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Adolescents' rights, duties and responsibilities to make their health choices: An integrative review

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Keywords:	Literature review < Empirical approaches, Moral sensitivity < Topic areas, Ethics and children in care < Topic areas, Moral distress < Topic areas, Codes of ethics < Topic areas
Abstract:	<p>Background: Although the link between adolescents' health choices in relation to rights, duties and responsibilities is acknowledged, little is studied this subject.</p> <p>Aim: To identify, describe and synthesize previous studies on adolescents' health choices in relation to rights, duties and responsibilities.</p> <p>Method: The integrative review was used to review and synthesize current knowledge. Electronic and manual searches from 2009 to March 2014 were used to systematically identify earlier studies.</p> <p>Results: The review identified 13 studies. Adolescents' health choices were linked to unsuccessfully exercised rights, arising from questioned autonomy and freedom, and their duties were hardly mentioned.</p> <p>Conclusion: Research into adolescents' health choices in relation to their rights, duties and responsibilities is still methodologically fragmented. In future, more research is needed to support adolescents' health promotion initiatives and increase their involvement opportunities.</p>

Abstract

Background: Although the link between adolescents' health choices in relation to rights, duties and responsibilities is acknowledged, little is studied this subject.

Aim: To identify, describe and synthesize previous studies on adolescents' health choices in relation to rights, duties and responsibilities.

Method: The integrative review was used to review and synthesize current knowledge. Electronic and manual searches from 2009 to March 2014 were used to systematically identify earlier studies.

Results: The review identified 13 studies. Adolescents' health choices were linked to unsuccessfully exercised rights, arising from questioned autonomy and freedom, and their duties were hardly mentioned.

Conclusion: Research into adolescents' health choices in relation to their rights, duties and responsibilities is still methodologically fragmented. In future, more research is needed to support adolescents' health promotion initiatives and increase their involvement opportunities.

Keywords

Adolescent, autonomy, health choice, integrative review, responsibilities, rights

Introduction

Adolescents make individual health choices in their everyday life. Health choices refer to the conscious or unconscious choices that individuals make that have a direct or indirect influence on their health¹⁻³. These choices are important for adolescents aged from 10 to 19 years of age^{4,5}, because they reflect their learned behaviours at home, illustrate their current attitudes and create a basis for their future health. Adolescents' health choices are linked to their wellbeing, lifestyle and health behaviours¹⁻³ and they concern habits related to nutrition, exercise, rest and substance use^{6,7}. Thus, health related choices are a factor among others which influence whether they get ill and need healthcare services¹⁻³. On a global level, the main concerns regarding adolescents' health choices are low rates of physical activity, an increase in the number who have problems with their weight and high rates of substance abuse^{6,7}.

Individuals' health choices in relation to rights, duties and responsibilities are a matter of autonomy and are important when it comes to making independent decisions⁸⁻¹³. Autonomy means independence and is concerned with authentic values that encourage a person to act. Autonomy is the person's state, whereas freedom deals with certain acts. The concept of freedom is described as an individual's ability to act, without external or internal constraints.¹⁴ Adolescents' health and choices are protected by international and universal declarations that highlight their rights to control their own health and bodies and which protect their rights to make health choices^{8,15-18}. Rights can be defined as

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8 something that an individual is entitled to have or do^{8,15-20}. However, rights also involve
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10 duties and responsibilities, because if a person has rights, they also have the duty to re-
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12 spect other peoples` rights^{9,14}. Duties are actions that individuals required to perform-
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14 ing^{21,22}. Responsibilities have been described as the action of behaving correctly or re-
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16 spectfully towards someone or something and to be accountable for ones` own actions.
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18 Individuals` rights, duties and responsibilities can be justified socially, morally or legal-
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20 ly.²¹⁻²³ While there are a variety of possible premises to examine adolescents` rights,
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22 duties and responsibilities, our emphasis here is on their health choices, which is linked
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24 to our views on their basic rights.
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29 Although, rights, duties and responsibilities play an essential role in all health choices,
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31 they have not been studied much and, when they have, they have been tackled in ways
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33 that have shown considerable variations^{6,7}. Understanding adolescents` health related
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35 rights, duties and responsibilities provides a basis for supporting them. This is necessary
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37 in order to promote adolescents` health choices and to improve involvement in their
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39 own healthcare and more widely in society⁷. A review of previous studies was chosen
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41 because there is a need for a more coherent understanding of the rights^{12,13}, duties and
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43 responsibilities^{11-13,19,24} that adolescents have in relation to health choices. There is also
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45 a need to deepen understanding of the conceptual basis in health promotion by focusing
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47 on adolescents` health in relation to their rights, duties and responsibilities.
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Aim

The aim of this integrative review was to identify, describe and synthesize previous studies on adolescents' health choices in relation to their rights, duties and responsibilities. The review aimed to respond to two research questions: what kind of methodology has been used when studying adolescents' rights, duties and responsibilities in health choices and how they have been described in previous studies?

Method

We used the integrative review method described by Cooper^{25,26} because it enabled us to identify and synthesize original studies with different methods²⁶⁻²⁸. The review process consisted of five stages: identifying the research problem, literature searches, data evaluation, data analysis and presenting the synthesis of the results²⁵⁻²⁷.

Research problem identification

The first stage was to identify the research problem, by conducting preliminary literature searches of previous studies, using different sets of search terms to find the most eligible ones.

