

Information seeking behavior for decision making in everyday life: a pilot study on adolescents

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Research paper

Abstract

The pilot study investigates adolescents' information-seeking behavior for decision-making purposes. The aim of the study is to explore adolescents' information-seeking behavior in everyday life decision-making situations. In this research we use a survey method with a questionnaire comprised of hypothetical decision-making situations which allows respondents to elaborate on their answers. The research aims to reveal whether adolescents engage in deliberate information seeking when facing everyday life decisions and if so, which information sources they use. Moreover, the research explores the importance attached by adolescents to information in making decisions. In addition, the results will be used for developing a methodology for a large-scale research project.

KEYWORDS: information-seeking behavior, decision making, adolescents

Introduction

This study precedes a large-scale research project on adolescents' information seeking for the purposes of making decisions in everyday life. As adolescents, individuals make decisions that may have lifelong consequences for their health, psychological well-being and social acceptance. Being an important part of a decision-making process, information may play a crucial role in making decisions in everyday life context. The activity of information seeking which adolescents engage in when making decisions may have a significant impact on decision outcomes. Finally, an information-seeking process adolescents engage in (or do not engage in) may play a significant role in making their everyday life choices.

That is why an understanding of adolescents' information-seeking behavior in that context is important.

Thus, the study was guided by the following research questions:

- Do adolescents engage in deliberate information seeking when facing everyday life decisions?
- If they do engage in deliberate information seeking, which information sources do they use?
- What is the degree of importance attached by adolescents to information in making decisions?

The answers to these questions will give us some preliminary insights into adolescents' information-seeking behavior for the purposes of making decisions in everyday life contexts, which will be further investigated in future work. Additionally, the results will be used for developing a methodology for a large-scale research project.

Definitions and theoretical framework

According to Wilson, information-seeking behavior is *the purposive seeking for information as a consequence of a need to satisfy some goal*. He adds that *in the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web)* (Wilson 2000, 49). Marchionini defines information seeking as *a process in which humans purposefully engage in order to change their state of knowledge* (Marchionini 1997, 5). He further explains that it is *a fundamental human process closely related to learning and problem solving* (Marchionini 1997, 6). In other words, when an individual needs new information for any purpose, he or she engages in purposeful or deliberate information seeking. In that process an individual interacts with different information sources.

Decision making may be defined as *the process of arriving at a decision after evaluating all relevant alternatives in achieving a decision maker's objective or objectives* (Radford 1994, 73). To learn about all relevant alternatives and to better understand the decision situation at hand, an individual needs information. That is why Yilmaz points out that information may be considered to be *at the heart of rational decision making* (Yilmaz 1997, 28)

Decision-making theorists recognize the role of information in the decision-making process. Radford underlines the role of information by developing a three-stage model of decision making, with information gathering being one of the stages. As he explains, information gathering consists of *an examination of the environment of the decision situation and the seeking out of details of the participants and of all of the factors that might bear on or affect the outcome of the situation* (Radford 1994, 80). Moreover, Mann's instructional program, the GOFER

course in decision making, includes fact finding, i.e. search for information among its five decision-making steps (Mann 1989, 151). Additionally, Simon stresses the role of information gathering in the decision-making process explaining that due to an individual's knowledge constraints, a need for information seeking in decision making emerges (Simon 1955, 106). Evidently, individuals engage in information seeking in order to obtain information that can help them to better understand the decision-making situation they are faced with. The relationship between information and the process of making decisions is clearly expressed in the concept of informed decision. Although there is no agreed definition of an informed decision as it depends on the theoretical predisposition of the researcher, a compromise definition would be that *an informed decision is one where a reasoned choice is made by a reasonable individual, using relevant information about the advantages and disadvantages of all the possible courses of action, in accord with the individual's beliefs* (Bekker et al. 1999, 1).

Savolainen conceptualized *everyday life information seeking* (ELIS) as seeking for information that takes place in daily life and is related to daily issues (Savolainen 1995). The concept of ELIS is defined as *the acquisition of informational (both cognitive and expressive) elements which people employ to orient themselves in daily life or to solve problems not directly connected with the performance of occupational tasks*. Savolainen explains that *such problems may be associated with various areas of everyday life, for example, consumption and health care* (Savolainen 1995, 266-267). His ELIS concept posits information seeking as an integral part of human endeavors to orient themselves in daily life or to solve problems. Savolainen has developed an approach to information seeking in the context of what he calls *way of life* which refers to order of things or the way an individual feels things (or daily activities) are organized when they are *normal*. *Way of life* reflects an individual's idea about how life should be lived while another Savolainen's concept, *mastery of life*, refers to efforts that an individual makes to keep his or her life in order or to take care of his or her way of life. We may argue that orienting and problem-solving activities involve both information seeking and making daily choices, which entail decision making.

Related works

Although the role of information seeking in a decision-making process is apparent, there has not been much research on youth information-seeking behavior for everyday life decision-making purposes in library and information science field. Although it is not specifically mentioned, the decision-making process is closely related to concepts some authors deal with in the context of everyday life (such as problem solving, coping and dealing with problems).

As already mentioned, Savolainen's ELIS concept posits information seeking as an integral part of human endeavors to orient themselves in everyday life or solve problems (Savolainen 1995). Some studies have dealt with youth information

seeking and decision making in other contexts and there are also some that have not addressed the relation between the two processes directly, but whose topic covers both. Julien investigates adolescents' information seeking for career decisions as well as the role a library may play in the process (Julien 1997a; 1997b; 1998; 1999; 2004). Given that many adolescents make career choices based on very limited information which can lead to unsatisfying outcomes in the long term, Julien explores which information sources adolescents use when making career decisions, how these sources help and what barriers to information access exist in this context. Agosto investigates decision making in the World Wide Web environment proposing a theoretical model of the criteria young people use to evaluate individual sites and suggesting that the model can be applied to young people's decision making in general (Agosto 2002a; 2002b). Poston-Anderson and Edwards describe dealing with problems as the sense-making of life experiences with problematic situations (Poston-Anderson and Edwards 1993). Lu investigates youth information-seeking behavior in coping with daily hassles (Lu 2008, 2009, 2010, 2011). Evidently, this matter has been in the focus of researchers because of the evident role information plays in the mentioned processes (that is, in orienting in everyday life, problem solving, decision making, coping and dealing with problems) which are a part of the individuals' endeavors to manage their lives and deal with problematic situations.

In order to address the gap in the research on youth information seeking for decision making in everyday life context, this pilot study builds on the listed research from library and information science field as well as on some ideas from decision making theory in general. The results will contribute to a better understanding of adolescents' information seeking when facing decisions in everyday life context and will help in developing the methodological apparatus for an upcoming large-scale study.

Methodology

The pilot study employs a survey method using a questionnaire with hypothetical situations which require decision making. Respondents were asked about their behavior in eleven hypothetical everyday life situations. In eleven questions, each representing one hypothetical decision making situation, four answers were offered describing possible behaviors adolescents would employ in order to help themselves while making a certain decision. Although the respondents were restricted to choose among the given answers, the questions were not completely close-ended. The given answers were the following: a) *I would try to find out more about the situation at hand and would seek for information from...* (they were asked to name a source or sources they would use); b) *I would not seek for information. I would make a decision based only on my prior knowledge and experience*; c) *I do not make decisions based on information. I make them based on something else* (they were asked to add what their decisions are based on) and

d) *I do not know what I would do*. Respondents were encouraged to elaborate on their answers. It can be seen that the respondents who have chosen the options *a* and *c* were offered additional open-ended question. They were asked to add which sources they would use (if they have chosen the option *a*) and what would they base their decision on, if not on information (if they have chosen the option *c*). The respondents were encouraged to list as many sources as they wanted to (when choosing *a* option) and to name anything they would base their decision on (when choosing *c* option).

The offered situations involved decisions affect different everyday life situations which affect seems to be less or more important for the life of individual. They come from new hairstyle, hobby selection and decision which mobile phone to buy, to more significant like: place to go on Saturday night, helping a friend who suffers from anorexia, engagement in sexual intercourse, decision which diet to take in order to lose weight, and weather to take a certain soft drug. Additionally, they were asked how they would behave if their boyfriend or girlfriend did something they did not feel comfortable with and what they would do when facing an important decision in general. As mentioned, adolescents' information-seeking behavior was investigated in the hypothetical and not real everyday life decision-making situations. By employing this approach we were able to cover a larger sample and get findings which can be used in an in-depth study aimed at gaining deeper insights into adolescents' information-seeking behavior in real everyday life decision-making situations and the way it affects the decision-making processes. Due to this approach, the study has some limitations, which will be discussed later in the text.

