

# HEALTH RELATED QUALITY OF LIFE AMONG ADOLESCENTS SURVIVING CANCER: A REVIEW

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## Introduction

Health related quality of life is a subset of quality of life representing satisfaction in areas of life affected by health status (Peterson & Bredow, 2009). It is a subjective, multidimensional and dynamic concept (Albert et al., 2002; Revicki et al., 2000; Sajid, Tonsi, Baig, 2008).

HRQOL has significance in oncology nursing practice, as it is an indicator of the effectiveness of nursing interventions (Salonen et al., 2009). Also measurement of HRQOL helps in planning care (Sloan et al., 2006), improves communication (Detmar et al., 2002), improves patient satisfaction, finds hidden morbidities and aids in clinical decision-making (Varni et al., 2005).

Adolescence is the period of life characterized by significant physical and emotional changes. The emphasis during this period is on autonomy, independence, sexuality, and peer relationships. So diagnosis of cancer during adolescence has major impact on their psychological and physical development (Abrams, Hazen, Penson, 2007).

Despite several studies conducted to investigate HRQOL among adolescents surviving cancer, there is still a contradictory result about the impact of some variables on HRQOL, particularly the impact of ethnicity and socioeconomic status on HRQOL among adolescents surviving cancer (Eilertsen, Jozefiak, Rannestad, Indredavik, Vik, 2012; Meeske, Patel, Palmer, Nelson, Parow, 2007; Wu et al., Bhatia, 2007). The aim of this integrative literature review is to evaluate HRQOL among adolescents surviving cancer.

## Abstract

The aim of this integrative literature review is to evaluate health related quality of life among adolescents surviving cancer. A literature search of studies published between 2007 and 2012 was conducted using the databases of Pubmed, Science Direct and SpringerLink. The articles were included if they were a research study, included the population of adolescents surviving cancer, if they investigated the health related quality of life and were published in the English language. A total of seven articles met the inclusion criteria. The reviewed articles show that adolescents surviving cancer have a good overall Health Related Quality of Life (HRQOL) compared with their peers. Poor HRQOL is associated with female gender, brain tumor, fatigue, and late effects. Recommendations are for practices to routinely assess HRQOL among adolescents surviving cancer especially for those with high risk for poor

**HRQOL. Recommendations for researchers are to investigate the impact of ethnicity and socioeconomic status on HRQOL among adolescents surviving cancer.**

**Keywords:** "adolescence cancer", "health related quality of life", "cancer survivors".

## Theoretical Framework

This integrative literature review will be guided by Spilker's model. Spilker (1996) illustrates the HRQOL as a pyramid of three levels. The top level is the overall assessment of well-being. The middle level contains broad domains (i.e., physical, psychological, spiritual, social, economic). The basis of the pyramid is the components of each domain (Spilker et al., 1996).

## Methodology

A literature search of studies published between 2007 and 2012 was conducted using the databases of Pubmed, Science Direct and SpringerLink. The keywords "adolescence cancer", "health related quality of life", and "cancer survivors" were used to search articles. The articles were included if they were a research study, included the population of adolescents surviving cancer, investigated the health related quality of life and were published in English language.

Thirty articles were reviewed for possible inclusion. Only seven articles met the inclusion criteria. All the articles are quantitative articles with correlational design.

## Findings

The most frequently studied domains are: physical, emotional, school and social domains.

### Physical Functioning

There are controversial results regarding physical functioning. Some studies revealed that adolescents surviving cancer assessed their physical functioning, similar to healthy controls (Dijk et al., 2007; Eilertsen et al., 2012; Meeske et al., 2007; Wu et al., 2007). Other studies concluded that adolescents surviving cancer had significant lower physical functioning subscale compared with healthy controls (Kupeli, Akyuz, Buyukpamukcu, 2011; Servitzoglou, Papadatou, Tsiantis, Kosmidis, 2009).

