed their children’s difficulties to themselves as parents. A parent of a 12-year-old child explained: ‘My son is a smart boy; it’s my fault … I did not follow my child’s achievement as well due to my busy schedule … right now he is in the third grade … he cannot read.’ Among other parents, some viewed disability from a supernatural perspective, considering it as ‘a test from God to measure our faith …’ (mother of eight-year-old boy).

Beliefs regarding children with ID in MS
Most of the parents attributed their child’s disability to medical reasons such as problems before, during or after birth, e.g. lack of oxygen. Some participants attributed it to being too young or too old during pregnancy, chromosomal abnormality, or to genetic reasons. One mother of a 13-year-old boy with moderate ID explained, ‘My age during pregnancy is the cause of my child’s case … he is the first-born’. Another mother, of a seven-year-old boy with mild ID, said, ‘The reason for my child’s disability is my injury to virus during pregnancy …’

Some parents attribute their child’s disability to environmental causes: including community beliefs, and educational programmes. A parent of a 10-year-old girl with Down syndrome explained, ‘the reasons for my child’s disability are due to the community … which did not reach the level of understanding of children and meet their needs effectively’. Remarkably, several consider their child’s disability as a gift from God.

Beliefs regarding children with ID in SC
A number of subthemes relating to beliefs in supernatural causes were identified. First, most parents had positive beliefs and considered it part of God’s plan: ‘… It’s God’s will … and only God could help him’. Few parents believed in ‘envy or evil eyes’: meaning when a person with ‘strong eyes’ intentionally or unintentionally looks at a mother during pregnancy, or at a child. However, some parents attribute their child’s disability to biomedical causes, including difficulty during childbirth and pregnancy, prenatal maternal. One participant, with a seven-year-old boy with moderate ID, expressed this idea as follows: ‘My son was born in the eighth month … this could be a major cause of my child’s problem’.

A few of the participants attribute their child’s disability to early childhood illness or injury. The father of a 12-year-old girl with moderate ID said, ‘My child was exposed to an accident on her head … after that, I feel that there is something wrong where she is delayed in speech and stutters … then we know that she has a significant development delay’. Only two of the participants attributed their child’s disability to genetic factors: a father of a 14-year-old boy with moderate ID said, ‘My child’s disability is due to genetic reasons … it’s a defect in the genes inherited from the parents …’

Beliefs regarding children with ASD in SC
Parents held a wide range of beliefs about the cause of their child’s disability. These ranged from biomedical causes (e.g. genetic factors, events surrounding the child’s birth) to environmental influences in the early childhood period. With regard to the former, genetic
influences were listed by some parents. The mother of a seven-year-old girl related, ‘Yes my child is autistic … the reason is genetics … because her father also has autism …’. Prenatal maternal risk factors were reported by several parents. The mother of a 10-year-old boy with ASD said, ‘When I was pregnant … I was exposed to pressures and problems … I think these pressures weighed on my son significantly …’

Premature birth or lack of oxygen after birth was mentioned as the cause by some parents; early childhood illness, immunisations or injury were mentioned by few parents. Yet few parents also blame themselves, for example, the father of a six-year-old girl: ‘My daughter lived with her mother for three years after we divorced … her mother is psychologically ill … she left my child for long hours a day from her first year watching TV and rarely interacted with others … now my daughter lives with me … and I’m trying hard to promote her to interact with others’. Half of the parents added that disability is just a ‘gift from God’.

Interestingly, all participants were similar in their fatalism, belief in God’s will or belief in biological factors as the causes of disability. The main difference was that some parents of children with ASD talked about genetic factors, while few parents of children with ID from either setting considered this as a cause, especially fathers. Few parents of children with ID and ASD talked about external causes such as early childhood illness. Several parents of children with SLD and some parents of children with mild ID in MS considered environmental causes. A few mothers of children with SLD attributed their child’s disability to psychological difficulties during pregnancy; and a few fathers of children with ASD blamed their partners (see Appendix 1).

**Parental beliefs about children’s progress**

**Parental beliefs about the progress of children with SLD in MS**

The analysis of interview transcripts showed that many of the parents had positive expectations and beliefs regarding their children’s abilities, but tended to be pessimistic about the future of children with SLD, and their ability to achieve similar results to their able-bodied peers. Such parents believed that a mainstream environment represented an opportunity for these children to enhance their social competence, overcome their academic problems, change significantly and graduate with at least a diploma after high school (half of the parents), or from university (mentioned by some parents) and live independently. ‘My son is like the others in his abilities … he only needs more support and a good teacher’. (mother of a 12-year-old child); ‘I always told my daughter that she can achieve great things …’. (father of 12-year-old girl).

