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The Role and Importance of Quality of Life among Preschool Children as a Prerequisite for a Positively Oriented Upbringing

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Abstract: The aim of this study was to evaluate the health-related quality of life (QoL) in a sample of healthy preschool children in the Republic of Croatia and comment on whether and how the research results open the preconditions for positive individual scenarios of the future related to positively oriented upbringing. The Pediatric quality of life inventory generic core scales (PedsQLTM) was completed by 230 healthy preschool children (5-6 years old) and their parents as a proxy-report. The data was descriptively analysed first. Reliability was assessed by Cronbach's alpha. The statistically significant difference between the PedsQLTM scales (physical, emotional, social, kindergarten and psychosocial functioning) for preschool children and their parent's proxy-report were analysed. The PedsQLTM scale score means for children's self-report ranged 71.32-76.49, with the total score was 74.53. Score means for their parent's proxy-report scale ranged 73.59-85.46, with the total score of 80.93. All the self-report and proxy-report scales showed satisfactory reliability with Cronbach's alpha varying between 0.64 and 0.89. Statistically significant difference between scales in self-report and proxy-report was for physical (t=-7.12, p<0.01), social (t=-6.42, p<0.01) and school functioning (t=-2.62, p<0.01) as well as psychosocial (t=-4.82, p<0.01) and total health (t=-6.85, p<0.01). The Croatian PedsQLTM is valid and reliable generic pediatric health-related QoL measurement that can be recommended for children's self-reports and their parent's proxy-reports. The results of the research open a precondition for positive individual scenarios of the future related to positively oriented upbringing.

Keywords: *quality of life, preschool children's, Pediatric quality of life inventory (PedsQLTM), Croatia*

Introduction

The quality of life (QoL) of adults has always been interesting to researchers, especially because it partly depended on the state of health (as a multidimensional concept) and the clinical picture. QoL is a complex concept which includes the objective factors and the subjective evaluation of physical, material, social, and emotional wellbeing, including personal development and purposeful activity, observed through personal system the values of the individual. As such research is "easier" to conduct among adults, it is not surprising that there is still a lack of scientific research dealing with the QoL of children, in general, and particularly with the QoL of preschool children (Hao et al., 2010; Klassen et al., 2003). The QoL of a child depends on the physical and mental factors and relations in the family and relationships with a wide environment (family, peers or kindergarten collective), and the quality of his life is undermined if there are health, emotion or social difficulties. Related to health, QoL includes the physical and mental domains, but also the domains of social well-being and functioning that play a significant role in assessing the impact on the child's current health, but also on his possible treatment in everyday life if necessary (Knez et al., 2013; Acquadro et al., 2003; Eiser and Mose, 2001).

The situation is far more unfavourable if we look at similar research related to the QoL of children in the Republic of Croatia, and even more unfavourable if we focus on the population of preschool children only. The results of a study in which preschool children underwent an eight-week intervention (were ex-

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posed to frequent physical activity) indicate that there are no significant indicators of improving the overall QoL compared to the control group (Truelove, 2016), which is contrary to the results of research in adults involved in a rehabilitation treatment, and especially in the treatment of persons with chronic conditions and health difficulties (Gu et al., 2016; Bize, Johnson and Plotnikoff, 2007; Penedo and Dahn, 2005). The results of research conducted among preschool children indicate that the lower the health-related QoL of a child, the greater the impacts on family life (Knez et al., 2013;Jastrowski Mano et al. 2011; Mazaheri et al., 2012; McGrath-Morrow et al. 2012; Medrano et al. 2013). In the mentioned, earlier papers, a larger number of studies were noticed in which children patients or children with disabilities (of various types) were involved. In relation to the above, the paper will provide a novelty in the research of the mentioned aspects among the population of healthy children aged five to six years.

