



Articles

The Relationship Satisfaction of Parents to Children With Congenital Heart Disease

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Abstract

The purpose of the research is to describe the marital satisfaction of parents with a child with congenital heart disease, and the factors associated with it. The data were collected using an electronic questionnaire from applicable parents ($n = 104$) via the website of the Finnish Association for Heart Children and Adults and a closed Facebook forum where such parents are members. Marital satisfaction was measured using the ENRICH Marital Satisfaction (EMS) scale. The data were analysed using statistical methods. The variables were described by frequencies, percentages, and dispersion measures ($Md =$ median, $Q_1 =$ lower quartile, $Q_3 =$ upper quartile). Associations between the background variables and relationship satisfaction were examined using Mann-Whitney U test and Kruskal-Wallis test. Most of the surveyed parents were quite satisfied with their relationships. Parental factors associated with marital satisfaction were the gender of the parent, current health situation, support received from the spouse, problems with the spouse, and remarkable changes in economic situation during last year. The age of the child with a congenital heart disease was a factor associated with marital satisfaction. The interaction skills of the parents must continue to be supported and strengthened, because good interpersonal skills increase marital satisfaction and help resolve the conflicts that may arise in a relationship.

Keywords: child with a congenital heart disease, parents, marital satisfaction

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The marital between parents forms the basis of a family (Paajanen, 2007). Several studies have suggested that embarking on parenthood decreases marital satisfaction (e.g. Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008; Salmela-Aro, Aunola, Nurmi, Saisto, & Halmesmäki, 2003; Twenge, Campbell, & Foster, 2003). In today's world, neither shared possessions nor children no longer guarantee the continuation of a relationship. Instead, people value the quality of the marital relationships they have (Malinen, 2011). Forming and maintaining a high-quality marital relationship has emerged as a special life goal (Kontula, 2013). However, such relationships are hard to sustain (Rosen-Grandon, Myers, & Hattie, 2004).

The marital relationship between parents is not only about interaction between two spouses. On the contrary, the well-being or suffering of any family member affects the other members of the family as well. The quality of the parents' marital relationship is a significant factor for a child's mental well-being (Salo, 2011). Marital satisfaction has an impact on parenthood – a happy spouse is often a happy parent as well (Malinen, 2011). In addi-

tion, a satisfactory relationship and support from one's spouse can provide protection against emotional exhaustion and hopelessness (Murphy, Christian, Caplin, & Young, 2007). Every year, over 500 children with congenital heart disease (CHD) are born in Finland (Rovamo & Rautiainen, 2014). No known research exists in Finland on the marital satisfaction of parents to heart children, and very few international studies have been carried out on the topic. Thus, it is an important focus of study.

Marital Relationship

The term *marital relationship* refers to an emotional relationship between two people. The quality of this relationship is the basis for marital satisfaction (Rosen-Grandon, Myers, & Hattie, 2004). A good marital relationship is considered to be one of the most important aspects of life, in addition to good parenting and spending time with one's family (Paajanen, 2005). Most people regard their spouse and other members of their family as their most important source of well-being and happiness in life (Kontula, 2013).

Marital satisfaction can be accomplished through love, faithfulness, and good communication (Rosen-Grandon et al., 2004). In a good and long-lasting relationship, spouses have the ability to solve any emerging conflicts through communication and conflict resolution skills (Kiiski, 2011; Pukkala, 2006). A good marital relationship also involves mutual appreciation and respect and having a strong trust in one's spouse in all matters (Kontula, 2013). The degree of happiness in a relationship affects the degree of happiness in other areas of life, too: research suggests that people who are happy in their marital relationships are also happier overall compared to people who are unhappy in their relationships (Dyrdal, Røysamb, Nes, & Vittersø, 2011; Kontula, 2009).

Child With a Heart Defect

A *heart child* refers to a child with a congenital heart defect. Heart defects are the most common birth defects in children (Rovamo & Rautiainen, 2014). Nearly all structural heart defects can be treated, and their prognoses have improved substantially during the past twenty years due to developments in diagnosis and treatment (Kaarne, Jokinen, Pesonen, & Leijala, 2008). The parents of a heart child experience constant worry over their child's illness (Van Horn, DeMaso, Gonzalez-Heydrich, & Dahlmeier Erickson, 2001) and encounter various sources of stress (Karsdorp, Everaerd, Kindt, & Mulder, 2007; Lawoko, 2007), such as challenges related to working while their child is ill (Lawoko & Soares, 2002, 2003) and, as a consequence, potential changes to their financial situation (Karsdorp et al., 2007; Lawoko, 2007; Van Horn et al., 2001). Because of these stress factors, special attention needs to be paid to supporting the marital relationships between the parents of heart children. A good relationship helps parents cope with stress factors (Goldbeck & Melches, 2006) and acts as a buffer against posttraumatic stress, depression, and anxiety, whereas low marital satisfaction has been linked to increased levels of depression and anxiety (Rychik et al., 2013).

