

RESILIENCE IN CHILDREN WITH INTELLECTUAL DISABILITIES: A REVIEW OF LITERATURE

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Abstract:

Purpose: Building the resilience of children with intellectual disabilities (ChID) can help reduce the personal, social and economic costs associated with mental ill health among such children. The aim of this paper is to review the research evidence on resilience in children with intellectual disabilities and to suggest areas for further research.

Methodology: Journal articles published in the last 20 years were searched for in several on-line databases to find potential papers for this review. The inclusion criteria were to search for published journal articles covering the theme of resilience in children with intellectual disabilities and their families. All identified titles and abstracts were screened which resulted in 50 articles. These were scrutinised more thoroughly and 34 remaining articles were selected for review.

Findings: Resilience is a dynamic process involving interactions between various risk and protective processes both internal and external to the individual that act to mediate the influences of adverse life events. Five key themes were identified within the literature which helped to form a picture of the current understanding of resilience among ChID and their careers. These were (1) increased risk factors associated with ID, (2) the role of personal attributes on resilience, (3) family and resilience, (4) schooling and resilience and (5) cultural factors which enhance resilience.

Originality: Despite the consistency with which poor outcomes for ChID have been reported there is little investigation of the specific causes, contributory factors and processes that might improve them. This paper contributes to greater understanding of resilience factors for children and young people with ID and provides areas for further research

Key words: resilience, intellectual disabilities, children and young people, mental health.

Introduction

Extensive evidence indicates that 'toxic' levels of adversity can significantly impair a child's development, health and well-being (WHO, 2012). Whilst many children are negatively affected by such hardships (Alvord & Grados, 2005), some manage to overcome difficulties and develop into productive and competent adults (Murray, 2003; Clarke & Clarke, 2003). Resilience research explores the characteristics, mechanisms and processes which enable high-risk individuals to succeed, despite seemingly poor odds (Doll & Lyon, 1998). This is particularly pertinent for young people (YP) and children with Intellectual Disabilities (ChID) and their families, who are exposed increased risk factors associated with negative life events and outcomes (Gardynik & McDonald, 2005). An estimated 2% of the general population in England have ID (Emerson et al, 2011) and are more susceptible to experiencing poverty, social disadvantage (Broberg, Blacher & Emerson, 2009) and developing psychological health concerns (Raghavan et al., 2010). While the resilience of non-disabled individuals has been widely researched (Margalit, 2003), comparatively few studies have examined how individuals with ID construct resilience for themselves (Miller, 2002). This review explores the state of current research regarding resilience among ChID and their families.

Method

Journal articles published in the last 20 years were searched for in several on-line databases including Medline, PsycLIT, PsycINFO and CINHALL. The rationale for this time line was based on the seminal work of Clarke and Clarke (2003) on Human Resilience: A fifty year quest. The following search terms were applied: (Risk Factors OR Prevention OR Resilience) AND (Young People OR Children), AND (Learning Disability OR Learning Difficulty OR Developmental Delay OR Mental Retardation OR Intellectual Disability). Additionally, the search terms were explored in smaller groupings and several variations were used to account for subtle ambiguities in word usage (i.e. Learning Disab* for disability, disabled and disabilities).

The inclusion criteria were published journal articles covering resilience in children with ID and their families. Systematic reviews, qualitative, quantitative and mixed-methods research papers were included. Resilience literature not covering YP or Children with ID was excluded. All titles and abstracts were screened, resulting in 50 articles. These were scrutinised more thoroughly and 34 remaining articles were selected to be read in greater detail (Appendix A).

FINDINGS

Resilience is a dynamic and interactive concept, with biological, psychological (internal), social and cultural (external) components (Broberg et al., 2009). Originally considered trait-like, more recent research implies a complex process involving interactions between various risk and protective factors, that reduce the effects of adverse life experiences (Margalit, 2004). Evans and Plumridge (2007) identify three components of protective factors: attributes of ChID, aspects associated with their families and attributes related to the wider social context. A dynamic rather than static conceptualisation of resilience emphasises the roles of both internal and external protective factors in promoting positive outcomes (Margalit, 2004). Resilience models are useful for policy-makers when informing guidance on prevention and intervention approaches (Robinson, 2000). The following themes were identified from the literature: (1) Increased risk factors associated with ID, (2) the role of personal attributes on resilience, (3) family and resilience, (4) schooling and resilience and (5) cultural factors which enhance resilience.