Literature searches

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9 The second stage was the literature search. Electronic searches were conducted using
10 the CINAHL, PubMed, Web of Science and Scopus databases (Figure 1). Search terms
11 included combinations of MeSH-terms, such as adolescent, decision making, lifestyle,
12 habit, health behaviour, morals, ethics, attitude and free search terms of synonyms con-
13 cerning adolescents, choices, health and ethical values. The formulation of the search
14 terms and electronic searches were carried out in collaboration with informaticians to
15 ensure the validity of the searches. In addition, manual searches were conducted in or-
16 der to avoid the search-bias and to maximise the number of relevant studies^{26,27}. The
17 journals that included the selected articles were scrutinised, together with their reference
18 lists. In addition, two journals, *Nursing Ethics* and *Bioethics* were included in the manu-
19 al searches, because of their close links to our research topic. The limitations for the
20 electronic and manual searches were that they had to be published in English between
21 January 2009 and March 2014 in a peer review scientific journal and the abstract had to
22 be available.
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Figure 1. The flowchart of the literature searches goes here.

Search outcome and selection

Based on the results of the 2,037 electronic searches, 77 original articles were selected based on their titles, 20 on their abstract and nine on their full text. As a result of the manual searches, 11 studies were identified based on their title and four were selected

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9 based on full texts. A total of 13 original articles were identified based on the literature
10 searches (Figure 1). The selection was conducted independently by two authors (TM
11 and MK).
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16 The selection of the original articles was based on the inclusion and exclusion criteria.
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18 Our inclusion criteria were that the focus of the original study was on healthy children
19 or adolescents (10 to 19 years old)⁴, that the focus of the paper was on health choices¹⁻³
20 and that it covered rights, duties or responsibilities²⁰⁻²². The exclusion criteria were that
21 the original study focused mainly on adults, a specific disease, such as diabetes or the
22 human immunodeficiency virus, or a particular health-related decision, such as vaccina-
23 tion or tooth-brushing frequency, or a reproductive health issues, such as pregnancy and
24 breast-feeding, or an environmental issues affecting health choices, such as the influ-
25 ence of buildings or food menus. In addition, studies that reviewed other studies were
26 excluded.
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39 *Data evaluation*

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42 The third phase of the review was to evaluate the quality of the selected full texts by
43 using appraisal criteria²⁹⁻³¹ (Table 1). The evaluation was conducted by two independent
44 researchers (TM, MK) and aimed to describe the quality of the original studies by fo-
45 cusing on methodological issues. All the studies were included^{26,27}.
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9 *Table 1. The evaluation of the quality of the selected studies based on the appraisal cri-*
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14 *Data analysis*

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17 Data analysis was the fourth stage of the research process and included all papers with
18 different methods²⁶. All the selected articles were read several times in order to gain an
19 overall understanding. In order to analyse the methodology of the selected articles, they
20 were tabulated according to the author(s), year of publishing, the aims, methods and
21 sample (Table 2). In addition, information about the instruments that were used in the
22 quantitative studies was tabulated: the name, developer(s) and the content of the instru-
23 ments, as well as the type of scales used and the reported reliability and validity of the
24 instrument (Table 3). After tabulating the methodological content we extracted the ma-
25 terial, from all the selected articles, related to adolescents' health choices in relation to
26 rights, duties and responsibilities and analysed and interpreted them by following the
27 principles of qualitative inductive content analysis³². After reading the papers several
28 times, the content was coded based on meaning units, such as a couple of words or sen-
29 tences, and the codes were sub-categorised based on their similarities and differences
30 and further abstracted into main categories. Three main categories describing the con-
31 tent of adolescents' health choices in relation to rights, duties and responsibilities were
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9 found. The analysis up to the sub-category stage was conducted by one author (TM) and
10 the final analysis was carried out in collaboration with all the authors.
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14 *Table 2. Summary of the selected original articles goes here*
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17 *Table 3. Summary of the instruments used in the quantitative original studies goes here*
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20 **Results**

21 *Findings of the methodology of the studies*

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27 The 13 original studies we selected employed a range of methods: six were qualitative,
28 four were quantitative and three were theoretical (Table 2). The data collection methods
29 mentioned in the qualitative studies were interviews^{33,34}, focus group discussions³⁵ and
30 group research sessions³⁶. In addition, there were combinations of individual, pair and
31 group interviews³⁷, as well as individual interviews, group discussions and observa-
32 tions³⁸. In the selected quantitative studies, 11 different instruments were used (Table
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5) In two studies the same two instruments - the Healthy Lifestyle Beliefs Scale and the
Healthy Lifestyle Choices Scale - were used^{39,40} and the remaining nine instruments
were only used once in each study.

In nine out of the 10 selected empirical studies, the target group was adolescents aged
from eight to 19 years old and parent-child dyads were used in one study³⁹ (Table 4).
Target groups also varied in relation to sex and sample size. The target groups were