Precisely for ethical reasons, but also for the complexity of conducting research, such research is still insufficient. Speaking of research ethics, using this instrument on a sample of preschool children the results obtained largely depend on communication, cooperation and agreement between children's and parents' reports among parents, guardians or adults indirectly participating in research helping the child. It is certainly necessary to conduct more research in which to determine the optimal level of agreement between parent and child. It is this issue that has triggered a number of discussions about the level of agreement between children's own views and those of their parents on the functioning of the child (Laaksonen et al., 2008; Cremeens, Eiser and Blades, 2006). Following this, it is interesting to mention research in which it was found that children of mothers who rated their QoL as poor were also considered worse, which may suggest the influence and projection of their own feelings (mothers') on the overall judgement of the child's functioning (Eiser, Eiser and Stride, 2005; Goldbeck and Melches, 2005; Cremeens, Eiser and Blades, 2006). Also, the level of agreement between the child and the parent may depend on the sex and age of the child, the parent's relationship with the child, health status, and ultimately in relation to the type of disease (if the child has it) (Le Coq et al., 2000; Eiser and Mose, 2001; Jovokic, Locker and Guyatt, 2004). As a possible solution to this challenge, some authors suggest that a child's self-assessment of well-being should be the first choice of information for the researcher (Gkoltsiou et al., 2008). It is extremely important that young people have a positive opinion about their personal, but also their professional development, which indirectly affects the QoL, a positive orientation on education, which in the long term leads to a positive orientation towards the future, and a successful educational process that enables young people to have a better professional and personal affirmation and reduces problematic behaviours (Chen and Vazsonyi, 2011; Dubovicki and Budić, 2019; Dubovicki, 2020, Dubovicki and Dilica, 2022; Dubovicki and Kostanjčar, 2023). If the overall quality of preschool children is positive, it can be assumed that this positive relationship will create prerequisites for the creation of positive quality later in primary and secondary education. The above leads us to the connection between a positive QoL and a positively oriented upbringing, which is important for a positive orientation in the life of every individual.

The aim of this study was to evaluate the health-related QoL in a sample of healthy preschool children (aged 5-6 years) in the Republic of Croatia and comment on whether and how the research results open the preconditions for positive individual scenarios of the future related to positively oriented upbringing. The research seeks answers to the following research questions:

1. Do preschool children's rate their QoL as low or high?
2. In which dimensions of QoL do children's self-report and parent's proxy-report match?
3. In which dimensions of QoL are the biggest differences in children's self-report and parents' proxy-report?
4. Do the research results and how do they open the preconditions for positive individual scenarios of the future related to positively oriented upbringing?

Materials and Methods

Participants

Participants were 230 healthy preschool children's (5-6 years old) recruited from ten kindergartens and their parents or guardians. Children were excluded if they were receiving any treatment for a chronic or acute medical condition, or if they had a history of special needs or learning difficulties. Written consent

from parents or guardians and verbal assent from children were obtained. The aforementioned ten kindergartens were deliberately selected for the reason that (according to the data obtained before conducting the research) at the time of conducting the research, there were the most healthy children of the specified age in them.

Assessment of health-related quality of life

The Paediatric quality of life inventory generic core scale (PedsQL™) includes parallel children self-report and parent proxy-report versions for ages 5-7 years, differing only in wording and length of response scale. The young children self-report version employs a 3-point Likert scale going from "never" to "almost always" with smiley faces to aid in the rating task. Items on parent proxy-report version are virtually identical to the children version, with minor language changes. The parallel parent version uses a 5-point Likert response scale going from "never" to "almost always". The PedsQL™ scale had 23 items grouped into four subscales: physical functioning (8 items), emotional functioning (5 items), social functioning (5 items) and kindergarten functioning (5 items), and the psychosocial scale includes emotional, social and kindergarten subscale. The questionnaire asked about the frequency of problems that occurred during the past month. Items are reverse-scored and linearly transformed to a 0-100 scale (i.e., 0 = 100, 1 = 75, 2 = 50, 3 = 25, 4 = 0), higher scores indicated better health-related QoL. Subscale scores were computed as the sum of the items divided by the number of items answered. The PedsQL™ scale was developed in the U.S. and the reliability and validity is well-established (Varni, Seid and Rode, 1999; Varni, Seid and Kurtin, 2001; Varni et al., 2002; Varni et al., 2003). Children were given the Croatian version of the PedsQL™ scale, administered as directed by the PedsQL™ manual for children's self-report (Varni, Seid and Rode, 1999; Varni, Seid and Kurtin, 2001; Schwartz and Rapkin, 2004). Children were interviewed individually in a quiet room separate from their groups. Parents completed the Croatian version of the PedsQL™ scale in relation to their child for parent's proxy-report. This questionnaire was sent home with each children for parents to complete.