Increased Risk Factors associated with ID

Whilst resilience has encountered extensive examination in typically developing children, it has only recently attracted attention when concerning ChID (Broberg et al., 2009). Research generally reports a high number of risk factors associated with having ID. Young ChID are often exposed to multiple social and economic disadvantages and negative circumstances. These include higher rates of unemployment and school drop-out, and lower rates of secondary school attendance and independent living (Murray, 2003). In a large scale survey, Emerson et al. (2008) identified that three out of four families supporting a 3-year old with ID, experienced poverty, material hardship, benefit status or social housing. In comparison, only one

in four families with a typically developing 3-year old, experienced comparable disadvantages.

Despite the consistency with which poor outcomes have been reported, there is little investigation of the specific causes, contributory factors and processes that might improve them. Certain demographic factors can combine to influence these outcomes (e.g. race, gender and socioeconomic status) (Murray, 2003). A systematic literature review examining the prevalence and determinants of health conditions among ChID (Allerton et al., 2011) highlighted poorer health than non-disabled peers. Their carer's were 2.5–4.5 times more likely to report their child had poor-to-fair general health, than those without disabilities. People with ID were also at a greater risk of a number of social determinants. These included poverty, poor housing, unemployment, discrimination and an increased chance of being bullied. They concluded that some risk factors could be reduced and recommended interventions for educating carers and ChID about risk-factors and resilience.

The Role of Personal Attributes in Resilience

Several studies have examined personal attributes associated with resilience among ChID. These include negative socioemotional and behavioural outcomes when compared to those with typical development (Al-Yagon, 2008), higher levels of loneliness and lower levels of hope, coherence (confidence in the world) and positive attachment. However, there appeared to be greater variance within the ID group, suggesting a large amount of heterogeneity among these children. Al-Yagon and Mikulincer (2004) identified that attachment styles were related to socioemotional adjustment among Israeli public school ChID (aged 8 and 11 years). Compared to a control group ($n = 98$), students with ID ($n = 98$) reported less attachment security and more attachment avoidance and anxiety. Furthermore, students with ID reported significantly higher levels of loneliness and lower levels of coherence (confidence in the world). Whilst a greater percentage of resilient ChID were securely attached, this did not differ significantly from children in the non-resilient group. The authors concluded that secure attachment may provide an important, but insufficient factor in determining resilience among ChID.

Margalit (2004) discussed evidence that preschool children with developmental difficulties demonstrated deficits in social-cognitive processing, when compared to

those without ID. These differences occurred in response to decisions and enactment processes. More specifically, the quality of response decisions for resolving social situations, was poorer among individuals with ID, suggesting a unique social information processing pattern. Protective factors, including problem solving skills and positive peer relationships, may be useful in addressing such issues (Evans & Plumridge, 2007). Furthermore, an individual developing a sense of identity, has been shown to act as a protective factor against internalising and externalising such problems (Frison, Wallander & Browne, 1998).

Alvord and Grados (2005) identified that resilient ChID tended to search for control over their lives, possess a strong desire to succeed, demonstrate persistence, set goals and were willing to accept support. Furthermore, these children had a better ability to identify their successes and unique strengths, and reported high levels of motivation and determination to overcome challenges. Additionally, they report that faith can operate as a protective factor in some cultures, but not in others. They acknowledged six protective factors including proactive-orientation, self-regulation, connections and attachments, school achievement/involvement and community.

Whilst more recent investigations have focused on the complex interactions of both external and internal factors, Bottrell (2009) argued that resilience research remains primarily focused on the individual and assumes an individualised nature of adaption. Whilst quantitative measures have typically been used to examine personal attributes associated with resilience, factors not accounted for by such measures may be more important in alternative theoretical positions (Bottrell, 2009). A qualitative account of personal attributes associated with resilience, may highlight important areas not explored in previous works. King et al. (2003) used a grounded theory approach to analyse interview data from adults with chronic disability. This approach allowed for an exploration of the nature of resilience, focusing on major turning points in their lives. This approach helped identify three new areas were including transcending (replacing a loss with a gain), self-understanding (participants recognising new things about themselves) and accommodating (making decisions about relinquishing something).

