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Factors influencing well-being and parenting self-efficacy of parents of children with special needs and the developmental outcomes of their children

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Abstract

Child characteristics and family demographics are important factors influencing the degree of parental well-being and parenting self-efficacy. Parents of children with special needs have reported more parental stress, depression, health problems, and poor parenting self-efficacy compared with parents of typically developing children. However, limited research has provided an overview of the effects of family demographics and child characteristics on parents' well-being and parenting self-efficacy in Asian countries. This quantitative study examined the effects of children's disabilities types and family demographics with well-being and parenting self-efficacy of parents (N = 420) of children with special needs aged ranged from 2.83 to 7.17. Family income, parental education level, work status, and parental age were found to be effective demographic variables predicting the well-being and parenting self-efficacy of parents of children with disabilities. Limitations and future research directions are presented.

Keywords: children with special needs, parents, well-being, parenting self-efficacy

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INTRODUCTION

Raising children with special needs can be challenging for parents. Past research has revealed that parents of children with special needs experience greater stress than parents of typically developing children (Ritzema & Sladeczek, 2011; Weiss, 2002; Yoong & Koritsas, 2012), due to the higher demands on both the physical and emotional capacities of the caregiver, as well as the material resources of the family (Cavanagh & Ashman, 1985; Doig et al., 2009;). As the parents must adapt to their extended caregiving role to maintain their children's health and the functioning of the family, they often experience higher levels of stress and parenting burden (Brown et al., 2020; Negash et al., 2015; Seltzer et al., 2004;). Since parents have been shown to play a vital role in influencing the developmental outcomes of children with special needs (Van Hooste & Maes, 2003), investigating the factors contributing to developmental differences among children with disabilities can help families and childcare practitioners better understand how they can optimize the developmental potential of children with special needs.

LITERATURE REVIEW

Abidin (1995) discussed two sources of parenting stress (or two categories of stressors): child-related stress and parent-related stress. "Child-related stress" involves child behaviors and characteristics that make parenting difficult and contribute to parenting stress, while "parent-related stress" is related to the characteristics and experiences of the parents that contribute to parenting stress but do not directly involve the child, such as parental competence or the spousal relationship.

Parenting Stress in Parents of Children With Special Needs

Empirical studies have examined the potential causal factors of parenting stress among parents of children with special needs. The behavioral problems of these children can be an important factor leading to increased parenting stress. Parents experience unique challenges in managing the characteristics of their children with autism spectrum disorder (ASD) and attention deficit hyperactivity disorder (ADHD). Children with ASD usually share common features of having impaired social skills and ritualistic behaviors (Di Renzo et al., 2017; Szumski et al., 2019). Parents must manage their children's problematic behaviors in public situations to avoid misunderstandings and misinterpretations among the general public (Estes et al., 2009; Valicenti-McDermott et al., 2015). In addition, parents of children with ADHD have reported high levels of stress when dealing with their children's symptoms of inattention, hyperactivity, and impulsivity (Theule et al., 2013), especially those closely attached to or perceiving themselves as the primary caregiver of their children (Baker, 1994). As children with special needs are often unable to properly adjust and adapt to environmental changes, parents are in the very stressful position of caring for and protecting them (DeLambo et al., 2011).

Although the characteristics of children with special needs contribute to increased parenting stress, such stress is also affected by the perceived parental functioning of their parents. With a child with special needs, the parents need to take care of the child's special needs, in addition to their daily needs (Dabrowska & Pisula, 2010). Parents must work hard to learn how to manage their child's unique conditions, make appropriate medical decisions, and advocate for their needs in the healthcare system and at school (Churchill et al., 2010). In addition, they bear the financial burden of their children's medical care and the time required for appointments with the healthcare services (Theule et al., 2013). This intensified caregiving role increases the parenting stress among parents of children with special needs.

