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Methodological Challenges in Research Regarding the Lifestyle of School Children

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Abstract

This study focuses on challenges which could be encountered during different phases of research regarding the lifestyle of children. A narrative review was formed based on data from literature as well as on the experience of the authors in research activities in the field of healthy lifestyle promotion among different groups of Romanian children. The study presents several challenges which must be taken in consideration when planning research in the field of lifestyle and health promotion among children, starting with recruitment of participants, procedure for data collection and continuing with the choose of the instruments used for data gathering. The lifestyle components which are addressed refer to smoking, nutrition related behaviour and physical activity of school children aged 6 to 15. Several examples of challenges encountered by some Romanian research studies and the way that they were addressed will be also presented. Research in the field of lifestyle of children could be a challenging, time and energy consuming process, but definitely also a rewarding one, since the results are important pillars for designing appropriate health promotion interventions.

Keywords: Romanian children; lifestyle; research; methodological challenges; health promotion.

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Introduction

The lifestyle of children refers to several behaviours such as smoking, alimentary habits and involvement in physical activity, which have important short term and long term consequences on their health and well-being. Different studies underline the importance of promoting a healthy lifestyle among children, since it is easier to form correct attitudes and habits, than to change them later (World Health Organization, 2002; Curie, 2008; Lotrean *et al.*, 2009). The lifestyle behaviours established in childhood may continue also during adolescence and adulthood, affecting the development of several diseases and interfering with the correct physical, emotional and social development (Currie, 2008; Lotrean *et al.*, 2010). Hence it is very important to develop appropriate programmes and measures in order to promote a healthy lifestyle among children. Nevertheless, efficient health promotion programmes and activities must be evidence based and research activities among children can play an important role in gathering and offering important information regarding several issues which must be taken in consideration when developing, implementing and evaluating healthy lifestyle promotion activities. First, research among different groups of children could assess the knowledge, attitudes and behaviours of children with respect to several components of the lifestyle, which will help the development of appropriate educational objectives and messages. Second, research studies could identify several characteristics and opinions of the target group which will guide the way of designing, delivering and evaluating the educational activities and materials. For instance, based on children opinions, needs and preferences, one educational program could be implemented at school, during extra curricula activities or using new methods of information technology. Third, it is important to perform the effect and process evaluation of the educational programs in order to understand if the program was efficient, implemented as intended and which is the feedback received from children with respect to its content. Hence, researches, where children are involved and recognised as important participants and their opinions and views are sought, are important in the field of healthy lifestyle promotion for children. Nevertheless, several studies suggest that this type of research must be performed, tacking in account and trying to solve several challenges, dilemmas and barriers which could be encountered, since there are some inherent differences about children which make them different from adults: they may have a limited and different use of vocabulary and understanding of words, relatively less experience of the world, different social competences, and may have a shorter attention span (Barker and Weller, 2003; Punch, 2002; Eirsnadottir, 2003).

This study focuses on challenges which could be encountered during different phases of research performed among children regarding their lifestyle, giving a special attention to several examples from Romania.

Methods

A narrative review was formed based on data from literature as well as on the experience of the authors in activities of research in the field of healthy lifestyle promotion among different groups of Romanian children. The study presents several challenges which must be tacking in consideration when planning research in the field of lifestyle and health promotion among children, starting with recruitment of participants, procedure for data collection and continuing with the choose of the instruments used for data collection. Several examples of challenges encountered by some Romanian research studies in the field and the way that they were addressed will be also presented. The focus of the study will be on research among school children aged 6 to 15 years old, which in the Romanian educational system means primary and secondary school children. The lifestyle components which will be discussed refers to smoking, nutrition related behaviour and physical activity.

Results

Recruitment of participants

There are several settings which allow to the research team to get the involvement of the children in research activities assessing their lifestyle, such as: (1) school settings; (2) children clubs (sport clubs, scouts clubs, holiday camps); (3) medical settings (offices of general medicine, hospitals, community health centres); (4) family.

Table 1 presents several advantages as well as challenges encountered during the process of recruiting the participants in different settings. We would like to point out two main challenges and possible ways of addressing them.