Family and Resilience

Research has also focused on protective factors associated with loving and supporting family relationships (Evans & Plumridge, 2007). Families caring for ChID may experience multiple challenges, requiring copious strengths and high levels of resilience (Olsson & Hwang, 2008; Giallo & Gavidia-Payne, 2006). A cohesive family demonstrating sufficient psychological capital can provide a valuable protective barrier for ChID, which can enhance their resilience to social exclusion, discrimination, low expectations and physical and social barriers (Evans & Plumridge). Whilst examining relationships between maternal personal resources and resilience among school age ChID, Al-Yagon (2008) identified that a mother's avoidant coping, moderated the effects of her child's ID on his/her loneliness. When mother's had higher levels of maternal avoidance, the relationship between the child's disability and low feelings of attachment security with the mother became stronger.

Positive adaptations by parents to their everyday routines to accommodate their children play a major role in building resilience (Maul & Singer, 2009). They stress that caring for ChID can provide a multitude of additional stresses, which require both long-term and short-term problem solving skills. The stress and negative effect on parent's psychological well-being can increase the risk of unwillingly placing the child in the care of others (Cramm & Nieboer, 2011). Though some research indicates that caring for a ChID has minimal negative impact on well-being (e.g. Olsson & Hwang, 2008), there is considerable evidence to suggest that parents may be at increased risk of developing psychological distress (Lloyd & Hastings, 2009). For example, Weiss (2002) identified that such parents had significantly higher levels of depression than those of typically developing children. Costigan et al. (1997) identified that ChID has a disruptive impact on family problem solving, but families who were resilient in the face of special demands learned to adapt to such circumstances.

Whilst quantitative assessments seemingly dominate this field, they may not adequately encapsulate the complexities and subtleties of family resilience. Grant and Whittell (2000) conducted a series of interviews exploring cognitive, stress-reduction and problem solving strategies of families with children and adults with ID. They identified that coping strategies were differentiated according to gender, life stage and family structure. Women focused more on instrumental problem solving

and displayed greater self-belief than men. Men were more equivocal in their use of coping strategies and tended to assume the role of secondary carer. The most helpful problem solving strategies appeared to include five key elements: personal growth, structure for coping, access to a confidant, effective priority setting and a repertoire of coping strategies. The findings pointed to both strengths and vulnerabilities in family coping and highlighted the importance of examining the strategies of all family members and not just mothers. However, the study is almost 16 years old and it would of academic interest to explore this dynamic in a current family setting.

Hope has been identified as an important factor in the resilience of mothers and fathers of ChID in terms of resistance to depression, anxiety and stress (Lloyd & Hastings, 2009). Low levels of hope in mothers increased child behavioural problems and were predictive of maternal depression, whereas higher levels of hope and less problematic child behaviours were predictive of positive-affect. Hope based interventions have typically shown to enhance well-being and reduce negative states such as depression (Peterson & Seligman, 2004), and may be of potential value as a resilience strategy for parents of ChID.

In a Swedish sample, mothers of ChID were found to have lower levels of well-being than fathers, but the presence of a ChID was not predictive of reduced well-being (Olsson & Hwang, 2008). However, differences in economic hardship and self-rated health, were key predictors of parental well-being. The addition of protective factors such significantly improved the predictiveness of the models. Cramm and Nieboer (2011) examined the characteristics of caregivers of ChID, at the point when they sought outside support/assistance. Among a sample of Dutch participants, they identified several conditions under which the caregiver's psychological well-being was affected. Levels of parental stress and the child's fearful and depressive feelings had a negative impact on caregiver's psychological well-being. In understanding the complexities of family dynamics, qualitative research with children and their families may offer valuable insights into family models of resilience among ChID.