The sampling was purposive and included 41 girls and 21 boys aged 15 to 18 who filled out the questionnaire. They were students from three high-school classes representing three different grammar school programs: general, language and sports. The study was conducted among the students of one grammar high-school in the city of Rijeka, First Croatian Grammar School in Rijeka, which was chosen because of the affability of its administration. Three classes representing three different grammar high-school programs were chosen to represent a variety of student population. The data were gathered in two days during three school lessons. With a help from the school psychologist and in agreement with the teachers, the questionnaire was filled in by the students at the beginning of the lessons. It took no longer than fifteen minutes for students to fill in the questionnaire.

The data gathered in closed-ended parts of the questions were quantified and expressed in percentages. The data gathered in open-ended parts of questions, in which the respondents who had chosen *a* or *c* option answered on the sources they would use or on possible basis for making a decision, were analyzed and classified. Based on the answers, categories were developed. For example, some of the categories of answers on information sources, which the respondents reported they would use in information seeking in career decision making

situation, were: websites, Internet forums, siblings and parents. The categories of sources were further organized in more general categories of Internet based sources, human sources and other sources. Frequency of these categories was then quantified and expressed in percentages.

The analysis and interpretation of the gathered data gave an insight into adolescents' tendency towards engagement in information seeking in the eleven everyday life decision situations. Moreover, it revealed which sources adolescents would use when engaging in deliberate information seeking. Furthermore, the analysis revealed what would serve as a basis for certain decisions to those adolescents who believe they would not base a certain decision on information, but on something else. Any additional comments were also analyzed and interpreted.

Results

The results show that the respondents' tendency towards engagement in deliberate information seeking varies across different everyday life decision situations, as shown in Table 1. Likewise, the sources they reported they would use are diverse and seem to depend on the specific situation.

decision situations		adolescents' responses					Total
		Trying to seek for information to know more	No seeking for information; decision based on previous knowledge	Decision not based on information	Don't know what to do	Not responded	
career	N	57	2	1	2	0	62
	%	91.9	3.2	1.6	3.2	0.0	100.0
hairstyle	N	26	27	8	1	0	62
	%	41.9	43.5	12.9	1.6	0.0	100.0
hobby	N	23	27	11	0	1	62
	%	37.1	43.5	17.7	0.0	1.6	100.0
anorexia	N	50	9	1	2	0	62
	%	80.6	14.5	1.6	3.2	0.0	100.0
sexual intercourse	N	25	20	13	3	1	62
	%	40.3	32.3	21.0	4.8	1.6	100.0
diet to lose weight	N	47	13	1	1	0	62
	%	75.8	21.0	1.6	1.6	0.0	100.0
place to go on Saturday evening	N	23	33	5	1	0	62
	%	37.1	53.2	8.1	1.6	0.0	100.0
soft drug	N	12	32	9	7	2	62
	%	19.4	51.6	14.5	11.3	3.2	100.0
mobile phone	N	48	13	1	0	0	62
	%	77.4	21.0	1.6	0.0	0.0	100.0
boyfriend/girlfriend problem	N	12	36	7	6	1	62
	%	19.4	58.1	11.3	9.7	1.6	100.0
important decision in general	N	45	12	3	1	1	62
	%	72.6	19.4	4.8	1.6	1.6	100.0

In the first question, the respondents were asked how they would behave if faced with making a decision about their future career (e. g. attending college or seeking employment). 91.9% of the respondents reported that they would try to learn more and would engage in information seeking for that purpose. Some of the respondents reported they would base their decision only on prior knowledge and experience (3.2%), and that they did not know what they would do (3.2%). A few of them responded that they would not base their decisions on information but rather on something else (1.6%) (Table 1).

The respondents who had answered they would seek for additional information for making career decision (choosing an *a* option among the answers offered in the questionnaire) were asked to add to their answers the source they would use. The answers are shown in Table 2. The respondents were encouraged to write all the sources they believed they would use, as many as they wanted to. Not all of them answered additional open-ended question offered in the chosen option, while some of them gave more than one answer on the information source they would use. Together they provided 141 answer on sources they would use, which represent 100.0% percentage of the answers listed in the Table 2. Furthermore, most of the listed information sources were listed in more than one answer which is shown in column named *Quantity of responses*, referring to the number of occurrence expressed in numbers, and in the column named *Percentage*, referring to the number of occurrence expressed in percentages.

As shown in Table 2, various websites were listed in 23 given answers which make 16.3% of the total number of answers provided. It is interesting to note that among them, three refer to specific web sites of CARNet - Croatian Academic and Research Network and of Croatian Employment Bureau which inform about education and employment. The Internet in general is listed as an information source the respondents would turn to in 14.9% of all the answers provided in that question. The respondents also mentioned they would seek for information on the Internet forums (in 4.3% of the provided answers), and in other Internet based sources, Wikipedia and Google (3.5%). Overall, the Internet based sources were represented in 39.0% of all given answers on the sources the respondents would use to learn more when facing career decision making situation. It is worth noting that in the most of the answers the respondents report turning to people with experience for the information that would help while making a career decision: 17.0% of the all provided answers referred to that category which includes former or current university students, people in a career of interest, people with experience the respondents feel close to, and older people. In 14.2% of the answers parents were named as the information source the respondents would turn to, and in 10.6% of the answers the respondents reported they would ask for professional help from their teacher, classmaster, school psychologist and generally *experts*. In 7.1% of the answers it is reported that information would be sought from friends, acquaintances or peers, 3.5% of the answers mention family member in general as a source while 2.1% of the answers report turning to siblings. As it can be seen, in the most of the answers

the respondents reported they would turn to human sources for help while making a decision on future career, listing various human information sources in 54.6% of the total of 141 provided answers. It is worth noting that family and extended family members occur in categories of parents, siblings and a family member in general. If we think about these three categories as one more general category, we can see that taken together family and extended family members make well recognized information source when it comes to seeking for help for making a career decision.

Several respondents reported they would seek for information at university of their interest, specifying they would attend events organized for that purpose (4.3% of answers). Moreover, two respondents would go to Croatian Employment Bureau. One respondent answered he would use *All possible sources for achieving the best accuracy possible*. These other sources, reported to be used, together make 6.4% of the given answers.

Table 2 – Responses on sources used while making a decision on one's career

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
websites: faculty websites, other educational institution websites, websites which provide information on possible job	23	16.3	Internet based sources 39.0
the Internet (in general)	21	14.9	
Internet forums	6	4.3	
other Internet based sources: Wikipedia, Google	5	3.5	
people with experience: former or current university students, people in a career of interest, people with experience the respondents feel close to, older people	24	17.0	human sources 54.6
parents	20	14.2	
professional help: teacher, classmaster, school psychologist and generally experts	15	10.6	
friends, acquaintances, peers	10	7.1	
family member	5	3.5	
siblings	3	2.1	
university, study abroad fair	6	4.3	other sources 6.4
Croatian Employment Bureau	2	1.4	
<i>All possible sources for achieving the best accuracy possible.</i>	1	0.7	
Total number of the responses, Σ=	141	100.0	100.0

In the second decision situation the respondents were asked to choose among the offered alternatives regarding a new hairstyle. 41.9% of them reported they would try to learn more and would engage in information seeking for that purpose while 43.5% reported they would not seek for information but would base their decision only on prior knowledge and experience. 12.9% of the respondents claimed they would not base their decisions on information, but on something else and 1.6% answered that they did not know what they would do (Table 1).

The same as in the first question, the respondents who had answered that they would seek for information to help themselves while making a decision were asked to add the information source they would use. Not all of them answered which information sources they would turn to for help with the decision on a new hairstyle, while some of them gave several different answers on the sources. Together, the respondents provided 52 answers which represent 100.0% of answers shown in Table 3. In Table 3 we can see that in the most of the answers the respondents wrote they would turn to the Internet (in general) to seek for information that would help in making a decision about new hairstyle. In 21.2% of the given answers they reported they would seek for information at the Internet (in general). In 15.4% they reported they would use other Internet based sources: Google, Instagram, YouTube, Tumblr, We heart it, Pinterest and blogs, while in 2 answers out of all of the given answers the respondents reported they would seek for information at websites on hairstyle and fashion. Altogether, 40.4% of the answers the respondents provided refer to Internet based sources. Furthermore, in 19.2% answers the respondents report turning to friends, and in 15.4% they report turning to hairdresser for help with the decision on new hairstyle. In 3 answers the respondents reported asking mother for information, in another 3 they reported asking parents, and also in 3 answers they reported asking siblings for information. In 2 answers they revealed they would turn to *an expert*. Family members were named in 1 answer, and 1 answer refers to *a person who has the haircut I want* as a source the respondent would turn to. Together, these human sources the respondents reported they would turn to make 59.6% of the given answers.

Some of the respondents who answered that they would not make their decisions based on information, but on something else, added that they would base their decisions on their *taste*, *idea*, and their *preference*. Moreover, they reported making their decision on a hairstyle based on their own preferences and on what they thought suited them best. One respondent answered he would base his decision on advice, showing he does not perceive advice as information.

