

## Health among 6-year-old children in a Swedish county: based on the Health Dialogue

Malin Rising Holmström, Niclas Olofsson, Lisbeth Kristiansen & Kenneth Asplund

To cite this article: Malin Rising Holmström, Niclas Olofsson, Lisbeth Kristiansen & Kenneth Asplund (2012) Health among 6-year-old children in a Swedish county: based on the Health Dialogue, *Vulnerable Groups & Inclusion*, 3:1, 8416, DOI: [10.3402/vgi.v3i0.8416](https://doi.org/10.3402/vgi.v3i0.8416)

To link to this article: <https://doi.org/10.3402/vgi.v3i0.8416>



© 2012 Malin Rising Holmström et al.



Published online: 06 Feb 2012.



Submit your article to this journal [↗](#)



Article views: 18



View related articles [↗](#)

---

# Health among 6-year-old children in a Swedish county: based on the Health Dialogue

Malin Rising Holmström<sup>1\*</sup>, Niclas Olofsson<sup>2</sup>, Lisbeth Kristiansen<sup>1</sup> and Kenneth Asplund<sup>1</sup>

<sup>1</sup>Department of Health Science, Mid Sweden University, Sundsvall, Sweden;

<sup>2</sup>Folkhälsocentrum, Landstinget Västernorrland, Härnösand, Sweden

## Abstract

**Aim:** To explore the experiences of self-reported health (SRH) of 6-year-old boys and girls.

**Background:** The goals for the Swedish School Health Services (SHS) are to identify health problems, take measures to prevent illness, and promote health. One approach used to achieve this is the use of the Health Dialogue (HD) questionnaire. The HD is offered at three occasions during compulsory school and once in high school; it follows the child's development and growth from 6 to 16 years old.

**Methods:** The HD is a structured questionnaire consisting of 15 questions related to health, each phrased in a positive manner. The HD represents a cross-sectional image of the child's SRH according to the child and parents. The SRH in this study is based on the results from the 5259 HD questionnaires conducted during 2006–2009 with 6-year-old children and parents. OR were analyzed for the HD.

**Results:** Experiencing comfortableness in preschool, good sleep, absence of severe headaches, being physical active/play every day, and not being a victim for bullying shows to be important preschool indicators for boys and girls.

**Discussion:** The most important health variable tagging in the preschool children's positive SRH was comfortableness in preschool. Both boys and girls need to feel comfortable in preschool to report a positive SRH in school. The girls seem to be more dependent on comfortableness, being physical active, and not being bullied while the boys need to have lunch in school every day and not to show symptoms like severe headaches.

**Conclusion:** The most important health variable tagging the preschool children's SRH is comfortableness in school. The HD can increase the knowledge of 6-year-old children's SRH and also be a tool to gain further insight into children's health by highlighting patterns in children's SRH.

**Keywords:** *Preschool; self-reported health; odds ratio; school nurse; health promotion*

---

\*Correspondence to: Malin Rising Holmström, Department of Health Sciences, Mid Sweden University, Holmgatan 10, 851 70 Sundsvall, Sweden. Email: malin.rising-holmstrom@miun.se

©2012 M.R. Holmström et al. This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License (<http://creativecommons.org/licenses/by-nc/3.0/>), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: *Vulnerable Groups & Inclusion*. DOI: 10.3402/vgi.v3i0.8416

It is widely known that conditions during childhood and adolescence are of great importance for future health (Petersen, 2008). In Sweden, preschool class constitutes the first step of the compulsory school system. Since 1998, all children in Sweden have the right to attend a preschool class when they turn 6 years old. The preschool class is voluntary for the parents and their child, but approximately 95% of all children aged 6 years participate in the preschool class (Lumholdt & Klase'N Mc Grath, 2006). According to the Education Act, children have the right to an education in an environment that promotes physical, mental, and social health (SFS, 2010:800). It is well known that learning and health are generated by the same factors (Awartani, Whitman & Gordon, 2008) and children's school performance and health have strong connections to their future development. A health-promoting school will strengthen children's mental and physical health, self-esteem, and school performance (Gustafsson, 2009).