Factors Associated With Marital Satisfaction

There is limited data available on the factors associated with marital satisfaction among the parents of heart children. Mothers of heart children have been shown to experience higher levels of anxiety (Rychik et al., 2013) and emotional exhaustion (Lawoko & Soares, 2002) compared to fathers of heart children. Emotional support has been found to have a positive correlation with marital satisfaction among the parents of heart children (Rychik et al., 2013). The age of a heart child has not been identified as a relevant factor with regard to the level of stress experienced by the family or the mother's ability to cope (Tak & McCubbin, 2002). A child's heart

defect has nonetheless not been associated with the marital satisfaction of the child's parents: already during pregnancy, mothers expecting children with heart defects have been found to have lower levels of marital satisfaction compared to mothers expecting healthy children (Rychik et al., 2013). Having children with serious heart malformations reflects negatively on the mental health of mothers (Solberg, Dale, Holmstrøm, Eskedal, Landolt & Vollrath, 2012). By contrast, other studies have discovered no link between a child's heart defect, regardless of its severity, and decreased marital satisfaction between parents (Dale et al., 2013) or between a child's heart defect and parents' stress levels (Tak & McCubbin, 2002; Uzark & Jones, 2003).

It is generally known that several factors, such as the gender of the parent, are linked to the marital satisfaction of parents. Mothers are less satisfied with their relationships compared to fathers (Twenge et al., 2003). The health status of the parents of a newborn has also been associated with marital satisfaction: the higher the level of depression in the parents of a newborn, the lower the level of their marital satisfaction (Salmela-Aro et al., 2003).

In addition, the support received from one's spouse – caring for one's spouse, providing emotional support, showing appreciation, and offering help – is related to communication and happiness in a relationship (Kontula, 2013). The age of the child has also been shown to play a role in marital satisfaction: mothers of small children have been found to be more dissatisfied with their relationships compared to mothers of older children (Twenge et al., 2003).

Aim of the Study

The aim of this study was to describe the marital satisfaction of parents to children with heart defects and the factors associated with it. The goal was to produce knowledge that can be utilized while planning and developing support schemes for the parents of heart children.

Research questions:

1. What is the level of marital satisfaction among the parents of heart children?
2. Which parent and heart child background factors are associated with marital satisfaction among the parents of heart children?

Methods

Participants and Procedure

The study focuses on the parents of heart children, and it is a quantitative cross-sectional study. The data for the study was collected between 2015 and 2016 through a link to an electronic form on the website of the Finnish Association for Heart Children and Adults (www.sydanlapsetja-aikuiset.fi) as well as through a closed Facebook group where the parents of heart children were members. To participate to this study there was one inclusion criterion: having a heart child in the family was a prerequisite for participating in the study. Both parents of a heart child could participate in the study, responding to the questionnaire separately.

Each stage of the study was guided by the principles of good scientific practice (Polit & Beck, 2012). Participation in the study was entirely voluntary, and the introduction to the questionnaire stated that the parents may

terminate their participation in the study at any stage. The Finnish Association for Heart Children and Adults, as well as the administrators of the Facebook group, gave their consent to carrying out the study. By responding to the questionnaire, the parents gave informed consent to participate in the study. Participation was anonymous (Burns & Grove, 2005).

The data comprises the answers of 104 parents of heart children. The questionnaire contained structured questions concerning parents and their heart children. The questions solicited background variables (Table 1) and parents' views on their marital satisfaction (ENRICH). The background variables were chosen based on existing research (Goldbeck & Melches, 2006; Lawoko & Soares, 2003; Rychik et al., 2013; Solberg et al., 2012).

Table 1

Parent's And Children's Demographic Characteristics (N = 99–104)

Variable	n	%
Parents		
Mother	86	82.7
Father	18	17.3
Age		
22–30 year	26	25.0
31–35 year	27	26.0
36–40 year	32	30.8
41–53 year	19	18.3
Marital status		
Partnered	96	92.3
Not partnered	8	7.7
Family structure		
Nuclear family	76	73.1
Blended family	20	19.2
Others	8	7.7
Education		
No education	13	12.5
Vocational education	42	40.4
College or polytechnic degree	27	26.0
University degree	22	21.2
Employment status		
Employment	65	62.5
Not employment or working	39	37.5
Religious community		
Yes	78	75.0
No	26	25.0
Parent's health status		
Very poor, quite poor or satisfactory	16	15.4
Quite good	69	66.3
Very good	19	18.3
Support amount from a spouse		
Not at all, very little, little or moderately support	13	13.1
Much support	23	23.2
Very much support	63	63.6
Significant illness or injury during the last year		
No	87	83.7
Yes	17	16.3
Problems with a spouse during the last year		
No	72	69.2
Yes	31	29.8
Significant change in economic status		
No	61	58.7
Yes	43	41.3