From a broader perspective, society exerts stress on people with special needs and their family members. Milton and Sims (2016) found that those with special needs have been categorized as societal othering and excluded by their schoolmates, colleagues and even relatives. In contemporary Hong Kong, as revealed in Holroyd's ethnographic study (2003), children with special needs have been seen as disordered, and both the children and their parents were marginalized and isolated. Mothers of these children were also stigmatized and blamed, attributing their children's disability to the misfortune of women and their families (Holroyd, 2003; Kwok et al., 2014).This is a possible source of stress from society on bringing up a child with special needs for parents. Thus, these parents are more likely to experience both child-related and parent-related stress, compared to parents with typically developing children (Abidin, 1995).

Well-Being and Parenting Self-Efficacy Among Parents of Children With Special Needs

As mentioned previously, the increased parenting stress experienced by parents of children with special needs is due to their adjustment to the extra obligation in taking care of their children. Previous studies have revealed an increased risk of psychological distress and depression among parents of children with special needs. These parents, especially mothers, often have to give up their jobs and their personal interests to become the primary caregiver of their children's special needs (Olsson & Hwang, 2001). Parents have also reported facing severe financial constraints to meet the needs of their children's medical care, negatively affecting their psychological health (Seltzer et al., 2001). Furthermore, Ryan and Runswick-Cole (2008) described that parents of children with special needs were in a liminal position in which they experienced a sense of disability even they were not disabled. These parents have shared experiences of discriminatory practices and being stigmatized with their children in their child rearing, such as schooling, parenting and daily living.

Many studies have examined the psychological well-being of parents of children with special needs (Baker et al., 2003; Hauser-Cram et al., 2001; Olsson & Hwang, 2001), but little is known about their physical health. Longitudinal studies have been conducted to investigate the differences in psychological and physical health between parents of

children with special needs and parents of typically developing children (Eisenhower et al., 2009; Eisenhower et al., 2013). Parents of children with special needs have shown significantly poorer psychological and physical health over time compared with parents of typical developing children. According to the neurobiological model, chronic stress and a depressed mood can suppress the neuroendocrine stress response system, which regulates the functioning of the human immune system (Herbert & Cohen, 1993; McEwen, 2000). The prolonged psychological stress of parents of children with special needs has been linked to various health problems, including poor sleep quality and increased mortality (Gallagher et al., 2010; Martin et al., 1995; Murphy et al., 2007).

In addition to poor psychological and physical health, parents of children with special needs have been found to have a lower level of parenting self-efficacy (Hoza et al., 2000; Rogers et al., 2009). Parenting self-efficacy is defined as parents' subjective belief in their ability to perform their parenting role (Coleman & Karraker, 2003; Hess et al., 2004). Parents of children with special needs face unique challenges in managing their children's special symptoms and behavioral problems. For example, it has been revealed that parents of children with ADHD often attribute their children's inattentive and impulsive behaviors to internal causes, leading the parents to perceive themselves as less able to deal with their children's problems (Johnston & Freeman, 1997). Importantly, low parenting self-efficacy can have negative effects on the long-term development of their children. The level of parenting self-efficacy has been found to affect parents' effective participation in the medical treatment of their children (Hoza et al., 2000). Parents with lower self-efficacy also tend to feel less competent in helping their children adapt to the school environment and pursue academic achievement (Rogers et al., 2009).

Effects of Family Demographics on Well-Being among Parents of Children With Special Needs

Although many studies have examined the effects of children's special needs (children with and without developmental problems) on parental psychological and physical well-being, more evidence is needed regarding other possible risk and protective factors influencing the well-being of parents with children with special needs. For instance, the effects of family demographics (including family income, parental education level, parental age, and employment status) on parents' psychological and physical well-being remain inconclusive.

