Direct, Indirect and Intermediary Relationship (Mediator): Father Involvement, Early Intervention Program and Well-Being of Children with Special Needs

Mohamad Ilmee Mohamad Zin, Mariani Md Nor, Kama Shaffeei

University of Sultan Idris Education, Perak, Malaysia
University of Malaya, Kuala Lumpur, Malaysia
Email : ilmee@siswa.um.edu.my

Abstract: The issues involving fathers, early intervention programs and well-being of children with special needs have led this research which is to examine whether the three factors or constructs or variables have direct, indirect and intermediary relationship (mediator) using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 3.0 software. The 158 samples of father who have children with special needs aged 4 to 8 years old answered the questionnaires for survey research. The results of this research proved that seven items of measurement in three constructs is significant and is suitable for the Well-being of Children with Special Needs; the Early Intervention Program; and Father Involvement.

Keywords: father involvement, early intervention program, well-being of children with special needs,

INTRODUCTION

Well-being of children not only includes development but also broad aspects such as health, safety, performance, and economic returns contribution by Every Child Matter Model (DfES, 2003; Roberts, 2011) including children with special needs. Human needs (Maslow, 1943), especially those involving children's needs (Davis, 1992) means that children have to go through their various needs throughout their lives such as survival, safety, social, and success, next to the real well-being of satisfaction (Self-Actualization).

Father plays a major role in every family, especially if their children have special needs. Based on previous studies, father's involvement is so needed by each child especially in language development (Gleason, 1975) and communication activities (Flippin & Crais, 2011), especially the well-being of children as early as the age below 3 years old starting their infancy stage again in the Early Intervention Program (Smith, 2005).

Early Intervention Program (EIP) refers to a program which ensures that the families of children with growth and developmental problems give the best opportunity to increase children's in the program (Smith, 2005). In addition, the EIP can be defined as a service development under public or government supervision, involving the cooperation of parents and the needs of children with special needs and the needs of parents supporting their child's progress and development (National Dissemination Centre for Children with Disabilities, 2012).

Therefore, the general objective of this research was to examine whether the three factors or constructs or variables, namely Father's Involvement, Early Intervention Program and Well-being of Children with Special Needs s have direct, indirect and intermediary relationship (mediator). Based on the general objectives, four (4) specific objectives of the research were determined, namely: (a) To identify the influence of Father Involvement against Early Intervention Program, (b) To identify the influence of the Early Intervention Program against the Well-being of Children with Special Needs, (c) To identify the influence of Father Involvement against the Well-being of Children with Special Needs, and (d) To identify Early Intervention Program as an intermediary relationship (mediator) between Father Involvement with Well-being of Children with Special Needs.

The issues that involve the father involvement, Early Intervention Program and well-being of children with special needs have led this research to study the father involvement in early intervention program for the well-being of children with special seeds based on some related principles.

Issues regarding father involvement and their impact on the well-being of children with special needs require an in-depth study. Fathers being too busy at work have hampered child development (Hawkins et al., 2002). Also, lack of father involvement in ensuring academic achievement and language development may affect children, especially if there is no involvement at all in the Early Intervention Program; this may cause children to have poor communication ability (Flippin & Crais, 2011). In addition, the lack of support and the high distress of the father also gave an impact on

the well-being of children (Middleon, 1995). It is clear that the relationship between father involvement and the well-being of children with special needs should be further improved.

Enhancement of the Early Intervention Program (EIP) for the development of children (Kementerian Pelajaran Malaysia, 2009) was delayed due to the shortage of personnel (Ghani & Ahmad, 2011) which slowed down the implementation of the EIP and its many beneficial effects on children with special needs. It is clear that the EIP can change the quality of life of a child with special needs. If the EIP is still lacking, it cannot provide a direct impact on the well-being of children with special needs.

Indirect effects of Early Intervention Program serve as a mediator between the involvement of father and the well-being of children with special needs. It requires a serious study because Early Intervention Program (Smith, 2005) needs the involvement of father (Flippin & Crais, 2011) to improve the well-being of children with special needs (Kementerian Pelajaran Malaysia, 2009). Some previous studies have looked at Early Intervention services to moderate development of children under 3 years old (Shonkoff & Hauser-Cram, 1987), fathers of moderate mother-father-child, and the father of moderate women (Rohner & Veneziano, 2001). Therefore, it is necessary to conduct this research to prove that the Early Intervention Program is a mediator between Father Involvement and the Well-being of Children with Special Needs.