A general summary is that the health of Swedish children is good and that it continued to improve since systematic measurement began in 1948 (Köhler, 2010). According to World Health Organization (WHO, 2009), Sweden is one of the countries where a majority of the children live a healthy and secure lifestyle; children in Sweden regularly eat healthy food, are physically active, and play and go to schools in a secure environment. Swedish schools have the lowest rate of reports of bullying. Since the 1990s, an increase in mental illness among young people has been reported by several sources in Sweden. One result, among others, was that the psychoso-

matic symptoms had almost doubled (Board of Health and Welfare, 2009). Self-reported health (SRH) for psychosomatic symptoms such as headaches, stomachaches, and back pain tend to increase with age, and there is significant gender differences between boys and girls in most of the countries included in the Health Behavior in School-Aged Children (HBSC) study (World Health Organization, 2008).

The Royal Academy of Sciences (RSAS), in its review, found weak scientific sustainability of the studies that reported increased mental illness among Swedish children and adolescents. The review also states that it is likely that particular psychosomatic disorders have increased and that there is a need to increase knowledge about child and adolescent health, and especially the young children's health (Petersen et al., 2010).

However, when it comes to research concerning the health of young children, it is always difficult to find reliable and age-appropriate methods. Health itself is a complex concept and consists of many factors. In this study, health is defined according to WHO's definition and described in the following three dimensions: physical, mental, and social. Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 1948).

### **The Health Dialogue (HD) concept**

The goals for the Swedish School Health Services (SHS) is to monitor children's development, preserving and improving their mental and physical health, to

promote healthy lifestyles among the children throughout their school years and to create a relationship based on being available, free of charge, and voluntary. In short, the goals for SHS are to identify health problems, take measures to prevent illness, and promote health (Board of Health and Welfare, 2004; SFS, 2010:800). One approach used to achieve the goals is the use of the HD. The HD concept consists of the following three parts: (a) a questionnaire; (b) a dialogue between child, parent, and school nurse where the questionnaire results are used as a base for the conversation; and (c) registration of the questionnaire results in the child's SHS medical record and at an epidemiological database. The questionnaire represents a cross-sectional image of the child's SRH according to the child and parents. The HD is offered at three occasions during compulsory school and once in high school; it follows the child's development and growth from 6 to 16 years old and, therefore, repeats the content, but the questions are reformulated to be age appropriate (Jonsson, Wickberg, & Björ, 2001). The aim of this study is to explore the experiences of SRH of 6-year-old boys and girls.

## **METHODS**

### **Sample and procedure**

The data for this study originated from the results of the HD questionnaires from all preschool classes in a county in the middle of Sweden. With large rural areas and a few cities, the county has approximately 250,000 inhabitants.

An epidemiological database, EPI-Child started in 2000, is focused on gathering data concerning children's health. Cooperation was initiated between the county council, the county administrative board, and seven municipalities that resulted in a systematic approach for collecting data (Public Health Center, 2005). The health of children referred to in this study is based on the results from the 5259 HD questionnaires conducted during 2006–2009 with 6-year-old children and parents, where the parents had given written consent. Only public schools were included. The study was approved by the Ethics Committee at the Medical Faculty, Umea University (no. 08-122M), and conducted according to the ethical principles recommended by the Research Council.

### **Dropouts**

The total number of preschool children in the county during 2006–2009 was 7093. Furthermore, 5259 parents approved of registration (written consent) of the HD ( $5259/7093 = 0.74$ , 74%) (Figure 1). The dropouts consist of the following three layers: (a) organizational changes and working conditions created a hindrance for school nurses and therefore approximately 800 children and parents were never invited to the HD; (b) the parents of approximately 500 children approved of the HD but did not approve of the registration in the database; and (c) the parents of approximately 500 children did not consent to participate in the HD. For ethical