Regarding the relationship of family income and availability of support services with the health of parents of children with special needs, Dyson (1991) reported that the financial advantages of families did not reduce their parenting stress. However, other studies have shown that parents from low-income families have lower levels of well-being because of their concerns about lacking money and resources to support effective intervention for their children with special needs (Churchill et al., 2010; Smith et al., 2001;). With lower levels of education, parents of children with special needs have reported higher time

demands and caregiving burden, leading to poor psychological well-being (Haveman et al., 1997). Nevertheless, parents' education level has not been shown to affect the psychological health of parents of children with special needs (Churchill et al., 2010). Older parents of children with special needs (aged 40 or older) have been shown to have worse psychological health because of intense anxiety about their ability to provide appropriate care for their children with special needs later in life (Collins-Moore, 1984), but they have reported lower parenting stress because of their higher social status, enabling them to utilize community resources to help their children (DeLambo et al., 2011). In terms of parental employment status, increased depressive symptoms have been observed among unemployed parents of children with special needs due to the lack of sufficient financial resources for their children's prolonged medical treatment. However, no significant difference in the psychological health of parents with children with special needs has been found in relation to parental occupational status (Smith et al., 2001). Therefore, the effects of demographic variables on the general well-being of parents with children with special needs remain unclear.

Effects of Family Factors on the Development of Children With Special Needs

Family factors, including parenting styles, parental attitudes and expectations about child performance, and marital relationships, have been suggested to affect the development of children with special needs (Van Hooste & Maes, 2003). Parents who have sensitive, directive, and elaborative responses to their children with special needs can effectively create a conducive and stimulating environment for positive development of their children, whereas parents who exhibit inconsistent and hostile behaviors toward their children can increase the frequency of problematic behaviors in their children (Aunos et al., 2008). In addition, parents with children with special needs tend to have low expectations for academic achievement and social attainment, while children's inability to have good academic performance further lowers parents' expectations (Boersma & Chapman, 1982).

According to the studies related to family conflict (e.g., Amato & Keith, 1991; Cummings et al., 2003; Negrino, 2020), marital stress and conflict can also negatively affect children's development. Children are expected to experience unhappiness, distress, and insecurity when facing parental hostility. Poor marital relationships create an undesirable home environment for the development of children and adversely affect their psychological adjustment. In addition to affecting children's developmental outcomes, parents suffer from increased stress when arguing with their spouse, which reduces their effectiveness in managing parenting tasks. A high level of marital conflict has also been associated with more behavioral problems among children with disabilities (Vrijmoeth et al., 2012). Under marital stress and conflict, parents are often less able to take care of their children's developmental needs and manage their behavioral problems. Furthermore, from the lens of a strength-based approach, parents are capable of promoting children's development and well-being with their own strength and resources, while the cooperation and

collaboration of both parents are necessary for cultivating a supportive family environment for children (Ma & Lai, 2014). Children with special needs, specifically need more help and care from their parents or caregivers than typically developing children, because of their developmental problems (Brandon, 2007; Ryan & Runswick-Cole, 2008). Therefore, family factors can contribute to the developmental outcomes of children with special needs in a range of ways.

OBJECTIVES OF THIS STUDY

Few empirical studies of the effects of children's special needs and family demographics on the well-being and parenting self-efficacy of parents of special needs children have been conducted in Asian countries (DeLambo et al., 2011; Eisenhower et al., 2013; Valicenti-McDermott et al., 2015). This study aimed to examine how different types of disability in children affect the general well-being and parenting self-efficacy of their parents. The inconsistent relationship between family demographic variables and the well-being and parenting self-efficacy of parents of children with special needs also prompted an examination of its possible effects.

The current study investigated the well-being and parenting self-efficacy of parents with children with special needs based on the effects of family demographics (age of parents, family income, parental education level, and employment status) and different types of special needs among children. Ethical approval from the University was received by the researchers prior to data collection.

METHOD

Participants

Four hundred and twenty parents or primary caregivers of children with special needs from a larger study of the early childhood intervention program supported by the Hong Kong government were recruited by convenience sampling. With the support of service providers of the intervention programme, they were invited to complete a self-report questionnaire on a voluntary basis. The age of the participants ranged from 21 to 65, and the majority were the parents of the children (81.5% were mothers and 17.1% were fathers), and the rest were caregivers, such as grandparents. Most of them were a homeworker without a full-time job (45.5%) and married (91.5%). Their monthly family incomes were between HK$10,001 and HK$20,000 (28.7%), between HK$20,001 to 30,000 (20.3%), and between HK$30,001 to 50,000 (22.1%). According to statistics by the Hong Kong government, the average monthly family income was HK26,500 in the year that the questionnaires were administered (Census and Statistics Department, 2018).