Schooling and Resilience

Developing and fostering resilience is a key ambition of educational institutions (Bottrell, 2009) and is heavily ingrained in their policies. Inclusive mainstream schooling is a key ambition of UK educational policy (Cooney et al., 2006). Guided by legislation such as the Disability Discrimination Act 2005, schools and educational institutions are required to accommodate and remove barriers to individuals with disabilities. Services aimed at building inclusive practice in education have appeared to construct protective factors and resilience among ChID which has been shown to increase their confidence and self-esteem (Evans & Plumridge, 2007). However, there are multiple issues associated with educating ChID in mainstream schools, including discrimination and stigmatisation.

Specialist schooling can provide opportunities to develop friendships with other ChID and make them feel less excluded. Such safe environments appear to offset negative experiences of marginalisation and social exclusion (Evans & Plumridge, 2007). However, many ChID have to travel some distances to special schools and may miss out on meeting people within their own locality. In addition, inclusive practice is not always implemented correctly and many individuals are disabled by poor practice. Adolescents with autism have been found to experience higher levels of loneliness and lower social network status than their typically developing classmates (Locke et al., 2010), which could potentially lead to stigmatisation or feelings of inadequacy.

ChID in mainstream schools have frequently reported stigmatization and discrimination (Evans & Plumridge, 2007) and devalued social identity (Szivos-Bach, 1993). However, stigmatisation has also been reported in special schooling systems (Evan & Plumridge 2007). Wiener and Tardif (2004) demonstrated that special education makes a difference to social and emotional functioning of ChID. Children in inclusive placements typically report better functioning than those in self-contained classes. However, Hackett et al. (2010) examined the mental-health needs of children from two special schools catering for social, emotional and behavioural difficulties. They found that perceived mental-health difficulties were much higher than the national average and suggested that there may be difficulties segregating poor mental-health from conditions such as ADHD, due to overlap.

Cooney et al. (2006) investigated differences between children with mild-to-moderate ID from mainstream and segregated schools in the UK. Both groups reported experiencing similar types of stigmatization out of school, provided similar social comparisons (social comparison to a more-disabled and less-disabled student) and similar future aspirations. However, those from mainstream school had more ambitious work-related aspirations but more stigma in school. Again, these findings suggested both positive and negatives associated with inclusive mainstream schooling. Enhanced work-related aspirations may be a positive outcome, but increased stigma is worrying considering the push towards inclusive schooling.

Anthony, Alter and Jenson (2009) demonstrated the effectiveness of out-of-school time intervention programmes for enhancing and maintaining academic performance, but also for reducing risk factors and enhancing resilience among at-risk children and youths in the US. Project evaluation components included building protections and resilience (bonding by mentoring and tutoring, academic and technical skills by reading and technical training, pro-social values by leadership training, expanding personal horizons by enrichment opportunities). Whilst this research was not specifically related to ID, similar approaches may be advantageous for such children. Further research examining such interventions is warranted in developing the evidence base on schooling and resilience.

Cultural Factors which Enhance Resilience

Relatively few studies examined the cultural components of resilience among families or ChID. Dominant conceptualisations of resilience typically minimize the significance of ethnicity and cultural diversity (Bottrill, 2009). However, cultural components may provide important protective factors for ChID and their families. For example, Frison, Wallander and Browne (1998) examined the influence of cultural factors operating at personal, social and community levels (ethnic identification, intergenerational support and church support) on protecting against maladjustment among African American adolescents ($N=147$) with ID (aged 13-17), from US schools. Whilst church support was more related to parental than child resilience, ethnic identity and intergenerational support (support given by non-parental relatives, at least one generation apart) were inversely associated with adolescents internalising and externalising problems. Furthermore, ethnic identification

moderated the relationship between overall risk and the internalising of problems. Cultural factors may have a positive effect upon the resilience of ChID, but more research in this area is needed.

There may also be cultural differences between stress and resilience experienced by parents of ChID. For example, Shin and Crittenden (2003) examined the causes of stress between parents from the USA and parents from South Korea. For American mothers, individual variables (e.g. maladaptive behaviour of children and maternal attitudes towards the child) appeared to affect stress. The stress of Korean mothers was more affected by their global attitudes toward disability and cultural values, and less affected by the children themselves. Furthermore, Wakimizu, Fujioka and Yoneyama (2010) used qualitative approaches to explore empowerment processes among Japanese mothers of ChID. They identified three stages in the empowerment process: confusion over caring for the child, confrontation with the child and the disorder, and expectations of a valuable life for the child. Qualitative approaches offer an exploratory avenue of investigation which would be particularly useful for building theory regarding cultural aspects of resilience.