Table 3 – Responses on sources used when making a decision on a hairstyle

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	11	21,2	Internet based sources 40.4
other Internet based sources: Google, Instagram, YouTube, Tumblr, We heart it, Pinterest, blogs	8	15.4	
websites on hairstyles and fashion	2	3.8	
friends	10	19.2	human sources 59.6
hairdresser	8	15.4	
siblings	3	5.8	
parents	3	5.8	
mother	3	5.8	
an expert	2	3.8	
family members	1	1.9	
a person who has the haircut I want	1	1.9	
Total number of the responses, Σ=	52	100.0	100.0

The third decision situation involved choosing a hobby. 37% of the respondents reported they would engage in information seeking to help them with the decision. 43.5% of them reported they would base the decision only on their prior knowledge and experience and 17.7% reported they would not base their decisions on information, but on something else (Table 1).

The respondents who had answered they would seek for information, choosing option *a* in the questionnaire, were asked to add the information sources they would use. Together they provided 44 answers on information sources they would turn to in additional open-ended questions. These 44 answers make 100.0% of the provided answers in Table 4 (not all the respondents answered which sources they would use, and some of them gave several answers on the sources of information). In 7 answers, which make 15.9% of all the given answers, the respondents reported they would turn to Internet in general as a source of information when seeking for help when deciding which hobby to engage in. The same number of answers refers to websites: websites on health, on physical activities, sports clubs websites (15.9%). Other Internet based sources: Internet forums, YouTube, Google, blogs and social networking sites were mentioned in 11.4% of answers as sources the respondents would turn to. Overall, in 43.2% of the given answers the respondents reported they would turn to Internet based sources. In most of the given answers, the respondents report they would turn to friends for information that would help them decide which hobby to engage in. In 20.5% of the given answers friends, close friends, friends with

experience were listed as information sources the respondents would turn to, 9.1% of answers refer to classmates, peers and acquaintances, and the same (9.1%) refers to people already engaged in the hobby of interest as those the respondent would turn to. Parents are recognized as a source of information in 3 answers while a family member, sports club members and an expert in that particular activity occur each in 1 answer. Altogether, in 52.3% of all the given answers the respondents answered they would turn to some kind of human information source. One of the respondents reported turning to organizations for information, and one also revealed that *An article or a book which I read, e.g. robotics because of SF* can be a useful source of information.

The respondents who reported that they would base their decision on something else other than information explained that they would make their decisions based on what they like, on opportunities, on their interests, preference and also depending on which sport they are good at. One respondent named YouTube and another added she would ask her parents and acquaintances showing they do not consider getting information at YouTube and asking parents/acquaintances to be information seeking.

Table 4 – Responses on sources used when making a decision on a hobby

Sources	Quantity of responses	Percentage	Grouping of responses (cumulative percentage)
the Internet (in general)	7	15.9	Internet based sources 43.2
websites: websites on health, on physical activities, sports clubs websites	7	15.9	
other Internet based sources: Internet forums, YouTube, Google, blogs, social networking sites	5	11.4	
friends, close friends, friends with experience	9	20.5	human sources 52.3
classmates, peers, acquaintences	4	9.1	
people already engaged in the hobby of interest	4	9.1	
parents	3	6.8	
family member	1	2.3	
sports club members	1	2.3	
an expert for that activity	1	2.3	
organizations	1	2.3	other sources 4.5
<i>An article or a book which I read, e.g. robotics because of SF.</i>	1	2.3	
Total number of the responses, Σ=	44	100.0	100.0

In the fourth decision situation the respondents were asked which of the offered alternatives they would choose to help a friend suffering from anorexia. 80.6% of the respondents wrote they would seek for information in order to learn more. 14.5% of them would base the decision only on their prior knowledge and experience, 1.6% answered they would not base their decisions on information but on something else, and 3.2% answered they did not know what they would do (Table 1).

As shown in Table 5, respondents who had chosen an *a* option in the questionnaire and answered they would seek for information provided 89 answers in additional open-ended question about the sources they would use (not all the respondents answered which sources they would use, while some of them gave several answers on the sources of information). Those 89 answers make 100.0% of the answers presented in the Table 5. As it can be seen, in the most of the given answers the respondents report turning to the Internet (in general) while seeking for information that would help them decide how to help a friend who suffers from anorexia. In 27.0% of answers the Internet (in general) was named as a source the respondents would turn to, in 10.1% of the answers referred to websites, websites on health and websites on anorexia and the way it is treated. Other various Internet sources which occur in 6.7% of the answers were put into the category named other Internet sources. That category includes: blogs on health, Internet forums, YouTube and searching for other people experiences on the Internet. Google was mentioned in 3 answers. Altogether, Internet based sources were listed in 47.2% of all answers given. Furthermore, physician was the most reported among human sources, listed in 15.7% of the answers. Parents were mentioned in 9.0%, and an expert in 5.6% of the answers. Moreover, the answers which mention a teacher, biology teacher and a school psychologist together make 5.6% of the answers, while answers which mention friends and acquaintances together make 3.4% of the all given answers. Person who managed to recover from anorexia, an older person and a person that the respondents can trust are mentioned each in 1 answer, and together make 3.4% of the given answers. Overall, the respondents reported they would turn to human information sources for a decision on how to help a friend who suffers from anorexia in 42.7% of the given answers. 4.5% of the answers the respondents provided mentioned books as an information source they would use, 2.2% of the answers mentioned youth magazines and newspapers, while library is mentioned in 1 answer as an information source. One respondent mentioned the project named *Living library* in which she took part and had opportunity to listen about the life of a girl who managed to recover from anorexia. Another respondent wrote he would use any reliable source. These other sources of information together make 10.1% of the answers the respondents reported to be used while seeking for information that would help in deciding how to help a friend who suffers from anorexia.

Table 5 – Responses on sources used when making a decision on helping a friend who suffers from anorexia

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	24	27.0	Internet based sources 47.2
websites: websites on health, websites on anorexia and the way it is treated	9	10.1	
other Internet based sources: blogs on health, Internet forums, YouTube, other people experiences on the Internet	6	6.7	
Google	3	3.4	
physician	14	15.7	human sources 42.7
parents	8	9.0	
an expert	5	5.6	
teacher, biology teacher, school psychologist	5	5.6	
friends and acquaintances	3	3.4	
older person, a person the respondent trusts, a person who managed to recover from anorexia	3	3.4	
books, books on psychosomatic diseases	4	4.5	other sources 10.1
youth magazines, newspapers	2	2.2	
library	1	1.1	
<i>Living Library</i> project	1	1.1	
<i>Any reliable source.</i>	1	1.1	
Total number of the responses, Σ=	89	100.0	100.0

In the fifth decision situation the respondents were asked which of the offered alternatives they would choose if they were deciding whether to engage in sexual intercourse. As it is shown in Table 1, 40.3% of the respondents reported they would try to lean more and would seek for information to help them make the decision. 32.3% of the respondents reported they would not seek for information but rather base their decision only on prior knowledge and experience. 21% of them answered that they would not base their decisions on information, but on something else while 4.8% answered that they did not know what they would do. Those respondents who had chosen option *a* and answered they would seek for information were asked to add the sources they would use, as in previous questions. Not all of them answered which sources they would use, and some of them gave several answers on the sources of information. Altogether they provided 49 answers about the sources they would use. Those 49 answers represent 100.0% of the answers on sources to be use listed in Table 6. As the results presented in Table 6 show, in the same number of answers the respondents report they would turn to the Internet (in general), to sexually experienced person who is close to the respondent and

to parents for information to learn more when deciding on engaging in sexual intercourse. 16.3% of the provided answers report the respondents would turn to the Internet (in general). In 3 of the answers the respondents reported they would turn to websites and websites on health, while in 2 answers they list Internet forums with other people experiences as the source of information they would turn to. Likewise, in 2 answers YouTube and Google occur as an information source, and the respondent who reported she would use Google added she would look for *experiences of people who are not related to me in any way*. Taken together, Internet based sources are represented in 30.6% of the given answers as the information sources the respondents would turn to while deciding whether to engage in sexual intercourse. Furthermore, in 8 or 16.3% of the given answers the respondents reported turning to sexually experienced person who is close to them, for example they wrote: *A friend who has already done it, A person with experience (mum), A person I am close to and has experience, A friend with experience*. Likewise, in 8 answers (16.3%) parents and mother are listed as the information source. Furthermore, in 6 or 12.2% of the answers given, the respondents mention friends and close friends as the source they would turn to, in 2 answers a close person is recognized as the source of information. Physician and gynecologist are mentioned in 2 answers. Another 2 of the provided answers mention siblings named as the information source. A cousin is listed in 1 answer, and one of the respondents writes she would have a conversation with boyfriend to learn more about the decision situation she would be facing. Overall, human sources are recognized as the information sources which could help while making the decision in 61.2% of the provided answers. Moreover, books are recognized to be useful information source in 3 or 6.1% of the answers. Lecture on sexual relations which respondents attend at school is mentioned as useful source of information in 1 answer as the source of information which may help. These other information sources (which are not Internet based nor human) together take 8.2% of the provided answers.