The age of children of the parents recruited ranged between 2.83 and 7.17, and the mean age was 5.14 years old. A breakdown of children's disability types in percentage was listed in Table 1.

Table 1. Types of Disabilities of the Children of the Recruited Parents

TYPES OF DISABILITIES	PERCENTAGES
Mental Handicap	2.8
Physical Impairment	0.3
Cerebral Palsy	0.3
Visual Impairment	0.3
Hearing Impairment	0.3
Autistic Spectrum Disorder	34.0
Speech Impairment	55.0
Global Developmental Delay	13.3
Attention Deficit Hyperactivity Disorder	4.3
Fine Motor Delay	5.0
Gross Motor Delay	3.5

There are parents missing a number of questions in certain subscales, thus turning into missing data. The missing data was cleaned during the data analysis process.

Instruments

Parenting Self-Efficacy Questionnaire

Maternal Self-efficacy Questionnaire (MEQ; Teti & Gelfand, 1991), a 10-item self-report scale, was adopted to assess parents' ability to take care of their children, such as the ability to cope with their children's emotions and their performance in daily routine tasks. The MEQ has been also used for assessing both fathers' and mothers' self-efficacy in other study with a good reliability (Leekes & Burne, 2007). Questions such as *"When my child gets mad or cries, I can comfort him/her"* and *"I can do well in childcare duties (e.g. feeding, bathing, etc.)"* were used in the study and were scored on a 5-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree). Adding the item scores generated a maternal self-efficacy score, ranging from 10 to 50. Higher MEQ scores indicated a higher level of parenting self-efficacy. The Cronbach's alpha (α) value for the MEQ was .80.

Early Intervention Parenting Self-efficacy Scale (EIPSES)

The 16-item EIPSES (Guimond et al., 2008) was used to (a) assess the degree to which caregivers perceive themselves as personally effective and capable of parenting their children, with questions such as "When my child shows improvement, it is because I am able to make a difference in my child's development;" and (b) measure the extent to which they believe that their children's outcomes are influenced by environmental factors or constraints (family background and availability of early intervention or community support), with questions such as "Children will make the most progress if their early interventionists work with them rather than if the parents work with the children." Items were scored on a 7-point Likert scale, ranging from 1 (Strongly disagree) to 7 (Strongly agree). The total scores ranging from 16 to 112 were computed by summing all items of the scale. Higher scores reflected greater perceived self-efficacy. The Cronbach's alpha (α) value for the EIPSES was .80.

Parental Stress Scale (PSS)

The PSS (Berry & Jones, 1995; Cheung, 2000) comprises 18 items to assess parents' perceived stress level by asking them to evaluate their feelings and thoughts based on different life situations when taking care of their children. Questions such as *"Caring for my child sometimes takes more time and energy than I have to give"* and *"I enjoy spending time with my child"* were used in the study. Items were scored on a 5-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree). A composite score was obtained by summing all items, yielding a possible score range of 18 to 90. Higher PSS scores indicated higher levels of stress among the respondents. The Cronbach's alpha (α) value for the PSS was .89.

Aggravation in Parenting Scale (APS)

The APS (Abidin, 1995) is a 9-item self-report scale evaluating parenting effectiveness. It includes measuring the frequency in the past month that the parent felt that it was much more difficult to take care of the child than usual, the child did things that really bothered the parent, the parent was angry with the child, and the parent felt that he/she was giving up more of his/her life for the child's needs. Questions such as "I find myself giving up more of my life to meet my child's needs than I ever expected" and "I feel trapped by my responsibilities as a parent" were used in the study and were scored on a 5-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree). Summing the items and dividing the score by the total number of items generated a total score ranging from 9 to 45. Higher scores indicated higher aggravation in parenting. The Cronbach's alpha (α) value for the APS was .69.