Based on Ecological Theory (Bronfenbrenner, 1979, 1986, 1989); Identity Theory (Erikson, 1968) and the Human Needs Theory (Maslow, 1943, 1998), there are some key points related to the theoretical framework of this research (Figure 1).

Microsystem in the ecological theory argues that the involvement of more than two parties in one place, such as like living at home and canteens in schools, can affect each other (Steinberg et al., 2011). Therefore, it was hypothesized that based on the ecological theory father involvement has a positive impact on the Early Intervention Program.

Ecological theory links Microsystem to some most important aspects in a child's life including family, school (care environment) or day care setting, and peer or older children (Steinberg et al., 2011). In addition, children spent the longest time in large families, in early care and education programs, health care settings and community sites such as neighbourhoods, libraries and playgrounds (Eastman, 2004). The number and quality of relationships with the family and education program where a child spends time also has important implications for their development (Eastman, 2004). Therefore, the researcher hypothesized that in the ecological theory the Early Intervention Program (Eastman, 2004) has a positive effect on well-being of children with special needs.

Ecological theory states that, in the available Microsystem, ecological well-being is a concept in which the well-being of a child is determined by the level of parents, families, communities and social well-being (Prilleltensky & Nelson, 2000). The involvement of father is a part of the children microsystem (Ball et al., 2007), and the view on the role of fatherhood and family and cultural interaction through cultural Macrosystem also affect how involved fathers affect children and families. Children interact with other people, including families (Steinberg et al., 2011) and are influenced by their parents (Steinberg et al., 2011). Theory of identity states that an identity can refer to the definition of the individual, including "I'm the father of two sons" (Schwartz, Luyckx, & Vignoles, 2011) and interpersonal acts as between groups and interaction as well as social recognition or otherwise that it received from other individuals or group (Butler, 1990; Reicher, 2000). Therefore, the researcher hypothesized that the Father Involvement in Ecological Theory (Ball et al., 2007; Steinberg et al., 2011) has a positive correlation with the well-being of Children with Special Needs (Prilleltensky & Nelson, 2000). The father involvement and well-being of children with special need also has a relationship in identity theory.

Ecosystem in ecological theory also clearly states that the institutions, organizations, and policies can either hinder or promote and support development (Ball et al., 2007). However, previous studies have shown that support in the form of the Early Intervention Program does not exclude the Father Involvement and Well-being of Children with Special Needs.

Father Involvement and Early Intervention Program are to achieve the final objective of the Well-being of Children with Special Needs (Theory of Human Needs). Everything a person needs, including children, without any conditions should be fulfilled by placing equal rights. Human needs theory applies to adults as well as children with special needs and helps father in a variety of needs and priorities in understanding the ways to support their children's development (Davis, 1992). All these requirements can be found in the Model of Children Needs (Davis, 1992), modified from Maslow (1943).

It is clear that the ecological theory, identity theory and theory of human needs play an important role in forming theoretical studies in this review. Relations between these theories can be seen as a hypothesis in relation with the Father Involvement and Early Intervention Program (ecological theory), Early Intervention Program and Well-being of Children with Special Needs (ecological theory and human needs theory), and Father Involvement and Well-being of Children with Special Needs Child (ecological theory, identity theory, and human needs theory) as well Early Intervention Program as study of gap through Father Involvement -> Early Intervention Program -> Well-being of Children with Special Needs which is

considered as an intermediary for the study.

The population and sample of respondents for this research were made up of fathers who have children with special needs aged 4 to 8 years who are involved in the Early Intervention Program in 13 Special Education Services Centers (3PK), Division of Special Education, Ministry of Malaysia Education. Client Data of Special Education Services Center (3PK) until 30 July 2015 in Malaysia shows that there are 933 people who are fathers of children involved in the Early Intervention Program at the Special Education Services Center (3PK), Ministry of Malaysia Education (Table 1).