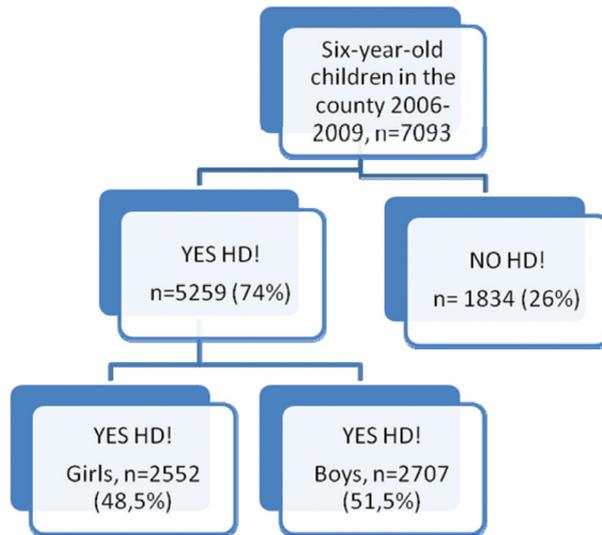


Figure 1. Distribution of dropouts during 2006–2009. HD, Health Dialogue.

reasons, it is impossible to investigate further in the matter.

### The HD questionnaire

The HD is a structured questionnaire consisting of 15 questions related to health each phrased in a positive manner. Six of the questions relate to physical health, five relate to mental health, and four relate to social health. The physical dimension includes nutrition, physical education, school environment, allergies, and sleep habits. The mental dimension includes experiencing comfort in school, anxiety, feeling sad or depressed, bullying, and having the ability to concentrate and work in school. The third dimension is social and includes leisure time, physical activity and playing, and smoking habits at home. The HD is addressed to the parent considering the child's age

and reading ability, but it is age-appropriate in language, numbers of questions, and content, and it is enhanced with images and visual estimation scales to enable and ensure the child's participation in the HD. The questionnaire has been tested in two pilot studies. In 2000/2001, one municipality in the county participated; and in 2003/2004, the second pilot study took place, and it included the whole county. At both occasions, a survey was distributed to the participating school nurses to explore their experiences working with the HD. After the pilot studies, the questionnaire was revised thoroughly. The number of questions was reduced, along with the level of detail of the issues (Wickberg & Sjöström, 2004). The approach of HD is positive health promoting, and in accordance with this, the variables have been coded and dichotomized consistently as

positive (coded 1) and negative (coded 0). The dependent variable was determined to be SRH (My child's health is) and was answered with the following five options: very good health (coded 1), rather good, neither good/poor, rather poor, and poor (coded 0).

Considering previous research results and a further examination of the correlation between the dependent and independent variables, nine variables were excluded because they proved to be less influential on children's health in the Swedish preschool context.

The following six selected variables were included in a model: (1) comfort in preschool (My child is comfortable in preschool), answered in five options including always (coded 1), often, sometimes, seldom, and never (coded 0); (2) sleep (My child sleeps well), answered in five options including always (coded 1), often, sometimes, seldom, and never (coded 0); (3) headaches were assessed by asking for the frequency of severe headaches during the last 3 months (My child has had severe headaches the last 3 months), answered in five options including never (coded 1), seldom, sometimes, often, and always (coded 0); (4) school lunch (My child has had school lunch), was assessed by a question about frequency of having school lunch during the school week with four answer options including daily (coded 1), 3–4 times/week, 1–2 times/week, and never (coded 0); (5) physical activity was assessed by asking how many occasions per week, outside of school were spent on exercising/playing until getting out of breath or sweaty (My child has been physically

active and played), answered in four answer options including daily (coded 1), 3–4 times/week, 1–2 times/week, and never (coded 0); and (6) bullying was assessed by asking for occurrence of bullying during the last 3 months, and the question was explanatory with concrete examples of bullying (My child has been bullied by other children in the last 3 months, i.e. has been called names, foul language, pushed around, excluded or in other ways been mistreated, etc.), answered in two answer options including no (coded 1) and yes (coded 0).

### Statistical analyses

Analyses were performed to explore the relationship between the dependent variable, experiences of SRH, and a model consisting of six independent variables from the HD. In order to explore the complexity of SRH of preschool children, we compared all children and between boys and girls. Multivariate analyses were conducted using multinomial logistic regression with a 95% confidence interval with the dichotomized variables (Polit, 2010). The statistical package SPSS version 19.0 was used for statistical analyses.