General Health Questionnaire (GHQ)

This 4-item self-report scale from the GHQ (Chan, 1993; Goldberg, 1978) measured individuals' current physical and psychological well-being by assessing their sleep patterns, level of distress, social dysfunction, among others. Questions such as "I am weaker and sicker compared with six months ago" and "My child changes my sleep patterns" were used in the study. Items were scored on a 5-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree). Summing the scores of the four items generated a general health score ranging from 4 to 20. Higher scores indicated higher individual distress and poor overall health. The Cronbach's alpha (α) value for the GHQ was .82.

Data analysis

To examine the effects of children's disability types and family demographics on the well-being and parenting self-efficacy of parents of children with special needs, independent samples t-tests were performed to compare different groups of parents based on each child's disability type (for example, group comparison between children with ASD and non-ASD children, children with ADHD and non-ADHD children, children with speech delay and children with normal speech development) and demographic variables (group comparison between family monthly income below HK$30,000 and above HK$30,001, parental education level below high school and above tertiary education, parent as a homemaker and as a working adult, and parents aged below 38 and above 38). The mode of the family monthly income of the participants was "HK$20001 to $30000", the upper line HKD$30000 was therefore selected as the marker.

RESULTS

The Effect of Child's Disability Type on the Well-Being and Parenting Self-Efficacy of Parents of Children With Special Needs

Based on the results of the independent samples t-test, parents of children with speech delay, visual impairment, hearing impairment, global developmental delay, and gross motor delay had no significant difference in terms of well-being and parenting self-efficacy in childcare compared with their counterparts without this type of disability.

However, the results of the independent samples t-test showed that parents of children with ASD, ADHD had statistically significant differences in their well-being and parenting self-efficacy compared with their counterparts (See Table 2).

Table 2 Independent Sample T-test Comparing the Well-being and Parenting Self-efficacy Between Parents of Children with ASD, ADHD, and Their Counterparts

	Groups							
Variables	*N*	*M*	*SD*	*N*	*M*	*SD*	*df*	*t*
	Parents with non-ASD children			Parents with ASD children				
PSE	299	38.70	4.60	102	37.70	5.56	150	1.65
EIPSE	262	74.75	8.83	81	75.22	9.83	341	-.41
PS	300	47.90	8.58	101	50.75	9.05	399	-2.85**
AP	300	2.85	.74	102	3.03	.70	400	-2.14*
GH	303	12.15	2.75	102	12.40	2.96	403	-.79
	Parents with non-ADHD children			Parents with ADHD children				
PSE	310	38.62	5.04	91	37.87	4.25	170	1.41
EIPSE	266	75.61	9.24	77	72.29	7.95	341	2.86**
PS	311	48.19	8.74	90	50.09	8.81	399	-1.81
AP	313	2.84	.72	89	3.08	.76	400	-2.82**
GH	314	12.01	2.78	91	12.92	2.76	403	-2.77**

Note. PSE = Parenting self-efficacy; EIPSE = Early intervention parenting self-efficacy; PS = Parental stress; AP = Aggravation in parenting; GH = General health
*p < .05, **p < .01, ***p < .001.

Parents of Children with ASD and Non-ASD Children

Parents of children with ASD reported significantly higher parental stress ($t(399) = -2.85$, $p < .01$) and aggravation in parenting ($t(400) = -2.14$, $p < .05$), compared with parents of non-ASD children. This indicated that parents of children with ASD had a higher level of psychological stress when taking care of their children and perceived themselves as being highly bothered by their children compared with parents of non-ASD children. However, no significant differences were found for their general health and maternal and early intervention parenting self-efficacy.