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8 described in relation to their background as an average group³⁵, as an urban group^{34,39},
9 as a lower-socioeconomic group^{5,33,36,37} and as a group with diverse socioeconomic
10 backgrounds^{38,40,41}. Seven of the selected studies were conducted in North Ameri-
11 ca^{33,36,39-43}, four in Europe^{34,35,37,38} and one each in Australia⁴⁴ and Asia⁵.
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18 *Table 4. Target groups of the selected original studies goes here*
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21 In all of the selected studies, adolescents' rights and responsibilities were examined as
22 part of other health issues, such as perceptions of health and health behaviour^{5,37,41},
23 choices made by adolescents and factors affecting them^{33,36,39,40} and health related
24 risks^{34,35,38,42,44}. In addition, rights and responsibilities related to children's and adoles-
25 cents' health related choices were examined as a part of public health policies⁴³.
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33 *Findings based on the results of the selected studies*
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36 Our findings showed that autonomy was a cornerstone for adolescents' health choices
37 and that these referred to the their ability to make value based and independent deci-
38 sions on health issues. Autonomy has been linked to adolescents' freedom but also to
39 the responsibility to make their individual health choices within their social environ-
40 ment.
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48 *Autonomy as a basis of adolescents' health choices.* Autonomy has been defined as an
49 adolescent's capability to act for themselves⁴² and portray their personal value-based
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9 health choices^{37,42}. Selected studies have found that the development of identity and the
10 sense of control over one's own life were essential for adolescents' autonomous health
11 choices⁴². However, autonomous health choices have required that adolescents have
12 sufficient self-confidence and capabilities^{37,42}, so that they are able to resist factors such
13 as peer pressure and make their own choices⁴².
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21 The selected articles highlighted the critical question of the link between adolescents'
22 limited capacity to make health choices and to take responsibility for those choices. Ad-
23 olescents are thought to have inadequate knowledge about their health choices and a
24 lack of comprehension about the consequences of their choices^{36,44}. However, as Brown
25 et al.⁴⁴ pointed out, capacity and responsibility were not correlated in adolescents and
26 they could be expected to take some responsibility for their choices.
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35 We found that the special feature of adolescents' autonomy in health choices was their
36 age, with autonomy evolving year by year³⁵ and control over their own choices³³ and
37 independence^{5,35,36,40} increasing. The adolescents' health choices, and their growing
38 level of autonomy, were influenced by their social environment, including the diminish-
39 ing influence of their parents³⁶ and the growing influence of friends^{35,40}. In addition,
40 gender appears to have an effect on adolescents' decisions, because girls have been re-
41 ported to be more aware and self-confident of the value of their health related deci-
42 sions⁵.
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9 *Freedom and rights beyond the adolescents' health choices.* Adolescents' health choices have also been linked to their freedoms and rights. Freedom referred to adolescents making choices according to their individual opinions without interference from their parents. Freedom has also been described as an adolescent's personal space and the ability to choose whatever they want. On the other hand, freedom has been described as having the opportunity to make similar decisions as their peers.³⁷ Adolescents also have freedom when it comes to relaxation and leisure activities^{34,38}, such as watching films, playing sports, having fun with friends, hanging out³⁸, partying and even using substances^{34,38}. Thus, unhealthy choices have been portrayed as an expression of freedom. Adolescents have reported that adult restrictions limited their freedom, while unhealthy choices gave them the chance to experience freedom without the restrictions and control exerted at home or school³⁸.

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36 When it comes to health choices, adolescents have been reported to be dependent on their parents^{5,41,43} and their rights have been linked to parental autonomy and family privacy. As a result, adolescents have been seen as vulnerable, but their rights regarding health choices have largely been unaddressed, met with scepticism and dealt with unsuccessfully. In addition, in comparison to adults' rights, adolescents' interests and rights have been approached unequally, thought to be less valuable and they have had limited opportunities to exercise their own rights⁴³.

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9 *Adolescents' health choices and responsibilities.* Responsibility has been described as
10 an essential part of adolescents' health choices and has been defined as a capacity for
11 autonomous and independent behaviour. In adolescents, forming their own independent
12 identity lies at the core of developing their sense of responsibility. Independent identity
13 refers to the identity that is separated from that of others, especially parents and peers.⁴²
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15 In selected studies, adolescents' responsibility has been linked to self-control in relation
16 to health choices around exercising and eating habits³⁹, but also to controlling impulsive
17 behaviour⁴². It has also been linked to social skills, such as cooperation and assertive-
18 ness³⁹, and considering another's perspective in relation to their own choices⁴².
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30 Adolescents' responsibility has been particularly integrated with the right on free choic-
31 es^{43,44}. Responsibility for adolescents' health choices has been presented as being an
32 individual choice and not a choice made by society⁴⁴. Although adolescents have the
33 freedom to make their own decisions and choices, they do not have the experience of
34 responsibility they need make the health choices that actively and independently pro-
35 mote their healthy lifestyle. According to Ridder et al, adolescents have let their parents
36 take that responsibility and, if their parents are not present, they tend to prefer unhealthy
37 choices, especially at school or with their friends.³⁵ Adolescents' health choices are
38 made based on their current situation^{34,35} and health has been something they take for
39 granted, rather than something they feel they need to make a priority³⁵.
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9 One example of the link between responsibility and health choices mentioned by ado-
10 lescents in the research was risky choices, such as drinking in moderation with friends³⁸.
11 Risky choices have included the opportunity to act autonomously^{38,44}, but also to ad-
12 vance their individual choices and responsibilities⁴⁴. In addition, these choices have
13 been linked to other valuable factors, such as social relationships and acceptance by
14 peers^{34,38,42,44}.
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23 However, adolescents' responsibilities for their health and health related issues have
24 been also described from a wider perspective, taking into account current discussions
25 and commercial interests. The relationships between the interests of society and the re-
26 sponsibilities of adolescents and their freedom to make choices have been seen as com-
27 plicated. Society in general, and parents in particular, have been seen as responsible for
28 ensuring that adolescents have the right to make health choices⁴³. Moreover, adolescents
29 have said that they expect parents to be responsible for providing them with the best
30 possible conditions for their health choices^{35,43}, such as offering them healthy meals and
31 opportunities to play sport and they also expect the same healthy eating and physical
32 activities to be provided at school. This makes healthy choices easier and more attrac-
33 tive. In addition, feedback suggests that school staff play a more significant role in
34 school than parents do at home.³⁵ The role that healthcare staff play in adolescents'
35 health choices is to ask them the right questions about their health conditions, as other-
36 wise they rarely speak about health related issues³⁶.
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Discussion

This study synthesised new knowledge about the content of research on adolescents' health choices in relation to rights and responsibilities. Although those rights and responsibilities were recognized in previous studies, only few studies made it the main focus of their research. Adolescents' health choices were described as being based on autonomy, despite the fact that their capacity to make independent health choices has often been questioned. Health choices were also linked to the adolescents' freedom to make decisions without interference from their parents.