A few of the respondents who answered they would not base their decision on information but on something else added they would make the decision based on their instinct, feelings, readiness and willingness, a mature judgment, love towards their partner, behavior and feelings of their partner. One of the respondents wrote that none of the offered options seemed acceptable to him. He added that engaging in sexual intercourse should be a decision made by both partners and that it should be based on communication between them.

The sixth hypothetical situation required a decision on a diet the respondents would choose if they wanted to lose weight. As Table 1 shows, 75.8% of the respondents answered they would try to learn more and would seek for information. 21.00% of them would not seek for information but would base their decision only on their prior knowledge and experience, 1.6% would not make their decisions based on information but on something else and 1.6% of the respondents answered they did not know what they would do.

Table 6 – Responses on sources used when making a decision on whether to engage in sexual intercourse

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	8	16.3	Internet based sources 30.6
websites, websites on health	3	6.1	
Interent forums with other people experiences	2	4.1	
YouTube, Google	2	4.1	
sexually experienced person who is close to the respondent	8	16.3	human sources 61.2
parents, mother	8	16.3	
friends, close friends	6	12.2	
a close person	2	4.1	
physician, gynecologist	2	4.1	
siblings	2	4.1	
cousin	1	2.0	
conversation with boyfriend	1	2.0	
books, books about women body, books on sexual intercourse	3	6.1	other sources 8.2
lecture on sexual relations at school	1	2.0	
Total number of the responses, $\Sigma=$	49	100.0	100.0

Those respondents who had chosen option *a* in the questionnaire and answered they would seek for information were asked to add the sources they would use. Together they provided 97 answers on sources they would turn to, as it is shown in Table 7 (not all the respondents answered about the source they would use, while some of them gave several answers on the sources of information). Those 97 answers represent 100.0% of the provided answers shown in Table 7. The most mentioned information source the respondent reported they would be using when seeking for information while choosing a diet aimed at losing weight is the Internet (in general). Among the given answers in 23.7% the Internet (in general) as the source the respondents would turn to is mentioned. In 11.3% answers the respondents list various internet based sources which include Google, YouTube channels (especially those with tutorials for recipes), Facebook and Instagram, Internet forums with other people experiences, blogs on healthy food, videos on food and exercising and articles on the Internet. 7 answers (7.2%) bring websites and, more specifically, websites on how to keep the body in shape, websites on food and also specific websites *Healthy food guide*, *BeFit* as useful information sources. Overall, Internet based sources were named in 42.3% of the given answers. Moreover, among the information sources the respondents reported they would use while facing the decision on diet, in 11.3% parents as

the source of information are mentioned. In 10.3% of the answers a physician is listed, and in 9.3% answers a nutritionist is identified as source that may help. Coach and fitness instructor are together mentioned in 11.3% of the provided answers. In 1 answer an expert (in general) is mentioned, and also in 1 friends are mentioned as the source of information. 5 answers bring together individuals with knowledge on dieting and individuals with experience in dieting. Taken together, answers in which the respondents report they would turn to other people or human information sources for help while deciding which diet to choose if they wanted to lose weight take 49.5 % of all of the provided answers. Furthermore, among the information sources the respondents listed in their answers, magazines (on healthy food, health and sports) are listed in 3.1% of the answers. In 4.1% books are recognized as the sources of information (more specifically: healthy food cookbooks, nutrition books, books on losing weight, professional books). Library is mentioned as the information source in 1 answer. Overall, these other sources of information make 8.2% of the provided answers.

Table 7 - Responses on sources used while making a decision on dieting

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	23	23.7	Internet based sources 42.3
Google, Internet forums, blogs on healthy food, Instagram, Facebook, Internet articles, YouTube channels especially with tutorials for recipes, videos on food and exercising	11	11.3	
websites, websites on how to keep a body in shape, websites about food	7	7.2	
parents	11	11.3	human sources 49.5
coach, fitness instructor	11	11.3	
physician	10	10.3	
nutritionist	9	9.3	
individuals with experience with dieting, individual with the knowledge on dieting	5	5.2	
an expert	1	1.0	
friends	1	1.0	other sources 8.2
books: healthy food cookbooks, nutrition books, books on losing weight, professional books	4	4.1	
magazines on healthy food, magazines on health and sports	3	3.1	
library	1	1.0	
Total number of the responses, Σ=	97	100.0	100.0

The seventh hypothetical decision situation was about where to go on Saturday night. It is shown in the Table 1 that 37.1% of the respondents reported they would try to learn more and would seek for information to help themselves while making a decision. 53.2% of them reported they would not seek for

information but would base the decision only on their prior knowledge and experience, 8.1% of them answered they do not base decisions on information but on something else and 1.6% answered they do not know what they would do. Those who had answered they would seek for information, choosing a option among the offered options, provided 25 answers about sources they would use, as shown in the Table 8 (not all the respondents answered about the source they would use, while some of them gave several answers on the sources of information). Among the provided answers, 3 refer to the Internet (in general), while 1 answer mentions Facebook as the information source the respondent would turn to. Taken together, these Internet based sources take 16.0% of the provided answers. The results show that when it comes to deciding on where to go out on Saturday night, the respondents consider friends and acquaintances to be the most helpful source of information. In 64.0% of the provided answers they reported turning to their friends and acquaintances. Furthermore, 16.0% refer to people with experience who *go out often or go out to interesting places* and who the respondents would ask *how to have fun and where and about their experiences* (as one of them explained). In 1 answer *other people* are mentioned as sources of information. Overall, 84.0% of the answers report that the respondents would turn to human information sources when deciding on where to go out on Saturday night.

The respondents who answered that they would not base their decisions on information but on something else added they would usually not do much planning, and that the decision would come to them. They explained that they would experiment and use their own experience, that they usually heard about good places to go and that they would go wherever as long as there was good music.

In the eight hypothetical decision situation, the respondents were asked which of the offered alternatives they would choose when deciding whether to use a soft drug offered by a friend. As it can be seen in Table 1, 19.4% of the respondents answered they would try to learn more and would seek for information; 51.6% of them answered they would base their decision only on their prior knowledge and experience; 14.5% answered they would not base their decisions on information but on something else, and 11.3% of the respondents did not know what they would do. The respondents who had chosen option a among the offered answers and answered that they would seek for information were asked to add the information source they would use to their answer. Again, not all of the respondents answered about the source they would use, while some of them gave several answers on the sources of information. Together the respondents provided 12 answers writing which sources they would use. Their answers are presented in Table 9 with 12 provided answers representing 100.0% of the answers presented in the table. As it can be seen, in the most of their answers the respondents reported they would seek for information on the Internet (in general) if they were facing the decision on using a soft drug. Among the answers, 6 refer to the Internet (in general), while websites, websites on health and *medical websites* together are mentioned in 3 of the

answers. Together, Internet based sources make 75.0% of the provided answers. 1 answer brings siblings and also 1 answer brings friends who had personal experience with drugs as the information source the respondent would turn to. Overall, these human sources make 16.7% of the answers the respondents gave. Likewise, medical handbooks are identified as the information source in 1 answer.

Table 8 – Responses on sources used when making a decision on the place to go on Saturday night

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	3	12.0	Internet based sources 16.0
Facebook	1	4.0	
friends, acquaintances	16	64.0	human sources 84.0
people with experience (e.g. go out often or go out to interesting places)	4	16.0	
other people	1	4.0	
Total number of the responses, $\Sigma=$	25	100.0	100.0

The respondents who answered that they would not base their decisions on information but on something else wrote that moral principles, common sense, environment and books that he/she read would influence their decision in this hypothetical situation. Some of the respondents expressed their opinion (*Drugs are harmful, I would never take them!*); some of them claimed they knew what was good for them, and some expressed a practical reason for their decision (*I would not pass a doping test; I fear my parents' reaction and the consequences I would suffer*).

