University of Alberta

Understanding an Adolescent's Decision to see a Family Doctor: "Make it like a trip to the Zoo"

by

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Abstract

This goal of this study was to understand why adolescents decide to see family physicians for annual check-ups, utilizing the Theory of Planned Behavior as a guiding perspective. Small group discussions involving 17 male and female adolescents from Edmonton were performed. A combination of category coding and thematic analysis was used in the data analysis. This study discovered that, for an adolescent, going to the family doctor for a check-up is not completely in their control. The participants did not feel that teenagers intend to go to a family doctor for a periodic check-up. They did express that a check-up, although uncomfortable, is a good idea. The adolescent felt that their parents' opinion regarding going for a check up is more important than their peers' opinion. Therefore, family physicians should recognize the attitudes of adolescents and potential barriers for this population when trying to encourage attendance at their offices.

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Introduction

During adolescence, individuals often experiment with smoking, drinking alcohol, using drugs and engaging in sexual activity for the first time (1). These health behaviours, beginning in adolescence, can become life-long problems (2). Consequently, a variety of health promotion programs have been developed to encourage healthy behaviour among adolescents (3).

Family physicians are one of several people who potentially can influence adolescents' health behaviours. Unfortunately, many adolescents often do not see a regular family physician for their primary care needs, nor do they come to family physicians for routine preventive health care check-ups. Most research has investigated the use of health care services by adolescents from the health providers' or adults' perspective, but very little research has explored adolescents' views of this situation (4-5).

A wealth of literature has tried to explain adolescent behaviour using psychological theories. This study will investigate adolescents' decision to seek health care services from a family physician from the perspective of the Theory of Planned Behavior (TPB) (6). The specific issue addressed in this study is to understand the beliefs of adolescents regarding annual check-ups from their family physicians. The project consisted of small group discussions of key informants including male and female adolescents from within Edmonton. A semi-structured interview design was used to explore adolescents' attitudes, subjective norms, and perceptions of behavioral control in relation to the decision to see a family physicians for a regular check-up. Data was analyzed within the

framework of the TPB, but using qualitative research techniques. In particular, a combination of category coding and thematic analysis was utilized in the data analysis. Questions were used to develop themes relating to each construct in the TPB, in reference to adolescents' decisions to visit family physicians for annual check-ups. The results from this research may assist health professionals in developing interventions to increase the frequency and effectiveness of annual check-ups among adolescents and therefore to help adolescents with the many health issues, which they face on a daily basis.

Chapter One - Background

The health of adolescents should be a major concern for Canadian society. Adolescents often experiment with smoking, drinking alcohol, using drugs and engaging in sexual activity for the first time (1). This experimentation, combined with their changing physical and mental development can lead to several health problems including addiction, teenage pregnancy, sexually transmitted diseases, and depression. These health problems, beginning in adolescence, can become life-long problems (2). Several researchers have examined factors underlying adolescent health behaviours, and a variety of theories have been developed to predict health-related behaviours and therefore guide future health promotion interventions (7-10).

Family physicians can potentially influence adolescents' health behaviour (11). Based on research and theories of health behavior, several guidelines have been created to help family physicians to improve adolescent health. These guidelines suggest that individuals should receive regular periodic check-ups during the adolescent years (12, 13). At these visits, family physicians can perform physical examinations and screen for health compromising behaviours. Regular visits can also help to develop important relationships between adolescents and their physicians. Unfortunately, despite these advantages, medical literature reveals that adolescents rely heavily on emergency services for their primary care needs instead of utilizing family physicians (14). Adolescents, and in particular older adolescents, attend family physicians offices for annual check-ups less frequently than the average for the Canadian population (15).

This phenomenon raises the question of why adolescents do not seek health care from family physicians. Previous research has addressed this question from the health providers' or adults' perspective and suggests that factors such as inadequate insurance, lack of transportation and inconvenient location of service constitute barriers to accessing family physicians (4-5). However, to complement this information, one must ask adolescents themselves. Unfortunately, very little research has examined the adolescent's view of this situation (5, 16, 17). One US study demonstrated that adolescents' decisions to seek health care are related to whether methods were in place to prevent transmission of disease between patients (5). Although interesting, very little research in this area has adopted a theoretical perspective on adolescent decision making in relation to the use of family physicians. This study will help fill this gap in the literature.

Overview of the Issue

Adolescents' attitudes in relation to visiting a family physician may be variable; some may have positive attitudes while others may have negative attitudes. Different attitudes may be present for different adolescents depending on age, gender and ethnic background. Beyond personal beliefs of adolescents, opinions of various important people within their lives can affect whether or not adolescents use a family physician. These other people may include their peers, their parents, their siblings and potentially family physicians themselves. These individuals may be differentially influential in affecting adolescents' decision to see a physician.

Beyond personal factors, adolescents' use of family physicians could be affected by both economic and environmental conditions. Although health services are universally available in Canada, economic factors may be relevant for understanding under-utilization of family physicians by young adults. Adolescents typically do not face direct financial barriers to seeking health care services. However, from the practitioner's perspective, economic factors may be important. Environmental issues can also play an important role in influencing adolescents' decision to visit a family physician. For example, regular family medicine clinics may only be open during 'office hours'. Teenagers may prefer to see the doctor after school hours in order to not attract attention or miss any classes. Unwillingness to accommodate walk-in appointments may also discourage them from seeking care. Confidentiality may also be a concern if the physician also sees the adolescent's parents as patients. Adolescents may be looking for confidentiality by seeing a different physician with each visit. Finally, waiting rooms of regular clinics do not cater to the adolescent population. Toys are available for younger children while magazines focus on adults' interests. For several of these reasons, adolescents may favour walk-in clinics.

The goal of the research was to understand why adolescents decide to see family physicians for annual check-ups, using the Theory of Planned Behavior (TPB) as a guiding perspective (6). This theory proposes that adolescents' attitudes towards family physicians, their perceptions of subjective norms (ie. beliefs about peers' or parents' opinion to see a physician), and their perceived behavioral control over obtaining an annual check-up from family

physicians will all influence their intentions to seek care from a family physician (6).

In the following section, literature will be reviewed on studies relating to adolescent health, the role of family physicians in adolescent health and behaviour theory. Next, a justification for examining the TPB in regard to adolescents' decision to visit their family physician for annual check-ups will be provided. Subsequently, the methodology, fieldwork, data analysis and a discussion of the findings will be presented.

Literature Review

There have been many articles published on issues related to the health of adolescents, and in particular, the health behaviour of adolescents (2, 3, 15, 18). A few researchers have examined the role of family physicians in promoting health behaviours among adolescents (19-21). A wealth of literature has tried to explain adolescent behaviour using psychological theories (22-28). This review of the literature will first describe adolescent health behaviour in Canada using epidemiological data. Next, the role of the family physician as discussed in the literature will be outlined. Subsequently, the Theory of Planned Behaviour and its predecessor, the Theory of Reasoned Action will be presented including important studies utilizing these theories to predict health-related behaviours.

Adolescent Health Behaviour – Current Statistics

A recent Canadian survey reported that 25 percent of respondents aged 15-17 and 35 percent of those aged 18-19 smoked regularly (15). Research has shown that most smokers begin their habit before age 19 (3, 18). Previous

literature has also shown that the earlier one starts to smoke regularly the less likely the individual will give up the habit (3). Other substance-related health behaviours include the use of alcohol and other drugs. The same Canadian survey showed that 31 percent of adolescents aged 15-17 and 61 percent of those aged 18-19 drank alcohol regularly and 25 and 23 percent of individuals used cannabis (15). Overweight children are also a growing problem in Canada with prevalence rates reaching 35% of children, with 16% of them being classified as obese (29). Similar to smoking, if obesity continues into adolescence then it will likely become a lifelong problem (2). The rate of clinical depression among adolescents has been estimated to be about five percent and is widely thought to be underestimated (15).

Role of Family Physicians in Adolescent Health Promotion

Very little work has been published to evaluate the impact of family physicians impact on adolescent health. Walker and Townsend's review of the impact of family physicians on adolescent health examined 105 studies and concluded that there was a lack of good research in this area and that further research is required (3). In a subsequent publication, Walker, Oakley and Townsend described a pilot study evaluating the impact of primary care consultations on adolescents (20). This study used a follow up questionnaire to determine whether any positive change was noted between an intervention group who received a health consultation and a control group in health related behaviors (smoking, drinking alcohol, taking drugs, nutrition, exercise or sexual health). Their results showed a statistically significant positive change in at least

one health related behaviour for 55% of respondents at one month in the intervention group (versus 45% in the control group). Two other studies evaluated the impact of general practice visits. One study evaluated lifestyle promotion in 8-15 year olds, reporting a significant increase in health behaviour knowledge (30). The other article described a positive change (32.4% were exercising more often and 40.5% were eating healthier) in response to a health visit with a clinic nurse (31).