Parents of Children with ADHD and Non-ADHD Children

Parents of children with ADHD reported significantly poorer general health ($t(403) = -2.77$, $p < .01$), lower early intervention parenting self-efficacy ($t(341) = 2.86$, $p < .01$), and higher aggravation in parenting ($t(400) = -2.82$, $p < .01$) compared with parents of non-ADHD children. The results showed that parents of children with ADHD not only developed poor physical health and were easily angry with their children, but also tended to attribute the developmental outcomes of their children to the external factors (e.g., community support, early intervention, and family background) instead of their personal abilities in taking care of their children. However, there were no significant differences in their psychological stress and maternal self-efficacy.

The effects of family demographics on parents of children with special needs

Based on the results of the independent samples t-test, family income, parental education level, employment status, and parental age had significant effects on the well-being and parenting self-efficacy of parents with special needs children (see Table 3).

Family Monthly Income

Parents with monthly income below HK$30,000 reported significantly lower early intervention parenting self-efficacy ($t(350) = -2.95$, $p < .01$) and poor general health ($t(412) = 2.39$, $p < .05$), meaning that they felt unable to provide effective care and medication to their children and had poor physical health. However, there were no significant differences for their maternal self-efficacy and psychological health.

Parental Education Level

Parents with an education level below high school reported significantly lower early intervention parenting self-efficacy compared with parents with tertiary education or above ($t(173) = -2.11$, $p < .05$). This indicated that they felt unable to provide effective parenting and medical care to their children. However, no significant differences were found for their well-being and maternal self-efficacy.

Table 3. Independent Sample T-test of the Effects of Family Demographics on the Well-being and Parenting Self-efficacy Among Parents with Children who Have Special Needs

	Groups							
Variables	*N*	*M*	*SD*	*N*	*M*	*SD*	*df*	*t*
	Parents with monthly family income below HK$30,000			Parents with monthly family income above HK$30,001				
PSE	244	38.55	5.10	166	38.45	4.60	408	.21
EIPSE	212	73.73	8.42	140	76.61	9.67	350	-2.96**
PS	243	49.26	8.58	167	47.75	9.04	408	1.71
AP	242	2.94	.74	169	2.82	.74	409	1.65
GH	245	12.51	2.73	169	11.84	2.87	412	2.39*
	Parents with high school education or below			Parents with tertiary education or above				
PSE	273	38.68	4.94	137	38.17	4.82	408	.99
EIPSE	244	74.15	8.37	108	76.51	10.23	173	-2.11*
PS	271	48.58	8.63	139	48.78	9.11	408	-.22
AP	272	2.90	.71	139	2.88	.79	409	.24
GH	275	12.30	2.75	139	12.10	2.91	412	.69
	Parents as homeworkers			Parents as working adults				
PSE	174	37.78	5.16	236	39.05	4.64	408	-2.61**
EIPSE	153	74.93	8.78	199	74.82	9.25	360	.11
PS	174	50.34	9.11	236	47.39	8.34	408	3.40**
AP	176	3.03	.77	235	2.79	.74	409	3.38**
GH	176	12.74	2.84	238	11.86	2.72	412	3.18**
	Parents aged below 38			Parents aged above 38				
PSE	213	39.02	4.81	197	37.95	4.95	408	2.23*
EIPSE	184	75.62	8.49	168	74.05	9.55	350	1.63
PS	212	48.31	7.80	198	49.01	9.74	377	-.80
AP	215	2.86	.68	196	2.93	.80	409	-.88
GH	215	12.16	2.77	199	12.32	2.85	412	-.57

Note. PSE = Parenting self-efficacy; EIPSE = Early intervention parenting self-efficacy; PS = Parental stress; AP = Aggravation in parenting; GH = General health *$p < .05$, **$p < .01$, ***$p < .001$.

Parents' Employment Status

Parents who were homeworkers reported significantly higher parental stress ($t(408) = 3.40$, $p < .01$), higher aggravation in parenting ($t(409) = 3.38$, $p < .01$), lower maternal self-efficacy ($t(408) = -2.61$, $p < .01$), and poorer general health ($t(412) = 3.18$, $p < .01$). Homeworkers tend more to be irritated when parenting their children with special needs, perceive themselves as ineffective in performing daily tasks, and have poor physical and psychological health compared with working parents. However, no difference was found for their early intervention parenting self-efficacy.