Based on data from these fathers (Table 3), the researcher with the approval of officials from each 3PK and fathers decided to have 158 of 200 fathers participated in this study. Priority samples are fathers who are having children with special needs under 4 years old (a total of 24 fathers) because the concept of Early Intervention Program is for children around this age. However, since the sample is not enough, the researcher recruited 139 more fathers having children bewteen 5 and 6 years old and 37 fathers of children aged 7 years old and above. The number of samples for pre test and pilot test are 30 fathers each from a total of 933 fathers who were not involved in the actual research. In the real reserach, the selection of the 200 was based on the presence of fathers with their children with special needs who are active for at least three months.

This research is considered as a survey research implementing two types of test which are pre-test and pilot test. Pre testing is typically done to measure the extent of the changes that will occur on the dependent variable processed later due to the independent variable (Konting, 2009). Accordingly, the researcher has conducted a pre-test questionnaire containing 277 items in 48 dimensions to 30 fathers in the Early Intervention Program, Special Education Services Centre (3PK), Division of Special Education, Ministry of Education Malaysia. From the pre-test findings, the researcher assessed the highest mean items using SPSS v22 for each dimension and summarized that only 52 items were selected to be testing in a pilot study.

Pilot test according to Rane and McBride (2000) explains the concept of reliability measurement in quantitative methods, particularly the use of a questionnaire in pilot study (pilot test) meaning a test on a small scale (small-scale testing). The pilot study was also the beginning of the trial (preliminary trial) before items of the real test are imposed on real samples. The aim of the pilot study is to obtain data from trials transparently through a small group of individuals (Borg & Gall, 1979). Another objective is to evaluate the consistency (reliability) item from the item level, the objective item, item understanding, usability items and command item itself (Roid & Haladyna, 1982).

The research was conducted using questionnaires adapted and developed by researchers from questionnaires and surveys of the literature suitable to collect data from fathers who have children with special needs who are involved in the Early Intervention Program.

One set of questionnaire form was adapted and developed by researcher in this study consisting of four parts that were answered by parents who have children with special needs involved in the Early Intervention Program. These parts are: (a) Part A: Demography of Respondents, (b) Part B: Father Involvement, (c). Part C: Early Intervention Program, and (d) Section D: Well-being of Children with Special Needs. This study used a 7 point Likert scale (Vagias, 2006) with 1 (Strongly Disagree), 2 (Disagree), 3 (Somewhat Disagree), 4 (Not Sure), 5 (Somewhat Agree), 6 (Agree) and 7 (Strongly Agree). Part A is related to demography of father. Parts B and D were adaptations of several questionnaires that correspond respectively to the Father Involvement and Well-being of Children with Special Needs, while Part C is built from a number of surveys on the literature for the Early Intervention Program.

Father Involvement construct from Father Involvement Inventory (Hawkins et al., 2002) had the value a = .95 (long version) by 9 dimension and 35 items and a = .94 (shorter version) by 9 dimension and 26 items. Ünlü (2010) using Father Involvement Inventory by Hawkins et al. (2002) found the value a = .86 by 6 dimensions and 25 items. The Well-being of Children with Special Needs construct also used the Well-being of Malaysian Family questionnaire (Lembaga Penduduk Dan Pembangunan Keluarga Negara, 2011) recorded a value of a = .928, which has seven dimensions and 123 items (Parent).

Three constructs of Father Involvement, Early Intervention Program and Well-being of Children with Special Needs were identified for this study. The constructs in this research include items adapted and developed from some questionnaires and some related literature review, consisting of: (a) Father Involvement constructs adapted from Father Involvement Inventory (Hawkins et al., 2002) and Father Involvement Survey - Turkish Form (Ünlü, 2010); (b) Early Intervention Program constructs developed from previous studies from Module 1: Basic Early Intervention Program (National Dissemination Centre for Children with Disabilities, 2012), Principles for Effective Parenting Skills Program (Sanders et al., 1999), Effectiveness Quality Intervention Program (Moore & Moore, 2003), Family Support Program (Schorr, 1997), Principles of Service Provision (Schorr, 1991), and Prevention Program (Fonagy, 2001); and (c) Well-being of Children with Special Needs construct adapted from the Well-being of Malaysian Family (Lembaga Penduduk Dan Pembangunan Keluarga Negara, 2011) questionnaire.