Several studies in the literature have commented on the amount and quality of health promotion advice being provided by general practitioners (3, 32-34). Most articles described a low level of preventative health services at general practice offices (3, 32-34). Two papers discussed the role of the general practitioner in health promotion and the importance of maintaining or increasing preventative health (21, 35). Three studies commented on the high level of need for preventative health visits among adolescents (20, 31, 36). Two studies described that the health promotion interventions were well received by the adolescents involved (30, 31), while one reported that adolescents want more health behaviour advice from their physician (21). These articles support the idea that adolescents want and value health advice provided by family physicians.

Previous research has discussed the importance of having an adult support member for adolescents outside of the family structure (37, 38). This adult can serve as a person whom adolescents can turn to or simply as a positive role model. Family physicians could fill this role. By providing needed health

information combined with the potential for screening for high-risk behaviour, family physicians could also be important supports for adolescents. If one can attract adolescents to seek care at family physicians offices, some health-compromising behaviours may be decreased.

One main limitation to all of the studies mentioned previously is that they focus on adolescents who already access family doctors. Therefore, studies are urgently needed to investigate why many adolescents do not access family physicians. The opinions and behaviours of those adolescents who do not access family physicians may be very different than their peers that do. This distinction is has been highlighted by the 'inverse care law' which states that those individual in highest need of health services are the least likely to seek help (18). Future research must include these adolescents to gain a better understanding of adolescent opinions and behaviours.

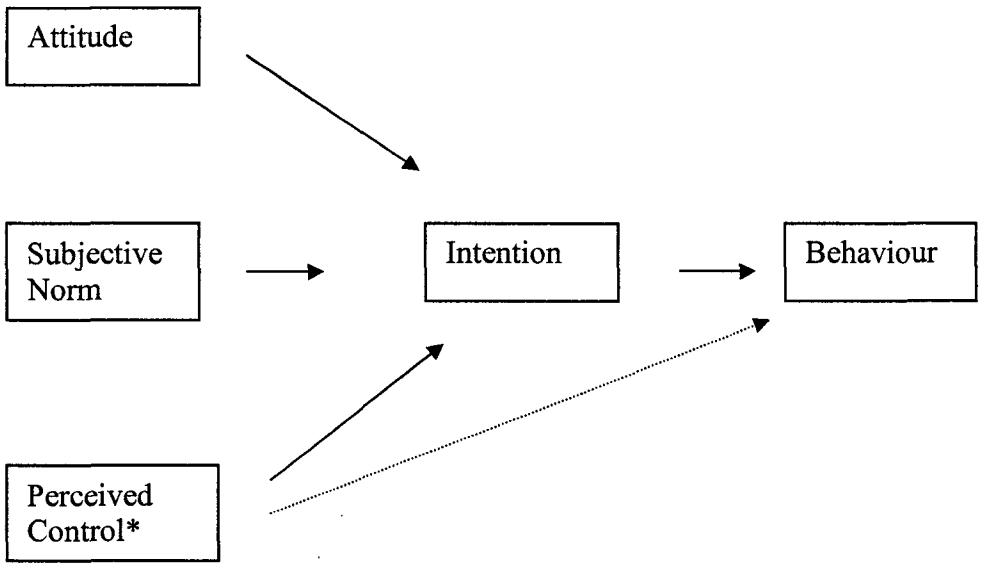
Health Behaviour Theory

The major purpose of using a theoretical model is to help us better understand behaviour in the health domain and to help design more effective interventions. Using an intuitive intervention approach, developed ad hoc and without theory, runs the risk of omitting important considerations in the development of an intervention strategy (39). As mentioned earlier, many theories have been developed to help predict behaviour. This project will be utilizing the well-established Theory of Planned Behavior to understand why some adolescents access family physicians and why other adolescents do not. This review emphasizes two main theories and articles published which describe

their utility. Clack and Becker have provided a more comprehensive review of health behaviour theories (10).

The first theory described in this review is the Theory of Reasoned Action (TRA), developed by Ajzen and Fishbein (40). According to this model, behaviour is influenced by intentions. Intention, in turn, is influenced by two factors, namely, attitudes and subjective norms. Attitudes include a person's belief that a particular behaviour will lead to certain outcomes. Subjective norms include perceptions about whether important individuals (eg. family, friends) think he or she should perform the behaviour. This original theory was developed through work with young college students (10), and has received support in areas of smoking, family planning and seeking preventative health services (10). However, a limitation of this model is that it is only applicable for behaviour under voluntary control. Consequently, a second related theory, the Theory of Planned Behavior (TPB), was developed by Ajzen as an extension of the TRA (Figure 1). The TPB attempts to explain behaviours that are both volitional and non-volitional (6). Specifically, TPB proposes that the degree of control a person thinks he has on performing the behaviour (perceived behavioural control) influences both intentions and the behaviour directly. Perceived behavioural control refers to personal beliefs about how easy or difficult performing the behaviour will be (6).

Figure 1: Theory of Planned Behavior



* not present in The Theory of Reasoned Action

Both the TRA and the TPB have been used in research on health behaviours of adolescents (23, 41). Recently, researchers have questioned whether the decision to perform specific health behaviours is completely voluntary (6, 42). Therefore in the last few years, the TPB appears to be more widely used among researchers, studying adolescent health behaviour. Specifically, this theory has been used to predict several behaviours including smoking, drinking, sexual activity, condom use and sunscreen use (23-28). In general, the model has been supported by these studies. Notably absent from these studies is research on adolescent behavior regarding periodic check-ups with family physicians.

A review of the literature, by Godin and Kok, examined the Theory of Planned Behavior and its applications to a wide range of health-related behaviours (42). Studies were grouped according to the specific types of health-related behavior investigated (addictive, automobile-related, eating, exercise, oral hygiene and clinical and screening behavior). The review compiled correlation and regression coefficients across studies that assessed variables from the TPB (attitude, subjective norm, perceived behavioural control and intention) that were reported in the various studies. Of the results reported, the results among the clinical and screening studies (attending a health check, participating in cancer screening) are the most relevant to this research project.

The review by Godin and Kok examined the strength of the Theory of Planned Behavior reported in these studies. The additional strength added by perceived behavioural control was noted where possible, thus making a

comparison to the earlier Theory of Reasoned Action. Strong evidence was present supporting that attitude, subjective norms, perceived behavioural control all predict intentions. The average explained variance in intention (R squared) was 44.6% in the clinical and screening studies. Perceived behavioural control added over one third of the explained variance (16.7%). In contrast, weak evidence linked perceived behavioural control and intention to actual behaviour in these studies. The average explained variance in behavior (R squared) was 15.6%. Despite weaker evidence, perceived behavioural control added half of the explained variance (7.0%). From these results, it appears that the Theory of Planned Behavior is a good model for predicting intention to engage in clinical and screening behaviour, but weaker in predicting actual behavior.

Research Question and Justification

This project was designed to describe attitudes, subjective norms and perceived control in relation to adolescents visiting their family physician for an annual check-up. Although the Theory of Planned Behavior (TPB) has been applied extensively to health-related behaviours, the Gokin and Kok review indicated that only one study examined TPB in relation to periodic check-ups but this study did not focus on the adolescent population (42). Of the studies previously discussed that applied the TPB to health-related behaviour in the adolescent population, none examined the behaviour of seeing a family physician for an annual check-up. Thus, it is unknown whether variables for the TPB are useful in understanding whether adolescents obtain an annual check-up from family physicians. The goal of the research was to describe variables from the

TPB among adolescents who do and do not currently visit a family physician for an annual check-up. Qualitative methods will be used to describe subjective norms, attitudes and perceived behavioural control in relation to this behaviour.

In the review by Godin and Kok, the authors highlighted the need for a standard protocol for studies evaluating the Theory of Planned Behavior (42). They outlined a method to develop a questionnaire that will be used to evaluate this theory. Their protocol includes a combination of qualitative and quantitative research methods.

Step 1: Obtain a proper definition of behaviour including action, target, time and context.
Step 2: Identify (1) the most frequent perceived advantages and disadvantages of performing the behaviour; (2) the list of the most important people who would approve or disapprove one's performance of this behaviour; (3) the list of perceived barriers or facilitating factors affecting the behavior studied. This information is to be obtained from people similar in characteristics to the group of people to be studied (qualitative study).
Step 3: Content analysis by two researchers to generate a list of (1) behavioural beliefs; (2) normative beliefs; and (3) control beliefs where the most often listed beliefs will be included in a draft questionnaire.
Step 4: The draft questionnaire must be piloted for comprehension, level of language and clarity with five to ten people sharing similar characteristics to the group of people to be studied. Modifications to wording are made.
Step 5: The second draft of the questionnaire is submitted to a reliability study involving 30 subjects with the same characteristics as the study group. Afterward the questionnaire is reviewed and reworded as needed.
Step 6: The final version of the questionnaire can be used in the main study (quantitative study).

