Determinants of poor life satisfaction in adolescents with congenital heart disease or early acquired cardiovascular disease: a nationwide observational study

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Funding Acknowledgement: Type of funding sources: Private company. Main funding source(s): Danish Heart Foundation

Background: Life expectancy in patients with congenital heart disease (CHD) and patients with early acquired cardiovascular disease (CVD) has increased due to improved treatments during the last decades. As life expectancy increases, focus on long term quality of life and life satisfaction as well as determining focus areas of preventive initiatives becomes essential.

Purpose: To investigate whether poor life satisfaction in adolescents and young adults with CHD or significant CVD is 1) associated with physical and mental challenges and 2) inversely associated with social support and self-efficacy have a protective effect against low life satisfaction.

Methods: Data from a Danish nationwide cross-sectional study was used to identify all patients with either CHD or significant CVD (e.g., arrhythmia, ischemia) aged 15–24 years with at least one contact to a Danish hospital department of cardiology between 2014–2018. Life satisfaction was measured on a scale of 0–10 and dichotomized into good life satisfaction if the score was >6. Using a logistic regression model with interaction terms for sex and adjusted for age and comorbidities, we estimated the association between physical challenges (New York Heart Association classification, NYHA), mental challenges (concentration limitations or memory limitations), social support, self-efficacy, and life satisfaction.

Results: 1961 patients were included, 58% had CHD. Median age was 20 years and 50% were female. NYHA-class III or IV were significantly associated with poor life satisfaction (OR: 0.42 [95CI: 0.26; 0.70]) (Figure 1). Likewise, self-reported memory limitations (OR: 0.79 [95CI: 0.68; 0.91]) and concentration difficulty (OR: 0.60 [95CI: 0.51; 0.70]) were associated with poor life satisfaction (Figure 1). In contrast, reported high self-efficacy (OR: 1.67 [95CI: 1.32; 2.12]) and good social support (OR: 2.16 [95CI: 1.60; 2.93]) were both associated with high life satisfaction (Figure 1). Finally, the association between NYHA class III (OR: 0.94 [95CI: 0.34; 2.59]), memory limitations (OR: 0.79 [95CI: 0.58; 1.07]), concentration limitations (OR: 0.71 [95CI: 0.49; 1.04]), and life satisfaction was not significant among individuals with high self-efficacy but remained significant among individuals with good social support.

Conclusions: In adolescents and young adults with CHD or early acquired heart disease, reported physical and mental challenges were associated with reduced self-reported life satisfaction. Both reported high self-efficacy and good social support were associated with increased life satisfaction. High self-efficacy among individuals reduced the negative association between mental or physical challenges and life satisfaction. These findings highlight the need for increased focus on promoting self-efficacy and the need for good social support in adolescents and young adults with functional limitations from their CHD or CVD in order to improve their long-term life satisfaction.