### RESULTS

Of the total sample of 5259 preschool-aged children, 2552 (48.5%) were girls, and 2707 (51.5%) were boys. The sample consists of three academic years with 6-year-old children (Figure 1). Experiencing comfortableness in preschool, good sleep, absence of severe

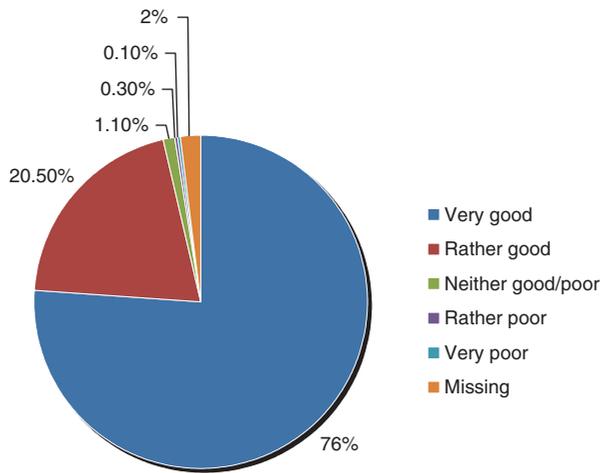


Figure 2. Children’s positive SRH based on health dialogues 2006–2009, n = 5259.

headaches, being physical active/play every day, and not being a victim for bullying shows to be important preschool indicators for boys and girls. Nine of ten children had experienced positive SRH (96.5%) and there were small differences between girls’ (96.2%) and boys’ (96.8%) SRH (Figure 2, Table I). The relationship between a positive SRH to important preschool health variables shows higher odds ratios within the boys concerning having lunch at school (3.5; 1.6–7.6) and the absence of severe headaches (2.3; 1.9–2.8). The girls showed a higher odds ratio of positive SRH when associating being a victim for bullying (1.7; 1.4–2.1), comfortableness in preschool (3.0; 2.4–3.7), and physical activity (1.5; 1.2–1.9). Having lunch in school shows no significantly raised odds ratio concerning girls’ positive SRH. Both boys (2.4; 1.9–2.9) and girls (2.4; 2.0–3.0) showed the same odds ratio of positive SRH when associating sleeping patterns (Table II).

## DISCUSSION

The most essential result shows that nine of ten children had experienced positive SRH (96.5%) and there were small differences between girls’ (96.2%) and boys’ (96.8%) SRH (Figure 2, Table I). This result conforms largely to other studies in the Swedish context concerning older children (WHO, 2008). The most important health variables tagging in the preschool children’s positive SRH are comfortableness in preschool and sleep. Both boys (2.9; 2.4–3.5) and girls (3.0; 2.4–3.7) need to feel comfortable in preschool to report a positive SRH in school. The girls seem to be more dependent on comfortableness, being physical active (1.5; 1.2–1.9), and not being bullied (1.7; 1.4–2.1), while the boys need to have lunch in school every day (3.5; 1.6–7.6) and not to show symptoms like severe headaches (2.3; 1.9–2.9), to report a positive SRH in school. The prevalence for bullying was

Table I. Distribution of frequencies of dichotomous variables in preschool 2006–2009 using (CI =95%).

	Frequency (N) all	Girls	Boys	Percent (%) all	Girls	CI	Boys	CI
<b>My child is healthy</b>								
Yes	3999	1948	2051	76.0	76.3	74.6–77.9	75.8	74.1–77.3
No	1155	542	613	22.0	21.2	19.7–22.9	22.6	21.1–24.3
Missing	105	62	43	2.0	2.4		1.6	
Total	5259	2552	2707	100				
<b>My child ... comfortable</b>								
Yes	3513	1778	1735	66.8	69.7	67.9–71.4	64.1	62.3–65.9
No	1645	96	149	31.3	28.1	30.9–45.7	34.3	47.1–64.3
Missing	101	58	43	1.9	2.3		1.6	
Total	5259	2552	2707	100				
<b>My child ... sleeps well.</b>								
Yes	3690	1784	1906	70.2	69.9	68.1–71.7	70.4	68.7–72.1
No	1485	722	762	28.2	28.3	26.6–30.1	28.1	26.5–29.9
Missing	85	46	39	1.6	1.8		1.4	
Total	5259	2552	2707	100				
<b>My child ... no headaches</b>								
Yes	3016	1413	1603	57.3	55.4	53.4–57.3	59.2	57.4–61.1
No	2152	1093	1059	40.9	42.8	40.9–44.8	39.1	37.3–41.0
Missing	91	46	45	1.7	1.8		1.7	
Total	5259	2552	2707	100				
<b>My child ... school lunch ...</b>								
Yes	5135	2490	2645	97.6	97.6	96.9–98.1	97.7	97.1–98.2
No	53	22	31	1.0	0.9	0.6–1.3	1.1	0.8–1.6
Missing	71	40	31	1.4	1.6		1.1	
Total	5259	2552	2707	100				