Table 9 – Responses on sources used when making a decision on whether to take a soft drug

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	6	50.0	Internet based sources 75.0
websites, websites on health, medical websites	3	25.0	
siblings	1	8.3	human sources 16.7
friends with personal experience with drugs	1	8.3	
medical handbooks	1	8.3	other sources 8.3
Total number of the responses, $\Sigma=$	12	100.0	100.0

In the ninth hypothetical situation the respondents were asked to answer which of the offered alternatives they would choose when facing a decision on buying a mobile phone. 77.4% of the respondents reported they would try to learn more and would seek for information while 21% of them reported they would not seek for information but would base their decision only on prior knowledge and experience. 1.6% of the respondents answered that they would not base decisions on information but on something else (Table 1). The

same as in the previous questions, those respondents who had answered that they would seek for information were asked to add the sources they would use. Together the respondents provided 78 answers about the sources (not all of the respondents answered about the source they would use, while some of them gave several answers on the sources of information). The answers on the sources are presented in Table 10, and 78 given answers represent 100.0% of the answers presented. In most of their answers, the respondents report they would seek for information on the Internet (in general) when deciding on buying a mobile phone. In 24.4% of the given answers the respondents report they would turn to the Internet (in general) to learn more when deciding on buying a mobile phone. 14.1% of the answers mention websites (and more specifically websites specialized for technology, websites of mobile network operators and manufacturers' websites) as the sources the respondents would use. Moreover, 10.3% of the given answers report turning to YouTube, and especially looking for reviews and videos with user's comments. Another 8 answers (10.3%) report turning to other Internet based sources: GSM arena, Internet reviews, blogs with user experiences, Google, Internet forums and IT websites. In 2 of the given answers the respondents mention seeking for information on e-Bay. Taken together, the Internet based sources make 61.5% of the given answers. Furthermore, 10.3% of the answers report asking shop assistant or an *expert* who works in a shop for information. In 10.3% of the answers the respondents report turning to friends. Parents are listed as information source in 5.1% of the answers, while in 3.8% of the answers the respondents report they would ask acquaintance for information. Brother and other family member who is familiar with mobile phones together make 2 of the given answers. Likewise, in 2 of the answers they report turning to IT technician, and in another 2 to person or friend who owns the mobile phone the respondent is interested in. Altogether, the human sources the respondents reported they would use together make 35.9% of the given answers. In 1 answer the respondent mention seeking for information at mobile phone shop and in 1 the respondent mentions seeking for information from a network operator. Together these other sources make 2.6% of the given answers. One of the respondents who would not base his decision on information added that he would choose a mobile phone he liked.

Table 10 – Responses on sources used when making a decision on buying a mobile phone

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	19	24.4	Internet based sources 61.5
websites, websites specialized for technics, websites of mobile network operators, manufacturers' websites	11	14.1	
YouTube, especially reviews and videos with users' comments	8	10.3	
other Internet based sources: GSM arena, blogs with users experiences, Internet reviews, Google, Internet forums, IT portals	8	10.3	
e-Bay	2	2.6	

shop assistant, <i>an expert</i> who works in shop	8	10.3	human sources 35.9
friends, friends experienced with technology	7	10.3	
parents, father	4	5.1	
acquaintance	3	3.8	
brother, other family member who is familiar with mobile phones	2	2.6	
IT technician	2	2.6	
person or friend who owns the mobile phone the respondent is interested in	2	2.6	
mobile phone shop	1	1.3	other sources 2.6
network operator	1	1.3	
Total number of the responses, Σ =	78	100.0	100.0

In the tenth hypothetical situation the respondents were asked to answer which of the offered alternatives they would choose to help them make a decision on what to do if their boyfriend or girlfriend did something they did not feel comfortable with. 19.4% of the respondents reported they would try to learn more and would seek for information while 58% of them reported they would not seek for information but would base their decision only on their prior knowledge and experience. 11.3% of the respondents answered they would not base their decisions on information, but on something else and 9.7% answered that they did not know what they would do (Table 1). Again, the respondents who had answered they would seek for information (choosing an option *a* in the questionnaire) were asked to add the sources they would use. Together they provided 15 answers about the sources they would use and all the answers refer to human sources (the same as when answering the previous questions, not all of the respondents answered about the source they would use, while some of them gave several answers on the sources of information). The answers are presented in Table 11. Majority of the answers the respondents offered reveal they would turn to their friends if they needed information that would help them decide what to do if their boyfriend/girlfriend kept doing something they were not comfortable with. 8 or 53.3% of their answers refer to friends or best friends, 2 of the answers refer to parents and another 2 on mother, 3 of the answers refer to boyfriend or a girlfriend as the respondents reported they would ask him or her about what was going on. As it can be seen, in all of the provided answers the respondents report they would turn to other people, meaning human information sources, for information.

Some of the respondents who answered that they would not base their decisions on information but rather on something else added their decision would be made based on intuition, instinct and feelings. Other answers mention the boyfriend's respect for the respondent as well as a conversation with the boyfriend. One of the respondents wrote: *My own feelings; if it does not feel right, no information could make me calm down*. Another respondent added she would ask her friends what to do, which suggests that she does not perceive asking friends as information seeking.

Table 11 – Responses on sources used when making a decision on what to do if a boyfriend/ girlfriend did something they were not comfortable with

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
friends, best friend	8	53.3	human sources 100.0
parents	2	13.3	
mother	2	13.3	
boyfriend or girlfriend	3	20.0	
Total number of the responses, $\Sigma=$	15	100.0	100.0

Finally, in the eleventh hypothetical situation the respondents were asked which of the alternatives offered they would choose if they were faced with making a decision on something very important to them and their lives in general. 72.6% of the respondents answered that they would seek for information and 19.4% of the respondents answered they would not seek for information but would base the decision only on their prior knowledge and experience. 4.8% of them answered that they would not base their decisions on information but on something else and 1.6% answered that they did not know what they would do (Table 1). Those respondents who had answered they would seek for information (choosing an option *a* in the questionnaire) were asked to add the sources they would use to their answers. Together they provided 108 answers about which sources they would use (not all of the respondents answered about the source they would use, while some of them gave several answers on the sources of information). The answers are presented in Table 12. Among the given answers, 13 or 12.0% refer to the Internet in general as the source the respondents would use while making a decision on something very important in general. In 3.7% of the answers given the respondents report using websites, and in another 4 using Google, Internet forums, YouTube videos and Internet articles. Among them, one respondent explained that *Google has all the answers*. Altogether, these Internet based sources listed make 19.4% of the given answers. The respondents revealed in their answers that if they were facing the decision on something very important, they would turn to their parents and their friends as the most desirable source of information that might help. In 24.1% of the answers the respondents reported they would turn to their parents, and in 23.1% of the answers to friends (and also close friends and best friends). Another group of recognized sources were experts: *experts that work in school, competent individuals* and *an expert such as psychologist* who are mentioned in 5.6% of the answers as the information sources the respondents would turn to. 4.6% answers refer to people who are close to the respondent (expressed in answers such as *Individuals I am close with, People I am close with and who know me best*). 3.7% answers refer to family members (in general), 3 answers refer specifically to a mother and another refer to siblings, 1 answer refers to a grandmother and another 1 to a cousin as the information source. Taking together these listed family members, we may say that family and extended family members

are well recognized as the information sources the respondents may turn to for information while making a decision on something very important for their lives. In 3 of the given answers the respondents mentioned asking *a responsible and clever person*. In 1 answer the respondent reports turning to people he/she cares about. Among the answers, 1 refers to a physician, 1 to acquaintances and in 1 answer the respondent wrote he/she would turn to *my own thinking*. As it is visible in Table 12, taking together all listed human sources, we may see that in 75.0% of their answers they report turning to other people when deciding on something very important in general. Moreover, among the given answers 2 refer to books, 2 to magazines and newspapers and another 2 report seeking for information from all of the possible sources (*From all of the possible sources; Wherever I can*).

Table 12 – Responses on sources used when making a decision on something very important in general

Sources	Quantity of responses	Percentage	Grouping of responses (percentage)
the Internet (in general)	13	12.0	Internet based sources 19.4
websites	4	3.7	
Google, Internet forums, YouTube, Internet articles	4	3.7	
parents	26	24.1	human sources 75.0
friends, close friends, best friend	25	23.1	
experts, experts that work at school, experts such as psychologist, competent individuals	6	5.6	
people who are close to the respondent	5	4.6	
family members	4	3.7	
siblings	3	2.8	
mother	3	2.8	
a responsible and clever person	3	2.8	
grandmother	1	0.9	
cousin	1	0.9	
<i>people I care about</i>	1	0.9	
physician	1	0.9	
acquaintances	1	0.9	
my own thinking	1	0.9	
books	2	1.9	other sources 5.6
professional magazines, newspapers	2	1.9	
<i>From all of the possible source; Wherever I can</i>	2	1.9	
Total number of the responses, Σ =	108	100,0	100.0

