Research in Developmental Disabilities 35 (2014) 2215–2223

Contents lists available at ScienceDirect

Research in Developmental Disabilities

Social support and mastery influence the association between stress and poor physical health in parents caring for children with developmental disabilities

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ARTICLE INFO

Article history:
Received 24 March 2014
Received in revised form 10 May 2014
Accepted 16 May 2014
Available online 11 June 2014

Keywords:
Parents
Developmental disability
Physical health
Mastery
Social support
Stress

ABSTRACT

To date, much of the research linking the stress of caring for children with developmental disabilities (e.g. Autism & Down syndrome) with parental health outcomes have tended to concentrate on mental health with less attention paid to the physical health consequences. Thus, this study sought to explore the psychosocial predictors of poor physical health in these caring parents. One hundred and sixty-seven parents (109 caregivers and 58 control parents) completed measures of stress, child problem behaviours, social support, mastery and physical health. Parents of children with developmental disabilities had poorer physical health compared to control parents. Stress and mastery, but not social support and problem behaviours, were significant predictors of poor physical health within caring parents for children with developmental disabilities. However, the association between mastery and physical health was mediated by perceived stress such that those parents who were higher on mastery reported less stress and better physical health; furthermore, the association between stress and physical health was moderated by social support; those parents high on social support and low in stress had better physical health. These results indicate that the paths between psychosocial factors and poor physical health in the caring parents are working synergistically rather than in isolation. They also underscore the importance of providing multi-component interventions that offer a variety of psychosocial resources to meet the precise needs of the parents.

1. Introduction

A wealth of research attests to the negative psychological impact of caring for a child with developmental disability (e.g. Autism, Down syndrome, and Fragile X) on parents. Although some parents cope well with the demands and challenges of caring for a child with a developmental disability (DD; Olsson & Hwang, 2008; Scorgie, Wilgosh, & McDonald, 1998), others do not, and as a consequence are more likely to experience outcomes such as distress (Gallagher & Hannigan, 2014; Thurston et al., 2011), anxiety, low self-esteem, depression (Olsson & Hwang, 2008), poorer general emotional health, and pessimism about the future. More recently a call for researchers to examine the physical health of

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http://dx.doi.org/10.1016/j.ridd.2014.05.012
0891-4222/

these caring parents has been made (Miodrag & Hodapp, 2010), which seems particularly pertinent given likely economic costs of illness in carers. Consequently, research efforts have begun to explore the physical health of caring parents.

In fact, research has found that relative to age- and gender matched control parents, parents of children with DD have poorer physical health for e.g. poor sleep, greater risk of hypertension, arthritis, increased headaches and higher rates of infection (Gallagher & Whiteley, 2013; Lovell, Moss, & Wetherell, 2012; Resch, Benz, & Elliott, 2012). Moreover, poor physiologically functioning is the likely underlying mechanism behind the poor health in caring parents (Gallagher, Phillips, Drayson, & Carroll, 2009; Lovell et al., 2012; Ruiz-Robledillo, De Andrés-García, Pérez-Blasco, González-Bono, & Moya-Albiol, 2014; Seltzer, Greenberg, Floyd, Pettee, & Hong, 2001). Although the two key factors that drive this association, social support and child problem behaviours, have received the bulk of attention from researchers, less attention is paid to coping styles. Further, research has established that physical health in these caring parents was best explained not by single psychological factor but more so by the interaction of two predictor variables (Gallagher & Whiteley, 2013). In that case, child problem behaviours exacerbated perceptions of stress to negatively impact physical health. Taking a piecemeal approach rather than testing integrated models has been criticised (Matthews & Gallo, 2012), indicating that this type of synergistic research is clearly warranted.

