

# “Today we are not good at talking about these things”: A Mixed Methods Study of Inuit Parent/Guardian-Youth Sexual Health Communication in Greenland

REVISED REFERENCES, 04/13/2016

---

## Abstract

Some of the highest rates of sexually transmitted infections (STIs) are reported in the Arctic. For example, the Inuit youth of Greenland have the highest STI rates in the circumpolar region. In this study, we used a mixed method approach to examine parent/guardian–youth communication about STIs and other sexual health topics. The quantitative component of the study involved the parents/guardians completing a brief questionnaire while the qualitative component involved their participation in focus groups. Parents/guardians reported that, although they found little difficulty communicating with youth in general, this was not the case for sexual topics. Similarly, parents/guardians reported a lack of communication about topics such as masturbation, why people engage in sex, and what it feels like to have sex. In general parents/guardians stated that it is uncomfortable for them to talk with their youth about sexual matters. At the same time, they are concerned about the high rates of unwanted pregnancy in their communities, and they would like to see more collaborative partnerships aimed at increasing sexual health education for youth. Future STI prevention efforts in Greenland would benefit from involving Greenlandic youth and their families in the design of community-based sexual health education programs that increase communication skills in families about topics related to sex. Community based efforts that involve families and empower them to educate their youth around STI risk-prevention behaviours is a necessary area of future development in Greenland.

## Keywords

Parent/guardian–youth communication, STIs, sexual health, Greenland, mixed methods

## Acknowledgements

This research was funded through the National Science Foundation, Arctic Social Sciences Program, Award #0908151. Special thanks are given to the Community Advisory Boards in Paamiut and Uummannaq as well as Dr. Gert Mulvad and Dr. Anders Koch for their guidance throughout the study. Thanks are also given to Augustine Rosing and Nammininguaq Jacobsen for their role as community outreach workers on the study. We are most grateful for the participation of the parents/guardians and youth in Inuulluataarnek.

## Introduction

Some of the highest rates of sexually transmitted infections (STIs) are reported in the Arctic, with the Inuit of Greenland having the highest STI rates in the circumpolar region (Gesink, Rink, Montgomery-Andersen, Mulvad, & Koch, 2010; Gesink Law, Rink, Mulvad, & Koch, 2008). In particular, Indigenous Greenlandic youth are disproportionately infected with STIs in comparison to other segments of the population in Greenland (Gesink et al., 2012). It is well established that untreated STIs, such as chlamydia and gonorrhea, can lead to serious complications, including pelvic inflammatory disease, ectopic pregnancy, preterm birth, eye, ear, nose, and throat infections among newborns, and infertility in both sexes, as well as increased susceptibility to HIV infection (Gesink et al., 2008; Minichiello, Rahman, & Hussain, 2013; Ravel et al., 2011).

Limited knowledge is available regarding prevention and intervention strategies that may be effective in reducing STI rates among Greenlandic youth. To date, one clinical intervention implemented in Greenland, which concentrated on testing and treatment, was successful in reducing STIs (Madsen et al., 2007). However, the majority of prior STI prevention and intervention research has been conducted with non-Arctic and non-Indigenous populations. Few studies in the Arctic have examined the social, cultural, psychological, and environmental determinants of STIs (Leston, Jessen, & Simons, 2012; Steenbeek, 2005; Steenbeek, Tyndall, Rothenberg, & Sheps, 2006), yet diversity related to these determinants can affect the applicability of research to remote, isolated, and small communities in the Arctic (Bjerregaard, Mulvad, & Olsen, 2003).

Health care services in Greenland are provided through the country's Danish medical system. Health care services are delivered either in hospital, within the country's larger cities and towns, or at health stations in the country's smaller settlements. Contraceptives, including condoms, are free and accessible in these health care settings, as is treatment for STIs. Despite the availability of STI testing- and treatment-focused services, Greenlanders face issues related to confidentiality, especially in smaller towns and settlements, as well as language barriers, as health care providers do not always speak Greenlandic (Inuit Circumpolar Council, 2010).

## Background

Greenland is a colonized country where 88% of the inhabitants are of Inuit heritage. As a constitutional constituency, Greenland creates its own policies related to internal matters, including health policies. The people of western Greenland refer to themselves as Kalaallit (Greenlanders) rather than Inuit. A dialect of the Inuit language, Kalaallisut (Greenlandic), is the official language of Greenland, while Danish is the auxiliary language. In this manuscript the terms “Kalaallit” and “Greenlanders” are used interchangeably.

Our study, which we called Inuulluataarneq (Having the Good Life), is based on an STI educational intervention with Greenlandic adolescents 15 to 19 years old and their parents or guardians (parents/guardians). The study was implemented from 2009 to 2012 in two western Greenlandic communities: Paamiut in the south of the country and Uummannaq further north. Community based participatory research (CBPR) principles were used to design, implement and evaluate Inuulluataarneq, which involved two components. During the first component of Inuulluataarneq, we implemented an educational intervention with 46 youth that included a series of eight sessions on a variety of topics related to STI prevention as well as STI testing, tracking, and treatment. Results of the youth educational intervention are presented in Rink et al., 2014 and Rink, Montgomery-Andersen, Koch, & Mulvad, 2013. The second component of Inuulluataarneq involved parent/guardian education regarding sexual health communication with

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

their youth. Prior to the development, design, implementation and evaluation of Inuulluataarneq, we conducted a two-year exploratory study in Greenland (2007 – 2009), in which Kalaallit youth reported a lack of communication with parents or guardians about topics related to sex, such as STIs (Gesink et al., 2010; Gesink et al., 2012). The results from this study were used to develop Inuulluataarneq’s parent/guardian component (Rink et al., 2012).