Variable	<i>n</i>	%
Adaptation to the child's heart decease		
Very poor, quite poor or moderately	18	17.3
Quite good	57	54.8
Very good	29	27.9
Got advance information about the child's heart disease		
No advance warning	77	74.0
Advance warning before birth	27	26.0
Number of children in the family		
1	19	18.3
2	44	42.3
3	19	18.3
4 or more	22	21.2
Age of the child		
0 – ≤ 12 month	18	17.3
> 1 – ≤ 3 year	20	19.2
> 3 – ≤ 7 year	28	26.9
> 7 – ≤ 12 year	30	28.8
> 12 – ≤ 22 year	8	7.7
Child's health status		
Very poor, quite poor, satisfactory	22	21.2
Quite good	50	48.1
Very good	32	30.8

Instrument

Marital satisfaction was measured with the ENRICH Marital Satisfaction (EMS) instrument. The EMS instrument consists of 15 statements that are used to evaluate marital satisfaction (10 statements) and idealistic distortion (5 statements). The statements about marital satisfaction addressed personality issues, communication, conflict resolution, financial management, leisure activities, sexual relationships, children and parenting, family and friends, role relationships, and spiritual beliefs. The statements used to measure idealistic distortion describe the relationship in an exaggeratedly positive manner. The idealistic distortion scores are used to correct for the potential bias in the marital satisfaction scores. The statements are answered with a 5-point Likert scale (ranging from *strongly agree* to *strongly disagree*) (Fowers & Olson, 1993). No known Finnish study has previously used the instrument, making this study a pilot for the instrument in the Finnish context. The instrument was double translated for the purpose of this study, and the response scale was expanded to a 7-point scale to increase precision for further inquiry. The background variables were examined individually in relation to both sum variables since the idealistic distortion scale could not be used for score adjustment due to altering the original response scale.

An existing statistical instrument, established as a reliable measure of marital satisfaction, was used in the data collection (Fowers & Olson, 1993). The developers of the instrument consented to its use in this study. The Cronbach alpha values of the sum variables created (marital satisfaction $\alpha = 0.850$; idealistic distortion $\alpha = 0.854$) exceeded 0.7 and can thus be considered internally consistent (Polit & Beck, 2012). The comparability of the results to previous results based on the instrument's mean sum variables is weakened by the fact that points were added to the scale.

Data Analysis

The variables were described by frequencies, percentages, and dispersion measures (Md = median, Q_1 = lower quartile, Q_3 = upper quartile). Background variables were recategorized based on frequencies. The EMS instrument includes both positive and negative statements, and they were translated following the instrument guide-

lines prior to the analysis (Fowers & Olson, 1993). Next, two sum variables were created: marital satisfaction (10 statements) and idealistic distortion (5 statements), whose internal consistency was tested by Cronbach's alpha. Since the group sizes were small, the links between the background variables and relationship satisfaction were examined through nonparametric tests (the Mann-Whitney U test / the Kruskal-Wallis test). If a qualitative variable had more than two values, the Mann-Whitney U test with a corrected p -value was applied in the paired comparison. The limit of statistical significance was $p < .05$ (Polit & Beck, 2012). The data were analyzed using the IBM SPSS 23.0 program.

Results

Background Information on Heart Children and Their Parents

The parents ($N = 104$) were on average 35 years of age ($SD = 6.6$, range 22–53). 83 per cent of the respondents were mothers of heart children. The majority were living in a marital relationship (92%) and in a nuclear family (73%). 40 per cent of the parents had a vocational degree, 26 per cent had an applied sciences degree, and 21 per cent an academic degree. The majority of the parents were working (63%), and belonged to a religious community (75%). The parents of heart children mostly considered themselves healthy (85%). The heart children were on average 6 years of age ($SD = 4.5$, range 0–22). The current health status of the heart children varied between very good (31%), fairly good (48%), and satisfactory or worse (21%; Table 1). The three most common heart defects among the respondents' children were ventricular septal defect (VSD), atrial septal defect (ASD), and coarctation of the aorta (CoA). 101 of the respondents' children were born with their condition (Table 1).

Marital Satisfaction Among the Parents of Heart Children

The vast majority of the parents surveyed were at least fairly satisfied with their marital relationships. Nearly a third of the respondents (31%) were very happy with their relationships. About a quarter (28%) were happy with their relationships, while a little over a quarter (30%) were fairly satisfied with their relationships. Among the parents surveyed, 12 per cent were dissatisfied or not satisfied/dissatisfied with their relationships.

The parents were predominately fairly satisfied with their marital relationships ($Md = 48.5$, $Q_1 = 39.3$, $Q_3 = 56.8$). Over half of the parents (53%) were satisfied with the communication they had with their spouses and felt understood by their spouses. Over two thirds (70%) of respondents were satisfied with decision-making and conflict resolution in their relationships. More than a third (40%) were dissatisfied with their financial situation and the way financial decisions were made in the household. A third (33%) of the parents were satisfied with the time they shared with their spouses, and over half (52%) were satisfied with the way both spouses regarded their responsibilities as parents. Half (50%) of the respondents were happy with the way spirituality and values were expressed in the household, but it is worth noting that 28 per cent of the respondents had no opinion on the matter.