Table I (Continued)

	Frequency (N) all		Percent (%)			
	Girls	Boys	all	Girls	Boys	CI
My child ... physical active/plays ...						
Yes	3392	1813	64.5	61.9	67.0	65.2–68.7
No	1760	854	33.5	35.5	31.5	29.8–33.3
Missing	107	40	2.0	2.6	1.5	
Total	5259	2707	100			
My child ... not been bullied by other children						
Yes	3205	1557	60.9	64.6	57.5	55.7–59.4
No	1877	1062	35.7	31.9	39.2	37.4–41.1
Missing	177	88	3.4	3.5	3.3	

higher among boys (39.2%) than among girls (31.9%); nevertheless, girls (1.7; 1.4–2.1) show higher odds ratio of positive SRH when associating bullying in preschool (Table II). Having lunch in school did not show significantly raised odds ratio for the girls' positive SRH; however, for the boys' positive SRH when associating having lunch in school shows the highest odds ratio (3.5; 1.6–7.6). These gender differences are hard to explain but one possible explanation for this could be the Swedish context where all children in primary education are offered free school meals according to the Education Act (SFS, 2010:800) and practically all children in the sample have had school lunch every day (Table I). Boys (2.4; 1.9–2.9) and girls (2.4; 2.1–2.8) show high odds ratios of positive SRH when associating sleeping patterns (Table II). Sleep for children is a complex concept and it is sensitive to cultural and psychosocial influences (Sadeh, Raviv, & Gruber, 2000), and there are strong associations between childhood sleep disorders and conduct, concentration, and mood problems (Heussler, 2005). Inadequate sleep among children can be a signal for various problems (Heussler, 2005, Smaldone, Honig & Byrne, 2007). Parents are often worried that children do not get enough sleep for their age, and school nurses are often asked questions (Thiedke, 2001). It is hard for parents to know if a child gets enough sleep, although the need for sleep is relative. Sleep problems during childhood are often overlooked, until it shows in poor school performance or behavior

Table II. Adjusted odds ratio (academic year, gender) (OR) of positive SRH when associating important preschool health indicators in boys and girls (CI = 95%).

Health Dialogue; all preschool children. 2006–2009	OR, all. n = 4989	Adjusted OR; girls, n = 2420		Adjusted OR; boys, n = 2569	
		CI	CI	CI	CI
My child is comfortable ...	2.9	2.5–3.4	2.4–3.7	2.9	2.4–3.5
My child sleeps well ...	2.4	2.1–2.8	2.0–3.0	2.4	1.9–2.9
My child has not had severe headaches ...	2.1	1.8–2.4	1.5–2.2	2.3	1.9–2.8
My child has had school lunch ...	2.8	1.5–5.1	0	3.5	1.6–7.6
My child has been physically active/played ...	1.4	1.2–1.7	1.2–1.9	1.4	1.1–1.7
My child has not been bullied ...	1.6	1.4–1.8	1.4–2.1	1.5	1.2–1.9

problems (Heussler, 2005). Parents of children with ADHD report sleep difficulties more frequently, and, therefore, it is relevant to initiate closer examination when parents and children report inadequate sleep (Hvolby, Jorgensen, & Bilenberg, 2009). By using HD, a school nurse gets the opportunity to identify children with sleep problems, take measurements to prevent sleep problems, and promote good sleep habits. The prevalence for headaches was lower among boys (39.1%) than among girls (42.8%), even though, boys (2.3; 1.9–2.8) showed higher odds ratio of positive SRH, more than girls (1.8; 1.5–2.2), when associating headaches in preschool (Tables I and II). Earlier research also shows that every fifth 6-year-old child experiences headaches, stomach aches, or back pains at least once a week (Petersen, 2008). It is further stated that children with pain problems functioned worse in school and pain problems as a child often remain as an adult (Petersen, 2008). A Finnish follow-up study of children aged 6 to 13 years old showed that prepubertal headaches predicted later migraines (Virtanen et al., 2007), and an Italian study (Guidetti, Fabrizi, Galli, & De Cesare, 1999) shows that headaches and migraines in childhood may be more difficult than in adulthood because the symptomatology shows age-related characteristics that require special approaches. The HD identifies children with headaches and enables the school nurse to examine the cause and the patterns of the headache more thoroughly and provide preventive advices.