In contrast, some explained that although they believed their child could make progress, this would be limited in comparison to their able-bodied peers. The mother of a 9-year-old boy, added, ‘My child has the ability to draw, but it is not up to the degree of creativity … it is just an accomplishment … for a child suffering from learning disability’. One participant did not expect that their son would make progress, expressed their fears for the future and doubted whether they could have an appropriate career or live independently. ‘My son has been receiving services in a resources room since two years ago … but he has not improved … I’m afraid to go past, and he remains as he is …’

Worthy of note, half of the parents demonstrated an awareness of their child’s difficulties and their tireless efforts in learning, and were proud of their achievements, regardless of the result. Since these parents viewed disability as a ceiling on educational potential, they
avoided high personal expectations for fear of unnecessary pressure on the child. The mother of a 12-year-old girl said: ‘I just ask my child to try and don’t push her; I think she is happy … what can I do, she is a gift from God … and I want her to be happy’.

With regard to what fields their children could progress in, participants indicated that children with SLD could progress in some skills, but not all. For example, most of the participants agreed that their children were making progress, especially in academic and personal skills. The mother of a 13-year-old boy said, ‘It is true that my son progresses in mathematics and Arabic well … but the level of progress is less than the real level’. Also, many of the parents believed that their children were making moderate progress in independence skills.

Parents were then asked to identify what skills their children needed to make the required levels of progress. Many of the parents emphasised that their children needed to develop their skills in language and behavioural modification, and focus more on academic skills. In contrast, some parents focused on communication and social skills, self-confidence and socialise with the surrounding community.

**Parental beliefs about progress of children with ID in MS**

The proportion of parents with positive expectations and optimism about the ability of children with ID to make progress constituted most of the parents; but several agreed this was happening very slowly, and that their children lacked independence. The parent of an eight-year-old boy with mild ID said: ‘Yes … with time, my son is performing better … becoming more self-reliant’. The mother of a 14-year-old boy with mild ID added: ‘My child has the ability to take advantage of the programmes offered … but school performance, advancing slowly … he needs more support’.

In contrast, half of the parents believed that their children with ID were likely to graduate from vocational rehabilitation, live independently and have a career. The father of a 13-year-old boy with mild ID explained, ‘It is true that my son cannot, unlike his peers, pass the high school academic course and live independently … but now after he passes primary education, he can graduate from vocational education and get a career in future’. But most of the parents remained afraid of the future. Six of these were parents of children with moderate ID, who believed their offspring would always need someone to help them, even after their parents had died.

Most of the parents believed that child motivation and the availability of effective programmes played an essential role. One parent of a 14-year-old boy with moderate ID said: ‘My child himself does not want development and success … he likes to depend entirely on us … when I ask him to try to do some things … he doesn’t do it or do it badly’. The mother of an eight-year-old girl with mild ID reported: ‘My child can develop her abilities to a great extent … because she is interested in it … assisted by specialists’.

Parents were then asked to identify the skills their children needed in order to make the required progress and live independently. Participants agreed that their child with ID needed to pay more attention to enhancing their abilities in basic academic skills, communication skills, independence skills (most of the parents), language skills, sports programmes, numeracy skills, dealing with money and daily life skills (around half of the parents).

**Parental beliefs about the progress of children with ID in SC**

Here, the responses varied considerably: many of the parents believed in the ability of their children with ID to make gradual progress. For example, the parent of a six-year-old child
with moderate ID and physical impairment said: ‘My son depended entirely on the crawl, and now he is walking on the wall.’ Another parent of a 15-year-old boy with moderate ID added: ‘My son is progressing well … he’s becoming able to read and write’. Interview analysis revealed that progress varied from one child to another in terms of the speed of improvement and the nature of the skills in which they demonstrated progress. For example, some children showed greater progress in academic skills, and others in life skills. ‘My child has become more capable in expresses her thoughts in a good way’, said the father of a 10-year old girl with mild ID.

However, as already noted, this progress ranged from slow to good, depending on the nature of the child’s disability. The mother of a nine-year-old girl with moderate ID believed: ‘My child can develop her abilities … but in a very simple degree, because her disability will not allow it’. Three parents believed that their child could make significant progress: the mother of an eight-year-old boy with mild ID said: ‘Yes, my child is progressing due to the services and programmes offered and focus on technology in the learning process … as well as the effective role of the team’. That said, some parents believed their children were not progressing because of poor levels of motivation. The mother of a 15-year-old girl with Down syndrome commented, ‘She cannot develop her capabilities because she does not accept going to school and does not socialise with people, even with her family’. Also, when teachers focus more on children who appear to be progressing faster than others, a child with ID can imitate other children: this was emphasised by few of the parents.

