

PERCEIVED SOCIAL SUPPORT AND SOCIO-ECONOMIC STATUS AMONG PARENTS OF CHILDREN WITH TYPE 1 DIABETES MELLITUS.

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Abstract

The parents are considered as primary caregivers of type 1 diabetes mellitus children. The parents had noticed anxiety-related problems, sleep-related issues, and constant worry about the children's blood glucose level.

Objectives: The aim of the study is to assess the level of perceived social support and to measure the level of socio-economic status among parents of children with type 1 diabetes mellitus.

Methods: The study used descriptive research design and the respondents were selected using Convenient sampling method.

Results: The results of the study showed a moderate level of perceived social support among parents of children with type 1 diabetes mellitus. Most of the parents of children with type 1 diabetes mellitus reported a lower level of socio-economic status.

Conclusion: The medical social workers should facilitate a peer support group for the parents of children with type 1 diabetes mellitus. It helps with the parental satisfaction, share diabetes-related relevant information, experiences, and positive child-caring practices.

Keywords: Social Support, Socio-Economic Status, Type 1 diabetes, Parents, Chronic illness.

Introduction

The parents of children with type 1 diabetes mellitus had identified stressful situations and worries. The management of type 1 diabetes mellitus children may negatively affect their family (Jonsson, Lundqvist, Tiberg, & Hallstrom, 2015). Type 1 diabetes mellitus management need to follow systematic methods such as careful monitoring of the blood glucose levels, food or diet management, routine exercises, effective management of insulin dosage, and equipped with diabetes emergencies or management of the high fluctuations in the child blood glucose levels (American Diabetes Association, 2011). The parental management in children with type 1 diabetes mellitus had noticed positive results. The family is responsible for the treatment of children with type 1 diabetes mellitus and the family would be affected by stressful situations and family conflict (Anderson et al.2002). The parents of children with type 1 diabetes mellitus had

noticed anxiety-related problems, sleep-related issues, and constant worry about the children's blood glucose levels (Feeley et al., 2019). The parents of children with type 1 diabetes mellitus maladaptive coping mechanism had led to negative consequences in the diabetes managements (Grover et al 2016). The family has to develop a sufficient support system to encounter type 1 diabetes-related problems. A sufficient level of coping mechanism helped the effective management of type 1 diabetes mellitus and maintain a good level of family quality of life (Jaser, 2011). The family of children with type 1 diabetes mellitus had reported severe level of psychological issues and the several studies showed that the social support helped the parents to achieve a sufficient level of health outcome (Aldubayee et al. 2020).

Diabetes patients are increasing in an alarming rate in world wide. The increased level of blood sugar in the human blood is called diabetes and it is caused by different reasons (Mobasseri, et al. 2020). Type 1 diabetes mellitus is commonly seen in children and adolescent (Baharvand, & Hormozi, 2019). Type 1 diabetes mellitus is considered as an autoimmune disease and affect the beta cells in the human pancreas. Type 1 diabetes mellitus is also known as childhood chronic illness and was previously known as juvenile diabetes and insulin-dependent diabetes mellitus (Doyle, & Grey, 2010). The type 1 diabetes mellitus cases increased 3 to 5 percentages in every year and the previous study showed that the three new cases per one lakh population with children below the age of fourteen is reported in India (Das, 2015). The families have a major role in the management of type 1 diabetes mellitus. Family is considered as a unit of psychosocial and physical support for type 1 diabetes mellitus children (Zysberg, & Lang, 2015). The parents of children with type 1 diabetes mellitus involvement in its management showed positive results (Anderson et al. 1997). Type 1 diabetes mellitus is identified as a lifelong condition and requires a strong commitment for the management (Miller, & Dimatteo, 2013).

Socioeconomic status (SES) is defined as a “measure of one’s combined economic and social status” (House, 2002). Socio-economic status measures the income, education level, and occupation. Education and occupation influence the family income. The socio-economic status is also related to health outcomes (Baker, 2014). The individual educational, occupational and income level, influences the social class or maintains the socio-economic status in society (Conger, Conger, & Martin, 2010). The socio-economic status influenced the person's physical health (Wang, & Geng, 2019). Perceived social support means “the person believes to be available, regardless of whether the support is available and may assess the degree of intimacy and affection within one’s relationships” (Social Support, 2021). The perceived social support is divided into three main domains such as significant others' support, family support, and friend’s support (Vaananen, Marttunen, Helminen, & Kaltiala-Heino, 2014). “Social support is defined as a psychological sense of belonging, acceptance, and assistance which increases people's ability to cope better with stressful conditions” (Mohebi et al. 2018). Social support plays an important role in the management of stress and it helps the person to maintain good health and wellbeing (Steese et al. 2006). Social support is considered as an agent of mental health or psychological wellbeing of a person especially in the case of a family with diabetes (Rad, Bakht, Feizi, & Mohebi, 2013). In this context the study aims to assess the level of perceived social support and to measure the level of socio-economic status among parents of children with type 1 diabetes mellitus.