The rights that adolescents have to make health choices has received little attention in previous research and those papers that have discussed it have suggested that those rights have not been particularly successful. This has been because adolescents have had limited opportunities to voice their rights and because of their vulnerability and dependency on adults. According to our review, the representation of adolescents' responsibilities for their health choices have been presented in terms of their capacity for autonomous behavior, free choices, self-control and other social aspects, such as relationships with parents and friends. The responsibility for adolescents' health choices has been seen to lie mainly with parents and healthcare and school staff, not the adolescents themselves. In summary, adolescents' rights, duties and responsibilities have rarely been studied and their rights, duties and responsibilities have been unclear. It is note-

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9 worthy that discussions about the links between duties, rights and responsibilities were
10 missing, even though this has been acknowledged in previous studies^{9,11,13}.

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14 Our findings, based on the methodology of the reviewed studies, showed that these did
15 not focus explicitly on the rights, duties or responsibilities of adolescents. They were
16 methodologically diverse studies, which was particularly evident in the variety of in-
17 struments used in the quantitative studies, a bias for research in first world countries,
18 such as Australia, Canada, Denmark, Sweden and USA and in the quality of the re-
19 viewed studies. This is why carrying out more methodologically coherent empirical
20 studies among varying target groups would highlight what these values are in relation to
21 adolescents' everyday health choices and the possible factors affecting them. In order to
22 fill this gap in the research, there is also a need for tested instruments.
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35 According to the World Health Organization, adolescents are a heterogeneous group
36 that are in different developmental phases^{4,7} and the studies that we analysed covered a
37 wide age range. However, this did reveal that adolescents' health choices related rights,
38 duties and responsibilities differed from children's and adults'. This was evident from
39 the original studies that we analysed, which showed increasing autonomy with age, but
40 also in the discussions about how adolescents' on-going development affected their ca-
41 pabilities to make health choices, compared to adults. Adolescence is a significant peri-
42 od of life, because it provides opportunities to make up the developmental deficits in
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9 childhood, but also to build up future health. That is why adolescents' special character-
10 istics need to be taken into account in health promotion strategies⁷ and in discussions on
11 their rights, duties and responsibilities.
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16 However, our findings described that the discussions about adolescents' rights, duties
17 and responsibilities in relation to health choices were limited, which is surprising given
18 that one of the main adolescents' rights is the right to health^{6,15-18,45,46}. There are tenta-
19 tive proposals for a Universal Declaration of Human Responsibilities⁴⁷⁻⁴⁹, which high-
20 lights the link between rights and responsibilities and aims to support The Universal
21 Declaration of Human Rights developed by the United Nations¹⁷. Examples of the rights
22 and responsibilities and duties are the given right for life, which results in the duty to
23 respect it, and the right to education, which results in an obligation to learn⁴⁷⁻⁴⁹. Howev-
24 er, the results of this review also showed that it is still unclear what adolescents' rights,
25 duties and responsibilities are in relation to health choice and unclear how they are exe-
26 cuted in everyday life. This is because none of the studies covered by this review de-
27 scribed the meanings and definitions of these values.
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44 According to our results, examples of responsible health choices by adolescents could
45 include moderating substance use and other unhealthy risky choices that are linked to
46 seeking freedom and pleasure. Thus, critical questions need to be asked about whether
47 adolescents can have the right to make unhealthy choices and what areas their responsi-
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9 bilities should cover. In other words, what special features underline the rights, respon-
10 sibilities and duties that adolescents have in relation to their health choices?
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15 In previous studies, the rights of adolescents to make free and responsible health choic-
16 es have been connected to justice and equality in societies and healthcare^{1,13,50}. Accord-
17 ing to Purcell, children's rights have often been considered as less valuable than adults'
18 autonomy and rights⁴³. However, there are also large imbalances in achieving adoles-
19 cents' rights on a global level, because of significant health inequalities^{6,7,18,51,52}. Thus
20 adolescents have unequal circumstances at both a local and global level, when it comes
21 to health choices⁵³ and, therefore, to fulfilling their rights, duties and responsibilities.
22 Adolescents who are vulnerable due to environmental and social conditions, such as
23 lack of parental guidance, food shortages or living in violent areas, need particular pro-
24 tection and support to exercise their rights to health⁷.
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38 However, it has been suggested that the rights and responsibilities attached to health
39 choices could also pose risks, particularly for adolescents. These risks include the pos-
40 sibility that autonomy could only be available for those who fit into the norms of society
41 and the general perception of what is rational⁴⁴. The results of this review have also
42 highlighted whether adolescents have the capability to make autonomous choices, be-
43 cause they depend on their parents and have immature reasoning when it comes to
44 choices. It has brought up the concern that combining the concepts of free health choic-
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9 es and responsibility can result in blaming adolescents for their decisions^{13,38,44} and
10 branding them as morally acceptable or unacceptable. These categorizations can lead to
11 exclusion and marginalization in society.^{38,44}
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16 Rights and responsibilities related to health choices are closely connected to health
17 promotion, which has been traditionally understood to provide knowledge in order to
18 achieve improved and healthy choices in the future^{54,55}. Despite recent efforts to em-
19 power adolescents and emphasize adherence and involvement in care, as well as in-
20 creased knowledge about adolescents' health determinants, their adherence to their
21 health choices has been recognized as challenging⁵⁶⁻⁵⁷. It is noteworthy that adherence
22 has not only been based on information, but has also focused on responsibilities⁵⁷. Thus,
23 in order to achieve better outcomes in adolescents' health choices, more attention needs
24 to be paid to their comprehension of their responsibilities in relation to their own health
25 promotion.
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39 Health professionals play a central role in adolescents' health choices in relation to
40 rights, duties and responsibilities. Because of adolescents' different and even unequal
41 backgrounds, they need individual support to get involved in their healthcare^{53,58-60}. In
42 previous studies, adolescents have said that the advice given to them by healthcare staff
43 was technical and irrelevant and did not take into account their individual opinions⁵⁸.
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9 Healthcare staff could create an environment where adolescents' individual choices are
10 taken into account and they are supported to make their own health decisions^{58,59}.