Using a CBPR framework, the Inuulluataarneq investigators worked with a Community Advisory Board (CAB) in each community to develop the parent/guardian component of the intervention (Holkup, Tripp-Reimer, Salois, & Weinert, 2004; Isreal, Schulz, Parker, & Becker, 2001). This was accomplished through a series of meetings in each community in which the investigators shared the results of the exploratory study as well as previous research on STI prevention and intervention with youth, while the CAB members discussed their knowledge of Kalaallit beliefs and traditions regarding sexual health and what they believed would be effective ways to address STI rates in their community. The community representatives agreed that parents/guardians have a vital role to play in educating their youth about sexual health. However, the CABs felt it would be difficult to keep parents/guardians engaged in an intervention that required extended involvement in the face of family and work responsibilities, combined with seasonal patterns of fishing, hunting, community celebrations, and family gatherings. It was thus decided that the parents/guardians would receive a single educational session regarding sexual health communication. This single session lasted from 1.5-to-2 hours. This session was designed to provide parents/guardians with information on STIs and sexual health communication and was implemented to coincide with the youth educational intervention, which involved seven sessions that covered self-confidence, thinking about the future, feeling ready for sex, trusting your sexual partner, what it means to have a sexual partner, communicating about and negotiating sex, condom use, facts and information about STI prevention as well as STI screening and treatment (Rink et al., 2013; Rink et al., 2014).

In this paper, we present findings from component two, specifically addressing parent/guardian perspectives of sexual health communication with their youth. The findings include: 1) results from a survey administered to parents/guardians regarding communication with their youth about sexual health topics; and 2) results from focus groups held in order to understand the perspectives of parents/guardians on communicating with their youth about sexual health topics.

## **Methods**

### **Community-Based Participatory Research**

Paamiut and Uummannaq, the two communities that participated in Inuulluataarneq, were selected through a series of discussions with key stakeholders in the Government of Greenland’s health care system, and social service agencies. At the time of the study, Paamiut, located in southwestern Greenland, had a population of 1,515; Uummannaq, in northwestern Greenland, had a population of 1,282. The primary industries of both communities are fishing and hunting. Once Paamiut and Uummannaq were identified as potential participating communities, the study’s investigators met with key leaders in the local government, the health care system, schools, and community-based organizations to establish support for the study. This process took approximately one year.

Once the communities agreed to participate in Inuulluataarneq, CABs were established in each community. Each of the two CABs consisted of four individuals: a youth, a parent, a

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

member of a community-based organization, and an elder. The CAB members were recommended by community leaders in Paamiut and Uummannaq for their awareness of the issues facing young people in Greenland, and for their understanding of their community. The members of the CAB received a gift card for the local grocery store as compensation each time they participated in a CAB meeting, which occurred four times a year for three years. Two community outreach workers (one for Paamiut and one for Uummannaq) were trained to administer surveys and facilitate focus groups; these individuals were responsible for recruitment and data collection. The two CABs, Inuulluataarnek’s investigators, and the community-outreach workers designed the study, developed the intervention resources, including the education materials and data collection instruments, promoted the study, reviewed and interpreted the results, and disseminated Inuulluataarnek’s findings to the community. Ethical approval was received from the Commission for Scientific Research (Greenland), the University of Greenland (Greenland), the University of Toronto (Canada), the Statens Serum Institut (Denmark), and Montana State University (United States of America).

## **Research Design**

Based on discussions with the two communities, we utilized a sequential explanatory-research design strategy to assess parent/guardian–youth communication (Creswell, 2003). The strategy involved the use of quantitative data collection and analysis followed by qualitative data collection and analysis to assist in the explanation and interpretation of parent/guardian–youth communication. This mixed methods approach allowed us to develop a better understanding of this important component of youth sexual education (Bergman, 2008; Creswell & Clark, 2007). Research that engages with Indigenous populations supports the use of mixed methods as a means to integrate western research methods with Indigenous ways of perceiving and understanding the world (Botha, 2011). This approach also facilitated a more nuanced understanding of the content and dynamics of parent/guardian–youth communication. The qualitative component of the study proved particularly useful for participating Greenlanders, as a means to appropriately describe their perspective about what sexual health topics are important to discuss with youth and how to address these issues within their families and communities.

The quantitative component of the study required parents/guardians to complete a brief survey and to participate in one educational session while their youth were enrolled in an educational intervention. All surveys were available in the Kalaallisut language. The qualitative component involved parents/guardians, who had completed a questionnaire and participated in one educational session, participating in a focus group.

An outreach worker was hired in each community. The outreach worker was responsible for working with Inuulluataarnek investigators and the Community Advisory Boards in Paamiut and Uummannaq. Specifically, they recruited parents/guardians and their youth, conducted the educational intervention with youth and parents, assisted in the development of research materials and data collection, and assisted with interpretation and dissemination of Inuulluataarnek results.

## **Participant Recruitment**

Parents/guardians were recruited using a purposive sampling technique and were eligible to participate if they had a youth between the ages of 15 and 19, and that youth also consented to participate in the youth educational intervention component of Inuulluataarnek. Strategies for recruiting research participants included partnering with agencies in each community to promote

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

Inuulluataarnek, posting flyers and posters in each community, giving presentations at local events, and word of mouth. Twenty-four parents/guardians (8 males and 16 females) agreed to participate in a total of four focus groups. A total (from both communities) of 28 parents/guardians (10 males and 18 females) agreed to complete the survey and one educational session, and 24 agreed to participate in a focus group.