Several of the participants appeared pessimistic about their child’s ability to live independently in future and have a job; indeed, about half of the parents expressed their fears about their child’s future. One mother, with a 10-year-old girl with moderate ID, spoke about this fear: ‘What can she do when I die … always she needs others to meet her basic needs’.

Participants were asked about what skills children with ID needed in order to realise their potential and make appropriate progress. Most agreed that their child needed to be provided with counselling services, independence and educated on how to deal and work with people; while several emphasised the need for fine muscle skills from an early age. Views included the following: ‘How to overcome the feelings of fear and anxiety from socialising with people and communicate with peers … This is what my child needs’. Another added, ‘My baby is mysterious … sometimes acting strange … sometimes shows a kind of social interaction … and sometimes she does not speak, sitting alone for a long time … and when I try to talk with her, she refuses …’ Another said, ‘My child needs to develop his skills of talking with others’. More than half of the parents also noted the need to focus more on academic, language and self-care skills, as well as providing the child with opportunities to practise the skills they learned.

**Parental beliefs about the progress of children with ASD in SC**

The data analysis shows that most of the participants had positive expectations from their children to make progress; while few believed in their child’s ability to forge a career, believed complete high school and even two years of college. Several of the parents believed their child would progress in playing skills and basic academic skills; as the parent of a 12-year-old girl said: ‘I feel that my child has enough intelligence to accomplish this’. But even these optimistic parents realised that such progress would require a lot of time and patience. One participant with a six-year-old boy said: ‘To make my son sit on the chair … this process took me at least two years in collaboration with the centre … only patience … that’s what parents
of children with autism need’. One mother of a 10-year-old boy with mild ASD concurred: ‘My path will take a long time … but I believe in my child’s abilities to access high school.’

Half of the parents felt proud and took pleasure in their children’s performance, regardless of how modest it might be. A participant with an eight-year-old boy expressed this feeling: ‘When my child performs a task, even in a simple way … I feel happy and this makes him happy also … I am satisfied with his destiny.’

In contrast, several of the parents believed that their child could make progress but not in an acceptable way, such was the nature and severity of their child’s disability. One father of a 10-year-old boy explained, ‘My child benefited about 50% from the educational programmes … it took a lot of time to get this result.’ Another mother added, ‘Honestly, I find it very difficult to deal with my child because he is moody and irritable, and does not show a desire to learn.’

Few of the parents spoke about their low expectations during the identification phase. A mother of a 13-year-old child said: ‘When we discovered that my child had [special status] … I tried to convince my husband to provide my child appropriate intervention … but he rejected it on the grounds that our child [is crazy] … there is no benefit of intervention … but I did not give up … now after four years my son has become his father’s companion …’ Only few of the participants believed their children were not progressing at all. One parent of a 10-year-old child said, ‘sometimes my son hurts himself … despite this, he has attended the centre for two years … his behaviour is not improved and will not’.

Participants were asked about what skills their children should develop in order to realise their potential. Most of the parents believed that their children needed social and communication skills. ‘My daughter understands everything, but it’s difficult to express her thoughts …’ (father of 15-year-old child). Half of the parents added other skills: for example, ‘my child needs to develop his ability to write and pronunciation skills and independence …’ Six parents had low expectations of children with ASD, particularly in terms of their ability to defend themselves, and expressed their concern that they were vulnerable to abuse. A parent of a nine-year-old child with ASD explained this as follows: ‘My son is simple, I’m afraid of exploitation by others and he may be exposed to abuse … his younger sister defends him …’

Interviewee responses demonstrated that participants had positive expectations and agreed that their children were gradually progressing, especially with regard to education skills, but they also expressed their fears about their children’s future. Participants agreed that their children needed more training in social and communication skills, behaviour modification and language in order to make appropriate progress. Parents with children in centres further cited life skills and independence skills. The main difference was that some parents of children with SLD believed that their child would make progress like their peers without disabilities, especially fathers. Also, parents of children with ID in MS believed that their child would graduate from vocational rehabilitation, and be able to live independently in future, compared with parents of children with ID and ASD in centres (see Appendix 1).

**Discussion and conclusion**

This study investigated the differences in parental beliefs about disability: both in terms of causes, and of the progress of children with different types of disabilities, in MS or SC. The findings of a recent study on cultural beliefs about the causes of disability in Jordan revealed congruence with other cultures (Dura-Vila, Dein, and Hodes 2010; Matt 2014): with many
turning to supernatural, biomedical and environmental explanations. No difference could be identified among parental beliefs in terms of their age, gender, education level and income.