Methods & Measures

This study used descriptive research design and the Convenient sampling method to collect data from respondents. The universe of the study is parents of diabetes mellitus children registered under Mittayi Project at the Kozhikode. Mittayi Project is run by the Kerala state government for the welfare of type 1 diabetes mellitus children and their families (Mittayi,2017). The study participants are parents of children with type 1 diabetes mellitus and data from the respondents were collected using a structured interview schedule. A total of 100 samples were collected from the Kozhikode Mittayi project area. The sanction to conduct the study was obtained from Mittayi Project. The study was approved by the Institutional human ethics committee, Central University of Kerala.

The study used the multidimensional scale of perceived social support for the assessment of perceived social support. The seven-point social support scale was identified with three subscales such as significant other's support, friend's support, and family support. The scale assessment score showed that the range of mean score between 1 to 2.9 considered lower level of perceived social support, the mean range between 3 to 5 measured as a moderate level of perceived social support, and last mean range between 5.1 to 7 considered a higher level of perceived social support (Zimet, Dahlem, Zimet & Farley, 1988). The present study used the Modified Kuppaswamy Scale Updated for the Year 2018. It assessed for the social class or socio-economic status of the parents of children with type 1 diabetes mellitus. The Socioeconomic status scale measured monthly family income, education of the head of the family, and occupation of the head of the family. It classified different levels of socioeconomic status from lower to upper status (Saleem, 2018).

Results

Table1: Socio-Demographic profile of parents of children with type 1 diabetes mellitus

Parent Gender	Percentage (%)
Father	36
Mother	64
Total	100%
Parent Age	Percentage
25-34	28
35-44	52
45-54	20
Total	100%
Child Gender	Percentage
Male	54
female	46
Total	100
Occupation of family Head	Percentage
Technicians and Associate Professionals	1
Clerks	6
Skilled Workers and Shop & Market Sales Workers	32
Skilled Agricultural & Fishery Workers	11
Craft & Related Trade Workers	1

Plant & Machine Operators and Assemblers	4
Elementary Occupation	40
Unemployed	5
Total	100
Education in the head of the family	Percentage
Graduate	5
Higher Secondary or diploma	22
High school certificate	58
Middle school certificate	11
Primary school certificate	4
Total	100
Family Monthly Income	Percentage
Below 6323	61
6327-18929	37
63182-126356	2
Total	100

Among the participants of the study, 64 percentage were mothers and 36 percentage were fathers of children with type 1 diabetes mellitus. The parent's age group was found to be between 25 to 54 years of age, and the mean age of parents is 38.29 and 5.75 showed the Standard Deviation. 52 percentages of parents of children with type 1 diabetes mellitus belong to the age group of 35 to 44 years, 28 percentages of parents included in the 25 to 34 years of age group and 20 percentages of parents of children with type 1 diabetes mellitus belong to the age group of 45 to 54 years. 54 percentages of the respondents were identified with male type 1 diabetes mellitus children and 46 percentages have shown female type 1 diabetes mellitus children. 40 percentages of parents of children with type 1 diabetes mellitus have elementary occupation, 32 percentages are skilled labourers or sales executives and 11 percentages of parents are agriculturalists or fishermen. 58 percentages of parents have high school level of education, 22 percentages of them have higher secondary level of education, and 11 percentages of parents of children with type 1 diabetes mellitus have only middle school education. 61 percentages of parents of children with type 1 diabetes mellitus have reported family monthly income was below the level of 6323 Indian rupees and 37 percentages of parents of children with type 1 diabetes mellitus showed the family monthly income between 6327 to 18929 Indian rupees.

Table 2: Socio-Economic Status of Parents of children with type 1 diabetes mellitus.

Socio Economic Status (SES)	Frequency	Percentage %
Upper Middle	3	3%
Lower Middle	37	37%
Upper Lower	60	60%
Total	100	100%

The study result showed that 60 percentages of parents of children with type 1 diabetes mellitus belong to the upper Lower-class category of socio-economic status. 37 percentages of parents of children with type 1 diabetes mellitus are from lower middle socioeconomic status or class and only 3 percentages of parents of children with type 1 diabetes mellitus belongs to the upper-middle-class.