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12
13 However, adolescents' health choices are linked to their families' health habits and ado-
14 lescents would benefit if healthcare staff also recognized if their parents needed assis-
15 tance and guidance with supporting their child's involvement⁵⁸. Healthcare staff need to
16 be aware of adolescents' health choices in relation to rights, duties and responsibilities,
17 but they also need to be aware of their crucial role in supporting and even decreasing
18 inequalities in health^{45,53}. In the future, resources and education are needed⁵⁸ to ensure
19 there is sufficient professional knowledge^{58,59} to respond to adolescents' support needs.

20
21 It is clear that there is a need for greater research into how adolescents can be helped to
22 fulfil their rights to make health choices and about their health related rights, duties and
23 responsibilities. There is little information about this in the current research and, as our
24 results have indicated, new knowledge would support the promotion of the fulfilment of
25 these ethical values in healthcare and support their implementation. In addition, under-
26 standing adolescents' rights, duties and responsibilities would enhance their opportuni-
27 ties to get involved in healthcare and society.

28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 **Limitations**

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The limitations of this review concern the subject of the study, the search strategies and the heterogeneity of the selected studies²⁷. Adolescents' rights, duties and responsibilities in relation to health choices is an abstract and multidimensional subject and, in this research, we focused on the individual's perspective. Since the concepts of the research topic were wide, different kinds of combinations of search terms would have been possible. However, the broadest possible search terms were used to improve the validity of the searches²⁵. The focus of this research was to examine the adolescents' point of view. During the literature search, we focused on the inclusion criteria in order to achieve a rigorous selection of original studies. We also decided to include studies that had included children^{4,7} as participants and the age of the focus groups varied from eight to 17 years^{33,39}. In addition, we included one theoretical paper that used the concept of children, because the topic of the research was essentially linked to the research aim⁴³ and because some authors use the term when referring to individuals under 16⁶¹ or 18¹⁶. A mixture of selected studies on children and adolescents provided a wide age continuum^{4,7}, but we only used the concept of adolescence in this research to give consistency to the concepts we explored.

Literature searches resulted in a large amount and wide variety of results. Nevertheless, all the relevant studies focusing on the research topic were included in order to avoid search bias^{25,27}. Electronic searches were effective, but, due to inconsistency in the search terminology and indexing problems, it is possible that these searches did not

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9 identify all the eligible studies²⁷. In order to avoid search bias, we also used manual
10 searches, but, for example, ancestry searches or networking would have improved how
11 comprehensive the search strategy was²⁷. Because we wanted to identify the latest re-
12 search, the time limitation of 2009-2014 was set. In addition, the searches were limited
13 to studies conducted in English. However, these limitations could have caused publish-
14 ing and language biases. The methodological rigour was improved by consulting an
15 informatician and the selection of the studies, analysis and quality evaluation were car-
16 ried out in collaboration with the authors. All the selected articles were examined by
17 descriptive, method specific quality criteria²⁷. Selected original studies were conducted
18 in first world countries, which limited the results of this review to the views of privi-
19 leged children and adolescents.
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34 **Conclusions**

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37 This study provided new knowledge on adolescents' health choices in relation to their
38 rights, duties and responsibilities. An adolescent's right to health is protected by inter-
39 national and universal declarations, but little is known about what it means in their eve-
40 ryday life. In addition, we know little about adolescents' views on their responsibilities
41 and duties, despite the fact that they are closely connected to their autonomy. It is note-
42 worthy that there are large imbalances in achieving adolescents' rights on a global level,
43 because of significant health inequalities. Understanding adolescents' health choices in
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9 relation to rights, duties and responsibilities could be crucial when promoting their au-
10 tonomy and health. In future, more empirical research should be carried out in different
11 cultural contexts and various methodological approaches should be used to develop a
12 greater understanding of adolescents' health choices.
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Declaration of conflicts of interest

The Authors declare that there is no conflict of interest.