First, despite the setting where the research take place, it is widely recognised that in order to gain children's consent and involvement in research, one has to go via adult gatekeepers who are able to limit researchers' access to the children (Barker & Weller, 2003; Punch, 2002). In the case o the research performed in schools, children clubs or medical settings an institutional approval for the research should be obtained from the administration/director of that institution. It is advisable to have a written agreement, where both rights and obligation of institution representatives and the research team are clearly depicted. In order to obtain this consent, these officials must be clearly informed about the research project: objectives of research; the research team; the activities involved by the research; duration of the research; the way the target group will be involved; the benefits of participation for the participants as well as for the society; the possible risk of participation; the assurance of anonymity/confidentiality during and after

the research is done, and during the process of dissemination; the contact data of the research team, where they can be contacted if there are questions or issues which must be clarified before, during or after the research is done; the way the institution representatives can obtain a copy of the final results (Lotrean *et al.*, 2011; Gavrilovici & Gavrilovici, 2009). An official agreement can prevent several misunderstandings, such as the impossibility of continuing the research, if at a certain moment during data collection the director of the school change and the new director have no idea about the research project and do not want to continue it. Negotiating access to children in these institutions is therefore a process requiring researchers to be prepared to address any issues that gatekeepers may raise (Barker & Weller, 2003; Punch, 2002), including a disagreement of the officials with some research questions or instruments (for instance the school administration do not agree with asking children regarding the anti-smoking policies which are in place on school property).

On the other hand, children may be contacted through their family home. Several researchers underlined that access through the home may also be a long and complex process (Barker & Weller, 2003; Punch, 2002; Mauthner, 1997). Contacting parents of each child is a time consuming process, parents may see researchers as intrusion, and do not want such a public examination of their own private space (Barker & Weller, 2003; Punch, 2002). Nevertheless, there were also researchers who preferred this way of getting to the children, since they found the process of negotiating the access in schools too complicated and with the risk of influencing the design of the research as a result of the opinions expressed by some school officials.

Second, another challenge is represented by the issues which researchers should correctly identify and address with respect to creating the children the appropriate environment which will allow them to have the time, the mood and the disponibility to participate. In schools or children clubs, the moment of performing the research should be carefully choose, in order to prevent the interference with other activities (for instance, the research could be performed in schools during some specific hours of civic education). Moreover, research conducted at school should take into account that children may feel pressure to give 'correct' answers to research questions, since they can interpret it as a school test. Hence, adult researchers need to reassure children that there are no right and wrong answers (Barker & Weller, 2003; Punch, 2002; Lotrean *et al.*, 2011) and they should express freely their own ideas and opinions.

The research activities performed in medical settings may take advantage of the possibility of involving medical doctors or nurses as part of the research team and they can gather important information from the children during their medical activity. There are big chances that health care professionals have already experience in working and communicating with children and beneficiate from children

confidence. Nevertheless, the overloaded clinical activity may be an important obstacle in motivating health professionals to participate in research activity.

Performing research with children at their home, in their own spaces can enable them to feel more comfortable. Yet adults should not assume that children necessarily prefer their own environment, they may actually prefer an adult researcher not to invade their child space or they could be intimidated by the presence of their parents (Barker & Weller, 2003; Punch, 2002). As several researchers also showed, ultimately it depends on the skills of the adult researcher to develop rapport and build up a relationship of trust both with children and the adult gatekeepers, such as parents or teachers (Eirsnadottir, 2003; Barker & Weller, 2003).

Procedure for data collection

The procedure for data collection must allow to children voluntary participation and must assure them anonymity or confidentiality.