Table 3: Perceived Social Support among Parents of Children with type 1 diabetes mellitus.

Level of Social Support	frequency	Percentages
Low Support	3	3%
Moderate Support	69	69%
High Support	28	28%
Total	100	100%
Significant Other		
Level of Social Support	frequency	Percentages
Low Support	2	2%
Moderate Support	12	12%
High Support	86	86%
Total	100	100%
Family Support		
Level of Social Support	frequency	Percentages
Low Support	2	2%
Moderate Support	7	7%
High Support	91	91%
Total	100	100%
Friends' Support		
Level of Social Support	frequency	Percentages
Low Support	75	75%
Moderate Support	17	17%
High Support	8	8%
Total	100	100%

The study result showed that 69 percentage of parents reported a moderate level of perceived social support. 28 percentage of parents showed a high level of perceived social support and only 3 percentages reported a low level of perceived social support. The sub-scale of perceived social support score result has been shown in this study. The significant others mean the person who helped more concerning diabetes children caring process. In most cases, the diabetes team members (Medical Professionals) are involved as significant others' support. The study showed that 86 percentage of parents of children with type 1 diabetes mellitus reported a high level of significant others' support. 12 percentage of parents reported a moderate level of significant others' support and 2 percentages reported low-level of significant others social support. The result showed that 91 percentages of parents of children with type 1 diabetes mellitus reported a high level of family support. 7 percentages of parents reported a moderate level of family support and only 2 percentages of parents of children with type 1 diabetes mellitus reported a low level of family support. The study result showed that 75

percentage of parents reported a low level of friends' support. 17 percentage of parents reported a moderate level of friends' support and 8 percentages of parents of children with type 1 diabetes mellitus reported a high level of friends' support.

Table 4: Socioeconomic Status and perceived social support among parents of children with type 1 diabetes mellitus.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.585a	4	.333
Likelihood Ratio	5.599	4	.231
Linear-by-Linear Association	3.614	1	.057
N of Valid Cases	100		

a. 5 cells (55.6%) have an expected count of less than 5. The minimum expected count is .06.

The statistical test result showed that a p-value of .333. The chi-square test result showed a p-value of more than 0.5 and accepted the null hypothesis. The study revealed that there is no relationship between the socio-economic status and the perceived social support among the parents of children with type 1 diabetes mellitus.

Table 5: Parent's age and perceived social support among parents of children with type 1 diabetes mellitus.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.350a	4	.672
Likelihood Ratio	3.155	4	.532
Linear-by-Linear Association	.084	1	.771
N of Valid Cases	100		

a. 3 cells (33.3%) have an expected count less than 5. The minimum expected count is .60.

The statistical test result showed a p-value of .672. The chi-square test result showed a p-value of more than 0.5 and accepted the null hypothesis. The study revealed that there is no relationship between parental age and the perceived social support among the parents of children with type 1 diabetes mellitus.

Table 6: Gender and perceived social support among parents of children with type 1 diabetes mellitus.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.594a	2	.014
Likelihood Ratio	9.362	2	.009
Linear-by-Linear Association	8.507	1	.004
N of Valid Cases	100		

a. 2 cells (33.3%) have an expected count less than 5. The minimum expected count is 1.08.

The statistical test result showed p-value .014. The chi-square test result showed a p-value less than 0.5 and rejected the null hypothesis. The study revealed that there is relationship between the parental gender (mothers or fathers of type 1 diabetes mellitus) and the perceived social support among the parents of children with type 1 diabetes mellitus.

Discussions

This study discuss the socio-demographic variables among parents of children with type 1 diabetes mellitus. The mothers of children with type 1 diabetes mellitus participated more in this present study. Similar studies reported that of mothers of children with type 1 diabetes mellitus participation (Herbert, Wall, Monaghan, & Streisand, 2017). The study reported the mean age of parents of type 1 diabetes children age 38.29 and most of the parents age are between 25 to 54 years of age. Previous study also reported almost similar mean age of the participants (40.6) and the age group between 25 to 51 years of age (Rankin, et al.2016). Most of the parents of children with type 1 diabetes mellitus had elementary occupation, agricultural and fisheries-related job. Prior studies' have identified that occupation and educational level plays an important role in the management of type 1 diabetes mellitus (Baharvand, & Hormozi, 2019). The results of the present study showed that majority of the parent’s educational level is above the level of high school. Education aids in improving the health care outcomes (Hahn, & Truman, 2015). The study showed that the majority of parents' family income showed very low level which is reflected in other studies too. The families with type 1 diabetes mellitus living conditions had reported undesirable and their family income showed scarcity. But increased levels of education had reported among parents of children with type 1 diabetes mellitus (Arzamastseva, & Martynova,1991).