This research project followed Godin and Kok's protocol up to Step 4 by utilizing key informants in small group discussions to develop a draft questionnaire to examine why adolescents do or do not see family physicians for a preventative check-up every year, according to the Theory of Planned Behavior. This draft questionnaire will be utilized in further quantitative analysis.

Adolescence encompasses a wide range of individuals. According to the World Health Organization, adolescence is defined as ages 10 to 19 (43). During

this time period, adolescents experience many changes mentally, physically and socially. In relation to health services, behaviour also varies with wide range of individuals. During early adolescence, individuals see family physicians more regularly than in later adolescence (15). Similarly, in regard to health-risking behavior, this group is diverse. These behaviours increase as adolescents increase in age, with a significant proportion of 15-17 year olds already participating in health-risking behaviour (15). This emphasizes the importance of family physicians to target adolescents at an earlier age group. For this reason, the principal investigator has selected thirteen to fifteen year-old individuals for this project.

Chapter Two - Methods

Overview

There are many possible sources for information on influences over adolescents' decisions to see a family physician. These include adolescents themselves, teachers and principals of schools where adolescents attend, parents of adolescent children and health care staff such as nurses and physicians. Data could consist of opinions, personal experiences and new ideas. There are also several methodologies available to study this topic. Possible research methods include case studies, content analysis, public meetings, small group discussions, and interviews (44). All of these methods have different advantages and disadvantages.

In order to understand the adolescents' perspective of visiting a family physician for an annual check-up, qualitative methods were chosen. Qualitative methods are appropriate tools since they are designed to describe rather than explain a target phenomenon. Previous research has not described the attitudes, subjective norms and perceived control of adolescents in relation to visiting a family physician. Small group discussions of "key informants" were chosen, since they provide a particular understanding of the groups' perceptions (45). A "key informant" has a position within the group of interest, possesses information connected to the topic of research and has a relationship, although possibly brief as in the case of a discussion or interview, with the researcher (45). The protocol outlined by Godin et al. also mentioned that a group of individuals be used to develop a description of the elements of the TPB (42).

Method of Data Collection and Research Design

The method of data collection was small group discussions containing approximately seven to ten adolescents. Initially, two small group discussions were conducted with thirteen to fifteen year-old adolescents; one containing female participants and the other containing male participants. Each small group discussion included individuals who had a check-up in the last year as well as those individuals who had not. Each small group discussion lasted for approximately two hours including a break as needed. The small group discussion followed a semi-structured interview design and used a funnel approach of questioning. Details regarding the questions to be asked are outlined in Appendix C.

After analysis of the data collected from the two small group discussions, a focus group with both male and female adolescents was conducted. The role of this focus group was to verify themes that arose earlier and determine whether new ideas were raised (confirm saturation) and provide additional data in areas required.

Small group discussions were used because they provide an opportunity to gain access to the details of the adolescent perspective including personal experiences (45). This information is not collected with questionnaire methodology. A group of adolescents was interviewed at one time to encourage participation. It was expected that by facilitating a discussion among a group of adolescents, they would be more at ease than if individual interviews were conducted. Similarly, the interaction between different members of each small

group discussion likely generated more ideas than gained by interviewing the adolescents individually. The numbers were kept small to ensure that all members of the group received the opportunity to participate. Within each small group discussion, probes were used to obtain clarification of ideas. A disadvantage to using small group discussions for this research was that some adolescents may not have wanted to share personal experience for fear of criticism. Confidentiality and cultivation of a relaxed atmosphere within the small group discussions was used to minimize this problem.

Setting

The setting for the small group discussions occurred at the university. By utilizing a room previously used for small group meetings, problems regarding set-up and acoustics were minimized. A disadvantage of this location is that transportation to and from the university was required. Since the participants were likely to be coming from different areas of the city, a central location was chosen.

Sampling

Inclusion criteria for the study included: thirteen to fifteen year-old adolescents from Edmonton, male and female adolescents, adolescents with and without a present family physician, and English speaking adolescents. The selection criteria were chosen based on personal experience. In the researcher's clinical practice, children are brought to the office by their parents until the age of about twelve. After this age, adolescents tend not to come in for regular check-ups (13). The researcher wanted to explore the ideas of adolescents within the

age where they are not frequently seen for annual check-ups. The researcher focused on urban areas due to the high level of available alternative services including walk-in clinics and hospitals. Both male and female adolescents were included to ensure opinions from both groups are represented. Also to maximize the opinions generated through the small group discussions, recruitment strategies were utilized to obtain adolescents from different socio-economic status levels. It was expected that adolescents without family physicians may have different views from those who do; therefore, both were included.

Fieldwork

Pre-Entry. Before the recruiting process began, the principal investigator spoke to several different adolescents to gain opinions and strategies for encouraging participation in the study. This was done informally through contact with adolescents known to the principal investigator. Other background information was obtained through other researchers experienced with working with this population. The information gained from other researchers and adolescents helped anticipate potential problems.

The principal investigator enhanced previous skills in group-dynamics by pursuing further training in small group discussion facilitation. A self-study kit on focus group facilitation was undertaken prior to the commencement of the research.

The draft list of questions used in the small group discussions (see Appendix C) was piloted individually with four adolescents, including two females and two males from the same age group that will make up the small group

discussions. Minor revisions to the questions were completed at this stage. These pilot participants were also asked about further ideas to encourage participation.

Participants were recruited through one family medicine clinic and one adolescent ski group within the Edmonton. Initially, contact was made with the medical clinic and ski group in order to determine whether they were willing to be a source for recruitment for the study. The recruitment tried to encompass different levels of socio-economic status as well as adolescent who had a check-up by their family doctor within the last twelve months and those who had not. All potential adolescents within the age group of interest were sent an information package. Consent forms of interested adolescents were mailed in self-addressed envelopes back to the primary investigator. Interested adolescents were notified by phone of the time and location of the small group discussion. Other adolescents were recruited by the snowballing method. In this method, adolescents interested in participating in the study were encouraged to locate other interested adolescents (45).

The information package consisted of an information sheet, a consent form for the students' parents and a short screening questionnaire. The information sheet included a description of the study, potential risks and benefits of participation, and issues regarding confidentiality (Appendix A). To further encourage participation a nominal reward (movie pass gift certificate) was given to those individuals participating in the study. The consent form was signed by one of the adolescents' parents, guardian or representative in addition to the

adolescent (see Appendix B). On the bottom of the consent form was a brief screening questionnaire that asked about gender, presence of family doctor and whether the teenager had had a recent check-up. This questionnaire allowed the principal investigator to group students appropriately and ensured that a diverse sample of adolescents was participating. Attendance was limited by a first-come first-serve basis from the date that the completed consent form was returned. The adolescents were notified of the date and time of the small group discussion by the principal investigator.

Entry. Two small group discussions of seven to ten individuals were to take place at the University of Alberta. Each small group discussion lasted approximately two hours. Refreshments were provided for the participants during this time. A casual and informal approach was used to gain rapport with the adolescents involved. This approach was believed to make the participants more comfortable and thus increase the likelihood of sharing their ideas.

Process of Interviewing. The principal investigator and a female co-investigator facilitated the small group discussions. The small group discussions utilized a semi-structured interview process. This process kept the small group discussions less formal and encouraged participation. A funnel approach of questioning was utilized, beginning with questions relating to adolescents in general and moving to specific opinions or ideas. Sharing of personal opinions and experiences was encouraged. The questions themselves focused on the different variables within Ajzen's Theory of Planned Behavior including subjective norms, attitudes and perceived control (see Appendix C). In addition to these

questions, several probes were used to gain further discussion and clarification of ideas.

Collection of Data. With full disclosure to the participants, data collection from the small group discussions occurred by means of audio tape recording. The recording device was small in order to facilitate the participants normalizing the situation. After each small group discussion, the tapes were transcribed by an individual trained in transcription who utilizes these skills on a daily basis. The transcription was performed according to Jefferson's conventions (44). This method of transcription included codes for important details like silences and interruptions, maximizing the potential data from the audio tapes (44).

Verification Methods

Verification occurred by several methods. The first included immediate verification during the small group discussion by asking for clarification of statements or opinions. Verification of the transcription process consisted of several spot checks to ensure that data transcribed from each small group discussion was accurate. The focus group conducted after the initial analysis helped to verify ideas presented.

Ethical Considerations

The Health Research Ethics Board (Panel B) of the University of Alberta reviewed the main ethical considerations of the research project. It was expected that some minor revisions would need to be performed to the project at this stage. Further ethical situations may have occurred during the small group discussions, but did not occur. Support may have been given where appropriate.