## **Data Collection and Analysis**

### **Parent/guardian surveys.**

Quantitative data were collected from parents/guardians to determine which sexual health topics they currently discuss with youth, as well as to gauge the degree of discomfort they experience during these discussions. On a self-administered survey, 28 parents/guardians (16 in Paamiut and 12 in Uummannaq) answered close-ended questions regarding demographics included parental age and language spoken. They also answered self-assessed questions about communication with their youth, which involve rating one's ability to converse openly with youth, both in general and on sexual topics in particular. The ratings involved a five-point Likert scale, with responses ranging from difficult to easy. Finally, parents/guardians were asked whether they had ever spoken with their youth about specific topics (n=25) relevant to sexual health (Villarruel, Cherry, Cabriales, Ronis, & Zhou, 2008).

The software Stata 10 (Statacorp, 2007) was used to conduct all statistical analyses. Simple means and frequencies were examined relative to the locations of the parents/guardians in either Paamiut or Uummannaq. For variables with continuous distributions, we conducted two-tailed *t*-tests to examine differences in responses by location. For variables with binary distributions, we conducted Pearson's chi-squared test to examine differences between locations. Statistical significance was established at  $p < 0.05$ , but given the small sample size, statistical trends ( $p < 0.2$ ) were also given attention (Tabachnick & Fidell, 1996). The results of the quantitative analysis were shared with the CABs in each community using bar charts to depict the means and frequency distributions. Discussions amongst the CAB members, community outreach workers, and the study investigators addressed interpretation of the results

### **Focus groups.**

At the end of the youth educational intervention of Inuulluataarnek, four focus groups were conducted with 24 parents/guardians to discuss their perspectives on educating their youth on sexual health and STIs. Two of the focus groups were conducted in Paamiut and in Uummannaq. Two of the focus groups included six parent/guardians each and the other two focus groups included four parent/guardians each. Parents/guardians participating in the educational session were given a gift card to their community grocery store as compensation for their time. Participants in the focus groups received an additional gift card. Light snacks were also provided to parents/guardians when they completed the surveys and participated in the focus groups. The focus group guide was developed in collaboration with community outreach workers and CAB members in each community, based on results from parent/guardian data analysis. Focus groups were conducted in the Kalaallisut language and a community outreach worker led each focus group. The participants were asked questions about a) how they communicate about sexual and reproductive health with their youth, b) the most effective method of providing youth information about STIs and other topics related to sexual and reproductive health, c) how they talk to their youth about sexual relationships, and d) how they would like youth and families to be educated about STIs and other sexual and reproductive health topics.

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

Focus groups were audio recorded, transcribed in Kallaallisut and then translated in English. Investigators were present during the focus groups and recorded their observations in English, after which, they were translated into Kallaallisut. The CAB members, community outreach workers, and investigators reviewed focus group transcripts; the CABs and community outreach workers reviewed the transcripts in Kallaallisut, while the investigators reviewed the transcripts in English. The following steps were used to analyze focus group transcripts: Step 1) Transcripts were read and reread by CAB members, community outreach workers and investigators to identify themes about sexual health topics, Step 2) Each individual wrote down their identified themes, Step 3) The CAB members, community outreach workers and investigators met to review, discuss and agree upon themes identified in the focus groups, Step 4) Transcripts were reviewed again by each individual to ensure that themes accurately captured what parent/guardians said and, Step 5) A final meeting with CAB members, community outreach workers and investigators was held to solidify the focus group themes (Bal 2004, Graneheim & Lundman 2004; Riessman 2003).

Validation of the focus group results relied on this iterative review process as well as awareness of the cultural context of focus group dialogues, and how this is captured in the transcripts. This also required undertaking a comparative approach to determining how each individual reviewed the transcripts, recorded their interpretation of themes and how the group discussed and reached consensus about the final themes (Bal 2004, Graneheim & Lundman 2004; Kvale, 1989; Riessman 2003).

## Results

### Survey Results

Parents/guardians, of whom 10 were male and 18 female, had a mean age of 44 years (see Table 1). All parents/guardians identified Kallaallisut as their primary language. However, more parents/guardians in Paamiut also spoke Danish (69%) in comparison to parents/guardians in Uummannaq (17%) ( $p = 0.006$ ). Parents/guardians in Paamiut also spoke English (25%) more often than the parents/guardians in Uummannaq (8%).

Table 1  
Personal History\*

	<b>Paamiut</b> ( <i>n</i> = 16)	<b>Uummannaq</b> ( <i>n</i> = 12)	<b>T / Chi-square</b>	<b><i>P</i></b>
Age	43.8 (7.7)	43.5 (6.3)	0.11 <sup>T</sup>	0.910
Speaks Greenlandic	88%	100%	1.60	0.204
Speaks Danish	69%	17%	7.50	0.006
Speaks English	25%	8%	1.30	0.254

\*Row totals do not sum to 1. Table shows means and percentages within Paamiut and Uummannaq samples, respectively. The comparison is between these samples.