Insert Figure 1 here

Conclusion

Despite the consistency with which poor outcomes for ChID have been reported, there is little investigation of the specific causes, contributory factors and processes that might improve them. Whilst resilience has been examined extensively among typically developing children, it has only recently gained momentum among ChID. Much of the resilience research identified within this review has examined quantitative measures of predictor and outcome variables. Whilst qualitative and exploratory accounts of resilience were also identified, these were relatively sparse. With recent changes in support systems, legislation and schooling in the UK, further exploratory investigations are recommended to identify current risk factors and potential avenues for enhancing resilience. Additionally, for under explored areas such as ethnicity, resilience and ID, a qualitative research methodology may offer

insightful understanding of factors involved in constructing resilience in diverse ethnic communities.

In terms of personal attributes, research has identified certain areas such as hope, security and attachment styles. In psychology, there has been shift in emphasis from areas dominated by the medical model (i.e. mental ill-health) towards a focus on strengths and resilience. The Positive Psychology movement has made considerable efforts in identifying and measuring strengths of character which have been identified as leading to a number of positive and negative outcomes. It would be of considerable value to examine strengths associated with resilience among ChID and their carers.

Both special schooling and mainstream schooling have advantages and disadvantages. A better understanding of the experiences of children from both schooling systems would make a valuable contribution to knowledge base on resilience. Whilst there is a greater push for inclusive education in the UK, there is evidence to indicate that this may enhance stigmatisation. Interviews with teachers from both schooling systems may help generate a better understanding of stigmatisation in schools, risk factors and potential avenues for resilience.

Qualitative research approaches with children, YP and their families may offer valuable insights into family models of resilience and how such structures could effectively operate to enhance resilience in young people. Inclusive and participatory research with children, their parents and teachers may provide valuable insights into the ways in which young people with ID construct resilience for themselves.

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Appendix A
Table of Literature Reviewed

Authors	Date	Title	Type of Literature	Findings and Themes
Allerton, Welch & Emerson	(2011)	Health inequalities experienced by children and young people with intellectual disabilities: A review of literature from the United Kingdom	A literature review examining the determinants and prevalence of health conditions and impairments among YP with LD	YP with LD generally had poorer health than non-disabled peers. Carers of children with LD were 2.5 – 4.5 more likely to report their child had fair-poor general physical health, than those without disabilities. YP with LD were also at a greater risk of a number of social determinants (poverty, poor housing, unemployment, discrimination and an increased bullying).
Alvord & Grados	(2005)	Enhancing resilience in children: A proactive approach	Literature review of factors which foster resilience in children	Resilient children with LD tended to search for control over their lives, possess a strong desire to succeed, demonstrate persistence, set goals and were willing to accept support. These children could identify their successes and unique strengths, and had high levels of motivation and determination. Faith can operate as a protective factor in some cultures, but not in others. Six protective factors: proactive-orientation, self regulation, connections and attachments, school achievement/involvement and community.
Anthony, Alter & Jenson	(2009)	Development of a risk and resilience-based out-of-school time programme	Discussion paper about applying principles of risk and resilience to the development	Effectiveness of out-of-school time intervention programmes for enhancing and maintaining academic