More boys (67.0%) than girls (61.9%) were physically active and played every day, even though girls (1.7; 1.4–2.1) showed higher odds ratios of positive SRH more than the boys (1.5; 1.2–1.9), when associating physical activity (Tables I and II). It is well established that physical activity generates positive effects on children's health (WHO, 2009). Previous research has shown that the playground design and presence of adults are important factors in increasing children's physical activity and play (Sallis et al., 2001). This indicates the association of school environment with children's physical activity and play. It is vital that the children feel safe and secure in school and that the playground is perceived as safe, welcoming, and inspiring to spontaneous activity and play in order to promote health. There is a paradox in the fact that the majority of the children experienced a positive SRH and experienced good comfort in preschool, considering that 35.7% of the children had experienced being bullied. One possible explanation could be that bullying in the younger age groups sometimes are of a milder character, including the experiences of being excluded, pushed in the lunch line, or treated unfairly (Frånberg, Gill, Nordren, & Wrethander, 2009). There is a large individual variation in maturity and development physically, mentally, and socially among children, and it affects how children perceive the environment. It is difficult to interpret the results because the definition of bullying varies (Lee, 2006). Bullying as a concept is not defined in HD, but the question is formulated with concrete

examples of what could be considered bullying to help the children to understand and interpret, "My child has been bullied by other children in the last 3 months (i.e. has been called names, foul language, pushed around, excluded or in other ways been mistreated, etc.)." The HD can help identify bullying, and the school nurse can act based on their knowledge of bullying characteristics (Lee, 2006; Obadina, 2009; Olweus, 1994).

### Methodological considerations

The strengths of this study are the inclusion of children from the general population, the use of identical questionnaires, the low drop-out rate, and a high response rate (74%; Figure 1). This enhanced the general applicability of the results. The HD is conducted in a systematic approach by all school nurses in the county. Organizational changes and working conditions have been a hindrance for some school nurses and made it impossible to implement the HD for all. The study design is cross sectional, and this implies that it is not possible to draw any causal conclusions from the results, but it provides an opportunity to present prevalence and explore cross-sectional relationships to children's SRH. It is hard to compare the results from the HD with other studies concerning SRH among 6-year-olds due to the lack of studies. Could the positive approach used in the HD make it difficult to express problems? Could this implicate difficulties in identifying children with health problems? In Sweden,

there is a long tradition of great trust in child health care and the use is high—approximately 90–98%. Childhood is one of the healthiest periods in life (Bremberg, 1998), and this in regard to the positive approach should not be a hindrance. The HD represents an opportunity for the school nurse to introduce a healthy lifestyle and to address questions about health, and it is well known that an early introduction to a healthy lifestyle is essential in preventing many diseases (Villard, Rydén, Öhrvik, & Ståhle, 2007). A study with Danish school children showed that HD inspired students' learning and desires to learn more about their own health (Borup, 1998).

The HD is addressed to the child and the parent, and this could suggest a lack of validity because the setup could imply possibilities to influence the child on how to answer the questions. According to a study that analyzed the dietary and physical activity behaviors in children using questionnaires and, afterward, a phone interview with the parents, there were no discrepancies in children–parents responses (Economos et al., 2008). The questionnaire used in the HD is age-appropriate in language, numbers of questions, and content; is enhanced with images and visual estimation scales; and uses concrete examples (Jonsson, Wickberg, & Björ, 2001).