In the situation where an individual was engaging in serious risks, the individual would have be encouraged to contact appropriate resources only if an opportunity arises after the small group discussion was completed. If participants inquired about obtaining a family doctor, a list of family physicians that are interested in adolescence and are located in the similar geographic area, would have been provided. Counseling contacts were available at each small group discussion session if participants had felt the need to access these services as a result of the discussion. One such contact was Child & Adolescent Services Association (CASA).

Chapter Three – Analysis

Preliminary data analysis consisted of surface analysis (44). The principal investigator listened to the audio tapes and notes were written regarding the ideas discussed. This occurred shortly after the completion of each small group discussion. Once transcribed, the data from the two small group discussions was read completely, to obtain a sense of the data collected. After this general examination of the data, 'coding' was performed on the data by the principal investigator. During this process, each transcript was read line by line and category codes were assigned to sections of text (45). Next, the analysis shifted to theme generation. The generation of themes was performed in two distinct methods; within participants, and between participants.

In the within participant method, theme generation occurred by examining the transcribed text of each key informant independently. Themes were generated for each key informant by looking at the data from that individual alone. Major themes were listed with corresponding sections of original text for a participant before moving on to the next key informant's text. After major themes were generated for each of the participants, a master list of major themes was complied.

In the between participant analysis the data from several key informants was examined as a group. As mentioned earlier, sections of text were initially given category codes. Afterward all of the text from any of the key informants, which was coded with a particular category, was examined. The sections of original text were reduced to shorter paraphrases. Similar paraphrases were

combined into a single item, while those paraphrases that were distinct were kept as separate items. A few examples of the paraphrase generation process are listed below:

Original Text: I don't think that their opinion is really important because this issue is kind of a personal one. So, yah it doesn't really affect me at all. (#1, Sec.96, Para 200)

Category: Friend's opinions

Paraphrase: Friends' opinion about health issues does not matter

Original Text: Yah, I know that I really do not talk to my friends about health issues. Just cause we really don't talk about stuff like it doesn't come up in every day subjects. (#2, Sec.112, Para 231)

Category: Friend communication

Paraphrase: Friends do not talk about health issues.

Original Text: I have a female doctor but I think that it would be very hard to talk to a guy doctor. Because they just don't know the stuff and you know you know it's different. (#2, Sec.210, Para 429)

Category: Doctor gender

Paraphrase: The gender of my doctor is important

Original Text: I personally just ask my parents and see if like get their opinion first. See if I needed an appointment and if so it they would probably take the action in arranging it. (#1, Sec.175, Para. 358)

Category: Process of going to doctor

Paraphrase: I would go to parents first before going to the doctor

The creation of paraphrases was performed to capture the meaning of the original text using language closely reflecting each key informant. The second purpose of generating paraphrases was to assist in the generation of questionnaire items at the end of the project.

Next, the paraphrases were examined within the context of the TPB. Paraphrases were then classified according to elements of TPB; attitudes, subjective norms, perceived control and intention. Several paraphrases did not represent an aspect of the TPB. These paraphrases were kept separate and organized in a separate group. The following are examples of categories that represent aspects of the TPB and those that were kept separate.

Attitude:

Original Text: I think that you should go at least once a year. (#2, Sec.0, Para. 223)

Category: Accessing health care

Paraphrase: I think teenagers should go for check up at least once a year.

Subjective Norms:

Original Text: I think that every single one of my do. I don't know anyone who doesn't and everyone just goes for the yearly check-up. (#1, Sec.181, Para. 370)

Category: Accessing health care

Paraphrase: Most teens go to family doctors for check-ups

Perceived Control:

Original text: I don't know how. I guess you would just phone in but how would I get there? Take the bus or something. You are kind of dependent on your parents to drive you there to. Things like that. (#1, Sec.48, Para 102)

Category: Transportation

Paraphrase: I need my parents to drive me to the doctor.

No Relevant Label:

Original text: I think that a resource out there now is the internet. You can go on and like just surf the web for some health thing. If you are concerned about it and you're serious about it. (#1, Sec.96, Para 200)

Category: Internet

Paraphrase: I can go to the internet for health information.

Steps for the Validation Focus Group

The validation focus group had several purposes. The first part was to determine whether new ideas about going to the family doctor for a check-up could be generated. This part consisted of open ended questions that covered areas such as general impressions, advantages, disadvantages, and people who would encourage or discourage going to a family doctor. Specifically ideas regarding attitudes, subjective norms, perceived control and intentions were emphasized.

The second part of the discussion was to determine whether ideas present in the initial small group discussions would be validated. This involved a focused discussion of the themes present by the previous groups. A copy of the sheet provided to the participants is found in Appendix D. The participants were asked whether they have any comments regarding these ideas. The main themes were discussed to determine to what extent the participants agree or disagree with the statements presented.

The third part of the validation group was to quantify the validation of the ideas presented by the original small group discussions and to test the questionnaire items that were generated. For each paraphrase, the participants were asked whether they agree or disagree with the statement using a seven-

point Likert scale. The adolescents were also asked to rank how important this item was on their decision to see a family doctor for a check-up. Lastly, the participants were asked to suggest how they would state that paraphrase in their own words.

Chapter Four - Results

Within Participant Analysis

Table #1 provides a summary of the description of the key informants in the two initial small group discussions including whether they had a check-up in the last 12 months:

Table #1: Demographics of Key Informants

Key Informants	Age	Recent Check-up	Gender	Hobby
A	15	no	male	hockey
B	13	yes	male	basketball
C	14	yes	male	skateboarding
D	14	no	female	stilt walking
E	15	yes	female	snowboarding
F	14	yes	female	computers
G	15	yes	female	soccer
H	14	yes	female	reading
I	15	no	female	reading
J	13	no	female	sports

The main themes discussed by each individual key informant are listed in Table #2 and #3.

Table #2: Main Themes from Small Group Discussion One

Key Informant A:

Parents influence on behaviour with respect to sports, eating habits
Friends don't talk about health issues to each other.
Appearance to teenagers is very important
Friends' opinions does not matter with respect to going to family doctor
Teenagers go for check ups regularly
Barriers to going to the family doctor
Waiting time is too long
Doctors do not spend enough time
Teenagers use the Internet for information

Key Informant B:

Friends do not talk about health issues
Lots of teens have family doctors
Parents influence behaviour
Friends' opinion do not matter in relation to health
Internet is a resource for teenagers
Barriers to going to the doctor
Incentives to increase going to the doctor

Key Informant C:

Behaviour is related to fun
Not sure if friends have family doctors
More than half of teenagers go for check ups
Parents influence behaviour in regard to health
Friends' opinions about health doesn't matter
Friends do not talk about health issues
Barriers to going to the doctor
Internet

Table #3: Main Themes from Small Group Discussion Two

Key Informant D:

Internet is a resource
Family doctor is for serious issues
Family doctor is low on the list of sources for information
Teens do not have FD or regular checkups
Appearance is important
Communication issues

Key Informant E:

Teens go to parents for health concerns
Internet is a resource

Most teens have family doctors
Communication issues at the doctor's office

Key Informant F:
Do not ask doctor personal stuff - do not know as well
Medi-centers are more convenient
Check-up is a good idea
Uncomfortable to talk to male doctor
How the doctors treat you, communication

Key Informant G:
Teenagers are using the internet more as a source of information
Do go to doctor for simple stuff
All friends go for checkups, all have family doctors
Friends opinions doesn't matter
Family Doctors know you better
Uncomfortable at the doctor's office

Key Informant H:
Teens go to parents regarding health issues
Internet is a resource for teenagers
Teens do not talk to friends about some issues
Parents influence going to doctor
Family doctor is not convenient

Key Informant I:
Family doctor is for serious issues
All friends go for checkups
Do not talk to friends about health issues
Friends' opinions do not matter in relation to health
I would talk to parents first before doctor
Concerns about how one sounds at the doctor

Key Informant J:
I would talk to parents first
All friends have a doctor, go for check ups
Do not talk to friends about health issues
It is good to see doctor
Going to the doctor is not convenient
Little treats or incentives would be good at the doctor

Between Participant Analysis

During the between participant analysis, the data was transformed into tables of the paraphrases that correspond to each of the constructs of the TPB (see Table #4). Beside each paraphrase in the table, the individuals who suggested this item are recorded. The nominal method of scoring data described by Boyatzis was utilized (46). The numeral 'one' in the table indicated that this paraphrase corresponded to the transcript for this individual, while the numeral 'zero' represented a lack of correspondence of the paraphrase and the transcript for that individual. If a participant disagreed with the paraphrase statement, the numeral 'zero' was still recorded (ie. no negative score were assigned). The total score on the right side of the table is a measure of the theme density for the different key informants.