Interestingly, the most frequently identified explanation among the participants was that disability was a case of God’s will. The results show that some of parents of children from MS; most of the parents of children from SC viewed their child’s disability through the prism of fatalistic faith in God. This is because in Jordan, people follow both Islam and Christianity, believe in God and fate; and believe that anything that happens to them was predestined by God, and families must care for their children as best they can. Such beliefs impact on parental expectations of their child: if parents view their child’s disability as a gift from God, they are more likely to adopt more positive expectations. This is consistent with the findings of many studies (Croot, Grant, Cooper and Mathers 2008; Matt 2014; Munyi 2012), which report that parents from different cultures as well as Jordan (Abu-Hamour and Al-Hmouz 2013) regard a child with a disability as a gift from God, and that families have to take care of these children (Stone-MacDonald and Butera 2015). Thus, belief in God may help parents to develop positive beliefs about their children’s abilities, which impact positively on the progress of the child. These findings are consistent with the existing global literature, which emphasises the strong relationship between parental beliefs and the achievements of young people (Goodall 2013).

The results also reveal growing awareness of biomedical causes of disability. Here, the main causes suggested by parents of children served in both settings included prenatal maternal risk factors (advanced maternal age, medication and psychological stress); problems during childbirth (lack of oxygen or premature birth); or early childhood illness or injury. Some mothers of children with ASD and SLD blamed themselves and felt that their carelessness during pregnancy or psychological pressure they were exposed to at that vital time was the cause of their child’s disability. It can be concluded that such feelings of guilt may be attributed to community attitudes, which usually blame mothers; this is supported by the study result when a few fathers blamed the mother as a reason for the child’s disability, and some mothers blamed themselves.

However, a few parents of children with ID and ASD educated in both settings attributed these problems to genetic causes. A similar story applied to parents of children with SLD. This may be related to social and cultural attitudes which label families of CWD as having transmitted this through their genes. Moreover, a few parents of children with ASD expressed a belief in a more specific cause of their child’s status (e.g. immunisations or child neglect). This concurs with Herbert and Koulouglioti (2010): all of whom found that parents have a wide variety of beliefs about the causes of autism. Generally, biological explanations reflect a more advanced level of awareness about disability, as well as the recent advances in medical diagnostics in Jordan which have helped foster more realistic expectations about their children. This explanation is evident in the findings of this study, which has demonstrated that parents had positive expectations of the ability of their children to make progress regardless of their age, gender, type of disabilities, placement, educational level or income.

Interestingly, more parents of children educated in MS attributed their child’s disability to environmental influences than parents of children educated in SC; they stated that their children simply required support from high-quality programmes in order to overcome their problems. This could suggest that parents of CWD educated at MS tend to focus on the similarities, rather than differences, between their child and their able-bodied peers: an
explanation supported by the finding that half of the parents of children with SLD believed that their child could pass high school; and more than half of the parents of children with ID believed in their child’s ability to secure a job, as long as they were provided with appropriate programmes and are motivated to succeed.

By contrast, parents of children from SC demonstrated less positive expectations of their children; expressed their fears for the future; and showed no great optimism about their child’s ability either to get a job or live independently. This was especially true for children with moderate disability compared with children with mild disability.

Also of note is that parents of children with SLD had higher expectations of their children than parents of children with ID in MS did, especially fathers, and compared with those with ID and ASD in centres. This result could be due to the characteristics of the disability: while those with SLD usually possess average intellectual ability, many children with SLD can be high achievers in some creative disciplines, such as drama, sports or painting; as well as experiencing less disparity in academic performance in comparison with those with other disabilities (Chandramuki, Venkatakrishnashastry, and Vranda 2012). Moreover, MS has a positive effect in changing beliefs about CWD and their ability to make progress, as mentioned by the WHO report (2011). Omoniyi (2014) also emphasised this finding by mentioning that fathers exhibit more favourable beliefs about their CWD compared with mothers.

In summary, parents of children with different types of disabilities, whether attending SC or MS believe that their child could benefit from programmes and make progress ranging from limited to good, depending on their nature, degree of disability, motivation and the programmes on offer. This is consistent with previous work, which found that most parents of CWD believe in their children’s abilities to perform as long as they are provided with relevant intervention (MacDonald 2012; Matt 2014). This is an important finding, because parents’ beliefs in their children’s ability play a key role in helping motivate their children to learn and grow (Stone-MacDonald and Butera 2015). Similar results were reported by Wong et al. (2014), who emphasised that the beliefs of parents of children with SLD depend on their awareness of the nature of their child’s disability and the services available.