### **Methodological challenges**

In research concerning children, it is always difficult to find methods that are valid and reliable. It is always important

to keep in mind a child's development age when interpreting responses (Cremeens, Eiser, & Blades, 2007) and that the child is always in a position with less power just because he or she is a child. There are studies that show that 6-year-old children have a basic and concrete understanding of health that is focused on hurts, aches, and eating the right food (Goldman, Whitney-Saltiel, Granger, & Rodin, 1991). Cremeens, Eiser, and Blades (2007) describe the use of concrete examples and “thinking aloud” as successful strategies used by children aged 5 to 9 years old to interpret abstract concepts such as health. The HD is inspired by these strategies by using concrete questions. Although there are difficulties in finding age-appropriate methods for research, it is vital that the research continues so that the child's perspective on health can be recognized. We suggest future studies and other study designs (e.g. quantitative longitudinal and qualitative studies) exploring children's SRH further.

### **School nursing implications**

Conclusions and nursing implications are based on results from a Swedish context. The most important health variable tagging the preschool children's SRH was comfortableness in preschool. Also, experiencing good sleep, absence of severe headaches, being physical active/play every day, and not being a victim for bullying shows to be important preschool indicators for boys and girls.

The HD can increase the knowledge of 6-year-old children's SRH and also be a tool to gain further insight into children's health by highlighting patterns in children's SRH. Health is a complex concept, a puzzle consisting of many pieces where HD could add one piece to the puzzle.

## CONFLICT OF INTEREST

None.

## ACKNOWLEDGEMENTS

School nurses in the county.

## REFERENCES

- Arborelius, E., Bremberg, S., et al. (1997). *Stöd på BVC-fallbeskrivningar, swe* [Support described in case reports in child health care]. Stockholm, Community Medicine South: Centre for Child and Adolescent Health. 4–5.
- Awartani, M., Whitman, C.V., & Gordon, J. (2008). Developing Instruments to Capture Young People's Perceptions of how School as a Learning Environment Affects their Well-Being. *European Journal of Education, 43*, 51–70.
- Board of Health and Welfare. (2004). *Riktlinjer för skolhälsovården, swe* [Guidelines for School Health Services]. [Elektronisk resurs]. Stockholm: Board of Health and Welfare.
- Board of Health and Welfare. (2009). *Folkhälso-  
rapport, swe* [Public Health Report]. Stockholm: Board of Health and Welfare.
- Borup, I.K. (1998). Adolescents learning health promotion: Pupils' evaluation of contacts with the school health nurse. *Nordic Journal of Nursing Research & Clinical Studies/Vård i Norden, 18*, 26–31.
- Bremberg, S. (2004). *Elevehälsa-teori och praktik, swe* [Student health - theory and practice]. Lund: Student litteratur. 209–211.
- Creameens, J., Eiser, C., & Blades, M. (2007). A qualitative investigation of school-aged children's answers to items from a generic quality of life measure. *Child Care Health Dev, 33*, 83–89.
- Economos, C.D., Sacheck, J.M., Kwan Ho Chui, K., Irizarry, L., Guillemont, J., Collins, J.J., & Hyatt, R.R. (2008). School-based behavioral assessment tools are reliable and valid for measurement of fruit and vegetable intake, physical activity, and television viewing in young children. *Journal of the American Dietetic Association, 108*, 695–701.
- Frånberg, G.-M., Gill, P., Nordren, K., & Wrethander, M. 2009. Speaking of bullying—and what is done (På tal om mobbing—och det som görs. En kunskapsöversikt, swe). Swedish School Board. Stockholm. *9(1111)*, 17–20.
- Goldman, S.L., Whitney-Saltiel, D., Granger, J., & Rodin, J. (1991). Children's representations of "everyday" aspects of health and illness. *Journal of Pediatric Psychology, 16*, 747–766.
- Guidetti, V., Fabrizi, P., Galli, F., & De Cesare, C. (1999). Unilateral headache in early and late childhood. *The Italian Journal of Neurological Sciences, 20*, S056–S059.
- Gustafsson, L.H. (2009). *Elevehälsan börjar i klassrummet, swe* [The Health of student's begins in the classroom]. Lund: Studentlitteratur.
- Heussler, H.S. (2005). Common causes of sleep disruption in daytime sleepiness: Childhood sleep disorders II. *Medical Journal of Australia, 182*, 484–489.
- Hvolby, A., Jorgensen, J., & Bilenberg, N. (2009). Parental rating of sleep in children with attention deficit/hyperactivity disorder. *European Child & Adolescent Psychiatry, 18*, 429–438.
- Jonsson, M., Wickberg, C., & Björ, O. (2001). *Hälsosamtale - en möjlighet att få kunskap om hur barn och ungdomar mår. Ett pilotprojekt i Härnösand, swe* [The Health