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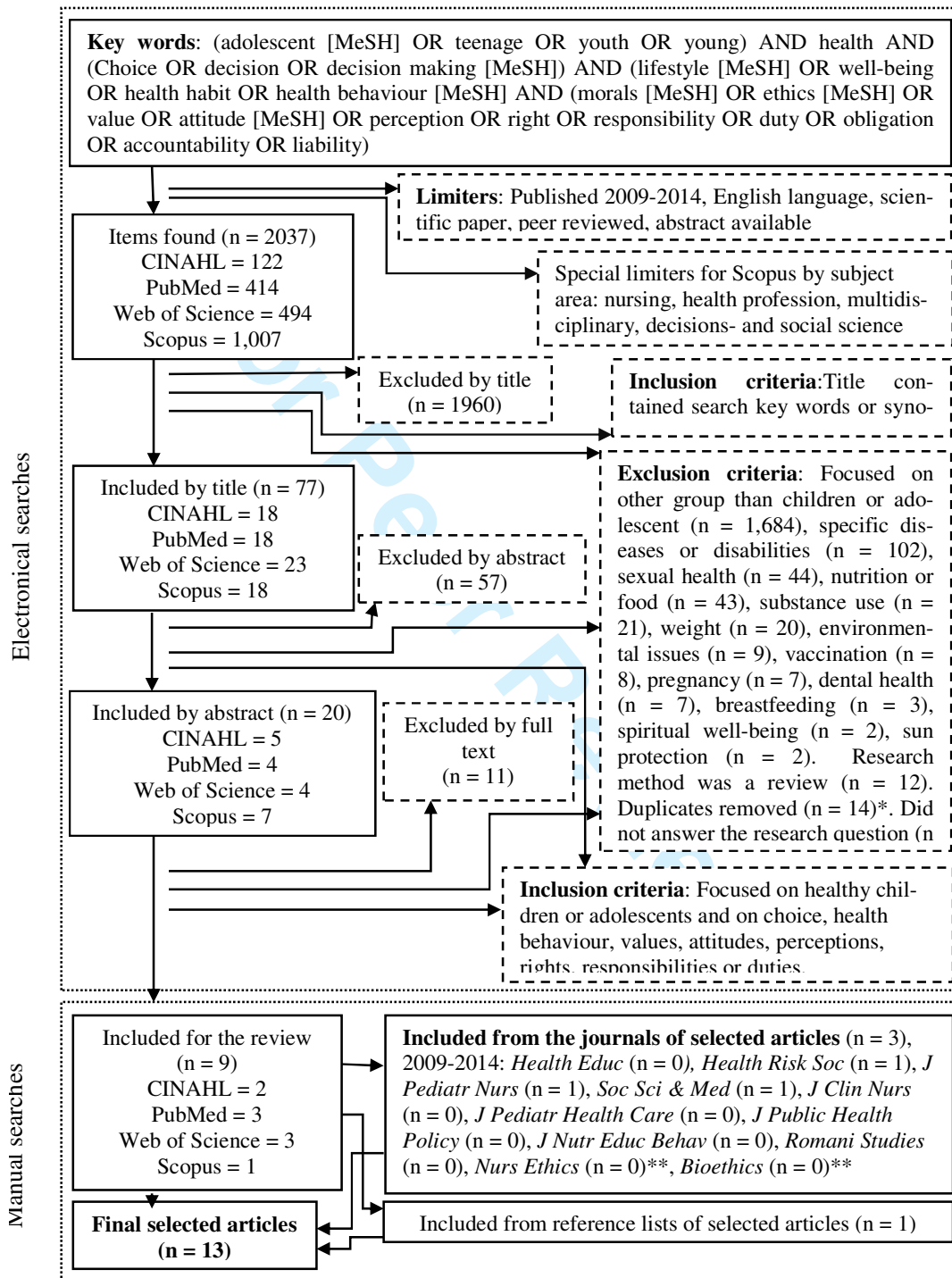


Figure 1. Flowchart of the literature searches

*Duplicates removed during abstract examination phase.** Included for the manual searches based on previous knowledge.

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Table 1. Evaluation of the quality of the selected studies based on the appraisal criteria²⁹⁻³¹.

Method	Qualitative			Quantitative				Theoretical						
	Author(s), year	Atkins et al 2010	Crondahl & Eklund 2012	Ridder et al 2010	Spencer 2013	Swanson et al 2013	Thig et al 2013	Jacobson & Melnyk 2011	Kelly et al 2011	Lee et al 2010	McDade et al 2011	Brown et al 2013	Keeler et al 2010	Purcell 2010
Common questions														
Was the rationale for the undertaking the research clearly stated?	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Were the aims and objectives of the research clearly presented?	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Was the background of the research comprehensive?	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Was the study design appropriate for the research questions?	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Was the methodology clearly identified?	y	y	y	y	y	y	y	y	y	y	o	o	o	o
Was the methodology clearly justified?	n	n	y	n	n	n	y	y	y	y	o	o	o	o
Were the ethical issues clearly identified and addressed?	n	n	o	y	n	n	y	y	y	n	o	o	o	o
Was ethical approval sought and received?	o	o	o	y	o	o	y	y	y	o	/	/	/	/
Was informed consent obtained?	o	o	y	y	y	o	y	y	y	o	/	/	/	/
Were the results presented clear way?	y	y	y	y	y	n	y	y	y	y	y	y	y	y
Was the discussion comprehensive?	y	y	y	y	y	y	y	y	y	y	/	/	/	/
Were the conclusions clearly presented?	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Were the limitations clearly addressed?	y	n	y	n	y	n	y	y	y	n	n	n	n	n
Qualitative														
Were the concepts clearly defined?	y	y	n	y	y	y	/	/	/	/	/	/	/	/
Was the context of the study clearly described?	y	y	y	y	y	y	/	/	/	/	/	/	/	/
Was the selection of the participants clearly reported?	y	y	y	y	y	y	/	/	/	/	/	/	/	/
Were a sufficient amount of cases included?	y	o	o	o	o	o	/	/	/	/	/	/	/	/
Was the data collection appropriately described?	y	y	y	y	y	y	/	/	/	/	/	/	/	/
Was the data analysis clearly reported?	y	y	y	y	y	n	/	/	/	/	/	/	/	/
Were sufficient data presented?	y	y	o	y	y	o	/	/	/	/	/	/	/	/
Were the authors' positions clearly stated?	y	y	y	y	y	y	/	/	/	/	/	/	/	/
Were the credibility and conformability clearly addressed?	y	y	y	y	y	y	/	/	/	/	/	/	/	/
Quantitative														
Was the population clearly identified?	/	/	/	/	/	/	/	y	y	y	y	/	/	/