- *Voluntary participation.* Children participating in the research activities must be assured that they could refuse to participate, without any consequences. In the case of using the questionnaire they can refuse by leaving the questionnaire blank. In the case of interviews they can refuse to answer the questions. This must be clearly explicit to them orally, but can be written also on the first page of the questionnaire (Lotrean *et al*, 2011).
- *Anonymity or confidentiality.* Whenever it is possible, the best option is to assure anonymity for the answers/information offered by participating children. For instance, in the case of using questionnaire for assessing several beliefs or behaviours of children, they will not write their names and identification data on the questionnaire. This will allow them to answer freely to questions regarding their smoking status or other health risk behaviours, without to be afraid that the teachers or the parents will find about this. Nevertheless, there are situation when the objectives of the research cannot allow for anonymity of the answers. For instance, if a study investigates the evolution during a period of time of several components of the lifestyle among children researchers perform the study two or more times and they need to follow the evolution between assessments of health behaviours of each person. In this case the only possibility is to assure confidentiality (Lotrean *et al*, 2011). Participating students must be assured that the data provided by them are confidential and only the research team will have access to them. There are studies which underline that this confidentiality should be broken only in cases where the researchers get information regarding child abuse or situations which put a serious treat to the children (Eirsnadottir, 2003; Barker & Weller, 2003). For instance,

studies assessing the lifestyle of Romanian children performed at school used several means in order to assure children that they can trust the research team, which will create the confidentiality of their answers (Lotrean *et al*, 2012a, Lotrean *et al.*, 2009): (1) school teachers or administration were not involved in the process of data collection; teachers were not present in the class when the questionnaires were administered or they were present, but they stay in front of the class and did not participate in questionnaire collection; (2) school students did not write their name on questionnaires, but put their questionnaire in an envelope and wrote their name on envelope. Another possibility is that the research team allocates a code to the students and they will write their code on the questionnaire, not the name.

Table 1. *Settings for recruitment of the study sample*

	Advantages	Challenges
School settings	<ol style="list-style-type: none"> 1. Facilitate access to many children, since a big percentage of children aged 6-15 goes frequently to school, the school drop out rates at this age in Romania being low 2. Allows the possibility of researchers to observe several components of the lifestyle of children during school activity, such as involvement in physical activity during breaks and hours for sport education, food offered in school cafeteria, smoking behaviour of children on school property 3. There are chances to receive more focus of the children, since they are used to perform several activities during school time 4. There are possibilities to involve some children in activities of data gathering by using photo cameras 	<ol style="list-style-type: none"> 1. Informed consent from school administration/ principal should be obtained 2. Often school administrations have different issues and priorities that need to be addressed and sometimes they could have a different agenda than the research team, including the risk that they do not agree with some of the research questions or instruments 3. It is advisable to obtain also the informed consent from parents, even if sometime could be a challenge to meet them. Some possibilities are to try to reach them during parents meeting convoked by teachers at school or sending them letters through children. 3. The school environment is a place for children to learn but is organised and controlled by adult teachers. Research conducted at school should take into account that children may feel pressure to give 'correct' answers to research questions (Barker and Weller, 2003) 4. Longitudinal studies can be carried out only for the period of time when children are still in the same school 5. Lack of time, since children are involved in several school activities

	Advantages	Challenges
Children clubs	<ol style="list-style-type: none"> 1. It can access some specific groups of children which might be of particular interest for a specific research (for instance a research focused on the lifestyle of children which participate to different sport clubs) 2. Some children could feel more relaxed and talk more freely than in a school environment 3. There are possibilities to involve some children in activities of data gathering by using photo cameras 	<ol style="list-style-type: none"> 1. Informed consent from the institution representatives should be obtained 2. Informed consent from parents is needed 3. Lack of time, since children are involved in other activities
Medical settings	<ol style="list-style-type: none"> 1. The possibility of getting information about the child also from the parents 2. The possibility of getting the medical doctors or the health care professionals as part of the research team, since they could have experience of building rapport and communication with children and, at the same time, they could get several information from their children patients during their medical activity, without to be interpreted as a interference by children or parents 3. The possibility of getting access to specific children groups, such as children with chronic diseases 	<ol style="list-style-type: none"> 1. Informed consent from the hospital director is needed 2. Informed consent from parents is needed 3. Challenges in convincing the health care professionals to be part of the research team due to overloading with clinical activity
Family	<ol style="list-style-type: none"> 1. No need of institutional approval 2. Some children may feel more relaxed and talk more freely than in a school environment 3. The possibility of getting information about the child also from the parents 4. There possibilities of conducting longitudinal studies 	<ol style="list-style-type: none"> 1. Some parents do not want a researcher to interfere with their home privacy 2. Some children may be intimidated by the presence of their parents 3. Lack of time from both children and/or parents to participate in the research activities

Research instruments

In order to gather information from children with respect to their lifestyle there are several instruments which can be used: (1) questionnaires ; (2) interviews ; (3) focus-groups ; (4) diaries ; (5) observation ; (6) different measurements.