- Dialogue—an opportunity to gain knowledge of how children and young people fell. A pilot project in Härnösand]. Härnösand: Västernorrlands County Council.
- Köhler, L. (2010). *Barnhälsoindex för stadsdelarna i nordöstra Göteborg, swe* [Child Health Index for the districts in Northern Eastern Gothenburg]. Gothenburg. 3–4.
- Lee, C. (2006). Exploring teachers' definitions of bullying. *Emotional and Behavioural Difficulties*, 11, 61–75.
- Lumholdt, H., & Klase'n Mc Grath, M. (2006). *Förskoleklassen—i en klass för sig, swe* [The Swedish pre-school class—one of a kind]. Swedish School Board.
- Obadina, S. (2009). Bullying in schools: An overview. *British Journal of School Nursing*, 4.
- Olweus, D. (1994). Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry*, 35, 1171–1190.
- Petersen, S. (2008). *Recurrent pain and health related quality of Life in Young School Children*. Department of clinical sciences, pediatrics, Umeå, University of Umeå.
- Petersen, S., Bergström, E., Cederblad, M., Ivarsson, A., Köhler, L., Rydell, A.-M., ... Hägglöf, B. (2010). Child and adolescent mental health in Sweden. A systematic literature review with emphasis on changes over time (Barn och ungdomars psykiska hälsa i Sverige. En systematisk litteratur översikt med tonvikt på förändringar över tid, swe). Stockholm: Royal Academy of Sciences.
- Polit, F.D. (2010). *Statistics and data analysis for nursing research*. Boston, MA: Pearson.
- Public Health Center. (2005). The Health Dialog [Online]. Retrieved from: <http://www.lvn.se/Halsa-och-varld/Planering-styrning/Folkhalsa/Halsosamtal-i-skolan/>
- Sadeh, A., Raviv, A., & Gruber, R. (2000). Sleep patterns and sleep disruptions in school-age children. *Developmental Psychology* [0012-1649], 36, 291.
- Sallis, J.F., Conway, T.L., Prochaska, J.J., Mckenzie, T.L., Marshall, S.J., & Brown, M. (2001). The association of school environments with youth physical activity. *American Journal of Public Health*, 91, 618–620.
- SFS 2010:800. The Education Act. *Svensk författningssamling*. Stockholm.
- Smaldone, A., Honig, J.C., & Byrne, M.W. (2007). Sleepless in America: Inadequate sleep and relationships to health and well-being of our nation's children. *Pediatrics*, 119, S29–S37.
- Thiedke, C.C. (2001). Sleep disorders and sleep problems in childhood. *American Family Physician*, 63, 277–284.
- Villard, L.C., Rydén, L., Öhrvik, J., & Ståhle, A. (2007). Impact of time trends and increasing age on health behaviour of Swedish school children. *Journal of Cardiovascular Risk*, 14, 326–332.
- Virtanen, R., Aromaa, M., Rautava, P., Metsahonkala, L., Anttila, P., Helenius, H., & Sillanpaa, M. (2007). Changing headache from preschool age to puberty. A controlled study. *Cephalalgia: An International Journal of Headache*, 27, 294–303.
- Wickberg, C., & Sjöström, M. (2004). *Hälsodata på webben, en möjlighet att visa hur barn och ungdomar mår, swe* [Health data on the Web, an opportunity to show how the health of children and adolescents]. Härnösand: The Public Health Center.
- World Health Organization. (1948). Definition of Health. Geneva: WHO.
- World Health Organization. (2008). Health Behaviour of school Aged-Children, HBCS. Geneva: WHO.
- World Health Organization. (2009). Socio-environmentally determined health inequities among children and adolescents. Summary of outcomes, background papers and country case studies. Geneva: WHO.