Statistical analysis

The collected research data were stored in a database in Microsoft Office Excel program and processed by a personal computer using the statistical program Statistica 13.1. The quality of data was descriptively analysed (mean value and standard deviation) and internal consistency reliability was assessed by Chronbach's alpha. The statistically significant difference between means of the PedsQL™ scale total score and subscale scores (physical, emotional, social, kindergarten and psychosocial functioning) in children's self-report and parent's proxy-report were analysed with Student's t-test. The level of significance was set to $p<0.05$.

Results

The results of the research (table 1) show high values in all contexts on the basis of which we can conclude that preschool children assess their QoL as high (M=74.53) which gives us a positive answer to the first research question. Comparing the values obtained by children and parents (second and third research questions), we can see that the greatest coincidence in responses is with the emotional dimension (functioning), and the greatest differences are observed with the social and physical dimensions (functioning). Authors of educational research have written about the importance and encouragement of the development of children's social competence, which later have an impact on peer relationships and even on school success (Katz and McClellan, 1999). In addition to the above, it is important that those who will teach future generations of preschoolers (future educators) be aware of the importance of investing in the development of social competences of future educators and teachers (Dubovicki and Brust Nemet, 2015).

Also, the differences can be observed in Cronbach's α for children (α=0.69) and parents (α=0.89), which supports previous research that highlights this phenomenon as a major challenge for scientists (Laaksonen et al., 2008; Cremeens, Eiser and Blades, 2006).

Table 1. *Scale descriptive statistics and internal consistency reliability of the PedsQL™ generic core scales for children's self-report and parent's proxy-report*

	Children's self-report		Parent's proxy-report	
Scale	M (SD)	Cronbach's α	M (SD)	Cronbach's α
Physical functioning	76.49 (15.41)	0.73	85.46 (11.28)	0.76
Emotional functioning	71.32 (19.22)	0.72	73.59 (13.16)	0.71
Social functioning	75.01 (15.03)	0.67	84.24(15.81)	0.84
Kindergarten functioning	74.13 (14.41)	0.64	77.72 (14.91)	0.74
Psychosocial functioning*	73.48 (10.19)	0.65	78.51 (12.14)	0.87
Total score	74.53 (9.33)	0.69	80.93 (10.67)	0.89

M - mean, SD - standard deviation, * The psychosocial domain includes emotional, social and kindergarten subscale

Table 2 shows a statistically significant difference between subscales in children's self-report and parents' proxy report in which the fact from the previous table are also confirmed, especially in the part of emotional functioning of preschool children (there is no statistically significant difference in significance level of 0.05) which gives us an answer to the second research question. The comparison is important for the reason that it is necessary to determine whether the children are evaluated as functioning equally in the various researched aspects as their parents, whether there is a (dis)harmony in that relationship and whether the parents ultimately know their children, which can also be inferred from this comparison. A possible discrepancy in the results would be a potential challenge for a possible future (too) big influence of the parents on the child's extracurricular and out-of-school activities (Peko, Dubovicki and Munjiza, 2014; Munjiza, Peko and Dubovicki, 2016).

Table 2. *Statistically significant difference between subscales in children's self-report and parent's proxy-report of the PedsQL™ generic core scales*

Scale	t-value	p
Physical functioning	-7.12	**<0.01**
Emotional functioning	-1.49	0.14
Social functioning	-6.42	**<0.01**
Kindergarten functioning	-2.62	**<0.01**
Psychosocial functioning*	-4.82	**<0.01**
Total score	-6.85	**<0.01**

Bold - statistically significant difference on p<0.05

* The psychosocial domain includes emotional, social and kindergarten subscale

From the review of the obtained results it can be concluded that the overall picture of the QoL of preschool children (aged 5-6) in the Republic of Croatia is at a satisfactory level. All values are above average, and yet in line with research on this issue in the world (Truelove, 2016; Gkoltsiou et al., 2008; Jirojanakul, Skevington and Hudson, 2003). The obtained results indicate that preschool children at the age of five to six self-assess themselves positively, i.e., they estimate that their QoL is at a satisfactory level, which is one of the first prerequisites for long-term planning of positively oriented education in the form of creating positive visions of personal and professional life of the future which gives us the answer to the fourth research question (Dubovicki, 2020; Dubovicki and Dilica, 2022; Dubovicki and Kostanjčar, 2023).