Discussion

Engagement in deliberate information seeking

This pilot study shows that adolescents who participated in the research do engage in deliberate information seeking in order to expand their knowledge on decision making situations they face. It also shows that the extent to which they do so depends on specific decision situation. Such information seeking activity corresponds to the concept of information seeking as a process in which people purposefully engage in order to change their state of knowledge and which is closely related to learning and problem solving, as explained by Marchionini (Marchionini 1997, 5). The study also shows that during information seeking process, people interact with various information systems, as suggested by Wilson (Wilson 2000, 49), but also with other various information sources. Moreover, a tendency towards engaging in information seeking, shown by the study respondents in some of the offered hypothetical decision making situations, corresponds to the role which information seeking plays in the decision making process. As it is mentioned earlier in this work, many of decision making theory researchers point to the important role that information seeking plays in decision making process (e.g. Radford 1994, 80; Mann 1989, 151; Simon 1955, 106). It is well recognized that people engage in information seeking to obtain information needed to better understand the decision making situation they are faced with. Eventually, that may lead to making better decisions (Mann 1989). Likewise, reported tendency to engagement in information seeking reveals that the respondents believe such an activity would help in making some of the hypothetical decisions which were set before them. Such belief corresponds with Savolainen's understanding of information seeking as an activity people employ to orient themselves or to solve problems in everyday life (Savolainen 1995). However, respondents reported lower tendency towards engaging in deliberate information seeking in some other of the offered hypothetical decision situation. This shows that the respondents believe there are decision situations in which information cannot help, as it is well illustrated in the answer: *if I had bad feelings, I know that there is no information that could make me calm down*, given by one of the study participants. Finally, adolescents' tendency towards engagement in information seeking, which they reported as their hypothetical behavior in some of the offered decision making situations, is in line with findings of Poston-Anderson and Edwards's work on the role of information in adolescent dealing with life concerns (Poston-Anderson and Edwards 1993), Julien's work on information behavior related to career decision (Julien 1997a; 1997b; 1998; 1999; 2004) and Lu's work on children information behavior in relation to coping with everyday life challenges (Lu 2008, 2009, 2010, 2011). Their work shows that the youth engage in deliberate information seeking to help themselves while making decisions and while facing life challenges, to a certain extent. Julien also found that adolescents show incidental information seeking behavior when they find information coincidentally in their environment (Julien 1998, 1999), and Lu

found that children engage in information seeking for some other purposes, and not only for problem solving (such as escaping from problem) (Lu 2009, 2010, 2011).

The survey results show that the respondents' tendency towards engaging in deliberate information seeking varies across different everyday life decision-making situations. The adolescents who participated in the survey were more prone to purposefully seek for information in some of the hypothetical situations, but less in others.

A high percentage of the respondents reported they would engage in information seeking to help them make a decision in the situations requiring a decision about their future career (91.9%), helping a friend who suffers from anorexia (80.6%), type of diet to follow to lose weight (75.8%), type of mobile phone to buy (77.4%) and when facing an important decision in general (72.6%). Apart from buying a new mobile phone, we may argue that the decisions in which the adolescents who participated in the survey reported higher tendency towards deliberate information seeking are the ones that may have significant and long-term consequences for their lives. When a person makes a career choice, he or she indeed makes a big decision which influences his or her future. Likewise, when helping a friend to cope with anorexia or choosing a diet to lose weight, a person makes decisions that may have a significant impact on their health. Finally, the decision on something that is considered to be very important in general surely has a significant impact on a person's life. On the other hand, the decision on the type of mobile phone to buy does not seem to have a long-term impact on an individual's life, and yet many of the respondents reported they would engage in purposeful information seeking. Whether they believe there is a lot of relevant information about mobile phone models that can help them choose the best one or they are inclined to information seeking for some other reason is something that needs to be investigated.

The respondents showed a lower tendency towards engaging in information seeking in hypothetical decision situations in which they were required to choose a hairstyle (41.9%), a hobby (37.1 %) or a place to go on a Saturday night (37.1 %). Moreover, less than half of the respondents reported they would seek for information when faced with the decision whether to engage in sexual intercourse (43.3%) and an even smaller number of them would do so in order to help them with the decision whether to take a soft drug (19.4%) or what to do if their boyfriend/girlfriend behaved in a way they were not comfortable with (19.4%). The decisions on hairstyle, a hobby or a place to go on a Saturday night have short-term consequences and although they are an important part of adolescents' everyday lives, it is likely that they will not have a significant impact on their lives in general or their future. On the other hand, in these three hypothetical situations many of the respondents reported they would not seek for information but rather make their decision based only on their prior knowledge and experience. This indicates that they consider themselves

to be well-informed on these topics and believe that their prior knowledge and experience make a solid basis for making the decisions. Furthermore, less than half of the respondents reported they would seek for information if faced with making a decision on engagement in sexual intercourse. 32.3% of the respondents reported they would base their decision on prior knowledge and experience and 21% reported they would base their decisions on something other than information. It is not clear whether they consider themselves to be well-informed on that topic or whether they believe that the basis for such a decision is something else, e.g. instinct and feelings. Finally, an even smaller number of the respondents reported they would seek for information if faced with decisions on taking a soft drug and resolving a problem with their boyfriend/girlfriend's unacceptable behavior. In the case of a soft drug situation, half of the respondents (51.6%) reported they would base their decision only on their prior knowledge and experience. It is possible that they believe they possess enough knowledge and experience to make a decision without seeking for additional information. Many of the respondents elaborated on their behavior in this situation, e.g. *I would not take drugs; I know that drugs are bad for me and I would not take them even at the risk of putting a friendship in danger; a real friend would never force me to do it and It is worth trying, there is nothing you can lose.* The fact that they felt provoked to express their opinions although they were not asked for it, suggests that many of the respondents have well-defined views on this subject. When it comes to the decision on how to respond to their boyfriend/girlfriend's unacceptable behavior, 58.1 % of the respondents answered they would base their decision only on prior knowledge and experience and 11.3% of them answered they would base their decisions on something other than information. Again, some of them further explained their answers stressing the importance of communication between partners, instincts and feelings. In her explanation, one of the respondents wrote that she would make a decision based on: *My own feelings; if it did not feel right, no information could put my mind at ease.*

In future work it is necessary to further explore the reasons that lie behind the adolescents' tendency to engage in (or not to engage in) information seeking in these hypothetical decision-making situations. Moreover, it needs to be explored whether adolescents' tendency towards engaging in information seeking for everyday life decision-making purposes depends on the perceived significance of the decision and the perceived impact the decision has on their lives in the long term. Furthermore, we need to explore whether they are less inclined towards information seeking and decision-making based on information when faced with decisions which are related to intimacy and emotions, as the results obtained from the hypothetical decision situations involving their boyfriend/girlfriend's unacceptable behavior and a decision on sexual intercourse may suggest.

Information sources

The same as engagement in information seeking for making hypothetical decisions, source selection seems to depend on the decision-making situation at hand. Overall, two main types of sources were reported to be used in the hypothetical decision situations: human sources and Internet-based sources. Other sources were mentioned as well in the respondents' answers, but in a significantly smaller number. Overall, human sources were the most frequently reported sources of information which is consistent with the findings from Julien's study indicating that adolescents tend to use interpersonal sources of information when making their career decisions (Julien 1998). This does not come as a surprise since other studies on youth information behavior also show that young people predominantly use other people as sources of information (for example Poston-Anderson and Edwards 1993; Agosto and Hughes-Hassell 2006). Most of the respondents reported they would use these types of sources in the situations requiring a decision on the following: their career (54.6%), hairstyle (59.6%), hobby (52.3%), sexual intercourse (61.2%), a place to go on a Saturday night (84%), and something very important in general (75.9%). Furthermore, all of the respondents who would engage in information seeking when deciding what they would do if their boyfriend/girlfriend did something they were not comfortable with reported they would use some kind of human source of information. In future work other decision-making situations that deal with personal relationships should be investigated to reveal whether adolescents tend to turn to personal sources when faced with decisions on personal relationships in general. On the other hand, human sources and Internet-based sources were almost equally represented in the respondents' answers concerning the sources they would use if faced with decisions on helping a friend suffering from anorexia and choosing a diet. Furthermore, most of the respondents answered they would use Internet-based sources if they needed to decide whether to take a soft drug (75%) and which mobile phone to buy (61.5%). The data gathered in the questionnaire does not explain why the respondents are prone to using a certain type of sources in specific decision-making situations (e.g. they are prone to seek for information on the Internet because they feel more comfortable staying anonymous and that is something this source of information can provide). The reasons that lie behind their choice of source need to be investigated in future research.

Moreover, if we focus on specific human sources and decision-making situations in which they are mentioned, we may gain some interesting insights. Family and extended family members as sources of information were mentioned the most in two decision-making situations: when deciding on a future career and when deciding on something important for them and their lives. As already discussed, these two decision situations may be considered to have lifelong consequences and a significant impact on an individual's life. Furthermore, in both situations parents were far more frequently mentioned than any other family member. This may indicate that when it comes to decisions which can significantly influence their lives, the respondents turn to their parents and other family members.