<sup>T</sup>T statistic

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

At the beginning of the study, parents/guardians in both Paamiut and Uummannaq reported that general communication about everyday aspects of life with youth was “somewhat easy” (corresponding to a score of 4). However, parents/guardians in Paamiut reported easier communication with youth about sex (mean = 3.7) than their counterparts in Uummannaq (mean = 2.8), (see Table 2). Although the community difference was not statistically significant ( $p = 0.059$ ), the results do indicate that parents/guardians in both Paamiut and Uummannaq feel less at ease about communicating with their youth about sex than about everyday life. The vast majority of parents/guardians in both locations (>90%) reported that they would like to speak with their youth more often about sex and sexuality (see Table 2).

Table 2  
Self-Assessed Communication with Youth\*

	<b>Paamiut</b> ( <i>n</i> = 16)	<b>Uummannaq</b> ( <i>n</i> = 12)	<b>T / Chi-square</b>	<b><i>P</i></b>
How would you rate your ability to communicate with your youth in general?	3.9 (1.4)	3.5 (1.2)	0.86 <sup>T</sup>	0.397
How would you rate your ability to communicate with your youth about sex?	3.7 (1.3)	2.8 (1.3)	1.98 <sup>T</sup>	0.059
I would like to talk more often with my youth about sex and sexuality.	94%	92%	0.04	0.832
<sup>T</sup> <i>T statistic</i>				

\*Row totals do not sum to 1. Table shows means and percentages within Paamiut and Uummannaq samples, respectively. The comparison is between these samples.

Parents/guardians in both Paamiut and Uummannaq reported a lack of communication with youth in several domains related to sexual health and sexuality (see Table 3). In particular, less than 35% of parents/guardians in both locations reported having spoken with their youth about why people like to have sex; 27% had discussed masturbation; less than 40% had spoken about what it feels like to have sex; and less than 30% had talked about wet dreams. Parents/guardians in Uummannaq were more likely to speak with their youth about aspects of puberty, such as the changes to boys’ bodies, (Paamiut 36%, Uummannaq 80%,  $p = 0.044$ ) and menstruation (Paamiut 75%, Uummannaq 100%,  $p = 0.086$ ). Parents/guardians from Paamiut, however, were more likely to report speaking with youth about what qualities to look for in a life partner (Paamiut 77%, Uummannaq 44%,  $p = 0.119$ ), and what to do if a partner doesn’t want to use a condom (Paamiut 63%, Uummannaq 33%,  $p = 0.161$ ).

Table 3  
Reported Ever Talking With Youth About the Following Topics\*

	<b>Paamiut</b> (n = 16)	<b>Uummannaq</b> (n = 12)	<b>Chi-squared</b>	<b>P</b>
What qualities are important in choosing close friends	71%	50%	1.14	0.285
What qualities to look for in a boyfriend/girlfriend/life partner	77%	44%	2.40	0.119
How to ask someone out on a date	50%	33%	0.58	0.445
How boys' bodies change physically as they grow up	36%	80%	4.07	0.044
How girls' bodies change physically as they grow up	69%	56%	0.43	0.512
How women get pregnant and have babies	87%	89%	0.03	0.873
Symptoms of sexually transmitted infections (STIs)	69%	50%	0.91	0.339
Reasons why people like to have sex	33%	30%	0.03	0.861
How well birth control can prevent pregnancy	81%	90%	0.36	0.547
How to choose a method of birth control	79%	60%	0.97	0.324
How to say no if someone wants to have sex and your youth doesn't want to	64%	80%	0.70	0.404
How well condoms can prevent sexually transmitted infections (STIs)	81%	83%	0.02	0.887
Menstruation (having menstrual periods)	75%	100%	2.95	0.086
The importance of not pressuring other people to have sex	73%	73%	0.00	0.973
How your youth will make decisions about whether or not to have sex	69%	78%	0.20	0.658
Consequences of getting pregnant/getting someone pregnant	81%	64%	1.05	0.305
How to use a condom	64%	44%	0.88	0.349
Reasons why your youth should not have sex	64%	44%	0.88	0.349
Masturbation	27%	27%	0.00	1.000
What it feels like to have sex	38%	33%	0.06	0.806
Homosexuality/people being gay	57%	63%	0.06	0.806
Wet dreams	27%	14%	0.42	0.518
What to do if a partner doesn't want to use a condom	63%	33%	1.96	0.161
How people can prevent getting sexually transmitted infections (STIs)	87%	91%	0.11	0.738
How your youth will know if he/she is in love	64%	75%	0.35	0.555

\*Row totals do not sum to 1. Table shows percentages within Paamiut and Uummannaq samples, respectively. The comparison is between these samples.

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

### Focus Group Results

Four main themes emerged from focus groups with parents/guardians (see Table 4). The first theme was sexual health communication. Parents/guardians felt that it was difficult to talk with youth about sex, and reported feeling unsure about what to say. This uncertainty left parents/guardians at a loss for how to bring up and process sexual topics with their youth. The second theme was pregnancy. Although Inuulluataarnej focused more on STI prevention, focus group participants in each community spoke about pregnancy. Parents/guardians were in agreement about wanting their youth to wait until they were finished their education. The third theme involved lack of knowledge about sexual health. Parents/guardians reported having little necessary knowledge of sexual and reproductive health topics to speak with their youth about topics such as condom use and STIs. The fourth theme was sexual health education. Parents/guardians felt that there should be increased collaboration between relevant agencies and groups within the community. They felt that the lack of openness about sex was exacerbated by an absence of public education on the subject within schools, hospitals, and other public agencies. Parents and guardians also discussed how to make it easier for them to participate in discussions with their young people about sexual health.