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Was the sampling method clearly reported?	/	/	/	/	/	/	y	y	y	n	/	/	/
Was the size of the sample clearly reported?	/	/	/	/	/	/	y	y	y	y	/	/	/
Was the instrument sufficiently described?	/	/	/	/	/	/	y	y	y	y	/	/	/
Was the instruments' validity and reliability clearly stated?	/	/	/	/	/	/	y	y	y	y	/	/	/
Was the data collection appropriately described?	/	/	/	/	/	/	y	y	y	y	/	/	/
Was the response rate clearly reported?	/	/	/	/	/	/	y	y	y	y	/	/	/
Was the data analysis clearly reported?	/	/	/	/	/	/	y	y	y	y	/	/	/

Y = yes, N = no, O = not stated, / = not relevant in this study.

For Peer Review

Table 2. Summary of the selected original articles

Qualitative studies	Author, year	Aim	Methods and sample
	Atkins R, Bluebond-Langner M, Read N, Pittsley J, Hart D. 2010.	To elicit the perspectives of adolescents of their experiences in promoting, maintaining, and restoring their health. To explore adolescents perceptions of the decisions they made and the factors affecting them.	Group research sessions (n=10). Content analysis, including emic and etic analysis.
Cron Dahl K, Eklund L. 2012.	To examine the perceptions of Roma adolescents on health, well-being and quality of life and how they managed their own life situation within these areas.	Interviews: 2 individual, 2 pair, 2 focus group interviews (n=14). Content analysis.	
Ridder M, Heuvelmans M, Visscher T, Seidel J, Renders C. 2010.	To investigate perceptions of adolescents concerning benefits, barriers and strategies of healthy eating and physical activity.	Five focus group discussions (n=37). Analysed by Atlas.ti and arranged in the EnRG-framework.	
Spencer G. 2013.	To examine adolescents' understanding about health and health related risks.	Ethnographic study. Group discussions, individual interviews, observations (n=55). Analysed by abductive multi-stage strategy: thematic analysis, theoretical analysis.	
Swanson M, Schoenberg N, Davis R, Wright S, Dollarhide K. 2013.	To examine adolescents' perceptions toward healthy eating and influences on food choices.	Focus group interviews (n=68). Thematic analysis.	
Thing L, Ottesen L. 2013.	To examine how adolescents understand risk discourses related to health and physical activity.	Hermeneutic approach. Focus group interviews (n=30). Hermeneutic circle as a means of interpreting data.	

Quantitative studies	Jacobson D, Melnyk B. 2011.	To examine relationships between weight, mental health, social competence, healthy lifestyle beliefs, choices and behaviours in overweight and obese children.	Quantitative questionnaire, pilot study (n=17), parent-child dyads. Descriptive correlational design. Descriptive statistics, Pearson's r- correlations.
	Kelly, S, Melnyk B, Jacobson D, O'Haver J. 2011.	To assess the relationships between cognitive variables (healthy lifestyle beliefs, attitude, perceived difficulty in leading a healthy lifestyle, intent to make healthy lifestyle choices), social support and healthy lifestyle.	Quantitative questionnaire. (n=404). Descriptive correlational design. Descriptive statistics, Pearson's r- correlations.
	Lee R, Loke A, Wy C, Ho A. 2010.	To examine the lifestyle behaviour and psychosocial well-being	Quantitative questionnaire. (n=241). Descriptive statistics, chi-square tests, t-tests, means, standard deviations.
	McDade T, Chyu L, Duncan G, Hoyt L, Doane L, Adam E. 2011.	To examine the adolescents' expectations for the future: perceived chances of living to middle age and perceived chances of attending to college.	Quantitative questionnaires. (n=10,142). Descriptive statistics, frequencies, T-tests, F-tests, multivariable models.
Theoretical studies	Brown S, Shoveller J, Chabot C, LaMontagne A. 2013.	To describe the concept of risk, from its generation and usage in a neoliberal agenda in relation to the health and well-being of adolescents.	Theoretical. Literature and examples from the UK, Canada and Australia. Young people.
	Keeler H, Kaiser M. 2010.	To develop a model about adolescents' engagement in health risk behaviour or refraining from it.	Theoretical examination of the literature. Adolescents.
	Purcell M. 2010.	To describe why the public health strategies, with	Theoretical examination of the philosophical limitations of

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political and moral foundations, remain ineffective in the current political and public responses to childhood
tackling childhood obesity. overweight and chronic disease in North America. Children.

For Peer Review

Table 3. Summary of the instruments used in the quantitative original studies.