		for children and youths	and evaluation of an out-of-school-time program.	performance, reducing risk and enhancing resilience.
Al-Yagon	(2007)	Socioemotional and behavioural adjustment among school-age children with learning disabilities: The moderating role of maternal personal resources.	Quantitative study comparing mothers of typically developing children with mothers of children with LD (Israel)	Examined relationships between maternal personal resources and resilience. Significant group differences on all children's measures and on several maternal personal resources. Mothers Attachment style affects coping mechanisms. Non avoidant mothers more likely to moderate the effects of child's LD on loneliness, hope and secure attachment.
Al-Yagon & Mikulincer	(2004)	Patterns of close relationships and socioemotional and academic adjustment among school age children with learning disabilities.	Quantitative research study examining patterns of close relationships among school children in Israel with LD.	Significant group differences in attachment styles and adjustment were identified between children with LD and their classmates without LD. Additionally, a subgroup of resilient children emerged from the LD group.
Bottrell	(2009)	Understanding marginal perspectives: Towards a social theory of resilience.	Qualitative analysis of resilience literature	Interventions need to recognise social inequalities, social pressures and societal and ideological expectations.
Cooney, Jahoda, Gumley & Knott	(2006)	Young people with intellectual disabilities attending mainstream and segregated schooling: perceived stigma, social comparison and future aspirations	Quantitative study comparing perceived stigma, social comparison and future aspirations between students with LD (aged 15-17) from mainstream and segregated schools in the UK	Participants from both groups reported experiencing stigma. Mainstream students reported additional stigma at school, but had more ambitious work related ambitions.
Costigan, Floyd,	(1997)	Family process and adaption to	Quantitative research study	The results implied that children with LD had a

Harter & McClintock		children with mental retardation: Disruption and resilience in family problem solving interactions.	exploring the impact on families of having a child with LD.	disruptive impact on families, but such families were typically more resilient in the face of extra demands.
Doll & Lyon	(1998)	Risk and resilience: Implications for the delivery of educational and mental health services in schools	A literature/research review on risk and resilience.	Explores the developmental pathways of risk and resilience. Discusses the potential for implementing school-based prevention interventions built on the findings discussed.
Emerson	(2007)	Poverty and people with intellectual disability.	Literature review about association between poverty and the prevalence of intellectual disabilities	Poverty effects LD, through the association between poverty and exposure to a range of environmental and psychosocial hazards. Families of a child with LD are more likely to experience poverty.
Emerson, Graham, McCulloch, Blacher, Hatton, & Llewellyn	(2008)	The social context of parenting 3-year-old children with developmental delay in the UK.	Quantitative study of secondary data from the UK's Millennium cohort study.	Young children with LD were more disadvantaged on multiple social and economic indicators (e.g. poverty, maternal hardship, social housing) when compared to typically developing children.
Evans & Plumridge	(2007)	Inclusion, social networks and resilience: Strategies, practices and outcomes for disabled children and their families.	Article based on qualitative research (interviews, case-studies and workshops) conducted as part of the National Evaluation of the Children's Fund (UK)	Strategies to promote Inclusion <ul style="list-style-type: none"> • Specialist services and Integrated services • Inclusion of family and wider community Building resilience and social networks <ul style="list-style-type: none"> • Individual level • Family level • Wider community level
Frison, Wallander & Browne	(1998)	Cultural factors enhancing resilience and protecting against	Quantitative research study (US) investigating resilience among	Results indicated that cultural factors were associated with better adjustment. Ethnic

		maladjustment in African American adolescents with mild mental retardation.	African American Adolescents	identification protected against high risk conditions
Gardynik & McDonald	(2005)	Implications of risk and resilience in the life of who is gifted/learning disabled.	Discussion paper on risk and resilience.	Contains discussions on risk factors and resilience, learning disability and giftedness.
Giallo & Gavidia-Payne	(2006)	Child, parent and family factors as predictors of adjustment for siblings of children with a disability	Quantitative research study exploring the impact of having a brother/sister with LD on siblings (aged 7-16).	Family factors (e.g. cohesion, resources, problem-solving and communication etc) were a stronger predictor of adjustment than siblings own experience of stress and coping.
Grant & Whittell	(2000)	Differentiated coping strategies for children or adults with learning disabilities: The relevance of gender, family composition and the life span.	Qualitative interview study which also included a number of quantitative elements.	Explored and identified a range of coping strategies (problem-solving, cognitive and stress-reduction) that families with children or adults with LD found useful. These were differentiated by gender, life-stage and family structure.
Hackett, Theodosiou, Bond, Blackburn, Spicer & Lever.	(2010)	Mental health needs in schools for emotional, behavioural and social difficulties	Quantitative research study exploring the mental health needs of children.	Examined the mental-health needs of children from two special schools catering for social, emotional and behavioural difficulties. Higher than national average perceived mental-health difficulties among the sample.
King et al.	(2003)	Turning points and protective processes in the lives of people with chronic disabilities	Qualitative study examining the nature of resilience in individuals with chronic disabilities.	Three new protective processes were identified: <ul style="list-style-type: none"> • Replacing a loss with a gain • Recognising new things about oneself • Making decisions about relinquishing something in life.
Lloyd & Hastings	(2009)	Hope as a resilience factor	Quantitative questionnaire-	Lower levels of hope and child behaviour problems