Discussion

The importance of this issue is evidences by a significant number of studies in the global context, and one such was written by Jirojanakul, Skevington and Hudson (2003) who conducted a similar study among children (N=498) aged 5-8 that showed significant differences in life satisfaction between urban children and children of construction workers. Children's satisfaction was most often conditioned by the father's income, education, type of school, mode of transportation to school and additional activi-

ties. Additional sports activities and additional jobs (other than housework) improved the QoL of urban children, while the QoL of children of construction workers was directly related to the father's education and income. There is also evidence that among children of construction workers, boys have a lower QoL than girls. Different causal explanations for the QoL of urban children and children of construction works suggest that it is context specific, and what affects one group of children's QoL in a particular context may not affect another group in a different situation.

The results of our research are extremely significant due to the later possible connection between self-assessment of the QoL of a preschool child and future school functioning, relationships with peers, school success and more (Mlinarević, 2004). Also, satisfaction with the QoL of preschool children creates preconditions for scenario of a positive future, which is extremely important for school, but also the overall life functioning of young people in growing up and preparing for future careers (Dubovicki, 2020). Maintaining a positive orientation in personal and professional growth and development is very important, because earlier research shows that young people, often at the end of their education, have increasingly negative visions of their personal and professional future, which leads to dark scenarios, loss of will to find employment and depression (Dubovicki, 2020; Beara, and Dubovicki, 2023; Dubovicki and Kostanjčar, 2023).

The QoL of preschool children should be considered as an investment in the future of our society, because children inevitably play the most important role in the development of society in the future. QoL has been conceptualized and studied in children for several decades, but with disparate approaches that have rarely been discussed jointly with application to children in general (Wallander and Koot, 2016).

Conclusions

The results of previous research have shown that parents, and especially mothers, have an influence on their children's answers, so in further research on this issue, another method is proposed using this tool, based on which the results could be obtained as objectively as possible. The above is important to point out because some of the earlier research shows that parents can interpret questions to their children in a way that "the children understand". However, it can also mean "drawing water to one's mill", i. w. by asking suggestive questions to which the children will give answers in accordance with the parents' answers.

Therefore, the QoL is not and cannot be determined only by statistical indicators that are most often used in this type of research. Quality also depends on factors that cannot be measured in detail, but are created based on the planning of personal positive scenarios of each individual. In other words, everyone creates positive or negative personal and professional scenarios for themselves. The prospects for success in the future are better if a person starts with a positive scenario.

Also, we consider it important to point out the fact that the QoL and the future positive orientation of preschool children in education were not linked in previous studies investigating this issue. We certainly believe that researching this issue with the help of futures studies will have a very important impact on the prevention of negative social and individual scenarios, possible adverse outcomes, especially when it comes to the QoL of preschool children. It is desirable that children have a positive self-image form an early age, which is evident from their self-assessment of the QoL, so that in the future, when making personal and professional choices, they have as positive future scenarios as possible (Dubovicki and Budić, 2019; Dubovicki, 2020; Dubovicki and Dilica, 2022).

Since we are today in a time where it is necessary to carefully plan and anticipate a desirable future (Singh and Yadav, 2017), the focus on positive future orientation and a successful educational process enables young people to improve their professional and personal affirmation and reduce problematic behaviours (Chen and Vazsonyi, 2011), which is an additional benefit to society as a whole.

Furthermore, the results of this paper can serve as a starting point for research and comparison of the results of healthy preschool children with children with health, emotional and/or social difficulties.

Conflict of interests

The authors declare no conflict of interest.

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Author Contributions

Conceptualization, Z.U.; methodology, Z.U. and S.D.; investigation, Z.U. and S.D.; formal analysis, Z.U.; data curation, Z.U.; resources, Z.U. and S.D.; supervision, Z.U.; project administration, Z.U.; writing-original draft preparation, Z.U. and S.D.; writing-review and editing, Z.U. and S.D. All authors have read and agreed to the published version of the manuscript.

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