Some of the parents of heart children surveyed presented an idealistically distorted view of their relationships ($Md = 23.0$, $Q_1 = 16.0$, $Q_3 = 27.0$). Almost half of the respondents (46%) stated they and their spouses understand each other almost perfectly, and 10 per cent saw their relationships as perfect successes. Nearly a fifth of the parents (17%) fully agreed that they had never, not even for a moment, regretted their relationship with their

spouses. However, almost half of the respondents (48%) felt that some of their needs were not met in their relationships.

The Parent and Heart Child Background Factors Associated With the Marital Satisfaction of the Parents of Heart Children

Among the parental background factors included, the gender of the parent, the current health status of the parent, the degree of support received from one's spouse, problems with one's spouse, and significant changes in one's financial situation were found to have a statistically significant link to the marital satisfaction of the parents. The fathers of heart children ($Md = 52.2$, $Q_1 = 46.8$, $Q_3 = 59.5$) rated their relationships higher compared to the mothers ($Md = 46.5$, $Q_1 = 38.0$, $Q_3 = 56.0$). The parents who regarded their current health status as very good ($Md = 51.0$, $Q_1 = 41.0$, $Q_3 = 57.0$) were more satisfied with their relationships compared to the parents who regarded their health as satisfactory or worse (paired comparison $p = .027$). The parents who received a high degree of support ($Md = 49.0$, $Q_1 = 39.0$, $Q_3 = 51.0$) (paired comparison $p = .045$) or a very high degree of support ($Md = 51.0$, $Q_1 = 43.0$, $Q_3 = 58.0$) (paired comparison $p < .001$) were more satisfied with their relationships compared to the parents who received a moderate or lower degree of support from their spouses ($Md = 34.0$, $Q_1 = 28.5$, $Q_3 = 45.0$). The parents who had experienced problems with their spouses over the previous year were less satisfied with their relationships ($Md = 38.0$, $Q_1 = 33.0$, $Q_3 = 46.0$) compared to the parents who had not faced problems during the same time period ($Md = 51.0$, $Q_1 = 44.0$, $Q_3 = 58.0$). The parents who had seen a significant change in their financial situation during the previous year were less satisfied with their relationships ($Md = 45.0$, $Q_1 = 33.0$, $Q_3 = 46.0$) compared to the parents whose financial situation had remained similar during the same time period ($Md = 50.0$, $Q_1 = 44.0$, $Q_3 = 58.0$). There was no link between other background factors and marital satisfaction (Table 2).

Table 2

The Factors Associated With the Marital Satisfaction of Parents (N = 99–104)

Demographic	Marital satisfaction				
	<i>n</i>	<i>Md</i>	<i>Q</i> ₁	<i>Q</i> ₃	<i>p</i> -value
Parent					.038*
Mother	86	46.5	38.0	56.0	
Father	18	52.2	46.8	59.5	
Age					.830
22–30 year	26	47.5	41.5	51.8	
31–35 year	27	46.0	43.0	60.0	
36–40 year	32	49.5	35.5	56.8	
41–53 year	19	49.0	41.0	55.0	
Education					.063
No education	13	50.0	43.5	59.0	
Vocational education	42	43.5	35.0	52.3	
College or polytechnic degree	27	50.0	40.0	56.0	
University degree	22	54.5	43.8	60.3	
Employment status					.835
Employment	65	49.0	40.0	56.0	
Not employment or working	39	47.0	38.0	58.0	

Demographic	Marital satisfaction				p-value
	n	Md	Q ₁	Q ₃	
Parent's health status					.034*
Very poor, quite poor or satisfactory	16	42.0	33.3	49.0	
Quite good	69	49.0	40.5	58.0	
Very good	19	51.0	41.0	57.0	
Support amount from a spouse					< .001***
Not at all, very little, little or moderately	13	34.0	28.5	45.0	
Much	23	49.0	39.0	51.0	
Very much	63	51.0	43.0	58.0	
Problems with a spouse during the last year					< .001***
No	72	51.0	44.0	58.0	
Yes	31	38.0	33.0	46.0	
Significant changes in a economical situation					.010*
No	61	50.0	44.0	58.0	
Yes	43	45.0	33.0	46.0	
Adaptation to the child's heart disease					.157
Very poor, quite poor or moderately	18	46.5	33.8	51.0	
Quite good	57	47.0	40.0	56.0	
Very good	29	51.0	40.0	58.5	
Got advance information about the child's heart disease					.470
No advance warning	77	49.0	38.5	56.0	
Advance warning before birth	27	48.0	41.0	59.0	
Number of children in the family					.318
1	19	47.0	39.0	56.0	
2	44	48.5	40.5	56.0	
3	19	44.0	34.0	53.0	
4 or more	22	50.5	40.3	59.3	
Age of the child					.047*
0 – ≤ 12 month	18	47.0	38.0	56.5	
> 1 – ≤ 3 year	20	39.0	33.0	50.0	
> 3 – ≤ 7 year	28	52.5	44.3	59.8	
> 7 – ≤ 12 year	30	50.0	41.8	56.0	
> 12 – ≤ 22 year	8	45.0	40.3	55.8	
Child's health status					.550
Very poor, quite poor, satisfactory	22	46.5	35.0	54.0	
Quite good	50	46.5	38.8	58.0	
Very good	32	50.5	41.0	57.0	

*p < .05. **p < .01. ***p < .001.