Table #4: Paraphrases according to TPB

Attitude Paraphrases	Key Informants										Total
Teenagers should go for a check-up every year	1	1	1	1	1	1	1	1	1	1	10
I believe that most teenagers have a family doctor	1	1	1	1	1	0	1	1	1	1	9
If family doctors build relationship, it is easier to talk about issues	1	1	1	0	1	1	1	1	0	1	8
I don't think my FD should ask about smoking, drinking, or sex	0	1	1	1	0	1	0	0	1	1	6
The waiting time at the doctor is too long	1	1	1	0	1	0	0	1	0	0	5
Going to the doctor is uncomfortable	0	0	0	1	0	1	1	0	1	1	5
The gender of my doctor is important	0	0	0	1	0	0	1	1	0	1	4
I believe that some teenagers do not care about their health	1	1	1	0	0	0	0	0	0	0	3
I need to be really ill to go to the doctor	0	0	0	0	0	0	1	1	0	1	3
Family doctors do not spend enough time with you	1	1	0	0	0	0	0	0	1	0	3
The fact that my FD may talk to my parents influences my decision to go	0	0	0	0	1	0	0	1	0	0	2

Subjective Norms Paraphrases	Key Informants										Total
My parents' opinion is important in relation to health	1	1	1	1	1	1	1	1	1	1	10
My friends opinions about health issues doesn't matter	1	1	1	1	1	1	0	0	1	1	8
My parents influence my decision to see a family doctor	1	1	1	0	1	1	0	0	1	1	7
If I had a health issue, I would talk to my mom more than my dad	0	0	0	1	1	0	0	1	1	1	5
Teenagers hide their feelings from their friends	1	0	0	1	0	0	0	0	0	1	3
I go with my sibling(s) to doctors appointments (younger)	1	1	1	0	0	0	0	0	0	0	3
My siblings influence my decision to see a family doctor	0	0	0	0	0	1	0	0	0	1	2

Perceived Control Paraphrases	Key Informants										Total
The waiting time prevents people from going to FD	1	1	1	0	1	0	0	1	0	1	6
I go with my parents to family doctor appointments	0	1	0	1	1	1	1	0	1	0	6
My parents make my appointments with the doctor	1	1	1	0	0	0	0	1	0	1	5
I need someone to drive me to the family doctor	1	0	0	1	0	0	1	0	0	0	3
I do not know how to make an appointment	1	0	1	0	0	0	1	0	0	0	3
There are more convenient options than going to my family doctor	1	0	1	1	0	1	0	0	0	0	3
The distance to the family doctor prevents you from going	0	0	0	1	0	0	0	1	0	0	2

Independent Paraphrases	Key Informants										Total
Teenagers do not talk to their friends about health issues	1	1	1	1	1	1	1	1	1	1	10
Family doctors offices should have better reading material	0	1	1	1	1	1	1	0	1	1	8
The reading material in FD office is not for teenagers	0	1	1	1	1	1	1	0	1	1	8
Teenagers go to parents with health issues	1	1	1	1	1	1	0	1	0	1	8
Internet is a way to get health information for teenagers	1	1	1	1	1	0	1	1	0	0	7
I can get info about health issues from my school	1	1	0	1	0	1	1	1	0	1	7
Family Doctors talk to parent more than teens	1	1	0	0	1	0	0	1	0	1	5
It is good to have the same family doctor as family	1	0	0	0	0	1	0	1	1	1	5
Teenager are concerned about how they look to their friends	1	0	1	0	1	0	1	0	0	1	5
Family doctors should have treats or little gifts	0	0	0	0	1	1	0	1	0	1	4
There should be a television in the waiting room	1	0	1	0	0	1	0	0	0	1	4
Family doctors offices are dull/grey	0	1	0	0	0	0	0	1	1	0	3
Better decorating would make family doctors offices more comfortable	0	0	0	0	0	0	0	1	1	1	3
FD should gradually lead into personal questions	0	0	0	0	1	1	0	0	1	0	3
It is different to talk to guy friends versus girl friends	0	0	0	0	1	0	1	0	0	1	3
Health issues for teenagers relate to physical appearance	0	0	1	0	1	0	0	1	0	0	3
I miss school when at I am at the doctor	1	0	0	0	0	0	0	0	1	1	3
Family doctors office cater to adults	1	1	0	0	0	0	0	0	1	0	3
It is embarrassing to talk to your friends about health issues	1	0	0	0	0	0	1	0	0	0	2
A television campaign to parents would increase teenager going to FD	1	1	0	0	0	0	0	0	0	0	2

Validation Focus Group

Table #5 shows the demographics data of the validation focus group.

Table #5: Demographics of Validation Group

Participants	Age	Recent Check-up	Gender	Hobby
K	15	no	male	hockey
L	13	no	male	video games

M	14	yes	male	riding my bike
N	14	no	female	movies
O	15	yes	female	dancing
P	14	yes	female	TV

The validation groups added strength to the ideas presented in the initial small group discussions. Initially, during the open discussion with this group of adolescents, the main ideas discussed are listed in below:

More comfortable with a family doctor who you know
The waiting time is too long
Family doctors talk to your parents
Teenagers should go to the family doctor for a check-up
Use of the emergency department by teenagers is common
Criticism of the reading material
Parents encourage teenagers to go
Doctors encourage Teenagers to go for check-up
Friends do not influence teenager to go to the family doctor
Teenagers do not have intentions on going to a family doctor for a check-up
Some teenager may go to a family doctor less: lack of parent influence, no money or insurance coverage, those wanting to hide drug use or a medical problem

Most of these ideas are consistent with the two previous small group discussions. Themes that were new included use of the emergency department by teenagers, further probing into the intentions of teenager with respect to going to a family doctor for a check-up and exploring which teenager may not access family doctors as often.

During the review of list of main themes from the previous small group discussions, the validation focus group provided support several themes. The principal investigator interpreted that the validation group supported a particular

theme if the theme was discussed by the participants and the majority of the discussion reflected agreement with the theme. The following themes were support by the validation group:

Friends' opinion do not matter in relation to health
Gender of doctor is important
Teenagers go to parents with health issues
Going to the doctor is uncomfortable
Family doctors talk to parent more than you
Incentives
Internet is a resource (not influence decision to go to Family Doctor)
Go to doctor only if seriously ill
Appearance is important to teenagers
Family doctors are not convenient
Doctors do not spend enough time
Better reading material is needed

During the last part of the validation focus group the teenagers completed a draft questionnaire which assessed their agreement with paraphrases presented by the initial small group discussions. The theme density score (the total scores from the Table #4) had a significant correlation with the combined agreement scores from the validation group (see Table #6). The Spearman correlation coefficient for these two groups was 0.436 with a p-value of 0.001. The validation group was also asked to rank whether they felt that the idea presented in the paraphrases was important to their decision to see a family doctor for a check-up. These scores also matched well with the theme density score generated by the initial two small group discussions (see Table #4). On reviewing the scores from the validation a discrepancy of score was prominent in three questions that were modified to incorporate the behaviour of going to a family doctor for a check-up. For example the phrase:

I use the internet for health info

became:

I use the internet for health information, so I do not need to go to the family doctor.

The correlation values were repeated omitting these questions.

Table #6: Correlation between Density Score Totals and Agreement/Importance

Paraphrases	Density Score (Max 10)	Agreement Score (Max 42)	Importance Score (Max. 42)
1. I do not know how to make an appointment with a family doctor.	3	24	11
2. Family doctors offices should have better reading material.	8	36	16
3. Since teenagers go to parents with health issues, they do not have to go the doctor.	8	17	27
4. Family Doctors talk to parents more than the teenager.	5	27	30
5. Internet is a way to get health information for teenagers, instead of going to a family doctor?	7	13	10
6. Since I can get info about health issues from my school, I do not need to go to a doctor.	7	11	14
7. It is good to have the same family doctor as your family.	5	23	22
8. Going to the Family Doctor for a check-up takes too much time.	4	20	29
9. Family doctors should have treats or little gifts at the office.	4	31	14
10. My friends influence my decision to see a family doctor for a check-up.	0	8	14
11. I miss school when at I am at the family doctor.	4	36	23
12. There should be a television in the waiting room at doctor offices.	4	36	17
13. That my FD may talk to my parents influence my decision to go.	2	20	32

