

**TOWARDS A MORE ETHICAL GLOBAL HEALTH RESEARCH: A CASE STUDY OF  
KNOWLEDGE TRANSLATION WITHIN THE *ALERT COMMUNITY TO PREPARED  
HOSPITAL CARE CONTINUUM* IMPLEMENTATION RESEARCH PROJECT**

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By

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# Abstract

The complex form of knowledge translation (KT) that takes place when community information is used to inform interventions within implementation research (IR) has not been explored within the KT academic literature. Furthermore, research fatigue has not been taken into consideration when evaluating KT processes in the academic literature. Research fatigue occurs when a community has had too much research done to it without seeing proportionate benefit, and become weary of the process. This is an important factor to consider because successful knowledge use within IR projects has the opportunity to reduce risk for research fatigue through community perception of change based on participation in research, whilst knowledge collection without a perceived change has been shown to increase the risk. Considering this premise, the objective of this thesis was to investigate the KT process within a maternal and child health IR project entitled the *Alert Community to Prepared Hospital Care Continuum* Project. The IR project was funded as development aid through a branch of Global Affairs Canada.

To study this KT process, a case study was designed that included a document review, participant observations, interviews with the members of the research team, and a focus group discussion. Studying the research team's KT process, there wasn't a structured KT or research framework, which hindered community knowledge incorporation. Additionally, weaknesses in data analysis due to time constraints and a lack of statistical expertise resulted in survey data not impacting continued implementation. However, the community-based design of the IR project allowed tacit knowledge to be integrated via KT based upon knowledge attained through relationship building and community consultations. Lastly, the structure of development aid itself was found to be problematic, as it reinforced global power inequities through funding restrictions, funding timelines, and through the physical separation of donor wealth from local knowledge. This can be addressed moving forward by doing anti-oppressive work both inside and outside of academia.

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# List of Abbreviations

ACPH	Alert Community to Prepared Hospital Care Continuum
CIHR	Canadian Institutes of Health Research
CBPR	Community Based Participatory Research
GHR	Global Health Research
HIC	High Income Countries
IDRC	International Development Research Centre
IMCHA	Innovating for Maternal and Child Health in Africa
IMF	International Monetary Fund
IR	Implementation Research
KAP	Knowledge, Attitudes, and Practices
KT	Knowledge Translation
LMIC	Low/Middle Income Countries
TBA	Traditional Birth Attendant
UniLúrio	Universidade Lúrio
U of S	University of Saskatchewan



# 1. Chapter 1: Introduction & Literature

## 1.1 Premise of the research

When it comes to promoting the health of women and children, a significant body of research has investigated how to best reduce mortality and improve health outcomes. This was acknowledged by the Secretary-General of the United Nations in his 2010 Global Strategy for Women and Children's Health, when he asserted that "We know what we need to do" (1). Despite this, significant gaps exist between research and practice in many areas of the world. This is highlighted by the fact that, as of 2015, high income countries (HIC) had an average maternal mortality rate that was 20 times lower than low and middle income countries (LMIC) (2).

This discrepancy between what we know and what we do is often referred to as the knowledge to action gap (3) or the know-do gap (4). For the past decade, there has been a call to bridge this gap in the global health field through the practice of knowledge translation (4), as it is thought to be a feasible way to reduce global health inequalities (5). The term *knowledge translation* (KT) has been defined by the Canadian Institutes of Health Research (CIHR) as (3):

The exchange, synthesis, and ethically-sound application of knowledge - within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system.

The World Health Organization (WHO) has acknowledged that "knowledge derived from research and experience may be of little value unless it is put into practice"(6), and has adopted the CIHR definition.

Alongside this movement, the field implementation science was born. Implementation science (or implementation research) is "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services and care" (7). Although KT and IR seem to have similar goals, KT and IR have very different roots, but this similarity has led to IR sometimes being referred to as *knowledge translation research* (8), which has added to the

confusion and controversy in terminology that will be explored in section 1.2.1. There have been calls for more IR, such as in the Statement on Advancing Implementation Research and Delivery Science from the Third Global Health Systems Research Symposium in Cape Town (9).

The field of development research has not escaped this trend towards IR. In 2016, the British Medical Journal of Global Health stated that they wanted “to participate in the development of implementation science but with a focus on equity and on a better adaptation and/or creation of theoretical, conceptual and methodological approaches in the context of LMICs” (10). Currently, Canada’s International Development Research Centre (IDRC), an offshoot of Global Affairs Canada, is funding 19 implementation research (IR) projects as a part of its Innovating for Maternal and Child Health in Africa (IMCHA) initiative (11). It should be noted that this was developed in the era after the Muskoka Initiative, which was a G8 commitment to focus on Millennium Development Goals 4 and 5 (concerning maternal and child health), which the Muskoka Summit attendees noted had been slow to see progress (12). As such, IDRC’s move to increase IR is occurring within the context of development aid, which in its current form has been criticized as “inadequate, donor-determined, charity-modelled transfer of funds that obfuscates the historic reasons for why today’s rich countries are rich and poor ones still poor” (13).

One of these IDRC-funded IR projects, the *Alert Community to Prepared Hospital Care Continuum* (ACPH) project, is occurring in the Natikiri district of Nampula, Mozambique. In Mozambique, neonatal and maternal death rates are unjustly high. According to Mozambican national statistics, the 2015 maternal mortality rate was 489 deaths per 100,000 live births, and the neonatal mortality rate was 2800 deaths per 100,000 live births (14). In contrast, rates in Canada were 7 maternal deaths and 320 neonatal deaths per 100,000 live births (14). Both the Mozambican federal government and Nampula provincial government have identified perinatal mortality as a high priority health issue (15).