Child behaviour issues, particularly externalising behaviours such as hyperactivity and conduct problems have consistently been shown to explain a significant proportion of the variance in parental distress and poor physical health in caring parents (Baker, Seltzer, & Greenberg, 2012; Blacher & McIntyre, 2006; Floyd & Gallagher, 1997; Gallagher et al., 2009; Hastings, Daley, Burns, & Beck, 2006; Hodapp, Fidler, & Smith, 1998). Problematic behaviours were found to moderate the association between stress and physical health (Gallagher & Whiteley, 2013), such that parents who reported more problem behaviours also reported more perceived stress and poorer health. However, stress in parents has also been shown to vary with social support (Bailey, Wolfe, & Wolfe, 1994; Dunn, Burbine, Bowers, & Tantleff-Dunn, 2001); those who report more social support tend to report less stress. Although social support is vital for physical health (for review see Uchino, 2009) and has been shown to have a direct effect on blood pressure and immune function in parents (Gallagher & Whiteley, 2012; Lovell et al., 2012; Ruiz-Robledillo et al., 2014), one pathway through which social support exerts its effect on health is through stress buffering.

The transactional model of stress (Lazarus & Folkman, 1984) suggests internal and external resources are influential in determining an individual's stress appraisals. Social support is a key external resource that has been found to influence stress appraisals (see Uchino, 2009). According to the stress buffering hypothesis (Cohen & Wills, 1985) social support, particularly perceived support, impacts health outcomes through its influence on the appraisal of the stressful situation. Those with a high level of perceived social support are less likely to appraise a situation as stressful as those with low social support. Therefore, parents with high levels of perceived social support are more likely to report fewer negative reactions to parenting stress than parents with low social support. To our knowledge, no study has examined the buffering role of social support on stress appraisals in this context, although positive appraisals were associated with lower depression and lower perceptions of stress among parents (Trute, Benzies, Worthington, Reddon, & Moore, 2010), implying that there may be a key role for the influence of social support in stress appraisals in this context. Thus, given that social support is inversely related to psychological issues such as depression and anxiety and is expected to "buffer" parents from stress through influencing how they perceive the stressful situation, it could be that social support influences physical health in these caring parents through its impact on perceptions of stress.

In terms of the transactional model of stress, individuals appraising stressors as controllable are theoretically believed to display an attenuated response to stressors (Lazarus & Folkman, 1984). And consistent with this, mastery or the belief that one has control over life's obstacles has been associated with better psychological health (Haidt & Rodin, 1999; Singer & Farkas, 1989), as well as better caregiver physical health (Roepke et al., 2008, including lower incidence of coronary heart disease; Lundgren, Garvin, Jonasson, Andersson, & Kristenson, 2014), better self-rated health, better functional status, and lower mortality (Seeman & Lewis, 1995). However, whether or not mastery has similar protective effects against poor physical health in these caring parents has yet to be investigated. Further, although the influence of mastery on levels of problem behaviour and psychological health in parents of children with DD has been examined (Paczkowski & Baker, 2007; Raina et al., 2005) the interactive pathways between perceived stress, social support, mastery and physical health have not been tested. In fact, to our knowledge, this is the first study to test these interactive pathways and it is in line with a recent call for researchers in paediatric psychology to use contemporary statistical techniques to test interactive effects (Karazsia, Berlin, Armstrong, Janicke, & Darling, 2013). We hypothesise that control of stressful situations will consequently enable parents to feel more confident and masterful hence protecting their health (Hastings et al., 2006). Thus, it could be that the association between mastery and physical health may be explained again by its impact on parental stress appraisals.

So to develop an understanding we take these variables mastery, stress appraisal, social support and test their effects interactively for those caring for a child with DD. Based on the evidence, it is hypothesised first, that compared to age- and gender matched control parents, parents caring for children with DD will report poorer physical health. Second, that mastery and social support will be positively associated with better physical health whereas behaviour problems and perceived stress will be associated with poorer physical health in parents of children with DD. Third, that the relationship between mastery and physical health will be mediated by stress. Finally, the association between perceived stress and physical health in these caring parents will be moderated by social support.