Again, this is a finding that needs to be further explored. Moreover, parents were the most frequently mentioned human source of information in the hypothetical situation requiring a decision on sexual intercourse and dieting. In the situation requiring a decision on anorexia, parents were the second most frequently reported human source (after a physician). In the situations involving choosing a hairstyle and a hobby and a mobile phone as well as deciding what to do if a boyfriend/girlfriend behaved in an unacceptable way, parents were also reported as those the respondents would turn to. They were not even once mentioned as a source of information when deciding whether to take a soft drug and where to go on a Saturday night. Overall, the survey results show that the respondents recognize their parents as a valuable source of information, except in some specific situations (taking a soft drug, places to go on a Saturday night) in which parents were not among the sources they would turn to. The reasons for that are yet to be investigated. On the other hand, when faced with making a decision on a place to go on a Saturday night, most of the respondents reported they would ask their friends. Also, friends were the most frequently reported source in the decision-making situation involving their hairstyle and hobby. In future work other decision-making situations related to leisure activities, appearance and fashion should be investigated to reveal whether adolescents tend to turn to friends for information when dealing with decisions on these topics. Furthermore, friends (close friends, best friend) were second most frequently reported source the respondent would turn to when making a decision on something important in general. Friends were also mentioned in other hypothetical decision-making situations. Although they were not mentioned as frequently, they still represent a significant source of information. Friends, siblings, acquaintances and peers were also mentioned as possible sources of information. Individuals with specific knowledge and competences were also indicated as helpful in certain decision-making situations. When faced with the decision on the type of mobile phone to buy, many of the respondents reported they would turn to a shop assistant, an *expert* who works in a shop or an IT technician for information to help them make their decision. When asked which source they would use when deciding on helping a friend suffering from anorexia, many of the respondents said they would turn to a physician, a school psychologist, a teacher or *an expert*. When it comes to the decision on their career, the respondents would rely on their teachers, class teachers, school psychologists and *experts* in general. When deciding on their hairstyle, the sources listed include a hairdresser, a beauty guru on YouTube and *an expert*. A physician and a gynecologist were mentioned as sources of information the respondents would turn to when faced with a decision on sexual intercourse, while a physician, nutritionist, coach, fitness instructor and an *individual knowledgeable about dieting* were mentioned in the decision-making situation involving the choice of diet. When faced with a situation in which they would have to make a decision on something very important in general, the respondents listed *experts at school*, *competent individuals* and *an expert such as a psychologist*. It can be seen that the concept of *an expert* is often mentioned among information sources which would be used. In some cases this concept is connected with another term which explains it further

(e.g. *an expert such as a psychologist*), but often it is not. Therefore, the content of the concept should be further investigated as well as its various contents in different contexts. An individual with experience was also identified as a source the respondents would turn to for information (e.g. *former or current university students and individuals in a career of interest* when it comes to career decisions; a person that *has had a sexual experience* when it comes to the decision on sexual intercourse; *experiences of other people on Internet forums* when it comes to dieting; *YouTube, especially reviews and videos with users' comments* when making a decision on which mobile phone to buy).

Besides having specific knowledge, competence and experience, another characteristic of the human sources the respondents would look for was identified from their answers. Close relationship to the individual who is perceived as a possible source of information is often mentioned in the respondents' answers, for example: *a close friend who knows me best* (when deciding on something very important in general), *I would ask for advice from close friends who are familiar with my interests* (when choosing a hobby), *a person who is close to me and has had a sexual experience* (when deciding on sexual intercourse), *I would talk to my best friend first, and it is possible that I would talk only to her* (when deciding on what they would do if their boyfriend/girlfriend did something they were not comfortable with). However, as already mentioned, when answering where she would seek for information to help her decide whether to engage in sexual intercourse, one of the respondents wrote that she would use Google and look for experiences of people who are not related to her. This answer shows that not all of the respondents look for closeness to individuals they choose as their source of information. It may be argued that closeness to a human source of information is perceived as an advantage in some decision-making situations, and as a disadvantage in others. Finally, the concepts of trust, honesty, understanding and responsibility were used to explain the respondents' choice of source. Some of the respondents reported they would use multiple sources (e.g. *Wherever I can – friends, family, the Internet, a physician and First I would ask my parents and other family members, then friends (closest) and then look for the information on the Internet (Google)*) and some of them even explained where they would seek for information first, and which sources they would use after that.

When it comes to Internet-based sources, most of the respondents answered they would seek for information on the Internet (in general) in all hypothetical decision-making situations they were put in. Websites (in general) and websites on decision topic were second most frequently mentioned source (e.g. *faculty websites, websites on hairstyle and fashion, websites on health and anorexia*). Other Internet-based sources mentioned include Internet forums, Wikipedia, Google, Instagram, YouTube, Tumblr, blogs, social networking sites, Facebook, Pinterest and We heart it. Overall, the respondents reported they would use a variety of Internet-based sources.

The respondents reported they would seek for information from other sources (apart from human and Internet-based sources) to a much lesser extent. They

mentioned books and magazines as sources they would turn to when deciding on helping a friend suffering from anorexia, when choosing a diet, when deciding whether to take a soft drug and when deciding on something very important in general. Nevertheless, these sources could be found in a small number of the respondents' answers. A library was mentioned only twice. This is consistent with the findings from Julien's study (Julien 1998) indicating that a library is among the least frequently used sources of information by adolescents making a career decision as well as with the findings from the studies conducted by Poston-Anderson and Edwards (Poston-Anderson and Edwards 1993) and Agosto and Hughes-Hassell (Agosto and Hughes-Hassell 2006)

The importance attached to information seeking in making decisions

Generally, we may say that the adolescents who participated in this study considered information to be very important for some of the decisions, while in other situations many of them reported they would base their decisions on something else.

Their tendency towards information seeking varied across different hypothetical decision-making situation showing the respondents do consider new information to be important when making some of the hypothetical decisions, whereas in others they do not consider it necessary. As shown, when deciding on their future career, helping a friend who suffers from anorexia, choosing a diet to lose weight, buying a mobile phone and deciding on something very important in general, most of the respondents reported they would engage in deliberate information seeking which suggests they consider that new information may help. When deciding on their hairstyle, hobby, a place to go on a Saturday night, whether to take a soft drug and what to do if their boyfriend/girlfriend behaved in a way they did not feel comfortable with, many of the respondents reported they would base their decision on their prior knowledge and experience. It is possible that those respondents are aware of the importance of information in the decision-making process, but consider themselves experienced enough and well-informed on the topic. In some of the hypothetical decision situations some of the respondents reported they would not base their decisions on information, but rather on something else: when choosing a hairstyle (12.9%) and a hobby (17.7%), when deciding whether to engage in sexual intercourse (21%) and whether to take a soft drug (14.5%) and when deciding what to do if their boyfriend/girlfriend behaved in the way the respondent was not comfortable with (11.3%). As a possible basis for their decisions they listed: their readiness and willingness, preferences, instinct, maturity, feelings, opinion and so on. Moreover, some respondents who, among answers offered, chose the one that says *I do not base my decisions on information but rather on something else*, elaborated on their choice by listing sources of information based on which they would make their decisions (other than information). Their answers show that they do not recognize they have actually reported their engagement in information seeking. For example, one of the respondents reported she would ask her parents and friends and think about it for a long time. Another wrote: *I would ask friends*

what to do and yet another wrote he would turn to *YouTube*. These respondents do not recognize the various forms of information and information seeking activity. Nevertheless, some respondents clearly showed awareness of engaging in information seeking to help them make a decision, as shown in the answer of one respondent who wrote that he/she would use *All available sources to make a well-informed decision* on his/her future career.

Conclusion

This study puts into focus the topic that had not been getting enough attention by the researchers. To the best of our knowledge, adolescent information behavior in relation to decision making process has been investigated only in limited contexts (Agosto 2002a; 2002b and Julien 1997a; 1997b; 1998; 1999; 2004). There has been some research done on adolescent information behavior in broad context of dealing with life challenges, (Poston-Anderson and Edwards 1993; Lu 2008, 2009, 2010, 2011), but it did not tackle the concept of decision making process specifically. This study offers a broader approach to research on adolescent information behavior in relation to making decisions considering the role of information seeking in decision making process, as it is expressed among the researchers who dealt with decision making theory (e.g. Radford 1994, 80; Mann 1989, 151; Simon 1955, 106). Such an approach puts into focus neglected, and yet important issue of information behavior for decision making purposes and therefore opens a new area in the youth information behavior filed.

This pilot study aims to reveal whether adolescents engage in deliberate information seeking for new information when facing everyday life decisions and if so, which information sources they use. Moreover, it aims to give an insight into adolescents' perception of the importance of information in making decision. The findings give some answers and a new insight into the topic, but also poses many new questions that need to be addressed in the future work. Once again, we may say that when it comes to information behavior, *one size does not fit all*.

The results indicate that adolescent information behavior in relation to decision making depends on a specific decision making situation. Adolescents who participated in the study were more inclined to engage into information seeking in some of the decision making situations, and less in others. It is possible that their tendency towards engaging in information seeking for decision making purposes depends on the perceived impact the decision may have on their lives in terms of life-long and short-term consequences. The reasons why the respondents showed higher tendency towards engaging into information seeking in some of the decision situations and lower in others are to be further explored.

