

Family Management and Risk/Protective Factors Predicts Quality of Life Among Military Children with Chronic Conditions

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BACKGROUND

“Family management” refers to the daily actions that families implement to manage their child’s chronic condition. As postulated by the Self- and Family Management framework (SFMF), family management describes the daily overall assessments provided and behaviors that a family exhibits to manage the physical, psychological, and social aspects of their child with special health care needs.

The SFMF proposes that family management and risk/protective factors relates to a child’s quality of life . SFMF posits that family management relates to multiple outcomes, including a child’s health-related quality of life. Available qualitative research suggests a theoretical link between family management, risk/protective and a child’s health-related quality of life but no quantitative research exists demonstrating such linkage. Risk/protective factors consist of a variety of factors to include family factors such as parental level of education and family structure. Aspects of family management includes hours of care providing care, change in family work life, and child activity limitation management.

A contextual factor not yet examined are families managing children with chronic health conditions within the context of the military family culture. In the United States, military families represent a unique subculture with unique challenges now better appreciated given media coverage related to the Iraq and Afghanistan wars. Approximately 280,000 military families include children with special health care needs (CSHCN), these as well as all military families confront multiple challenges including frequent moves, deployments, and separations due to training and schooling. Based on the prevalence of CSHCN within the military family subculture, as well as the potential challenges faced by these families, the influence of risk/protective factors and family management of CSHCN on a child’s quality of life readily justifies examination.

PURPOSE

This study examined the predictive value of family management, risk/protective values on pediatric quality of life in a national representative family of military children with special health care needs (CSHCN)

METHODS

A descriptive correlational design assessed the relationship between family management, risk/protective factors and pediatric quality of life while controlling for emotional and behavioral difficulties (EBD) using a national cross-sectional survey data base. The United States Department of Health and Human Services (DHHS) sponsored the research study while the Center for Disease Control (CDC) National Center for Health Statistics (NCHS) State and Local Area integrated Telephone Survey (SLAITS) program conducted the 2009-2010 National Survey-Children with Special Health Care Needs (NS-CSHCN) cross-sectional survey of U. S. households. The complex 2009-2010 NS-CSHCN design surveyed U. S. households with at least one resident child (0 to 17 years) with a diagnosis of one or more of twenty chronic disease(s), lasting a minimum of one year at the time of interview. Identification of the sample of military families (n=1,600) resulted from their answering affirmatively to their insurance carrier: Tricare, Champus, or Champ-VA. The variables selected for this secondary data analysis addressed family management, risk/protective factors, and quality of life. For measurement of family management, the selected variables from the secondary data file represent SFMF concepts. The independent variables used to assess family management included the child’s activity limitations, family hours spent per week providing care to the child with the chronic condition, and change of parental work life (employment). The independent risk/protective factor variables included parental education and family structure. Emotional difficulties, activity difficulties, and missed school days comprised the dependent variables that represent quality of life from the database. These variables effectively represent health-related quality of life concepts frequently assessed in children with chronic diseases. Covariates included demographics and emotional behavioral conditions. All statistical analyses were conducted with IBM SPSS Statistics 24.0. The data were cleaned and assessed for outliers, missing data and multicollinearity.

Descriptive statistics, including univariate assessments such as frequencies and bivariate associations between each independent and dependent variables using Pearson chi-square, were conducted for all variables. The significance for all analyses was set at a *p-value*<0.05; independent variables demonstrating significance in the bivariate analyses or deemed theoretically appropriate (i.e., all FM variables) were eligible for multivariate models. To predict each of the three quality of life variables, multivariate logistic regression models were built and assessed.

RESULTS

Model Information of the Predictive Effect of Family Management, Risk/Protective Factors, and Emotional Behavioral Conditions on Military Children’s Health-related Quality of Life