		in mothers and fathers of children with intellectual disabilities.	based study exploring resilience in mothers and fathers of children with LD.	predicted depression in mothers. Anxiety and depression were predicted by low hope in fathers.
Locke, Ishijima, Kasari & London	(2010)	Loneliness, friendship quality and the social networks of adolescents with high-functioning autism in an inclusive school setting.	Quantitative research study examining the socio-emotional relationships of adolescents with autism and the typically developing classmates.	In non-segregated regular education, individuals with Autism experienced more loneliness, poorer friendship quality and lower social network status than their typically developing classmates.
Margalit	(2004)	Second generation research on resilience: Social-emotional aspects of children with learning disabilities.	Overview and commentary for a special issue of Learning Disabilities Research and Practice Journal.	This article provides an overview of four research papers presented in this issue. It makes links between the articles and contextualises their content.
Murray	(2003)	Risk factors, protective factors, vulnerability and resilience: A framework for understanding and supporting the adult transitions of youth with high incidence disabilities.	Literature review examining risk/protective factors and resilience and how they might inform understandings of post-school outcomes.	Explores factors which contribute to poor post-school outcomes for children with LD. Identifies a range of risk and protective factors organised around the individual, family and school.
Olsson & Hwang	(2008)	Socioeconomic and psychological variables as risk and protective factors for parental well-being in families of children with intellectual	Quantitative study examining well-being differences between parents with and without children with LD in Sweden.	Mothers of LD children had lower levels of well-being than fathers and controls. However, having a child with LD did not in itself predict poorer well-being. Well-being of parents of a child with LD was dependant on protective and risk factors.

		disabilities.		
Robinson	(2000)	Are there implications for prevention research from studies of resilience?	Commentary addressing whether prevention research could benefit resilience research when designing interventions.	General discussion on resilience and prevention research.
Shin & Crittenden	(2003)	Well-being of mothers of children with mental retardation: An evaluation for the double ABCX model in a cross cultural context.	Quantitative research study comparing the stress and well-being of mothers of children with mental retardation from America and Korea. An evaluation of the double ABCX model	For American mothers, the maladaptive behaviour of children affected maternal stress whereas Korean mothers were affected ore globally by their attitudes towards disability and Korean values
Ungar	(2010)	What is resilience across cultures and contexts? Advances to the theory of positive development among individuals and families under stress.	Discussion of qualitative research findings and theory and its implications for practice.	The individual's difficulties within a social context The problem of resilience as a well-defined construct Three areas of epistemological innovation: <ul style="list-style-type: none"> • The emerging sociology of individuals & families • Ecology theory • Widening perspective of cross-cultural psychology Better practices to nurture resilience
Wakimizu, Fujioka & Yoneyama	(2010)	Empowerment processes for families rearing children with developmental disorders in Japan	Qualitative Interview study – mothers in Japan of children with developmental difficulties	Confusion over caring for the child <ul style="list-style-type: none"> • Feeling uncomfortable with the child • Inferiority complex from child behaviour • Family conflicts • Lack of information Confrontation with Child <ul style="list-style-type: none"> • Unity of the family

				<ul style="list-style-type: none"> • Collaboration with care staff • Approaching local administration
Weiss	(2002)	Hardiness and social support as predictors of stress in mothers of typical children, children with autism, and children with mental retardation.	Quantitative research study comparing stress in mothers of children with autism, 'mental retardation' and typically developing children.	Significant group differences regarding depression and anxiety were identified. Additionally, hardiness and social support were predictive of successful adaption.

Figure 1
Brief summary of the areas covered throughout this review