Among the heart child background factors included, the age of the child had a significant link to the relationship satisfaction of the parents. The parents of children above the 3 – 7 years age group ($Md = 52.5$, $Q_1 = 44.3$, $Q_3 = 59.8$) were on average more satisfied with their relationships. However, the paired comparison showed no differences in the relationship satisfaction of the parents between children in different age groups. The current health status of heart children was not identified as a significant factor for the marital satisfaction of the parents (Table 2).

The parental background factors that were statistically significant in relation to idealistic distortion were the gender of the parent, the degree of support received from one's spouse, and problems with one's spouse over the previous year. The fathers of heart children ($Md = 26.5$, $Q_1 = 23.0$, $Q_3 = 28.0$) idealized their relationships more

compared to the mothers ($Md = 22.5$, $Q_1 = 15.8$, $Q_3 = 27.0$). The parents who received a very high degree of support from their spouses ($Md = 25.0$, $Q_1 = 20.0$, $Q_3 = 29.0$) idealized their relationships more compared to the parents who received a moderate or lower degree of support from their spouses ($Md = 14.0$, $Q_1 = 9.0$, $Q_3 = 23.5$) (paired comparison $p = .003$). The parents who had experienced problems with their spouse over the previous year perceived their relationships less idealistically ($Md = 15.0$, $Q_1 = 13.0$, $Q_3 = 20.0$) compared to the parents who had not experienced problems with their spouses during the same time period ($Md = 25.0$, $Q_1 = 22.0$, $Q_3 = 28.0$). Other parental background factors had no significant statistical link to idealistic relationship positions. The data showed no association between the heart child background factors and the parents' idealistic views about their marital satisfaction (Table 3).

Table 3

The Factors Associated With the Idealistic Distortion of Parents (N = 99-104)

Demographic	Idealistic distortion				p-value
	n	Md	Q ₁	Q ₃	
Parent					.047*
Mother	86	22.5	15.8	27.0	
Father	18	26.5	23.0	28.0	
Age					.817
22–30 year	26	21.5	14.8	25.8	
31–35 year	27	23.0	18.0	29.0	
36–40 year	32	23.0	14.5	28.0	
41–53 year	19	24.0	19.0	27.0	
Education					.633
No education	13	25.0	16.0	26.5	
Vocational education	42	22.0	13.8	28.0	
College or polytechnic degree	27	24.0	17.0	27.0	
Academic degree	22	23.0	18.5	28.3	
Employment status					.901
Employment	65	23.0	17.0	27.0	
No employment or working	39	23.0	15.0	28.0	
Parent's health status					.235
Very poor, quite poor or satisfactory	16	21.0	11.5	26.5	
Quite good	69	24.0	16.5	28.0	
Very good	19	23.0	20.0	28.0	
Support amount from a spouse					< .001***
Not at all, very little, little or moderately	13	14.0	9.0	23.5	
Much	23	22.0	16.0	25.0	
Very much	63	25.0	20.0	29.0	
Problems with a spouse during the last year					< .001***
No	72	25.0	22.0	28.0	
Yes	31	15.0	13.0	20.0	
Significant changes in a economical situation					.127
No	61	23.0	18.0	28.0	
Yes	43	21.0	14.0	27.0	
Adaptation to the child's heart disease					.084
Very poor, quite poor or moderately	18	19.0	12.5	28.0	
Quite good	57	23.0	16.0	27.0	
Very good	29	26.0	21.5	28.5	

Demographic	Idealistic distortion				p-value
	n	Md	Q ₁	Q ₃	
Got advance information about the child's heart disease					.856
No advance warning	77	23.0	16.0	27.0	
Advance warning before birth	27	23.0	16.0	29.0	
Number of children in the family					.590
1	19	24.0	17.0	27.0	
2	44	23.5	16.3	28.0	
3	19	21.0	10.0	27.0	
4 or more	22	23.0	16.8	28.3	
Age of the child					.106
0 – ≤ 12 month	18	21.5	14.0	28.5	
> 1 – ≤ 3 year	20	15.5	12.3	26.5	
> 3 – ≤ 7 year	28	25.5	20.0	28.8	
> 7 – ≤ 12 year	30	23.0	17.0	26.3	
> 12 – ≤ 22 year	8	24.5	21.5	28.5	
Child's health status					.659
Very poor, quite poor, satisfactory	22	22.0	14.8	27.3	
Quite good	50	24.0	17.5	28.3	
Very good	32	23.0	15.5	26.8	

*p < .05. **p < .01. ***p < .001.