Table 4  
Focus Group with Parents

<p><b>Sexual Health Communication</b></p> <ul style="list-style-type: none"> <li>• <i>“I would like to say that the subject of sex is taboo and for that reason, I sometimes find it hard to see which approach to take.”</i></li> <li>• <i>“There are some [parents/guardians] who have no clue where to begin to talk about sex”.</i></li> <li>• <i>“Today we are not good at talking about these things.”</i></li> <li>• <i>“Perhaps it is because we are shying off of speaking openly about sex that our children react with introversion when we try to speak with them.”</i></li> </ul>
<p><b>Pregnancy</b></p> <ul style="list-style-type: none"> <li>• <i>“I told my daughter that she should wait to have children until she is educated, because of the things I have experienced. There is no reason that she has to go through the same.”</i></li> <li>• <i>“ ... they must be finished with an education and keep focused on their goals before they become pregnant.”</i></li> <li>• <i>“ I have told my daughter that it is very important that she gets an education and get qualifications before she becomes pregnant ... it is more important that she have a goal in life.”</i></li> </ul>
<p><b>Knowledge of Sexual Health</b></p> <ul style="list-style-type: none"> <li>• <i>“I suddenly found out that condoms have an expiration date. I did not know that. There are so many small details for you to know.”</i></li> <li>• <i>“I feel that my knowledge about STIs is not very good. It is difficult to speak with my child about STIs because I do not know about STIs and their consequences.”</i></li> <li>• <i>“We (parents/guardians) know little about these sex things today. We only know about it superficially. We (parents/guardians) are in doubt what to do...what to tell our children”.</i></li> </ul>
<p><b>Sexual Health Education</b></p>

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

- *“The hospital and the public school should take more responsibility and not just only parents and do something like giving more sexual education to the young people so that they can protect themselves when they having sex.”*
- *“I believe that sexual health should be taught in school in an interesting way; then maybe then, families would become more open.”*
- *“Maybe during school the parents could also get sex education, maybe once a month where we can talk about how to protect our children ... include the families and have the parents interact with their children ...”*
- *“.... Have someone from the hospital meet with the parents ... we could then be spoken to about various information about sex and be given examples of how to talk with our children about this ...”*

### **Limitations**

There are several limitations to this study. First, during the youth educational intervention phase of Inuulluataarnej, parents/guardians participated in just one session regarding sexual health communication, with a particular emphasis on STIs. Although this process was based on recommendations by the CABs in both Paamiut and Uummannaq, focus group results reveal that parents/guardians clearly desire more education and training in how to speak with their youth about sex than a single session could provide. However, while this might have benefited families involved in Inuulluataarnej, more training might have influenced the findings in that it might have increased sexual health communication between parent/guardians and their youth. Second, parents/guardians voluntarily participated in Inuulluataarnej; thus potentially introducing bias in terms of representing parents/guardians who self-selecting out of the study. Moreover, self-reported data can be more difficult to interpret because its reliability depends on the participants' introspective ability and their accurate interpretation of questions (Langhaug et al., 2010). Third, our parent/guardian questionnaire was relatively short. As well, it did not screen for factors that could have revealed different and perhaps more effective ways of communication with youth such as the context in which communication took place or the style of communication. However, the focus groups did shed light on some nuances in communication that could be targeted for future efforts. Fourth, given the specific context of the research and the limited sample size, results cannot be generalized outside this population of parents/guardians. Similarly, the small sample size limits the statistical significance of findings.

### **Discussion**

In this paper, we present new data from an unstudied population. The results suggest that parents/guardians are an important and influential target population for public health efforts aimed at reducing STIs among Greenlandic youth. Previous research among Greenlanders suggests that historically, family and kinship networks played a greater role in educating young people about topics related to sexual and reproductive health (Trondheim, 2010). Traditionally, for youth in Greenland, the family provided a safe setting in which to share knowledge, and was the primary source of information about sexual health. Intimate male–female relationships, sexual intercourse, and pregnancy were and continue to be viewed as a natural part of one's life. Literature on pre-colonial life in Greenland recounts stories of families using joking and teasing to share information about courtship, marriage, pregnancy, and sex (Langgard & Thisted, 2011). Furthermore, one of Greenland's best-known accounts of the creation of the sun and the moon is based on appropriate and inappropriate sexual behaviour. Thus, in the past, issues related to

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

sexual health were not considered inappropriate for conversation, as our parents/guardian focus group participants suggest is the case in modern-day Greenland. In a previous exploratory study (2007-2009), one research participant stated, “Not having sex is like not drinking water or not sleeping. Sex is natural” (Gesink et al., 2010). This statement, recorded in our initial data collection for the design of Inuulluataarnej, supports Greenlanders’ pre-colonial perceptions of sex and their cultural belief that sex is natural.

Findings from Inuulluataarnej suggest that there has been a breakdown in how Greenlandic families address sexual topics. One possible explanation relates to a westernization of the Greenlandic way of life, in which parents/guardians are inadequately prepared to address the complexity of sexuality, particularly in the context of increasing youth access to the internet, media influences, and social marketing (Steenbeek, 2005; Steenbeek et al., 2006). Furthermore, centuries of colonization by the Danish required Greenlanders to adapt to Scandinavian systems of education and health care. Kalaallit were taught to view the western outsiders as experts and keepers of knowledge, so that sexual and reproductive health education was no longer seen as the responsibility of the family. This undermined Greenlanders’ traditional ways of educating their youth about sex (Montgomery-Andersen & Borup, 2012; Montgomery-Andersen, Willen, & Borup, 2010).