Variables associated with poor physical functioning are female gender; females surviving cancer had reported significant lower physical functioning compared with males surviving cancer. Also adolescents surviving brain tumors had significant lower physical functioning compared with adolescents surviving other cancers. Other variables associated with poor physical functioning are fatigue and severe late effects. In detail, adolescents who reported fatigue or severe late effects had significant lower physical functioning compared with adolescents surviving cancer without fatigue or severe late effects. In addition non-white race is associated with significant lower physical functioning compared with white race survivors (Eilertsen et al., 2012; Kupeli et al., 2011; Meeske et al., 2007; Servitzoglou et al., 2007; Wu et al., 2007).

Parent's educational level is also associated with adolescent's physical functioning; adolescents whose parents are university graduates had significant better physical functioning score than adolescents whose parents are primary school graduates (Kupeli et al., 2011).

### Emotional Functioning

All reviewed articles show that emotional functioning score among adolescents surviving cancer did not significantly differ from emotional functioning among healthy controls (Dijk et al., 2007; Eilertsen et al., 2012; Kupeli et al., 2011; Mort, Salantera, Matomaki, Salmi, Lahteenmaki, 2011; Meeske et al., 2007; Servitzoglou et al., 2007; Wu et al., 2007).

Although adolescents surviving cancer have good emotional functioning, several studies identify risk variables for poor emotional functioning. These variables are Hispanic race; emotional functioning scores were significantly lower for Hispanic survivors compared with non-Hispanic survivors. Also females surviving cancer

had significant lower emotional functioning compared with males surviving cancer. Fatigued survivors had significant lower emotional functioning compared with non-fatigued survivors. Kupeli and his team found that adolescents surviving brain tumors had significant lower emotional functioning compared with adolescents surviving Hodgkin and non-Hodgkin lymphoma (Kupeli et al., 2011; Meeske et al., 2007; Wu et al., 2007).

### School/Cognitive Functioning

Several studies reveal that adolescents surviving cancer had good school functioning compared with healthy controls (Dijk et al., 2007; Eilertsen et al., 2012; Meeske et al., 2007; Mort et al., 2011; Wu et al., 2007) but Kupeli and his team found that adolescents surviving cancer had a significant lower score in school function compared with healthy controls (Kupeli et al., 2011).

Poor school functioning is associated with Hispanic race, as Hispanic survivors had lower school functioning compared with Caucasian survivors. Brain tumor survivors had significant lower school functioning compared with other cancer survivors. Also adolescents treated with radiotherapy reported poor school functioning compared with survivors not treated with radiotherapy. In addition, female survivors reported significant lower school functioning compared with female controls (Kupeli et al., 2011; Meeke et al., 2007; Wu et al., 2007).

### Social Functioning

The majority of reviewed articles conclude that adolescents had good social functioning compared with healthy controls (Dijk et al., 2007; Eilertsen et al., 2012; Kupeli et al., 2011; Mort et al., 2011; Meeske et al., 2007; Wu et al., 2007), except Servitzoglou and her team who found that teenagers had significant lower social functioning compared with healthy controls (Servitzoglou et al., 2007).

Researchers have been identify risk variables for poor social functioning, which are brain tumor survivors compared with other cancer survivors, fatigued survivors compared with non-fatigued survivors, and female survivors compared with female controls (Meeske et al., 2007; Wu et al., 2007).

### The Overall Health Related Quality of Life

All reviewed articles conclude that there is no significant difference in overall HRQOL score between adolescents surviving cancer and the healthy controls. Variables affecting the overall HRQOL are female gender, brain tumor, fatigue, and late effects (Dijk et al., 2007; Eilertsen et al., 2012; Kupeli et al., 2011; Mort et al., 2011; Meeske et al., 2007; Servitzoglou et al., 2007; Wu et al., 2007).

### Conclusion

Adolescents surviving cancer have a good HRQOL compared with their peers. Poor overall HRQOL is associated with female gender, brain tumor, fatigue, and late effects. Recommendations are for practice to routinely assess HRQOL among adolescents surviving cancer especially for those with high risk for poor HRQOL. Recommendations are for researchers to investigate the impact of ethnicity and socioeconomic status on HRQOL among adolescents surviving cancer.

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