Age of Parents

Parents younger than 38 reported significantly higher maternal self-efficacy compared with parents over 38 ($t(408) = 2.23$, $p < .05$). This indicated that parents under the age of 38 had more self-confidence in taking care of their children with special needs. However, no significant differences were found for their health and early intervention parenting self-efficacy.

DISCUSSION

Effects of Children's Disability Types

The quantitative results revealed that the well-being of parents of children with ASD and ADHD was generally poorer compared with parents of children with other types of special needs, and they appeared to be more stressed when parenting their children. Children with ADHD and ASD had problematic and maladaptive behaviors, with high impulsivity and low social skills to adapt to environmental changes, and usually required extensive care. Parents' management of their children's behaviors could lead to a high level of parenting stress or psychological distress (Estes et al., 2009; Valicenti-McDermott et al., 2015). However, such explicit behavioral problems of children have not been accepted and are regarded as the consequences of incapable or poor parents by the public, which is a kind of stigma from the community as perceived by the parents (Kwok et al., 2014). This experience probably leads a great level of stress in child rearing for them.

Effects of Family Demographics

Most parents, especially the mothers who were the primary caregivers of their children, were unable to work, even part-time. Raising children with special needs is more demanding than those without special needs. Although there are various rehabilitation services for children with special needs in Hong Kong, parents still have additional responsibilities related to their children's disabilities, such as medical checkups, visiting to school teachers and therapists. Brandon (2007) found that parents even need to sacrifice

their own time for personal care and leisure to take care of children with special needs. Thus, two parents in a family may not be available and cannot afford to enter the labour force concurrently, resulting in lowering their family income. In fact, the financial burden on the family increased parental stress because of their perceived inability to meet the needs of their children with special needs (Scherer et al., 2019). This is consistent with the quantitative findings that parents of children with special needs having lower monthly family income are at higher risk of poor health than those parents with higher monthly family income.

The quantitative results also identified another risk factor leading to poor physical and psychological health of parents with children with special needs. Homemakers tended to have higher parental stress and poor general health than working parents. Indeed, homemakers are expected to assume greater responsibility for child rearing and family management than their working spouses (Hastings, 2003). Especially for parents of children with ASD and ADHD who were homemakers, their prolonged care of their children's behavioral problems without sufficient support from their spouses had a negative effect on their general well-being. Moreover, devoting most of their time to take care of children and family also diminished parents' social network with friends and colleagues that would normally provide support for themselves (Brandon, 2007)

To improve the well-being and parenting self-efficacy of parents of children with special needs, special attention should be paid to spouses to alleviate the heavy childcare responsibility of parents and maintain the family functioning of children with disabilities. As the study identified some of the risk factors associated with the lower levels of well-being and parenting self-efficacy of parents of special needs children, more support should be provided to vulnerable parent groups with low family income, low educational level, and being unemployed. By providing social support and community resources, including the creation of district-based parent resource centers, child intervention and family services provided by individual social welfare agencies, child management skills and close interdisciplinary collaboration with schools, families should be able to improve parents' ability to perform childcare tasks, in turn support children's development.

LIMITATIONS

In the current study, the effects of demographic variables on the well-being and parenting self-efficacy of parents of children with different types of special needs were different from previous studies. Future research should focus on the effects of demographic variables on parents of children with special needs in Asian countries to obtain information from parents about other factors contributing to their good health and parenting self-efficacy. Moreover, this is only a quantitative-based study overviewing the factors influencing parents of children with special needs. In future research, interviewing the parents to acquire a more comprehensive understanding of their parenting practices and the challenges encountered in bringing up children with special needs can further

benefit the investigation of their well-being and parenting self-efficacy, providing a qualitative basis for the current findings.

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