Discussion

This study describes marital satisfaction among the parents of heart children and the factors associated with it. A majority of the parents surveyed were satisfied with communication in their relationships and felt understood by their spouses. Moreover, a majority of the parents surveyed were satisfied with decision-making and conflict resolution in their relationships. Previous research has indicated that good communication and arguing skills are essential in conflict resolution and overcoming crises in relationships (Kiiski, 2011; Pukkala, 2006). On the other hand, the results show that a significant proportion of the parents were dissatisfied with the communication they had with their spouses and the level of understanding between them and their spouses. For this reason, more attention needs to be paid on boosting the communication skills of the parents of heart children, since that will also contribute to better conflict resolution skills.

The parents of heart children who participated in the study also overidealized their marital satisfaction. Higher marital satisfaction correlated with higher idealistic distortion. Previous research has produced similar results (Fowers, Applegate, Olson, & Pomerantz, 1994). This signifies that parents who are very satisfied with their marital relationships tend to see their relationships in an exaggeratedly positive light. Idealistic distortion manifested for instance as a significant number of parents stating they have a perfect understanding with their spouse, something which, according to Fowers and Olson (1993), is theoretically impossible.

The results show that several background factors relating to heart children and their parents are linked to the marital satisfaction of the parents. The gender of the parent is connected to marital satisfaction: the fathers were more satisfied in their relationships compared to the mothers. This has also been shown in previous studies (Lawoko & Soares, 2003; Rychik et al., 2013; Twenge et al., 2003). Only 17 per cent of the parents who participated in this study were fathers.

According to the results, the parents who had a very good perception of their health status were more satisfied with their marital relationships. Previous research has discovered a link between depression in the parents of newborns and low levels of relationship satisfaction. (Salmela-Aro et al., 2003). It is worth noting that relationship dissatisfaction may stem from having poor health, but it is also possible that dissatisfaction in one's relationship is the reason for the deterioration of one's health. Previous studies have shown a correlation between low marital relationship satisfaction among the parents of heart children and increased mental health issues. Meanwhile, a good marital relationship has been found to provide protection from depression and anxiety (Rychik et al., 2013) and to help cope with stress factors (Goldbeck & Melches, 2006).

The results indicate that the parents of heart children who had received a high degree of support from their spouses were the most satisfied in their marital relationships. Previous research has provided similar results (Kontula, 2013; Rychik et al., 2013). Potential problems encountered with one's spouse over the previous year also played a role in the marital satisfaction of the parents. Relationships may face various problems, and communication and conflict resolution skills are essential to overcome them, since these skills have been associated with marital satisfaction (Kiiski, 2011; Kontula, 2013; Paajanen, 2003). Confiding in one's spouse and receiving support can increase the level of intimacy and affection in a relationship, which in turn will improve marital satisfaction. Mutual support between spouses can be strengthened through good communication skills, which also help with tackling and solving problems.

The results of this study reveal that the parents who had experienced a significant change in their financial situation over the previous year were less satisfied in their marital relationships. Previous research has stated that household financial conditions may generate stress in families with heart children (Lawoko & Soares, 2002; 2003; Van Horn et al., 2001). This study does not specify whether the significant change described is a positive or a negative one, but it is nevertheless clear that significant changes in household finances, prompted by changes in employment situation, for instance, are linked to marital relationship satisfaction.

The results show a link between the age of a heart child and the marital satisfaction of parents: the parents of children above the 3 – 7 years age group were the most satisfied with their relationships. The heart defect of the child was congenital in nearly all of the respondents' cases, which suggests that these families have been able to adapt to the situation over time through information and potential treatment. Moreover, the heart condition of the child may have stabilized over time and may therefore not cause as much anxiety in the family as perhaps previously. This result corresponds to the results of Twenge et al. (2003), whose study found that the mothers of small children are less satisfied compared to the mothers of older children. It must be noted, however, that the paired comparison showed no statistically significant differences between different age groups of heart children and their parents' marital satisfaction.

Limitations

The study was a cross-sectional in a nature. Thus, the data were collected only once indicating the situation at this time. Due the cross-sectional nature of this study causality cannot be determined.

The link on the web page of the Finnish Association for Heart Children was open to everyone, so it was theoretically possible for people other than the parents of heart children to submit responses to the questionnaire. However, the fact that the parents of heart children who do not frequent the websites used for data collection

were excluded has to be taken into consideration when examining the results. For this reason, extrapolating the results to all parents of heart children must be done with reservation.

Conclusion

The parents of heart children surveyed were relatively satisfied with their marital relationships. The marital satisfaction among the parents of heart children and the factors associated with it have to be included when considering the well-being of families, as the relationship between parents reflects on the whole family in significant ways.

In the future, studying marital satisfaction among the fathers of heart children is especially important, since the majority of the participants of this study were mothers. More information is also needed on the kind of support the parents of heart children wish to have for their marital relationships.

Implications

Health care needs to focus on improving and boosting the communication skills of the parents of heart children, since good communication plays an important role in conflict and problem resolution in relationships. Moreover, good communication nurtures mutual support between spouses, something that correlates highly with marital satisfaction.