The study showed that the socio-economic status of the parents of children with type 1 diabetes mellitus had revealed that most of them belong to the lower-middle class category or lower level of socio-economic status. The lower level of socio-economic status had negatively affected the medical conditions among type 1 diabetes mellitus children (Walker et al.2015). It is evident from the studies that the increased level of diabetes-related cost in Indian rural and urban health sectors and diabetes-related expenditure is doubled in India during 1998 to 2005. It led to a diabetes-related economic burden in India (Ramachandran et al.2007). The diabetes-related

treatment expenditure is very high in south India. Health expenditure showed a high level in connection with the diabetes complications and hospital-based diabetes treatments (Shobhana et al.2000). The health or diabetes-related health expenditure showed very high in the private medical treatment but the affordable treatment or low level of health expenditure reported in the government health areas (Elrayah et al.2005). The present study showed the decreased level of income among parents of children with type 1 diabetes mellitus and they may be struggling with the diabetes-related economic burden.

The parents of children with type 1 diabetes mellitus are confronted with daily child-related diabetes situations. Social support has been identified as a greater game-changer of vulnerable situations among the parents of type 1 diabetes mellitus. The present study revealed that the majority of the parents of type 1 diabetes mellitus showed a moderate level of perceived social support. Perceived social support is identified to play a great role in the management of parental anxiety and depression (Roohafza et al.2014). The significant others' support means the persons who helped more concerning diabetes children caring process. Usually, the diabetes treatment team or diabetes multidisciplinary team members (medical professionals) support in the treatment or caring process of parents of children with type 1 diabetes mellitus. The study showed that most parents of children with type 1 diabetes mellitus reported a high level of social support from significant others. The parents of children with type 1 diabetes mellitus required more practical and psychological support from the health care professionals for the better management of children with type 1 diabetes mellitus (Rankin, et al.2016). The health care professionals can assess the need of parents or families of type 1 diabetes mellitus and provide adequate social support. A sufficient level of perceived social support had reported better diabetes-related health outcomes (Kuru, & Piyal, 2018).

Family social support has been identified as a great role in the management of type 1 diabetes mellitus children. The study showed that the parents of children with type 1 diabetes mellitus reported a high level of family social support. Social support is considered the most effective mechanism for diabetes management. The family and health care professional provide a higher level of social support (Mohebi et al.2018). Family social support helps to overcome the stress faced by the individual (Miller & Dimatteo, 2013). The family members are identified as a key role in the management of diabetes mellitus and support among family members showed good diabetes-related health results (Baig, Benitez, Quinn, & Burnet, 2015). The study revealed that the majority of the parents of children with type 1 diabetes mellitus reported a very low level of friend's social support. The present study showed a very low level of peer support among parents of children with type 1 diabetes mellitus. The parental increased level of psychological issues is identified along with a decreased level of parental friend's support (Whittemore et al.2012). The present study result showed that there is a significant difference between parents' gender (Mother or Father) and perceived social support in this study. The previous studies had observed the difference between the mothers and fathers of children with type 1 diabetes mellitus (Dorman et al.2000).

Conclusions

In conclusion, the parents of children with type 1 diabetes mellitus in this study showed a moderate level of perceived social support. The social support domain such as family support and significant others showed

higher level of perceived social support. It is also evident from the study that support from the friends is also not at the expected level. Most of the parents of children with type 1 diabetes mellitus reported lower-middle level of social status or socioeconomic status. The mothers and fathers reported a significant difference in the perceived social support but the parents' age and socio-economic status have identified no difference in the perceived social support among parents of children with type 1 diabetes mellitus. Medical social workers or mental health professionals can help the parents of children with type 1 diabetes mellitus. The medical social workers should facilitate the peer support group for the parents of children with type 1 diabetes mellitus. The peer support group would work as a social network among parents of children with type 1 diabetes mellitus. It helps the parental satisfaction, share diabetes-related relevant information, experiences, and positive child-caring practices.

Future Implications

Future research should be conducted on the longitudinal design-based assessment of social support. It would help the parents of children with type 1 diabetes mellitus to identify the social support gaps and use the remedial measures for future support. The peer support among parents of children with type 1 diabetes mellitus was noticed as very important. The present study suggests peer support-based intervention. It would help the parents of children with type 1 diabetes mellitus for the proper management of type 1 diabetes mellitus.

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