Three constructs of Father Involvement and Well-being of Children with Special Needs were derived from a number of questionnaires adapted, and Early Intervention Program was developed from few surveys of literature in constructing questionnaires. The construction item to construct the Early Intervention Program was formed by rational-intuitive approach (Hase & Goldberg, 1967). Implementation of this approach was based on the subjective opinions of the researcher (Azizah, 2012) and also on other studies. Researcher developed items for the construct tentative Early Intervention Program under the document Module of Basic Early Intervention Program (National Dissemination Centre for Children with Disabilities, 2012) and five studies of literature Principles of Effective Parenting Skills Program (Sanders et al., 1999); Qualities of Effective Intervention Program (Moore & Moore, 2003); Supporting Families Program (Schorr, 1991); Service Delivery Principles (Schorr, 1997); and Prevention Program (Fonagy, 2001).

Validity and reliability construct of assessment questionnaire results described in this study to assess the Reliability of Composite Reliability for Individual Item Reliability, Internal Consistency Reliability and Average Variance Extracted (AVE); and to assess the Validity for Convergent Validity and Discriminant Validity in PLS-SEM.

Composite reliability values have exceeded .70, which is the minimum level (Nunnally & Bernstein, 1994) for all constructs and not less than 0.80 (Fornell & Larcker, 1981). Composite reliability value of .70 to 0.90 is appropriate (Nunnally & Bernstein, 1994). However, Cronbach alpha for 3 constructs involved was negligible (Hair et al., 2011) because of values below 0.70 and should reach above 0.70 (Chin, 2010). Therefore, Composite reliability accepted in PLS-SEM has also measured the value of Cronbach alpha (Barroso, Carrión, & Roldán, 2010). Thus, composite reliability for internal consistency reliability (Nunnally & Bernstein, 1994) and individual item reliability (Hair et al., 2014) have been met in this particular study especially convergent validity. However, Cronbach alpha values are ignored because composite reliability has been met (Hair et al., 2011).

The values of factor loadings or outer loadings to assess individual items reliability have exceeded 0.708 (Hair et al., 2014) while the reliability of composite exceeds the minimum 0.70 and Average Variance Extracted (AVE) exceeds the minimum 0.50 (Hair et al., 2011). In this study also, values > 0.708 has been received or maintained (Hair et al., 2014) as the Composite Reliability (> 0.70) and AVE (> 0.50) respectively have been met. AVE also exceeds the value 0.50 (Fornell & Larcker, 1981).

The values of latent variables or constructs are greater than the correlation between the different latent variables (Fornell & Larcker, 1981) based on Fornell- Larcker Criterion and Cross Loading. In addition, Heterotrait-Monotrait Ratio (HTMT) represents the latest methods in discriminant Validity test and its acceptance in the study. This confirms that this questionnaire fulfils the criteria of discriminant validity.

METHOD

The research methodology was adapted from Systematic Implementation Procedures PLS-SEM by Hair et al. (2014) composed of 6 stages, namely (1) Structural Model Designation, (2) Determination of Measurement Model, (3). Data Collection and Assessment, (4) PLS Path Model Estimation, (5) PLS-SEM Evaluation Results, and (6) PLS-SEM Evaluation Results Structural Model.

Inferential statistics using multivariate analysis Structural Equation Modelling (SEM), better known as PLS-SEM via software SmartPLS 3 (Part B-D in the questionnaire) is applied in this research. SEM data analysis is a complex statistical technique popular nowadays in the studies of Social Sciences (Hair et al., 2011). It combines the ability to analyze various statistical analyses such as Factor Analysis, Multiple Regression and path analysis simultaneously. Path analysis contained in SmartPLS 3 software is used to examine the relationship between the independent variables and the dependent variable to answer the research question and achieve the objectives. The data in this study to measurement will be analyzed using SmartPLS3 software (Ringle et al., 2012).