1. *Questionnaires* can be used for secondary school children, while having a very limited utilization for primary school children. Validity and reliability of questionnaires is always an important issue and the challenge of developing questionnaires for assessing lifestyle of children with good validity and reliability

is even higher. In order to investigate the involvement of children in one health risk behaviour, several questions must be used, in order to capture the correct answer. For instance, a research study performed among Romanian secondary school children assessed smoking behaviour by a combination of five questions (Lotrean *et al.*, 2012a). First, students were asked to choose a statement that best described their smoking behaviour (e.g. 'I smoke less than weekly'; 'I smoke at least once a week'). The responses were cross-validated using an algorithm of concepts measuring current smoking (smoking in the last month, the last week and the last 24 hours) and lifetime smoking (number of cigarettes smoked during lifetime). The assessment of alimentary habits of children could be performed by using a food frequency questionnaire, which has three main parts: a list with aliments, a part where children choose the frequency of eating the specified food products during a certain period of the (for instance in the last month) and a third part which investigates the quantity of food eaten with each occasion. In order to make children to better estimate the quantity, a definition of what a portion is should be clearly formulated and children can decide how many portions they have eaten. In a study regarding alimentary habits of Romanian secondary school children vegetables intake, respectively fruit intake were assessed by two items each (Lotrean *et al.*, 2012b). The first item was a food frequency question: How often did you eat fruits/vegetables in the last 7 days? The second item referred to the number of portions of fruits, respectively vegetables they consumed on such days. A clear definition of one portion was included in the questionnaire for both vegetables and fruits. Similar with other studies (World Health Organization, 2002; Mullarkey *et al.*, 2007), one portion of fruits was defined as a whole fruit (e.g. medium apple), three-fourths cup (178 mL) fruit juice, or one-half cup (120 mL) cut-up fruit. For vegetables, a serving was defined as 1 cup (240 mL) raw leafy vegetables (e.g. lettuce), one-half cup other vegetables, or three-fourths cup vegetable juice. Other possibilities of making children to better understand what a portion means are represented by showing to children pictures with one portion of the specific food. Different studies also underline the importance of explaining to the children very well all these issues connected to estimation of food quantity and frequency of consumption, since it could be difficult for some of them to make correct estimation (Mullarkey *et al.*, 2007).

2. *Interviews.* This type of instruments can be used both for primary school children and secondary school students. Some researchers suggest that some children prefer to be interviewed together with another child colleague or that some little children could cooperate better if during the interviewing process they are allowed to play or draw something (Eirsnadottir, 2003). Moreover, the clarity of language and the experience of the researchers in communicating and building connection with children are vital. Sometimes children are not used to expressing their views freely or being taken seriously by adults because of their position in adult dominated society. The challenge is how best to enable children to express

their views to an adult researcher and how to ‘maximise children’s ability to express themselves (Barker & Weller, 2003).

3. *Focus groups*. They could be utilised in order to gain deeper insight regarding the opinions of older children from secondary schools on a specific issue. Some children can be stimulated to talk during focus groups activities, while others may lack confidence in communicating directly in the presence of other peers.

4. *Diaries*. Diaries where there are written the food products and/or the type of physical activity from a certain period of time (generally 3-5 days) can offer valuable detailed information about the lifestyle of the investigated person, but they have limited utilization in research among children. This type of instruments can be used only with older children, with a high literacy and good motivation in performing such a task.

5. *Observations*. Adults researchers can perform several observation in different settings in order to investigate how children behave with respect to different lifestyle components (for instance the smoking behaviour of children on school property), but it offers some qualitative data which generally should be completed with data gathered using other types of instruments.