Instrument	Originally developed by*	Content	Scale	Reliability/validity	Study(s)	
Psychics aspects	Beck Youth Inventory II (BYI II).	Beck J, Beck A, Jolly B & Steer R. 2005	100 items: self-concept, anxiety, depressive symptoms, anger, disruptive behaviour.	Not stated.	Cronbach's alpha for subscales, self-concept 0.94 anxiety 0.93. depression 0.95.	Jacobson & Melnyk 2011
	Healthy Lifestyles Attitude Scale.	Melnyk B & Small L. 2003.	14 items: <u>attitudes</u> toward living a healthy lifestyle.	5-point Likert: 1 strongly disagree, 5 strongly agree.	Face validity 10 teens, content validity 8 adolescent health specialists. Cronbach's alpha 0.84.	Kelly et al. 2011
	Healthy Lifestyles Perceived Difficulty Scale.	Adopted from Melnyk B & Small L 2003, Morrison-Beedy D, Nelson L & Volpe E 2005	10 items: perceived difficulty in living a healthy lifestyle.	5-point Likert: 1 very hard to do, 5 very easy to do.	Cronbach's alpha 0.88.	
	Healthy Lifestyle Beliefs Scale.	Melnyk B. 2004.	16 items: beliefs/confidence about various facets of maintaining a healthy lifestyle.	5-point Likert: 1 strongly disagree, 5 strongly agree.	Face validity 10 teens Content validity 8 adolescent health specialists Cronbach's alpha 0.77-0.94.	Jacobson & Melnyk 2011, Kelly et al. 2011
Behavioural aspects	Behavioural skills: physical activity and fruit and vegetable intake.	Hagler A, Norman G, Radick L, Calfas K & Sallis J. 2005.	14 items and two scales: change strategies relating to physical activity and fruit and vegetable intake.	5 point Likert: 1 never, 5 many times.	Cronbach's alpha 0.93 for physical activity, and for fruit and vegetable intake 0.95.	Kelly et al. 2011
	Healthy Lifestyles Behaviours Scale.	Melnyk B, Jacobson D, Kelly S, O'Haver J, Small L & Mays M. 2009.	16 items: measures current healthy lifestyle behavioural practice.	5-point Likert: 1 strongly disagree, 5 strongly agree.	Face validity 10 teens, Content validity 8 adolescent health specialists. Construct validity sup-	Jacobson & Melnyk 2011

					ported by factor analysis. Cronbach's alpha 0.88.	
	Healthy Lifestyle Choices Scale.	Melnyk B. 2004.	16 items: intentions to engage in healthy lifestyle behaviours, including nutrition, exercise and goal setting.	5-point Likert: 1 strongly disagree, 5 strongly agree.	Face validity 10 teens. Content validity 8 adolescent health specialists Cronbach's alpha 0.86-0.92.	Jacobson & Melnyk 2011, Kelly et al. 2011
Social aspects	Social Skills Rating System (SSRS).	Gresham F & Elliot S. 1990.	34 items (child) and 55 items (parent): information on social skills, social problem behaviour, academic problems. Parent items: social skills (cooperation, assertion, <u>responsibility</u> , self-control), behaviour subscales.	3-point 0 never/not important, 2 very often/critical.	Content validity by teachers, parents, students. Cronbach's alpha for parents 0.90 and for children 0.83.	Jacobson & Melnyk 2011
	Social support-Family.	Hagler A, Norman G, Radick L, Calfas K & Sallis J. 2005.	Family influence/support, for physical activity, fruit and vegetable intake and dietary fat habits (Hagler et al. 2005)	5-point Likert: 1 never, 5 every day.	Cronbach's alpha 0.92.	Kelly et al. 2011
Multidimensional	Adolescent Lifestyle Questionnaire (ALQ).	Gillis A. 1997.	43 items, two constructs and seven dimensions: physical participation, nutritional habits, health awareness, social support, stress management, identity awareness (e.g. <u>beliefs, values</u>), social support.	Likert 1 never, 5 almost always.	Alpha reliability coefficient 0.91, alpha coefficient for subscales 0.60-0.88. Chinese version: Content validity 1.0, Cronbach's alpha 0.92, alpha coefficients for the seven dimensions 0.59-0.83	Lee et al. 2010

National Longitudinal Study of Adolescent Health.	Harris K, Halpern C, Whitsel E, Hussey J, Tabor J, Entzel P & Udry J. 2009.	Outcome measures: cigarette smoking, fast food consumption, level of physical activity, total amount of physical activity and expectations for the future (perceived chances of living to age 35 and attending to college, parental education, other sociodemographic variables, health behaviours, baseline control variables.)	Diverse scales.	Not stated.	McDade et al. 2011
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*References not reported in this study.

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Table 4. Target groups of the selected original studies.

	Total (n)	Girls (n)	Boys (n)	Ages	Focus group	Country	Research
Qualitative	n = 10	n = 3	n = 7	15-19	High poverty area	USA	Atkins et al. 2010.
	n = 14	n = 8	n = 6	13-18	Lower socioeconomic group	Sweden	Crondahl & Eklund 2012.
	n = 37	n = 20	n = 17	12-14	Average Dutch region	Netherland	Ridder et al. 2010.
	n = 55	not stated		15-16	Diverse socioeconomic group	UK	Spencer 2013.
	n = 68	n = 37	n = 31	8-17	One of the poorest areas	USA	Swanson et al. 2013.
	n = 30	n = 15	n = 15	15-17	Danish school	Denmark	Thing & Ottesen 2013.
Quant.	n = 17	n = 11	n = 6	9-12	Urban, south western state	USA	Jacobson & Melnyk 2011.
	n = 404	n = 212	n = 192	13-18	Diverse socioeconomic group	USA	Kelly et al. 2011.
	n = 241	n = 107	n = 134	10-13	Lower socioeconomic group	China	Lee et al. 2010.
	n = 10142	n = 5039	n = 5102	12-19	Diverse socioeconomic group	USA	McDade et al. 2011.
	Total	5853	5961				
Theoretical					Young people	Australia	Brown et al 2013.
					Adolescent	USA	Keeler & Kaiser 2010.
					Children	Canada	Purcell 2010.