| | Model 1 Emotional Behavioral Difficulties <i>n</i> = 1581 | | | Model 2 Activity Difficulties <i>n</i> = 1581 | | | Model 3 Missed School Days (> 4 days) <i>n</i> = 1,413 | | |
|--|---|-------|-------|---|-------|-------|--|-------|-------|
| | Exp B | [CI] | | Exp B | [CI] | | Exp B | [CI] | |
| Family Management | | | | | | | | | |
| Work Change | 0.901 | 0.598 | 1.357 | 1.210 | 0.760 | 1.924 | *1.412 | 1.031 | 1.932 |
| Hours of Care/Week | | | | | | | | | |
| < 1 Hour ^{ref} | 1.000 | | | 1.000 | | | 1.000 | | |
| 1-4 Hours | 1.045 | 0.779 | 1.403 | *1.482 | 1.082 | 2.031 | *1.622 | 1.266 | 2.077 |
| 5-10 Hours | 1.255 | 0.708 | 2.224 | 1.421 | 0.758 | 2.664 | 1.114 | 0.705 | 1.761 |
| > 11 Hours | *1.883 | 1.060 | 3.346 | 1.585 | 0.840 | 2.989 | *1.854 | 1.186 | 2.899 |
| Activity Limitations | | | | | | | | | |
| None ^{ref} | 1.000 | | | 1.000 | | | 1.000 | | |
| Moderate | *2.307 | 1.725 | 3.086 | *2.302 | 1.690 | 3.136 | *1.623 | 1.251 | 2.106 |
| Consistent | *3.674 | 2.413 | 5.593 | *7.167 | 4.375 | 11.74 | *1.725 | 1.226 | 2.428 |
| Risk/Protective Factors | | | | | | | | | |
| Family Structure | | | | | | | | | |
| Married ^{ref} | 1.000 | | | 1.000 | | | 1.000 | | |
| Step Family | 1.282 | 0.882 | 1.865 | 0.902 | 0.599 | 1.359 | 0.828 | 0.609 | 1.125 |
| Single Mom | 0.950 | 0.646 | 1.396 | 0.860 | 0.571 | 1.294 | 0.895 | 0.645 | 1.242 |
| Other | 1.069 | 0.567 | 2.015 | 0.817 | 0.414 | 1.614 | 0.709 | 0.427 | 1.175 |
| Parent Education | | | | | | | | | |
| < HS ^{ref} | 1.000 | | | 1.000 | | | 1.000 | | |
| HS | 0.648 | 0.186 | 2.250 | 0.408 | 0.099 | 1.679 | 1.133 | 0.447 | 2.868 |
| > HS | 0.694 | 0.212 | 2.264 | 0.438 | 0.114 | 1.683 | 0.964 | 0.404 | 2.302 |
| Child Age | | | | | | | | | |
| 0 to 5 ^{ref} | 1.000 | | | 1.000 | | | 1.000 | | |
| 6 to 11 | 0.816 | 0.563 | 1.184 | 0.861 | 0.580 | 1.280 | 1.027 | 0.633 | 1.664 |
| 12 to 17 | 0.859 | 0.588 | 1.255 | *0.460 | 0.304 | 0.696 | 1.027 | 0.631 | 1.672 |
| Child Gender | | | | | | | | | |
| Male ^{ref} | 1.000 | | | 1.000 | | | 1.000 | | |
| Female | 0.858 | 0.653 | 1.126 | *0.693 | 0.517 | 0.929 | 1.183 | 0.938 | 1.493 |
| Emotional Behavioral Conditions | | | | | | | | | |
| ADHD | *2.428 | 1.774 | 3.322 | *11.92 | 8.267 | 17.19 | *0.700 | 0.543 | 0.901 |
| Depression | *12.09 | 5.536 | 26.40 | *2.908 | 1.639 | 5.160 | 1.221 | 0.853 | 1.748 |
| Anxiety | *5.272 | 3.059 | 9.087 | 0.986 | 0.583 | 1.668 | *1.400 | 1.006 | 1.947 |
| ODD | *4.466 | 2.340 | 8.521 | 1.694 | 0.927 | 3.097 | 0.966 | 0.680 | 1.372 |
| Autism | *3.094 | 1.651 | 5.798 | *5.721 | 2.222 | 14.73 | 0.817 | 0.563 | 1.185 |
| DD | *3.005 | 1.954 | 4.622 | *11.18 | 5.823 | 21.50 | 0.958 | 0.692 | 1.327 |
| MR | 1.185 | 0.503 | 2.796 | 1.807 | 0.315 | 10.37 | 0.904 | 0.537 | 1.523 |

CONCLUSIONS

Analyzing health-related quality of life in CSHCN provides a general measure of a child’s overall functioning in the context of a chronic health condition. Activity limitations for military families managing CSHCN is a specific family management variable that demonstrates the need for more detailed research attention. Expanding a regularly administered national survey to provide a composite of nationwide HRQOL for U. S. CSHCN may provide yet another level of understanding regarding military families managing CSHCN.