Furthermore, the selection of the sources that the respondents report using seems to depend on a specific decision situation as well. The perceived impact

of the decision in terms of life-long and short-term consequences, intimacy and emotions related to a decision situation, anonymity which sources provide and familiarity of the sources may be among the factors which influence adolescents' source selection. Two main types of sources were reported to be used in the hypothetical decision situations: human sources and Internet based sources, with human sources being mentioned the most in the answers. The reasons for choosing a specific type of source in certain decision making situations needs to be further investigated.

Among the human sources respondents would turn to, mostly reported were: parents and other family or extended family members, friends, individuals who are perceived to have knowledge or competence on the decision topic (e.g. physician, nutritionist, psychologists, fitness instructor), individuals who have some experience related to decision making situation and individuals the respondents feel close to. Parents were recognized as a human source of information that most of the respondents would turn to when deciding on future career and on something very important for them and their lives in general. Friends were reported as a human source of information that most of the respondents would turn to when deciding on a new hairstyle, on a hobby and where to go out on Saturday night. Additionally, friends came second among the sources listed that the respondents would turn to when deciding on something very important. Many of the respondents reported they would turn to an expert for information to help themselves while making a decision. The content of an expert concept should be further investigated as well as its various meanings in different everyday life decision making contexts.

The Internet (in general) was reported as a source many of the respondents would turn to when seeking for information to help themselves while making each of the offered hypothetical decisions. Also, the respondents reported a variety of other Internet based sources they would use in hypothetical decision making situations. The significance of anonymity Internet based sources may provide to adolescents needs to be further investigated.

Finally, the importance which adolescents attach to information while making decisions also seems to vary among different hypothetical decision situation offered in the research. Overall, we may say that the adolescents who participated in this study considered information to be very important for some of the decisions, while in other situations many of them reported basing their decisions on something else. It would be interesting to further explore in which everyday life decision situations information is perceived as helpful, and in which it is not. Moreover, it was revealed that there are some respondents who do not recognize various forms in which information may come and neither do they recognize various forms of information seeking activity.

As it has already been stated above, the aims of the study included getting a better insight into decision-making behavior of adolescents which will help in developing a methodology for a large-scale research project and provide the basis for an in-depth research. In addition to providing answers to the research

questions, this pilot study tested the used methodological approach and yielded new insights into the topic as well as raised a lot of new questions that need to be addressed in future research.

The study approach was based on the hypothetical and not real everyday life decision-making situations. As a result the study has some limitations. As already explained, this approach allowed us to cover a larger sample and provided findings which can be used in future work. The approach has some limitations considering that in real everyday life decision-making situations the respondents' behavior may differ from the hypothetical behavior they reported on in the study questionnaire.

This pilot study shows that future research which would investigate adolescents' behavior in real everyday life decision-making situations requires a different methodology. An in-depth study that would include in-depth interviews is needed in order to gain a deeper understanding of adolescents' information-seeking behavior in real life decision-making situations and the way it affects decision-making processes.

Finally, the pilot study highlighted the following questions that need to be addressed in future work:

- In future work it is necessary to further explore the reasons that lie behind adolescents' tendency to engage in information seeking when faced with everyday life decision-making situation.
- Additionally, we should explore how the significance attached by adolescents to information in decision-making and the impact a decision may have on their lives in the long term influence their tendency towards engaging in information seeking.
- Moreover, we need to investigate what other factors involved in a decision-making situation affect adolescents' engagement in information seeking.
- We should explore how the significance adolescents attach to information in decision-making and the impact a decision may have on their lives in the long term influence their choice of information source. Likewise, other factors involved in a decision-making situation influencing adolescents' choice of information source need to be further investigated in future work.
- Gender differences in information-seeking behavior for everyday life decision making which have not been addressed in this study need to be explored in future work.

References

- Agosto, Denise E. 2002a. "A model of young people's decision-making in using the Web." *Library & Information Science Research* 24: 311-341.
- Agosto, Denise E. 2002b. "Bounded rationality and satisficing in young people's Web-based decision-making." *Journal of the American society for Information Science and Technology* 53: 16-27. <https://doi.org/10.1002/asi.10024>
- Agosto, D. E., and S. Hughes-Hassell. 2006. Toward a model of the everyday life information needs of urban teenagers, Part 2: Empirical Model. *Journal of the American Society for Information Science and Technology* 57, 11: 1418-1426. <https://doi.org/10.1002/asi.20452>
- Bekker, H, Jg. Thornton, J. Lilleyman, M. MacIntosh, Aj. Maule, Cm. Airey, S. Michie, et al. 1999. "Informed decision making: an annotated bibliography and systematic review." *Health Technology Assessment* 3, 1: 168. <http://discovery.ucl.ac.uk/15902/1/15902.pdf>.
- Julien, Heidi E. 1999. "Barriers to adolescents' information seeking for career decision making." *Journal of American Society for Information Science* 50, 1: 38-48. [https://doi.org/10.1002/\(SICI\)1097-4571\(1999\)50:1<38::AID-AS16>3.0.CO;2-G](https://doi.org/10.1002/(SICI)1097-4571(1999)50:1<38::AID-AS16>3.0.CO;2-G)
- Julien, Heidi. 1997a. "How does information help? The search for career-related information by adolescents." Faculty of Graduate Studies The University of Western Ontario. Accessed September 15, 2015. URL: <http://www.collectionscanada.gc.ca/obj/s4/f2/dsk2/ftp02/NQ28498.pdf>
- Julien, Heidi. 1997b. "How career information helps adolescents' decision-making." In *Proceedings of an international conference on Information seeking in context*, 371 – 385. London: Taylor Graham Publishing. Accessed September 15, 2015. URL: http://www.informationr.net/isis/ISIC1996/96_Julien.pdf
- Julien, Heidi. 1998. "Adolescent career decision making and the potential role of the public library." *Public Libraries* 37, 6: 376-381.
- Julien, Heidi. 2004. "Adolescent decision making for careers: An exploration of information behavior." In *Youth Information-Seeking Behavior: Theories, Models, and Issues*, edited by Mary K. Chelton and Colleen Cool, 321-352. Lanham : Scarecrow.
- Lu, Y.-L. (2008). "Coping assistance vs. Readers' advisory: Are they the same animal?" *Children & Libraries* 6, 1: 15-22.
- Lu, Ya-Ling. 2010. "Children's information seeking in coping with daily-life problems: An investigation of fifth- and sixth-grade students." *Library & Information Science Research* 32: 85-86.

- Lu, Ya-Ling. 2009. "Children's strategies in coping with daily life: Does information matter?" Proceedings of annual conference of the American society for information science 2009. Vancouver, Canada. Accessed September 20, 2015. URL: <http://www.asis.org/Conferences/AM09/open-proceedings/openpage.html>.
- Lu, Ya-Ling. 2011. "Everyday hassles and related information behavior among youth: a case study in Taiwan." *Information Research* 16,1. Accessed August 16, 2015. URL: <http://www.informationr.net/ir/16-1/paper472.html>
- Mann, Leon. 1989. "Becoming a better decision maker." *Australian Psychologist* 24, 2: 141-155. <https://doi.org/10.1080/00050068908259558>
- Marchionini, Gary. 1997. *Information seeking in electronic environments* (Cambridge Series on Human-Computer Interaction). doi:10.1017/CBO9780511626388. <https://doi.org/10.1017/CBO9780511626388>
- Poston-Anderson, Barbara, and Edwards, Susan. 1993. "The role of information in helping adolescent girls with their life concerns." *School Library Media Quarterly* 22, 1: 25-30.
- Radford, K. J. 1994. "Decision making, individuals." In *Encyclopedia of human behavior*, editor-in-chief V.S. Ramachandran. Vol. 2, 73-82. San Diego, CA : Academic Press
- Savolainen, Reijo. 1995. "Everyday life information seeking: Approaching information seeking in the context of way of life". *Library %26 Information Science Research* 17: 259-294. Accessed September 26, 2015. http://www.researchgate.net/profile/Reijo_Savolainen/publication/222495233_Everyday_life_information_seeking_Approaching_information_seeking_in_the_context_of_way_of_life/links/02e7e533ad57ebaf9a000000.pdf
- Simon, Herbert A. 1955. "A behavioral model of rational choice." *Quarterly Journal of Economics* 69, 1: 99–118. <https://doi.org/10.2307/1884852>
- Wilson, T. D. 2000. "Human information behavior". *Informing Science* 3, 2: 49–55. <http://210.48.147.73/silibus/human.pdf>.
- Yilmaz, M R. 1997. "In defense of a constructive, information-based approach to decision theory." *Theory and Decision*, 43: 21–44. <https://doi.org/10.1023/A:1004977910644>