FINDING AND DISCUSSION

Findings

Based on the findings, it was found that items that represent each construct have suitable reliability or individual item reliability. There are 7 significant items representing 3 constructs which are Well-being of Children with Special Needs affected by 2 items (Child Health, and Child Housing and Enviroment); Early Intervention Program affected by 2 items (Individual Family Service Plan, and Screening); and Father Involvement influenced by 3 items (Thinking Process, Shared Interest, and Time).

Those findings of Path Model (Figure 2) in this study using PLS-SEM via software SmartPLS 3 are significant based on previous research found in the Theoretical Framework. Accordingly, the findings of this research prove that 7 items of measurement in 3 constructs (Table 2) are significant and appropriate to Father Involvement in the Early Intervention Program for the Well-being of Children with Special Needs.

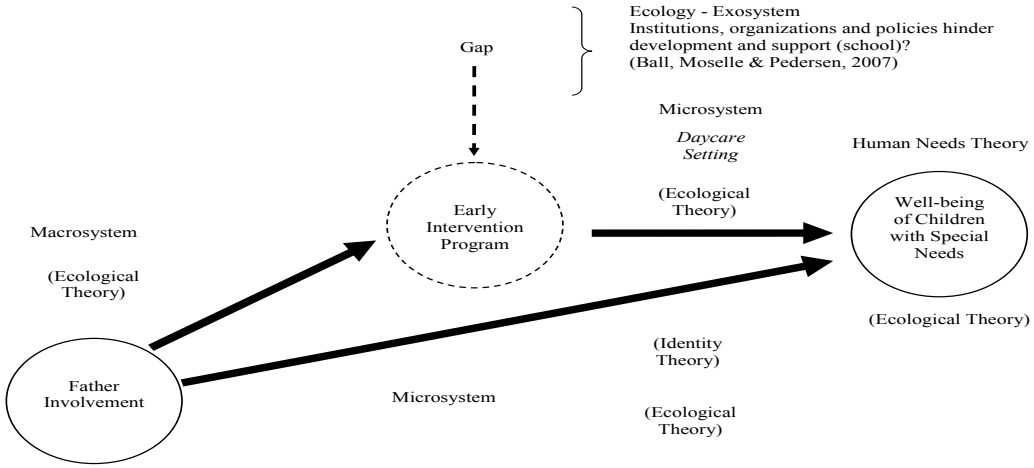

Figure 1. Theoretical Framework

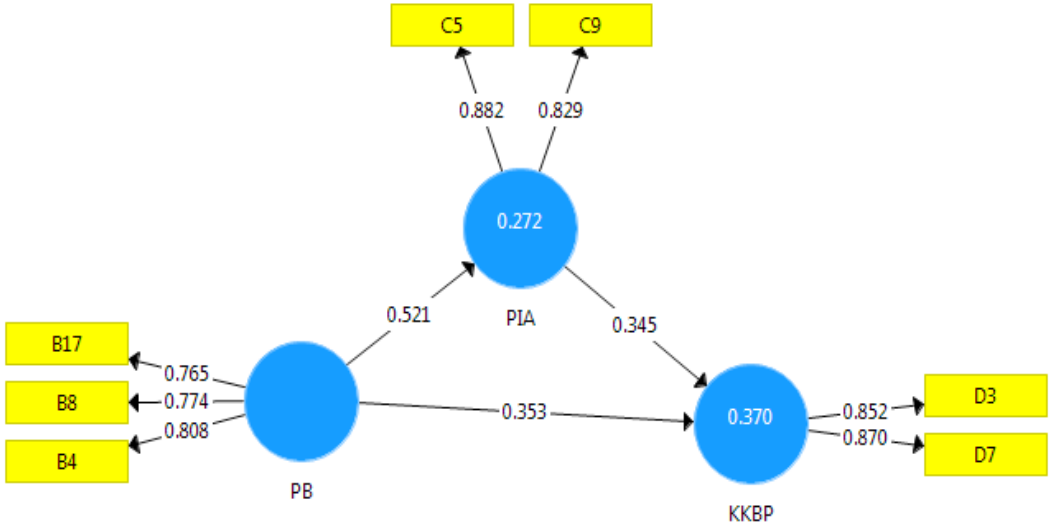

Figure 2. Findings of Path Model PLS-SEM using SmartPLS 3 Software

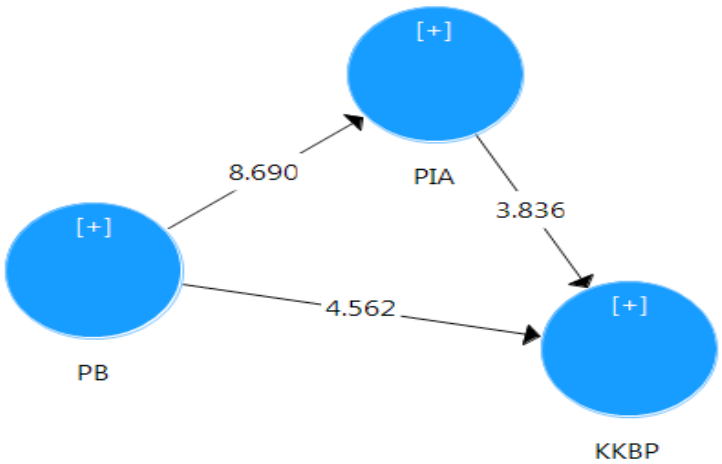

Figure 3: Early Intervention Program as an intermediary relationship (Mediator) between father involvement and well-being of children with special needs.

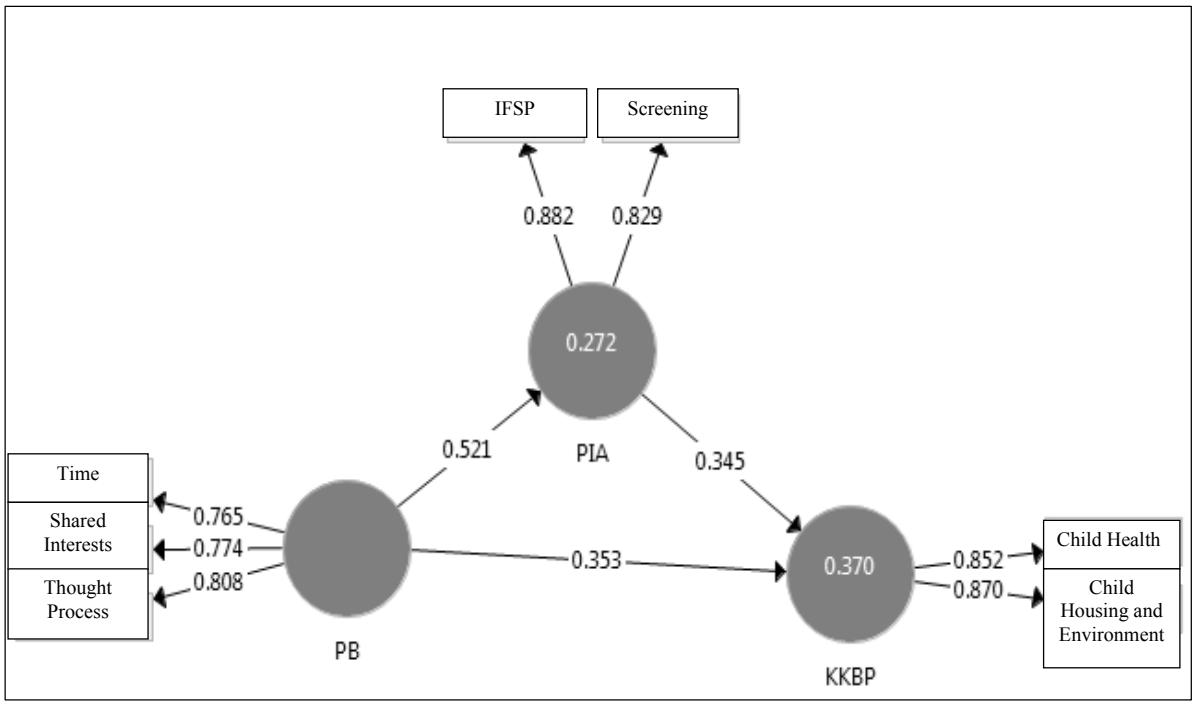

Figure 4. Model of Father Involvement in Early Intervention Program for the Well-being of Children with Special Needs (Mohamad Ilmee Mohamad Zin & Mariani Md Nor, 2018)