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Competing Interests

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References

- Burns, N., & Grove, S. K. (2005). *The practice of nursing research. Conduct, critique & utilization*. Maryland Heights, MO, USA: Elsevier/Saunders
- Dale, M. T. G., Solberg, Ø., Holmstrøm, H., Landolt, M., Eskedal, L., & Vollrath, M. (2013). Relationship satisfaction among mothers of children with congenital heart defects: A prospective case-cohort study. *Journal of Pediatric Psychology*, 38(8), 915-926. <https://doi.org/10.1093/jpepsy/jst038>
- Dyrdal, G. M., Røysamb, E., Nes, R. B., & Vittersø, J. (2011). Can a happy relationship predict a happy life? A population-based study of maternal well-being during the life transition of pregnancy, infancy, and toddlerhood. *Journal of Happiness Studies*, 12(6), 947-962. <https://doi.org/10.1007/s10902-010-9238-2>
- Fowers, B. J., & Olson, D. H. (1993). ENRICH Marital Satisfaction Scale: A brief research and clinical tool. *Journal of Family Psychology*, 7(2), 176-185. <https://doi.org/10.1037/0893-3200.7.2.176>

- Fowers, B. J., Applegate, B., Olson, D. H., & Pomerantz, B. (1994). Marital conventionalization as a measure of marital satisfaction: A confirmatory factor analysis. *Journal of Family Psychology, 8*(1), 98-103. <https://doi.org/10.1037/0893-3200.8.1.98>
- Goldbeck, L., & Melches, J. (2006). The impact of the severity of disease and social disadvantage on quality of life in families with congenital cardiac disease. *Cardiology in the Young, 16*(1), 67-75. <https://doi.org/10.1017/S1047951105002118>
- Kaarne, M., Jokinen, E., Pesonen, E., & Leijala, M. (2008). Lasten synnynnäiset sydänvialat [Congenital heart defects in children]. In J. Heikkilä, M. Kupari, J. Airaksinen, H. Huikuri, M. Nieminen, & K. Peuhkurinen, (Eds.), *Kardiologia* [Cardiology] (pp. 970-1013). Helsinki, Finland: Duodecim Medical Publications Ltd.
- Karsdorp, P. A., Everaerd, W., Kindt, M., & Mulder, B. J. M. (2007). Psychological and cognitive functioning in children and adolescents with congenital heart disease: A meta-analysis. *Journal of Pediatric Psychology, 32*(5), 527-541. <https://doi.org/10.1093/jpepsy/jsl047>
- Kiiski, J. (2011). *Suomalainen avioero 2000-luvun alussa. Miksi avioliitto puretaan, miten ero koetaan ja miten siitä selviydytään?* [The Finnish divorce in the early 2000s. Why are marriages dissolved? How is divorce perceived? How to cope with divorce?] (Doctoral Dissertation). Retrieved from http://epublications.uef.fi/pub/urn_isbn_978-952-61-0422-5/urn_isbn_978-952-61-0422-5.pdf
- Kontula, O. (2009). *Parisuhdeonnan avaimet ja esteet. Perhebarometri 2009* [Keys and obstacles of happiness in couple relationships. Family barometer 2009] (Publications of the Population Research Institute E38). Helsinki, Finland: Väestöliitto.
- Kontula, O. (2013). *Yhdessä vai erikseen? Tutkimus suomalaisten parisuhteiden vahvuuksista, ristiriidoista ja erojen syistä. Perhebarometri 2013* [Together or apart? A study on strengths, conflicts, and causes of separation in Finnish couple relationships. Family barometer 2013] (Publications of the Population Research Institute E47). Helsinki, Finland: Väestöliitto.
- Lawoko, S., & Soares, J. J. F. (2002). Distress and hopelessness among parents of children with congenital heart disease, parents of children with other diseases, and parents of healthy children. *Journal of Psychosomatic Research, 52*(4), 193-208. [https://doi.org/10.1016/S0022-3999\(02\)00301-X](https://doi.org/10.1016/S0022-3999(02)00301-X)
- Lawoko, S., & Soares, J. J. F. (2003). Quality of life among parents of children with congenital heart disease, parents of children with other diseases and parents of healthy children. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation, 12*(6), 655-666. <https://doi.org/10.1023/A:1025114331419>
- Lawoko, S. (2007). Factors influencing satisfaction and well-being among parents of congenital heart disease children: Development of a conceptual model based on the literature review. *Scandinavian Journal of Caring Sciences, 21*(1), 106-117. <https://doi.org/10.1111/j.1471-6712.2007.00444.x>
- Lawrence, E., Rothman, A. D., Cobb, R. J., Rothman, M. T., & Bradbury, T. N. (2008). Marital satisfaction across the transition to parenthood. *Journal of Family Psychology, 22*(1), 41-50. <https://doi.org/10.1037/0893-3200.22.1.41>
- Malinen, K. (2011). *Parisuhde pikkulapsiperheessä*. [Spousal relationship in families with young children.] (Doctoral dissertation). Retrieved from <https://jyx.jyu.fi/bitstream/handle/123456789/37002/9789513945145.pdf>