Our quantitative results demonstrate that parents/guardians find it somewhat easy to speak with their youth about many sexual and reproductive health topics and would like to talk more often with them about these issues, but face challenges. In focus group discussions, parents/guardians highlighted the need for the health care system, schools, and community-based organizations to be more involved in working with them to provide sex education for their youth. Specifically, they would like to be more educated and supported by community-based organizations, and work in partnership with them to improve sexual health education to reduce STIs. Potential avenues for creating such a partnership include: (1) After-school or evening programs for families, designed by school personnel, health care professionals, and community members and (2) Parent/guardian groups led by a trained facilitator, in which parents/guardians come together to discuss communicating with their youth about sexual health. Working together as a community to educate youth is congruent with Greenlanders’ communal beliefs, which focus on shared decision-making and that all members of a community are interconnected and reliant on one another (Nuttall, 1992; Trondheim, 2010).

The use of CBPR as the framework for Inuulluataarnej ensured that the study was designed, implemented, and evaluated in a manner that was respectful of the Greenlandic people in both Paamiut and Uummannaq and that the research materials were culturally appropriate. Despite its limitations, this study contributes to literature about the benefits of mixed method research with Indigenous populations. Using quantitative methods, we identified how parents/guardians feel about discussing sexual matters with their youth and what topics they do and do not tend to address. Qualitative findings reveal specific areas of concern among parents/guardians, and how they would like to address these concerns. These insights will inform the planning of educational and skill-building initiatives for Inuit parents and guardians in Greenland.

As a traditional collective society, it was important for Greenlanders to take part in discussions and decision-making regarding what happened in their families and communities (Nuttall, 1992). After centuries of colonization there is an increasing need for the Government of Greenland to express its sovereignty, including deciding how and what kind of research is conducted in Greenland (Kleist Pedersen, 2006; Kleist Pedersen, 2012). The CBPR approach

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

undertaken in this study demonstrates true partnership in health research with the Inuit of Greenland. In particular, the use of Kalaallisut in all phases of the research process was consistent with a CBPR approach. In Greenland, Danish is viewed as the language of the elite and those who speak Danish, rather than Kalaallisut, are often seen to some degree as outsiders by those who speak the mother tongue (Langgard & Thisted, 2011). When describing perspectives of communication about sex and family, the use of Kalaallisut gave richness to the data that may have been lost had the parents/guardians been required to speak Danish or English (Montgomery-Andersen, 2013). The parents/guardians were happy to express themselves in Kalaallisut during the educational session, as well as the quantitative and qualitative data-gathering components of Inuulluataarneq.

Past research indicates that male parents/ guardians are less likely than female parents/ guardians to be involved in the sexual health education of their youth (Dyson & Smith, 2012; McNeely et al., 2002). Yet, our study does not support a gender disparity, as fathers or male guardians made up just over one third of our sample. In fact, we found that fathers/male guardians in Greenland are invested in communicating with their youth about sexual health topics. This is consistent with traditional family practices in small populations, such as those found in Greenland, in which fathers historically participated in the sexual health education and care of their children as well as assisting in the birthing process (Montgomery-Andersen & Borup, 2012).

### **Conclusion**

The results of Inuulluataarneq suggest that parents/guardians want to be engaged in raising sexually healthy youth, and to participate in educating their youth about sexual health. Swahn (2012) found that parents/guardians want their youth to be knowledgeable about sex, have clear sexual values, and be sexually healthy. Our conclusions are supported by previous research investigating parent/guardian–youth communication about sex, in which improving techniques for communication about sex through family education provided by schools and other community-based organizations resulted in a reduction in sexual risk-taking behaviors among youth (Deptula, Henry, & Schoeny, 2010; Lederman, Chan, & Roberts-Gray, 2008; Villarruel et al., 2008).

Trondheim (2011) explains that youth, parents/guardians, and families are part of an elaborate kinship and social network that forms the basis for communities in Greenland. Bodenhorn (2000) supports Trondheim’s research by further stating that there is no separation between Greenlandic families and the people that make up the communities in which they live. For example, the concept of family may be defined as being a biological member of a family, being adopted into a family either socially or emotionally, or having grown up together in the same community. This suggests that programs, such as mass screening and treatment campaigns or free, accessible condoms and STI treatment, which do not incorporate Greenland’s cultural concepts of kinship and the highly-important family system, are only part of what is needed to prevent STIs among Greenlanders.

Future STI prevention efforts in Greenland would benefit from involving Greenlandic youth and their families in the design of community-based sexual health education programs that address increasing communication skills in families about topics related to sex. Research in other parts of the world, with families that maintain good communication with youth about sex, has demonstrated delayed onset of sexual activity among these youth as well as reduced sexual risk-taking behavior (Bearinger, Sieving, & Sharma, 2007). STI prevention efforts that focus on the

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

incorporation of healthy communication about sexual health between parents/guardians and their youth are based on the high value Greenlanders place on family and the promotion of sexually healthy decision-making among young people.

Community-based efforts that involve and engage families in educating their youth about prevention of sexual risk-taking behaviours is a necessary area of future development in Greenland.