Generally speaking, parents of children with different types of disabilities who are being educated in MS and in SC exhibited similar beliefs about causes of disability, whether fatalistic, biomedical or environmental. Much work is required in order to provide such children with the life they deserve, a right guaranteed to them by law. Consequently, understanding of cultural beliefs towards disability as well as practical assessment of these beliefs is also needed, because it is critical that such children have the chance to develop their self-confidence, are provided the appropriate support and are able to integrate into their communities.

Cultural beliefs about causes of disability might also impact upon parental involvement in intervention services, as well as how they perceive their children’s progress. The ability of parents to accept their children’s disabilities is reflected in how they identify their children’s problems. Accurate identification and acceptance promotes the development of the child. Moreover, knowledge about the causes of disability helps parents to build realistic expectations of their child, which in turn are positively reflected in the development of high-quality services.

Parental responses to the interview questions support the researchers’ clinical observations regarding the need for parent training programmes. This training should focus on
correcting inaccurate parental beliefs and teaching effective ways of promoting child development. More research is required in order to learn more about parental reactions and the stress they experience, as well as the impact of social support networks on enhancing parental beliefs and improving the progress of children. The overall findings of this study might be useful in helping the parents to recognise the impact of unrealistic views on the cause of these disabilities on their expectations of their children.

**Implications**

The findings of this study have important implications for future research related to disability. First, professionals should be aware of and sensitive to the diversity of beliefs among parents. If professionals understand these beliefs, they will be more effective in promoting behaviour that may allow early identification and intervention. Professionals must also be aware of parental beliefs about their child’s abilities to make progress: which, in turn, impacts on their encouragement of and involvement in high-quality services for their child, and helps build realistic expectations which are more likely to lead to realistic progress. Intervention programmes focus only on the child, ignoring the potential contribution of the parent as a source of support and main contributor to the child’s progress.

**Limitations**

The main limitation of this study was that children with severe forms of disabilities were not included, as they are more prone to many medical problems. Moreover, Jordanian children with SLD are only educated in mainstream settings; while Jordanian children with ASD are only educated in segregated centres. Only those with ID are educated in both settings. Finally, there is a clear question over whether a relatively limited sample size is transferable to the whole Jordanian community.

**Disclosure statement**

No potential conflict of interest was reported by the authors.

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References


Appendix 1. Themes from parents regarding beliefs about the cause of disability and children’s progress

<table>
<thead>
<tr>
<th>Major themes/ Type of disability</th>
<th>MS</th>
<th>SLD</th>
<th>SC</th>
<th>ID</th>
<th>ASD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme1. Causes</strong></td>
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<tr>
<td>I. Biological causes</td>
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<tr>
<td>a. Factors during birth, such as dystocia, lack of oxygen, prematurity</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>b. Prenatal maternal</td>
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<tr>
<td>mother age</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>taking medicine during pregnancy</td>
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<td>maternal illnesses</td>
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<td>Viruses during pregnancy</td>
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<td>Genetic factors, chromosomal abnormality</td>
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<tr>
<td>psychological stress during pregnancy</td>
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<tr>
<td>c. External causes</td>
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<tr>
<td>early childhood illness or injury</td>
<td>x</td>
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<td>immunisations</td>
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<tr>
<td><strong>II. Supernatural explanation</strong></td>
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<td>a. Fatalism</td>
<td>x</td>
<td>x</td>
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<tr>
<td>b. Envy or evil eyes</td>
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<td>x</td>
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<tr>
<td><strong>III. Environmental or societal deprivations</strong></td>
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<td></td>
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<tr>
<td>a. Inappropriate programmes, teaching strategies</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b. Feeling of guilty and community attitude</td>
<td></td>
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<td>x</td>
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<tr>
<td><strong>Theme2. Progress</strong></td>
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<tr>
<td>Positive expectation (most parents)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Low expectations (few parents)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td><strong>Field of progress</strong></td>
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<td></td>
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<tr>
<td>a. Basic academic skills</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>b. Social skills</td>
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<td>x</td>
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<tr>
<td>c. Independence skills</td>
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<tr>
<td><strong>Needed skills</strong></td>
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<td></td>
</tr>
<tr>
<td>a. Communication and social, independence, language and academic skills</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>b. Behavioural modification, motivation, counselling</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
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<tr>
<td>c. Sport and daily life skills</td>
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<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

MS: Mainstream schools; SC: Segregated Centres.