- Murphy, N. A., Christian, B., Caplin, D. A., & Young, P. C. (2007). The health of caregivers for children with disabilities: Caregiver perspectives. *Child: Care, Health and Development*, 33(2), 180-187.
<https://doi.org/10.1111/j.1365-2214.2006.00644.x>
- Paajanen, P. (2003). *Parisuhde koetuksella. Käsitteitä parisuhteesta ja sen purkautumisesta. Perhebarometri 2003* [Relationships under strain. Perceptions of relationships and their dissolution. Family barometer 2003] (Publications of the Population Research Institute E17). Helsinki, Finland: Väestöliitto.
- Paajanen, P. (2005). *Eri teitä vanhemmuuteen - kaksikymppisenä ja kolmekymppisenä lapsen saaneiden näkemyksiä perheellistymisestä ja vanhemmuudesta. Perhebarometri 2005* [Different routes to parenthood – perceptions of 20-something and 30-something parents on starting a family and becoming parents. Family barometer 2005] (Publications of the Population Research Institute E21). Helsinki, Finland: Väestöliitto
- Paajanen, P. (2007). *Mikä on minun perheeni? - Suomalaisen käsityksiä perheestä vuosilta 2007 ja 1997. Perhebarometri 2007* [What constitutes a family? – Finns' perceptions of family in 2007 and in 1997. Family barometer 2007] (Publications of the Population Research Institute E30). Helsinki, Finland: Väestöliitto
- Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice*. Philadelphia, PA, USA: Lippincott Williams & Wilkins
- Pukkala, T. (2006). *Millaiset avioliitot kestävät? Pitkässä parisuhteessa eläneiden käsitykset pysyvän avioliiton avaimista* [What makes a marriage last? Perceptions of people in long-term relationships on the keys to a lasting marriage] (Doctoral dissertation). University of Lapland, Rovaniemi, Finland.
- Rosen-Grandon, J. R., Myers, J. E., & Hattie, J. A. (2004). The relationship between marital characteristics, marital interaction processes, and marital satisfaction. *Journal of Counseling and Development*, 82(1), 58-68.
<https://doi.org/10.1002/j.1556-6678.2004.tb00286.x>
- Rovamo, L., & Rautiainen, P. (2014). Sydänvikaisen vastasyntyneen hoito [Treatment of a newborn with a heart defect]. Retrieved from
<http://www.kaypahoito.fi/web/kh/suosituksset/suositus;jsessionid=0EB2DBF6559F08F172F8FEC044DD85AE?id=nix02113>
- Rychik, J., Donaghue, D. D., Levy, S., Fajardo, C., Combs, J., Zhang, X., . . . Diamond, G. S. (2013). Maternal psychological stress after prenatal diagnosis of congenital heart disease. *The Journal of Pediatrics*, 162(2), 302-307.e1.
<https://doi.org/10.1016/j.jpeds.2012.07.023>
- Salmela-Aro, K., Aunola, K., Nurmi, J., Saisto, T., & Halmesmäki, E. (2003). Puolisoiden masentuneisuus ja tyytyväisyys parisuhteeseen lapsen syntymän yhteydessä (Depression and relationship satisfaction among spouses while having a newborn). *Psykologia*, 38(3), 167-179.
- Salo, S. (2011). *Parisuhdeongelmat ja lasten psyykinen hyvinvointi: kaksi tutkimusnäkökulmaa* [Couples conflicts and children's mental wellbeing: Two research approaches] (Doctoral Dissertation). Retrieved from
<https://jyx.jyu.fi/bitstream/handle/123456789/36861/9789513944476.pdf>
- Solberg, Ø., Dale, M. T. G., Holmstrøm, H., Eskedal, L. T., Landolt, M. A., & Vollrath, M. E. (2012). Trajectories of maternal mental health: A prospective study of mothers of infants with congenital heart defects from pregnancy to 36 months postpartum. *Journal of Pediatric Psychology*, 37(6), 687-696. <https://doi.org/10.1093/jpepsy/jss044>

- Tak, Y. R., & McCubbin, M. (2002). Family stress, perceived social support and coping following the diagnosis of a child's congenital heart disease. *Journal of Advanced Nursing*, 39(2), 190-198. <https://doi.org/10.1046/j.1365-2648.2002.02259.x>
- Twenge, J. M., Campbell, W. K., & Foster, C. A. (2003). Parenthood and marital satisfaction: A meta-analytic review. *Journal of Marriage and the Family*, 65(3), 574-583. <https://doi.org/10.1111/j.1741-3737.2003.00574.x>
- Uzark, K., & Jones, K. (2003). Parenting stress and children with heart disease. *Journal of Pediatric Health Care*, 17(4), 163-168. [https://doi.org/10.1016/S0891-5245\(02\)88322-5](https://doi.org/10.1016/S0891-5245(02)88322-5)
- Van Horn, M., DeMaso, D. R., Gonzalez-Heydrich, J., & Dahlmeier Erickson, J. (2001). Illness-related concerns of mothers of children with congenital heart disease. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(7), 847-854. <https://doi.org/10.1097/00004583-200107000-00020>