### References

- Bal, M. (2004). *Narratology: Introduction to the theory of narrative*. Toronto, ON: University of Toronto Press.
- Bearinger, L., Sieving, R., & Sharma, V. (2007). Global perspectives on the sexual and reproductive health of adolescents: Patterns, prevention and potential. *Lancet*, 369, 1220–31. doi:10.1016/s0140-6736(07)60367-5
- Bergman, M.E. (Ed.) (2008). *Advances in mixed methods research: Theories and applications*. London, UK: Sage. doi:10.4135/9780857024329
- Bjerregaard, P., Mulvad, G., & Olsen, J. (2003). Studying health in Greenland: Obligations and challenges. *International Journal Circumpolar Health*, 62, 5–16. doi:10.3402/ijch.v62i1.17525
- Bodenhorn, B. (2000). ‘He used to be my relative’: Exploring the bases of relatedness among Inupiat of northern Alaska. In Carsten, J. (Ed.), *Cultures of relatedness: New approaches to the study of kinship* (pp.128-148). Cambridge, UK: Cambridge University Press.
- Botha, L. (2011). Mixing methods as a process towards indigenous methodologies. *International Journal Social Research Method*, 14, 313–325. doi:10.1080/13645579.2010.516644
- Creswell, J. (2003). *Research design: Qualitative, quantitative and mixed methods approaches*. (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage.
- Creswell, J. & Clark, V. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Deptula, D., Henry, D., & Schoeny, M. (2010). How can parents make a difference? Longitudinal associations with adolescent sexual behavior. *Journal of Family Psychology*, 24, 731–739. doi:10.1037/a0021760
- Dyson, S. & Smith, E. (2012). ‘There are lots of different kinds of normal’: Families and sex education– styles, approaches and concerns. *Sex Education*, 12(2), 219–229. doi:10.1080/14681811.2011.609053
- Gesink, D., Mulvad, G., Montgomery-Andersen, R., Poppel, U., Montgomery-Andersen, S., Binzer, A., Jensen J. S. (2012). Mycoplasma genitalium presence, resistance and epidemiology in Greenland. *International Journal Circumpolar Health*, 71, 1–8. doi:10.3402/ijch.v71i0.18203

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

- Gesink, D., Rink, E., Montgomery-Andersen, R., Mulvad, G., & Koch, A. (2010). Developing a culturally competent and socially relevant sexual health survey with an urban arctic community. *International Journal Circumpolar Health*, 69, 25–37. doi:10.3402/ijch.v69i1.17423
- Gesink Law, D., Rink, E., Mulvad, G., & Koch, A. (2008). Sexual health and sexually transmitted diseases in the North American Arctic. *Emerging Infectious Disease*, 14, 4–9. doi:10.3201/eid1401.071112
- Graneheim, U. & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nursing Education Today*, 24, 105–112. doi:10.1016/j.nedt.2003.10.001
- Holkup, P., Tripp-Reimer, T., Salois, E., & Weinert, C. (2004). Community-based participatory research: An approach to intervention research with a Native American community. *Advances in Nursing Science*, 27, 162–175.
- Inuit Circumpolar Council. (2010). *Health systems serving Inuit communities across the Arctic*. Ottawa, ON: Health Canada. Retrieved from <http://www.inuitcircumpolar.com/uploads/3/0/5/4/30542564/finalcircumpolarinuithealthsystems.pdf>
- Isreal, B., Schulz, A., Parker, E., & Becker, A. (2001). Community based participatory research: Policy recommendations for promoting a partnership approach in health research. *Education Health*, 14, 182–197.
- Kleist Pedersen, B. (2006) A narrative on narratives in contemporary Greenland. In I. Colligon & M. Therrien (Eds.), *Orality in the 21st century: Inuit discourse and practices: Proceedings of the 15th Inuit Studies Conference*. Paris 2006, France: Institut National des Langues et Civilisations Orientales (INALCO). Retrieved from <http://www.inuitoralityconference.com/art/Kleist02.pdf>
- Kleist Pedersen, B. (2012). Culture isn't something you wear on Sundays! In B. Kleist Pedersen, F. Nielsen, K. Langgard, K. Pedersen, & J. Rygaard (Eds.), *Grønlands kultur og samfundsforskning 2011* (pp. 51–75). Nuuk, GL: Forlaget Atuagkat/ Ilisimatusarifik (University of Greenland).
- Kvale, S. (1989). *Issues of validity in qualitative research*. Lund, SE: Studentlitteratur/Chartwell-Bratt.
- Langhaug, L. Sherri, L. & Cowan, F. (2010). How to improve the validity of sexual behaviour reporting: Systematic review of questionnaire delivery modes in developing countries. *Tropical Medicine and International Health*, 15(3), 362-381. doi:10.1111/j.1365-3156.2009.02464.x
- Langgard, K. & Thisted, K. (Eds.) (2011). *From oral tradition to rap: Literatures of the polar north*. Nuuk, GL: Forlaget Atuagkat/ Ilisimatusarifik (University of Greenland).

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

Lederman, R., Chan, W., & Roberts-Gray, C. (2008). Parent-adolescent relationship education (PARE): Program delivery to reduce risks for adolescent pregnancy and STDs. *Behavioral Medicine, 33*, 137–143. doi:10.3200/bmed.33.4.137-144

Leston, J., Jessen, C., & Simons, B. (2012). Alaska native and rural youth views of sexual health: A focus group project on sexually transmitted diseases, HIV/AIDS, and unplanned pregnancy. *American Indian and Alaska Native Mental Health Research, 19*, 1–14. doi:10.5820/aian.1901.2012.1

Madsen, T., Leitnert, T., Lohse, N., Obel, N., Ladefoged, K., & Gerstoft, J. (2007). Introduction of HIV Type 1 into an isolated population: Molecular epidemiological study in Greenland. *AIDS Research of Human Retroviruses, 23*, 675–681. doi:10.1089/aid.2007.0235

McNeely, C., Shew, M. L., Beuhring, T., Sieving, R., Miller, B. C., & Blum, R. W. (2002). Mothers' influence on the timing of first sex among 14- and 15-year olds. *The Journal of Adolescent Health, 31*, 256–65. doi:10.1016/s1054-139x(02)00350-6

Minichiello, V., Rahman, S., & Hussain, R. (2013). Epidemiology of sexually transmitted infections in global indigenous populations: Data availability and gaps. *International Journal of STDS and AIDS, 24*, 759–768. doi:10.1177/0956462413481526

Montgomery-Andersen, R. (2013). *Faces of childbirth* (Unpublished doctoral dissertation). Nordic School of Public Health NHV, Göteborg, SE.