14. A TV campaign to parents would increase teenagers going to a family doctor.	2	14	10
15. Teenagers should go for a check-up every year.	10	35	30
16. Better decorating would make FD offices more comfortable	3	33	23
17. I don't think a Family Doctor should ask about smoking, drinking, or sex.	6	15	15
18. If family doctors build a relationship, it is easier to talk about issues.	8	41	37
19. There are more convenient options than going to my family doctor.	3	26	22
20. Going to the family doctor is uncomfortable.	5	22	35
21. The gender of my family doctor is important.	4	27	26
22. I need to be really ill to go to the family doctor for a check-up.	3	23	22
23. Family doctors do not spend enough time with you.	3	19	32
24. Family doctors office cater to adults.	3	27	19
25. I go with my parents to family doctor appointments.	6	34	24
26. The waiting time prevents people from going to Family Doctor.	6	30	27
27. I need someone to drive me to the family doctor.	3	34	36
28. My parents influence my decision to see a family doctor.	7	31	23
29. I believe that most teenagers have a family doctor.	9	37	22
30. I go with my sibling(s) to doctors appointments.	3	15	10

31. My parents make my appointments with the family doctor.	5	41	26
32. My siblings influence my decision to see a family doctor.	2	6	9
33. The distance to the family doctor prevents you from going for a check-up.	2	15	17
Spearman Correlation Coefficient (Small group discussion score versus agreement or importance)		0.258	0.436
P value		0.148	*0.011
Modified Spearman Correlation Coefficient**		0.359	0.664
P value**		0.051	*0.001

Note. * significant p-value. ** omitting questions 3, 5 and 6

Within each questionnaire item, the participants were asked to suggest wording changes how the statement was written. Several questionnaire items were modified according to their suggestions. A complete list of all wording suggestions generated by the validation focus group is in Appendix E.

Chapter Five – Discussion

This study utilized the Theory of Planned Behavior to attempt to understand adolescents' decision to see a family doctor for a periodic check-up. The ideas presented by the participants reflect their attitudes, subjective norms, perceived control and intentions. Several of the ideas presented are supported by previous literature. In addition, new ideas were also discussed by the participants. The discussion will highlight some of the main themes and new ideas.

Attitudes

Most of the adolescents in the study felt that going to the family doctor for a periodic check-up was a good idea. The teenagers stated that it is an opportunity to find out if anything is wrong. They also mentioned that at these visits one could ask some questions that one might have. In general, the participants agreed that teenagers should go for a check-up each year. This idea is not consistent with the fact that half of the participants had not been to the doctor for check-up within the last 12 months. Family doctors experience in the offices is that most teenagers do not come to the doctor for periodic check-ups. Selection bias may be a reason for this discrepancy. Many of the teenagers were recruited through a medical clinic and therefore those willing to participate in the study may have a more positive view of the utility of going to the family doctor for a check up.

An important theme that was presented by the teenagers is the importance of having a doctor that they know. The teenagers stated that if a

family doctor works to build a relationship with a teenager, going to doctor is more comfortable. One teenager stated "You know the person so it's not as uneasy, like it's easier to talk to them about things". A previous study reported that it was important for adolescents to see their doctors as people whom they could talk about non-medical issues (47). Oandasan et al. stated that building strong doctor-patient relationships with adolescent patients is crucial to develop positive attitudes that they will have the rest of their lives (47).

Waiting times at a family doctor's office was a prominent theme. The adolescents from the study felt that the waiting was too long. Several authors have reported that adults rank the waiting time as the greatest area of patient dissatisfaction when assessing the care they receive from their family doctor (48, 49). Gribben showed that long wait time was associated with decrease health care utilization in a New Zealand population (50). In another study, Eggleston et al. demonstrated that shorter waiting time was shown to influence patient attendance at health promotion clinics in Britain (51). Oandasan et al. did not mention the waiting time issue in their study involving adolescent girls (47). In contrast, the participants from the small group discussions demonstrated that the length of the waiting time is clearly an important issue for adolescent patients as well. Several adolescents felt that the long waiting time was an important disincentive to seeing a family doctor for a check up.

Another main finding from this study is that teenagers feel that going to the doctor is uncomfortable. This supports previous work by Oandasan et al. which stated the adolescent girls feel uncomfortable during physical examinations (47).

The participants of this study stated that a visit with their family doctor is more comfortable than going to a walk-in clinic or emergency department.

Another idea that was presented by the adolescents was the importance of the gender of the family physician. The female participants had a strong preference for a female family doctor. The male participants did not have a gender preference. The idea of gender preference has been reported previously in the literature. In particular, Oandasan et al. reported that adolescent girls prefer female physicians (47). The gender preference of male adolescents is not know to be reported in the literature.

Subjective Norms

Parental influence was another main theme that arose from the discussions of the participants. The teenagers clearly stated that the largest influence on going to the family doctor was their parents. Most teenagers go for a check when their parents schedule the appointment. Previous literature has shown the strong influence of parents and friends on the behaviour of adolescents (52). It is obvious that in younger children, parental influence is the main factor in children visiting the family doctor. The author did not expect the parental influence to be as strong in the adolescent population.

One interesting result from this study is that the teenagers stated that their friends opinions do not matter when it comes to health issues. This was a major theme of both initial small group discussions and was confirmed by the validation group. This was interesting because for teenagers, peer pressure and peer's opinions are thought to be very important. This result suggests that teenager

peer influence does not affect an adolescent's decision to see a family doctor for a check-up. One possible explanation is that for the age group participating this study (younger teenagers), the influence of their peers may not be as strong as during later adolescence.

The adolescents in this study also identify other individuals that may affect their decision to see a family doctor for a check-up. Doctors themselves recommend that teenagers come in for a periodic check-up. This is consistent with several guidelines for adolescent health both in Canada and the United States of America (12, 13). In addition to doctors, the adolescents from this study identified teachers and counselors as people who would encourage them to go to the family doctor for a check-up while individuals that have had a negative experience at the family doctor may discourage them.

Perceived Control

The perceived control element of the Theory of Planned Behavior is what distinguishes it from the earlier Theory of Reasoned Action. Perceived control allows for prediction of behaviours that are not under complete control of the individual. Several factors were raised in this study which demonstrates that going to the family doctor is not a completely volitional act.

Several adolescents reported that they did not have the knowledge necessary to make an appointment for a check-up. Most of the participants rely on their parents to make the appointments for them. Furthermore, most of the teenagers go with their parents to the family doctors office.

Time restrictions affect the ability for adolescents to go to the family doctor for a check-up. The hours of operation of most doctors offices conflict with school for most teenagers. For those who go to appointments with their parents, work schedules of their parents may affect the ability to go to the doctor. The time required for an appointment was also raised as a barrier to going to the doctor for a check-up. Other physical limitations to going to the family doctor for a check-up included the need for someone to drive the adolescent to the clinic.

Intentions

One of the interesting findings, which is consistent with the author's personal experience with teenagers, is that they do not intend to go to the family doctor for a check up. The participants from this study felt that teenagers go when an appointment is booked by their parents but do not plan or initiate the scheduling of periodic check-up. Several participants commented that they thought it was a good idea to go and that they expected that they would go when their parents set up an appointment for them. This is an area for further clarification. The author is aware of no published study examining the intentions of adolescent to see their family doctor.

Independent Ideas

A main theme was communication between teenagers. From the discussions of the participants, it appears that teenagers do not talk about personal health issues with their friends. One teenager stated "Yah, I know that I really do not talk to my friends about health issues. Just cause we really don't talk about stuff like it doesn't come up in every day subjects." This was

unexpected. The author expected the teenagers would discuss their health more readily with their peers.

The importance of appearance for adolescent was also raised in the discussion with the participants. The teenagers commented on the importance of nice clothes and styled hair. One participant mentioned that appearance is why he participates in sports. The emphasis on appearance among teenagers is not novel. However, the participants of this study did discuss the possible connection between teenagers not talking about personal health issues with friends and the importance of appearance. One teenager stated "I think they keep it a little bit more private and not talk about it because they have to keep up an image of being tough and stuff." This may explain why teenagers do not discuss their health issues with their friends.

Another main theme was family doctors communication. The participants felt the family doctors talk to their parents more than to teenagers themselves. The adolescents stated that they felt left out of the discussions. One teenager stated "It's my foot that's broken. Ask me. I probably know how much it hurts more than she does". In addition, the participants felt that some doctors would use language that they did not understand. One teenager stated "Is that some condition of my foot or do I have a brain problem or what". These problems with communication are supported in the literature (5, 47).

Discrepancy in the Validation Group

Three items that were presented by the initial small group discussions did not have strong connection to going the family doctor for a check up (see question 3, 5 and 6 – Table #4). These items were:

I go to my parent with health issues

I use the internet for health info

I get information from school

It was hypothesized that these statements may mean that since other sources of information are available, these may be reasons for not going to the family doctor. The phrases were changed to test this theory in the validation group. The validation group did not agree with these altered statements and gave them low scores on the questionnaire. For example, 'I go to my parents with health issues' had a density score of 8 out of 10 but the modified paraphrase's agreement score was only of 17 out of 42.