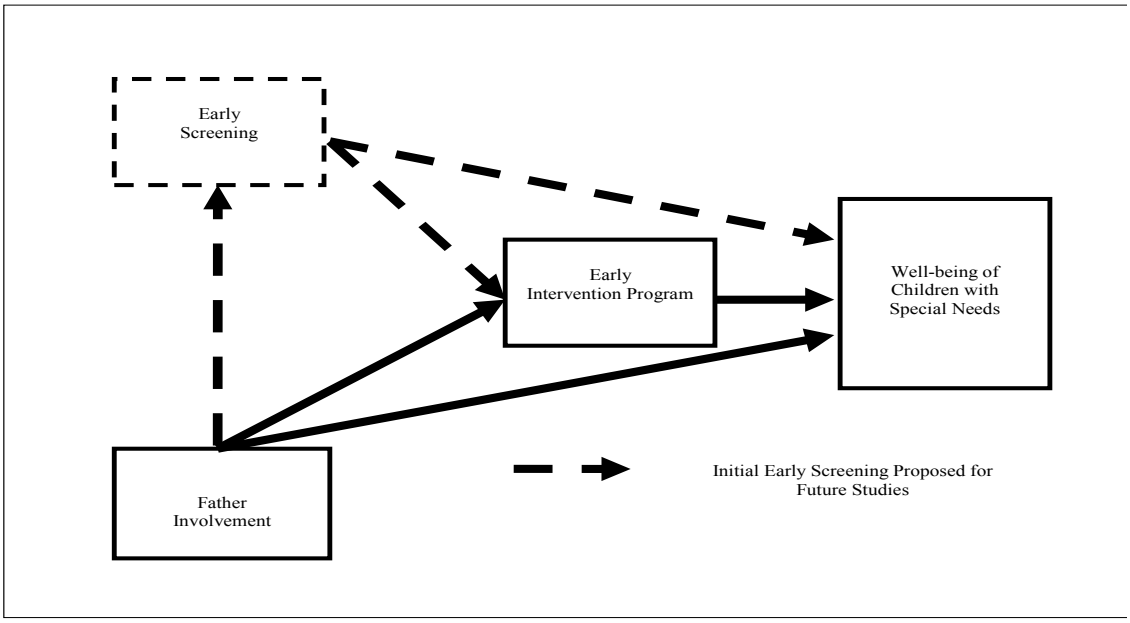

Figure 5. Conceptual Framework of Father Involvement in Early Intervention Program for the Well-being of children with Special Needs Needs the addition of Early Screening construct

Table 1. Fathers Who Have Children with Special Needs in 13 Special Education Services Centres (3PK) All State in Malaysia Up to 30 July 2015

3PK (States)	Number of Father Who Have Children With Special Needs/Age Children (Year)							Total
	0-1	2	3	4	5	6	7 +	
Perlis	-	-	-	-	11	-	19 SK 3 SMK	33
Kedah	-	-	-	-	-	-	-	147
Pulau Pinang	-	-	-	-	-	-	-	15
Perak	-	-	-	-	-	7	39	46
Putrajaya	-	-	-	24 PIA	-	68 Pra	117 SK 29 SM	238
Selangor	-	-	-	-	-	9	90	99
Melaka	-	-	-	-	1	6	119	126
Johor	-	-	-	-	-	-	-	30
Pahang	-	-	-	-	-	-	-	21
Terengganu	-	-	-	-	-	2	84	86
Kelantan	-	-	-	-	-	3	37	40
Sarawak	-	-	-	-	-	-	-	16
Sabah	-	-	-	-	-	2	3 31	5 31
Total				24	12	97	571	933
		24				109		

Note. 3PK = Special Education Service Centre; PIA = Early Intervention Program; Pra = Preschool; SK = Primary, SM = Secondary

Table 2. Item Represent Each Statement Construct and Dimensions

Constructs (Latent Variables)	Item Codes	Item Delegation (Dimensions)	Item Statements (Reflective)
Well-being of Children with Special Needs (KKBP)	D3	Child Health	I have found in the last 6 weeks ago my child happy.
	D7	Child Housing and Environment	I found the basic facilities in a residential area so good for my child.
Early Intervention Program (PIA)	C5	Individual Family Service Plan (IFSP)	I found IFSP need the cooperation of relevant groups to review the functionality of the development of children with special needs.
	C9	Screening	I think that there is any activity that requires written permission program in my screening.
Father Involvement (PB)	B4	Thought Process	I plan for the future of my child.
	B8	Shared Interests	I read with my child.
	B17	Time	I allocate time just talking with my child when my child wants to talk about something.