Montgomery-Andersen, R. & Borup, I. (2012). Songlines and touchstones: A study of perinatal health and culture in Greenland. *AlterNative: An International Journal of Indigenous Peoples, 1*, 88–102.

Montgomery-Andersen, R., Willen, H., & Borup, I. (2010). ‘There was no other way things could have been’: Greenlandic women’s experiences of referral and transfer during pregnancy. *Anthropology and Medicine, 17*, 302–313. doi:10.1080/13648470.2010.526696

Nuttall, M. (1992). *Arctic homeland: Kinship, community and development in northwest Greenland*. Toronto, ON: University of Toronto Press.

Ravel, J., Gajer, P., Abdo, Z., Schneider, M., Sara, S., Koenig, ... Forney, L. (2011). Vaginal microbiome of reproductive-age women. *Proceedings of the National Academy of Science USA, 108(Suppl 1)*, 4680-4687. doi:10.1073/pnas.1002611107

Riessman C. K. (2003). Positioning gender identity in narratives of infertility: South Indian women’s lives in context. In Inhorn, M., Van Balen, F. (Eds.), *Infertility around the globe: New thinking on childlessness, gender, and reproductive technologies* (pp.152-170). Oakland, CA: University of California Press.

Rink, E., Gesink Law, D., Montgomery-Andersen, R., Mulvad, G., & Koch, A. (2009). The practical application of community-based participatory research in Greenland: Initial

“Today we are not good at talking about these things” • Elizabeth Rink, Ruth Montgomery-Anderson, Mike Anastario

experiences of the Greenland Sexual Health Study. *International Journal of Circumpolar Health*, 68, 405–413. doi:10.3402/ijch.v68i4.17370

Rink, E., Montgomery-Andersen, R., & Anastario, M. (2014). The effectiveness of an education intervention to prevent chlamydia infection among Greenlandic youth. *International Journal of STD and AIDS*. DOI: 10.1177/0956462414531240 doi:10.1177/0956462414531240

Rink, E., Montgomery-Andersen, R., Tróndheim, G., Gesink, D., Lennert, L., Kotalawala, N. (2012). The role of personal responsibility, trust in relationships, and family communication in the prevention of sexually transmitted infections among Greenlandic youth: Focus group results from Inuulluataarneq In Kleist Pedersen, B., Nielsen, F.AJ., Langgård, K., Pedersen, K., Rygaard, J. (Eds.), *Greenland's cultural and social research 2010-12* (pp.198-208). Nuuk, GL: Ilisimatusarfik.

Rink, E., Montgomery-Andersen, R., Koch, A., & Mulvad, G. (2013). Ethical challenges in the Arctic: Lessons learned from the Greenland Sexual Health Study. *Journal of Empirical Research on Human Research Ethics*, 8, 110–118.

StataCorp. (2007). *Stata Statistical Software: Release 10*. College Station, TX: StataCorp LP.

Steenbeek, A. (2005) *An epidemiological survey of chlamydial & gonococcal infections in a Canadian arctic community: Determinants of sexually transmitted diseases among remote Inuit populations* (Unpublished doctoral dissertation). University of British Columbia, Vancouver, BC.

Steenbeek, A., Tyndall, M., Rothenberg, R., & Sheps, S. (2006). Determinants of sexually transmitted infections among Canadian Inuit adolescent populations. *Public Health Nursing*, 23, 531–534. doi:10.1111/j.1525-1446.2006.00592.x

Swahn, M. (2012). Cross-national perspectives on early adolescence implications and strategies for public health prevention and interventions. *The Journal of Early Adolescence*, 32(1), 20-25. doi:10.1177/0272431611432866

Tabachnick, B. G. & Fidell, L. S. (1996). *Using multivariate statistics* (3<sup>rd</sup> ed.). New York, NY: HarperCollins College Publishers.

Trondheim, G. (2010). Kinship in Greenland: Emotions of relatedness. *Acta Borealia*, 27, 208-220. doi:10.1080/08003831.2010.527536

Trondheim, G. (2011). *Kinship and gender in Greenlandic cities. Feelings of connectedness* (Unpublished doctoral dissertation). University of Greenland–Ilisimatusarfik, Department of Culture and Social History, Nuuk, GL.

Trondheim, G. (2012). The modern Greenlandic family. *Materialisten 3-4-12. Tidsskrift for forskning, fagkritikk og teoretisk debatt*, 997, 410–521.

Villarruel, A., Cherry, C., Cabriales, E., Ronis, D., & Zhou, Y. (2008). A parent-adolescent intervention to increase sexual risk communication: Results of a randomized controlled trial. *AIDS Education and Prevention*, 20, 371–383. doi:10.1521/aeap.2008.20.5.371