Disagreement among Key Informants

One of the topics that was discussed by the key informants related to questions regarding lifestyle issues that a family doctor might ask adolescents. There was disagreement between the key informants on whether questions should be asked about smoking, drinking, drug use and sexual behaviour. Some felt that these issues impacted their health and should be asked while others felt they should not be asked unless the teenager introduces the topic. Since high level of health-risking behaviour that has been documented in this population, it is clear that questions regarding these behaviours are important at periodic

check-up (15). Family physicians may benefit from asking the adolescent for permission before asking about lifestyle behaviours.

Limitations

One limitation to this study was that the group of adolescents participating in the study may not represent a broad range of socioeconomic status. The SES status of the adolescents was not asked due to the possibility of collecting inaccurate information and the implications of possibly discouraging participation. This study tried to recruit adolescents from both higher and lower SES. Unfortunately, recruitment was not successful from targeted high and low SES sources. A further attempt at recruitment was done through one medical clinic and a youth ski group. The clinic population from which the adolescents were recruited is located near downtown Edmonton and serves a population of inner city (lower SES) individuals and University (higher SES) individuals. The ski group recruitment likely targeted higher SES individuals. The validation group did mention that lack of money may negatively influence the ability of teenagers to see a family physician for a check up. They mentioned that if a teenager or a teenager's family did not have money to pay for health care they may not go to the doctor.

Another limitation of this study was the number of participants. The author planned to recruit 30-40 adolescent for participation in the study. Unfortunately recruitment was more difficult than expected. The author did utilize a validation group to help support the findings from the study.

Problems with Recruitment

During the process of this study, recruitment of adolescents was difficult. Initially, two different school boards within the Edmonton area were approached to recruit adolescents, but approval was not granted due to the fact that the study was not educational in nature. This delayed the progress of this project considerably. Following these applications, three different youth organizations were approached to recruit adolescents. The Boys and Girls Club of Edmonton was very interested in taking part in the study, but their adolescents did not want to participate. The other two organizations chose not to participate. Finally recruitment was successful through the medical clinic and ski group.

Further Research

One of the goals of this research study was to generate a questionnaire that could be utilized in a larger quantitative study evaluating the strength of TPB in predicting adolescents' decision to see a family doctor for a check-up. This qualitative study described the elements of the TPB, which to this date had not been done. The next step is to continue the protocol outlined by Godin et al. to evaluate the TPB (42). The questionnaire generated from this study will be submitted to a test –retest reliability study of approximately thirty subjects, before proceeding to larger study. Next the questionnaire will be utilized in a larger study to test the ability of TPB to predict adolescents' decision to see a family doctor for a check-up. Adolescents will be recruited to participate in completing the questionnaire. The correlation and regression coefficients between the variables within the TPB (attitude, subjective norm, perceived behavioural control

and intention) will be calculated. This large quantitative study is planned for the near future.

Chapter Six - Conclusion

The incidence of risk-taking behaviours among adolescents is rising in Canada (20, 53). The long-term health consequences of these choices that face Canada's adolescents are immense. The results from this study provide a needed understanding of Canadian adolescents' perspective, both male and female, on annual check-ups from their family physicians.

The adolescents in this study did not feel that teenagers intend to go to a family doctor for a periodic check-up. They did express that a check-up, although uncomfortable, is a good idea. The experience is improved if the doctor is someone they know and is of the same gender. The adolescent felt that their parents' opinion regarding going for a check up is much more important than the opinion of their peers. This study confirms that, for an adolescent, going to the family doctor for a check-up is not completely in their control. Factors affecting this control include knowledge on how to make an appointment, available time and available transportation.

With these results in mind, parents should be encouraged to arrange annual check-ups for their adolescent children and therefore help develop an important relationship between the adolescent and the family physician. Family physicians should recognize the attitudes of adolescents and potential barriers for this population when trying to encourage attendance at their offices. By doing this, a trip to the family doctor for a periodic check-up will be a more comfortable and beneficial experience and more like a "trip to the zoo".

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Appendix A - Information Sheet (to be printed on department letterhead)

Understanding What Determines Adolescents' Decision To See a Family Physician

Principal Investigator: Dr. Douglas Klein, Department of Public Health Sciences, University of Alberta, Tel. (780) 477-4201 Email: douglask@ualberta.ca
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Purpose:
The research team hopes to gather adolescents' perspectives on annual check-ups by their family physicians. It is been conducted as a part of Dr. Douglas Klein's Master's Degree work.

Methods:
You are being asked to take part in a small discussion session called a "small group discussion" with 7-10 other people from your school. You will be asked to share your thoughts and feelings toward family doctors, general adolescents' opinions, and your ability to see a family doctor. There are no right or wrong ideas. You have the right to refuse to answer a question. The small group discussion will last for about 2 hours. Doug Klein and Jennifer Greenwood from the University of Alberta will help run the discussion.

Confidentiality:
The small group discussion will be tape-recorded. An individual not connected with the school will type the tapes out. The names of the individuals in the small group discussions will be recorded on the tapes to help the typist; but the typist will replace the original names with numbers or fake names. All information obtained from the small group discussion will be kept confidential. Tapes and transcripts will be stored in a secure place by the principal investigator for five years after the study is completed, which is the university rule. In reporting results, only summary information and anonymous quotes will be reported. Only the principal investigator and the secretary will have access to the confidential data. No on-site staff members of the schools or university will have access to the original tapes or transcripts. All information will be kept private except when codes of ethics or the law requires reporting. Each participant will be asked to promise not to talk about what is said during the small group discussions about anybody else. The information will not be shared with parents of participants.

Benefits:
This study may not have any direct benefit for you. However, through your participation, you will assist in the gathering of information that will help to make the family physicians more useful and user-friendly for adolescents. You will be provided with a summary of the preliminary results of the study. One movie pass will be given to each student that participates in the project.

Risks:
Participation in this small group discussion will require time. The small group discussion itself will last about 2 hours, not including travel time. The small group discussion will occur after school hours. This may cause some participants to feel tired. However, refreshments will be provided and you are welcome to take breaks as needed. If you are upset by anything that is discussed, we will arrange for you to have someone to talk to about it.

Withdrawal from the study
Even after you have agreed to take part in the small group discussion you may decide that you do not want to take part anymore. You can leave before or in the middle of the small group discussion.
You are not obligated to take part and deciding not to do so will not affect your school marks in any way.

Use of Information:
The information gathered at the small group discussions may be presented at conferences or published in the future but participants' names will not be used in written analysis or publications.

Consent Form:
If you are comfortable with the above information and wish to participate in the small group discussion, you and one of your parents will be asked to sign a consent form on November 15, 2001 before the small group discussion session begins. You will be given a copy of the form to keep for future reference.

Screening Questionnaire:
The screening questions at the end of the consent form will be used to arrange the students in the correct small group discussions. These questions will not be used to eliminate any students. Note there is a maximum of 40 students that can participate. Students will qualify for the four following groups on a first-come first-serve basis.
1. Grade sevens who have had a check-up by their family doctor in the last twelve months (10 students)
2. Grade sevens who have not had a check-up by their family doctor in the last twelve months (10 students)
3. Grade eights who have had a check-up by their family doctor in the last twelve months (10 students)

Grade eights who have not had a check-up by their family doctor in the last twelve months (10 students)

Please return your form as soon as possible.

If you have any questions about this study, call Doug Klein at 477-4201.
If you have any concerns about this study, call Dr. Lory Laing, Program Director of Population Health, University of Alberta (not involved in the study) at 492-6211.

Appendix B - Consent Form (to be printed on department letterhead)

Understanding What Determines Adolescents' Decision To See a Family Physician

Investigators
Principal Investigator: Dr. Douglas Klein,
University of Alberta, Tel. (780) 477-4201
Email: douglask@ualberta.ca

Co-investigator: Jennifer Greenwood
University of Alberta, Tel. (780) 492-1626
Email: jcg1@ualberta.ca

Consent Please circle your answers:

Do you understand that you have been asked to be in a research study?
Yes No

Have you read and received a copy of the attached information sheet?
Yes No

Do you understand the benefits and risks involved in taking part in this research study?
Yes No

Have you been given a number to call to ask questions and discuss this study?
Yes No

Do you understand that you can quit taking part in this study at any time?
Yes No

Has how we will keep what you say confidential been explained to you?

Yes No

Do you understand who will be able to see or hear what you said?
Yes No

Do you know what the information you say will be used for?
Yes No

Do you agree to be audio taped during the small group discussion?
Yes No

Do you agree to complete the screening questionnaire?
Yes No

I agree to take part in this study.

_____ _____
Signature of Student Date

_____ _____
Printed Name Phone Number

I agree that my son or daughter may take part in this study.

_____ _____
Signature of Parent/Guardian Date

_____
Printed Name

Screening Questionnaire

We ask the students to answer the following questions.