Discussion

The results showed a positive and significant relationship between Father Involvement and Early Intervention Program. Results of this research support the findings of previous researches (Dunst, 1985; Flippin & Crais, 2011; Smith, 2005; See, 1999; Sloper, 1999; and Stalker, 1990) which provs that the relationship between Father Involvement and Early Intervention Program is positive and significant. In the context of the Father Involvement in the Early Intervention Program, father involvements clearly play a large role in influencing the existing Early Intervention Program.

The results of analysis also show positive and significant relationship between the Early Intervention Program and Well-being of Children with Special Needs. Results of this research follow on the findings of previous studies by Dunst et al., (2007); Holm & McCarti (1978); Linde and Siegel (1983); Newborg et al. (1989); Robinsha (1994); and See (1999) which prove that the relationship between the Early Intervention Program and Well-being of Children with Special Needs is positive and significant. In the context of the Early Intervention Program against Well-being of Children with Special Needs, the Early Intervention Program clearly plad a major role in influencing the well-being of children with special needs.

Furthermore, the results show a positive and significant relationship between Father Involvement and Well-being of Children with Special Needs. Results of this study support the findings of previous studies by Dunst (1985); Gleason (1975); Flippin & Crais, (2011); Middleon (1995); Pellegrini, Brody, & Siege (1985); Pleck (2007); Shannon et al., (2002); Slope, (1999); Sloper & Turne, (1993); and Tannoc, (1988) which prove that the relationship of Father Involvement and Well-being of Children with Special Needs is positive and significant. In the context of the father's involvement against well- being of children with special needs, the father involvement clearly plays a large role in influencing the well-being of children with special needs widely not only in child development.

The analysis results showed the existence of a mediator (in part) or intermediary relationships of Early Intervention Program between Father Involvement and Well-being of Children with Special Needs. Results of this study customize the last adaptation findings by Hebbeler et al., (2007) and prove that the Early Intervention Program must exist as a significant mediator of the relationship between Father Involvement and Well-being of Children with Special Needt. In the context of the importance of the EIP as a mediator between Father Involvement and Well-being of Children with Special Needs, the role EIP necessarily should exist between father and children with special needs.

CONCLUSION

Early Intervention Program as mediator findings in this study has provided intermediate a strong relationship between Father Involvement and Well-being of Children with Special Needs. This is based on evidence upon which the existence of the Early Intervention Program indirectly is necessary to give effect to the Well-being of Children with Special Needs. Early Intervention Program is also a strong link between Father Involvement and Well-being of Children with Special Needs in this study.

Moreover, the discovery of mediator in this study contributes to the increase of existing models. These findings prove that the Early Intervention Program is the primary contribution between Father Involvement and Well-being of Children with Special Needs.

The model is also able to make a practical contribution to the field. This model shows that the Father Involvement is the strongest variable in influencing Early Intervention Program and Well-being of Children with Special Needs different with Early Intervention Program in influencing Well-being of Children with Special Needs.

The implementation of the Early Intervention Program in particular could use Model of Father Involvement in Early Intervention Program for Well-being of Children with Special Needs. This model can be expanded in line with the latest findings. The study further in future is scrutinized with emphasis Early Screening especially for finding children with special needs under the age of 4 years, which has not been involved or dropouts in the Early Intervention Program. iImplementation of qualitative in-depth study with mothers along with the fathers as respondents is also needed for future researchers to explore indicators of Father Involvement (Process Thought, Shared Interest, and Time), Early Intervention Program (Individual Family Services Plan and Screening), and Well-being of Children with Special Needs (Child Health, and Child Housing and Environment).

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