6. *Measurements*. Several types of measurements could be used in order to validate the information offered by children. For instance biochemical determinations of plasma and salivary cotinine and thiocyanate or expired air carbon monoxide could be used to validate smoking behaviour declared by children. Several studies, however, have found high correlations between self-reports and biochemical assessments of children smoking behaviour when confidentiality of responses is assured (Dolcini *et al.*, 1996). Another example refers to the use of a pedometer- a device, usually portable that counts each step a person takes by detecting the motion of the person’s hips. In order to better assess the involvement of children in physical activities, researchers could ask them to wear pedometers for several days.

Conclusions

Research in the field of lifestyle promotion among children need to be carefully planned. The setting where the research is performed and the instruments for data collection must be chosen according with the age and socio-educational characteristics of the children, the study objectives and the possibility of receiving access to children from the parents/persons responsible with the education and well being of the children. The concentration span, the life experience and social competencies, the communication ability of children are important factors which influence their capacity of expressing freely their opinions and ideas and raise challenges to adult researchers. Nevertheless, identification of these challenges

and seeking for appropriate solution to overcome them have the potential to offer valuable results which increase the chance of understanding the lifestyle related behaviours of children, the factors which influence them and the type of educational activities which should be developed for children. Hence, research in the field of lifestyle of children could be a challenging, time and energy consuming process, but definitely also a rewarding one, since the results are important pillars for designing appropriate health promotion interventions.

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References

- Barker, J., & Weller, S. (2003). Never work with children? The geography of methodological issues in research with children. *Qualitative research*, 3, 207-227.
- Currie C. (2008). *Inequalities in young people's health. Health behaviour in school-aged children international report from the 2005/2006 survey*. Copenhagen: WHO Regional Office for Europe.
- Dolcini, M.M., Adler, N.E., & Ginsberg, D. (1996). Factors influencing agreement between self-reports and biological measures of smoking among adolescents. *Journal of Research on Adolescence*, 6, 515-542.
- Eirsnadottir, D. (2007). Research with children-methodological and ethical challenges. *European Early Childhood Research Journal*, 15(2), 97-211.
- Gavrilovivi, O., & Gavrilovici, C. (2009). Introducere în etica cercetării de la prescripție la realizarea practica. *Revista Romana de Bioetică*, 2, 24-32.
- Lotrean, L.M, Laza, V., Ionut, C., De Vries, H. (2010). Assesement of health risk behaviours and their interrelationship among young people from two counties of Romania. *Journal of Public Health*, 18, 403-411.
- Lotrean, L.M., Mester, I., Ionut, C., & De Vries, H. (2009). Factors associated with smoking among Romanian senior high school students. *Revista de Cercetare si Interventie Sociala*, 25, 83-100.
- Lotrean, L.M., Trofor, A., Mihălțan, F., & Santillan, E.A. (2011). School-based smoking prevention programmes: ethical aspects. *Pneumologia*. 60(2),107-110.
- Lotrean, L.M., Mesters, I., & de Vries, H. (2012a). Why do Romanian junior high school students start to smoke? *Child Care Health and Development*. Epub ahead of print Aug 29, 2012. doi: 10.1111/j.1365-2214.2012.01428.
- Lotrean, L.M., Tutui, I., & Simion, L. (2012b). *School lunch of Romanian school children and its content in fruits and vegetables*. World Public Health Nutrition Conference, Rio de Janeiro, www.wphna.org
- Mauthner, M.(1997). Methodological Aspects of Collecting Data from Children:Lessons from three Research Projects. *Children & Society*, 11, 16-28.

- Mullarkey, D., Johnson, B., & Hackett, A. (2007). Portion size selection of fruits and vegetables by 9- to 10-year-old children in Liverpool. *Journal of Human Nutrition and Dietetics* 20(5), 459-466.
- Punch, S. (2002) Research with Children: The Same or Different from Research with Adults? *Childhood*, 9(3), 321-341.
- World Health Organization (2002). *World Health Assembly global strategy on diet, physical activity and health*. Resolution WHA55.23. Geneva: World Health Organization.