Are you?
Female Male

Do you currently have a Family Doctor?
Yes No

Have you had a check up by your Family Doctor in the last year?
Yes No

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

_____
Signature of Investigator or Designee

Appendix C – Draft Small group discussion Questions

Adolescents with a Recent Check-up.

Subjective Norms:
What are issues that adolescents have about their health?
Where do adolescents go with questions about their health?
Do your friends have regular family doctors?
What is the opinion of annual check-ups with family doctors among your friends? Among your Parents?
How important are these opinions to you?

Attitudes:
Is having a family doctor important?
What are your opinions about visiting your family doctor for an annual check-up?
Any personal experiences, good or bad?
What do you think your family doctor can offer you?
Does it matter if the doctor also sees your family?
Do you or have you had any concerns about seeing a family doctor?

Perceived Control:
Are family doctors accessible for you?
If you want a family doctor do you know how to obtain one?
What prevents you from seeing your family doctor?
Are there any personal experiences that you can share?
What would encourage you to get an annual check-up from your family doctor?

Adolescents without Recent Check-up.

Subjective Norms:
What are issues that adolescents have about their health?
Where do adolescents go with questions about their health?
Do your friends have regular family doctors?
What is the opinion of annual check-ups with family doctors among your friends? Among your Parents?
How important are these opinions to you?

Attitudes:
Is having a family doctor important?
What are your opinions about visiting a family doctor for an annual check-up?
Any personal experiences, good or bad?
What do you think a family doctor can offer you?
Does it matter if the doctor also sees your family?
Do you or have you had any concerns about seeing a family doctor?

Perceived Control:
Are family doctors accessible for you?
If you want a family doctor do you know how to obtain one?
What prevents you from seeing a family doctor?
Are there any personal experiences that you can share?
What would encourage you to get an annual check-up from a family doctor?

Appendix D – Main Themes

Check-up is a good idea
Most Teenagers go for check ups
Friends opinion do not matter in relation to health
Teens go to parents regarding health issues
Parents influence behaviour
Barriers to going to the doctor
Family doctor is not convenient
Family Doctors talk to parent more than you
Internet is a resource for teenagers
Friends do not talk about health issues
Go to doctor for serious issues
Lots of teens have family doctors
Appearance to teenagers is very important
How teenagers would change how family doctor ask questions
Incentives to going to the doctor
Parents influence going to doctor
Uncomfortable to talk to male doctor
Behaviour related to fun
Not sure if friends have family doctors
Doctors do not spend enough time
Family Doctors know you better than other doctors
Uncomfortable at the doctors office

Appendix E – Questionnaire Item Wording Suggestions

1. I do not know how to make an appointment with a family doctor.

You can get your parents to do it
When deciding to go to the doctor, is knowing how to make an appointment an important factor
Is knowing how to make an appointment a factor in seeing a family doctor
How important is needing to know how to make an appointment to have a check-up.

2. Family doctors offices should have better reading material.

I get bored easily
Doctors' offices should have better diversions

3. Since teenagers go to parents with health issues, they do not have to go the doctor.

There may be something really wrong with you

4. Family Doctors talk to parents more than the teenager.

Your parents might say stuff that isn't true

5. Internet is a way to get health information for teenagers, instead of going to a family doctor?

Internet is a way to diagnose

6. Since I can get info about health issues from my school, I do not need to go to a doctor.

School pamphlets can not give prescriptions

7. It is good to have the same family doctor as your family.

It does not matter
Doctor could see patterns in family health

8. Going to the Family Doctor for a check-up takes too much time.

Does the amount of time you have to wait affect whether you go to the doctor or not.
Waiting is a big pain
It is boring to wait

9. Family doctors should have treats or little gifts at the office.

Is having candy or gifts to bribe kids make you want to see a doctor
only for younger children
maybe a small candy or something

10. My friends influence my decision to see a family doctor for a check-up.

My friends do not discuss check-ups

11. I miss school when at I am at the family doctor.

Instead of miss school I would put "away" or something

Anything to get out of school

12. There should be a television in the waiting room at doctor offices.

Its better than magazines but you can never watch what you really want
not tuned to something boring though

13. That my FD may talk to my parents influence my decision to go.

They should keep personal things private

14. A TV campaign to parents would increase teenagers going to a family doctor.

TV commercials
people do not actually listen to health commercials on TV

15. Teenagers should go for a check-up every year.

It is not a high priority

16. Better decorating would make FD offices more comfortable

Doctor office are usually boring or tacky

17. I don't think a Family Doctor should ask about smoking, drinking, or sex.

These things are part of your health and should be asked
They probably should but not too much

18. If family doctors build a relationship, it is easier to talk about issues.

Your not going to tell your deepest problem to a complete stranger

19. There are more convenient options than going to my family doctor.

Health facilities are never convenient

20. Going to the family doctor is uncomfortable.

Only when girls go to guy doctors and vice versa
Depends on the doctor

21. The gender of my family doctor is important.

I would never go to a male doctor

22. I need to be really ill to go to the family doctor for a check-up.

No Suggestions provided

23. Family doctors do not spend enough time with you.

No Suggestions provided

24. Family doctors office cater to adults.

Children's toys are always around
Wasn't sure what cater meant but then I got it.
Do family doctors offices pay more attention to adults

25. I go with my parents to family doctor appointments.

No Suggestions provided

26. The waiting time prevents people from going to Family Doctor.

No Suggestions provided

27. I need someone to drive me to the family doctor.

Needing a "ride"

28. My parents influence my decision to see a family doctor.

No Suggestions provided

29. I believe that most teenagers have a family doctor.

No Suggestions provided

30. I go with my sibling(s) to doctors appointments.

Change values to always sometimes never do not rather than disagree/agree

31. My parents make my appointments with the family doctor.

No Suggestions provided

32. My siblings influence my decision to see a family doctor.

No Suggestions provided

33. The distance to the family doctor prevents you from going for a check-up.

No Suggestions provided

Appendix F – Draft Questionnaire

1. I do not know how to make an appointment with a family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **knowing how to make an appointment** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

2. Family doctors offices should have better reading material.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **better reading material** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

3. Since teenagers go to parents with health issues, they do not have to go the doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is the fact that **teens go their parents with health issues** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

4. Family Doctors talk to parents more than the teenager.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is the **doctor talking to you** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

5. Internet is a way to get health information for teenagers, instead of going to a family doctor?

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **access to the internet** in affecting your decision to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

6. Since I can get info about health issues from my school, I do not need to go to a doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **your ability to get info from the school** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

7. It is good to have the same family doctor as your family.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **having the same doctor as your family** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

8. Going to the Family Doctor for a check-up takes too much time.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **the waiting time** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

9. Family doctors should have treats or little gifts at the office.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **treats at the office** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

10. My friends influence my decision to see a family doctor for a check-up.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **your friends influence** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

11. I have to miss school when at I am at the family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **missing school** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

12. There should be a television in the waiting room at doctor offices.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **a television** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

13. That my FD may talk to my parents influence my decision to go.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **keeping things private** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

14. TV comercials to parents would increase teenagers going to a family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **a TV campaign** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

15. Teenagers should go for a check-up every year.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **this above idea** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

16. Better decorating would make FD offices more comfortable

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **better decorating** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

17. I don't think a Family Doctor should ask about smoking, drinking, or sex.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **asking about these behaviours** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

18. If family doctors build a relationship, it is easier to talk about issues.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **family doctor building a relationship with you** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

19. There are more convenient options than going to my family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **these options** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

20. Going to the family doctor is uncomfortable.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **being comfortable** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

21. The gender of my family doctor is important.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **the doctor's gender** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

22. I need to be really ill to go to the family doctor for a check-up.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **being really ill** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

23. Family doctors do not spend enough time with you.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **the amount of time the family doctor spends with you** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

24. Family doctors office focus on adults.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is that **the office focuses on adults** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

25. I go with my parents to family doctor appointments.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is the fact that **you need to go with your parents** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

26. The waiting time prevents people from going to Family Doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **the wait time** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

27. I need someone to drive me to the family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **needing a drive** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

28. My parents influence my decision to see a family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **your parent influence** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

29. I believe that most teenagers have a family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **this fact** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

30. I go with my sibling(s) to doctors appointments.

	1	2	3	4	5	6	7	
never								always

How important is **going with your siblings** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

31. My parents make my appointments with the family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is the fact that **your parents make the appointment** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

32. My siblings influence my decision to see a family doctor.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **your siblings influence** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____

33. The distance to the family doctor prevents you from going for a check-up.

	1	2	3	4	5	6	7	
strongly disagree								strongly agree

How important is **this distance** in deciding whether to see a family doctor for a check-up?

	1	2	3	4	5	6	7	
Not at all important								Very important

How would you say the above statement differently?

_____