The ACPH project is a 3.5 year maternal and child health IR project in the Natikiri district of Nampula, Mozambique. It is a joint effort between the community of Natikiri, Lúrio University (UniLúrio), the University of Saskatchewan, and the Nampula Provincial Department of Health. The IR team, which is composed of both local university faculty/staff and visiting faculty/staff associated with the University of Saskatchewan, as well as representatives from the Nampula Provincial Health District, finalized the research plan in late 2016 after conducting a baseline study

to assess community needs. The community needs and priorities were sorted into 7 different strategic areas as noted in the project implementation plan:

1. Support knowledge and practice of sexual and reproductive health (SRH), with a focus on rights, family planning (FP), and contraception, education and adolescent sexual health. Interventions included a community theatre program, working to provide additional training to the community's traditional birth attendants, reviving several local health committees, working with schools to revive a peer to peer sexual education program, and creating a community radio program to discuss sexual and reproductive health.
2. Teach emergency obstetrical care guidelines and "Helping Babies Breathe" and "Helping Babies Survive" to maternity staff. Interventions also included providing ultrasound training for the maternal health nurses.
3. Develop a community-based "motorcycle-ambulance" transport system for pregnant women and newborns to attend prenatal visits and receive timely urgent care.
4. Develop prenatal care that women, men, and their families in the community see as important, acceptable, and useful, and allows the birth care team to make recommendations for a safe delivery.
5. Fully integrate of Marrere General Hospital into Nampula City Maternal Health Services. Interventions included rehabilitating an operating room at Marrere General Hospital for dedicated C-section use, as well as advocating for 24/7 staff coverage to make emergency C-sections available at all times.
6. Support and enable the Mozambican government's anti-bribery campaign in hospitals. This included working with the hospital co-management committee to implement a new complaint system so that patients felt comfortable raising concerns with their hospital care.
7. Increase administrative capacity of Marrere General Hospital to respond to increases in service demand.

In total, this expansive 7 strategy project includes 21 overall objectives, with 87 sub-objectives and associated indicators to monitoring project progress as created by the IR team. Project implementation began in March 2017, and is scheduled to continue until October 2020, though it has now been extended until December 2020 due to the current SARS-CoV-2 pandemic. The program aims to ensure that community members will be educated about family planning and sexual/reproductive health, and that the hospital will be prepared to receive labouring women and

newborn babies in a “safe and culturally sensitive manner” (15). To help achieve these goals, the project committed in the project implementation plan to:

utilize on-going implementation research to provide regular, updated information regarding each objective throughout project implementation enabling continual quality improvements. The implementation research variables of acceptance, adoption, cost-effectiveness and sustainability will be measured for each objective (15).

Community feedback has been elicited via annual community meetings and intermittent surveys.

The IDRC’s call for applications to the IMCHA initiative was intended for “Implementation Research Teams”, with IR outlined as way to “generate new knowledge about how interventions work, for whom, and under what conditions” (16). Further, the ACPH’s project implementation plan outlined that they would “use implementation research” to measure outcomes such as acceptance, adoption, cost-effectiveness, and sustainability (15). Though the definition of IR may be under debate, the term IR was used for this research to be consistent with project’s terminology but was not the central process under study. Rather, the research sought to explore an application of KT within the project, specifically looking at how community knowledge is incorporated into it. The study of KT can be useful tool when framing knowledge use within IR (as framed in its current use). For example, within IR projects, there are steps where various knowledge sources are synthesized (whether from the academic literature, community feedback, familiarity of local context, etc.) during the course of project design and continued monitoring and evaluation. This synthesized knowledge then impacts how the knowledge is applied during project implementation.

In the case of the ACPH project, a lot of feedback is sought out from both the community and other stakeholders, but the researcher team in the ACPH project are the ones who ultimately decide how all of the knowledge and feedback goes on to influence implementation. Consequently, though the role of researcher is often thought of one that is solely in charge of creating knowledge, these implementation researchers also have the added responsibility of serving as the gate keepers who control how data influences the project implementation. Considering this, their role as maternal and child health researchers has to take into consideration a lot more than just academic literature that addresses maternal and child health interventions. They must integrate information gleaned from the local community, and then consolidate knowledge into an effective, locally adapted intervention that will benefit the people’s health. This role of controlling how knowledge

goes on to shape the interventions is a key piece of the IR process, as it can be seen as a gatekeeping function that determines not only what knowledge is applied, but also how and to what extent it goes on to effect project interventions.

However, the process of data collection and knowledge gathering is not necessarily a harmless process. It carries inherent risks, such as the risk for research fatigue within a project's target population. *Research fatigue* is when communities become tired of (and often jaded by) the research process (17). When research fatigue occurs, it is harmful to the community and it damages the community's relations with the university researchers (17-19). Factors that have been found to contribute to a greater risk for research fatigue include being a marginalized community, being in close proximity to a university, filling out repetitive questionnaires, and not seeing action based on participation in the research (17). However, if the participants in the research perceive change as a result of research engagement, then this can be protective against research fatigue (17). This knowledge about research fatigue risk factors allows us to see the connection between KT within development research projects and research fatigue. Data collection and gathering knowledge inherently is going to have some risk for research fatigue in populations that are already marginalized, especially when other risk factors are present. However, by ensuring that the knowledge collected from the community is acted on as a part of the KT process (meaning the process by which knowledge is collected, validated, and applied) and the project changes to reflect the participants' knowledge, then this is protective against research fatigue.

## 1.2 Introduction to the Research

This thesis is an instrumental case study of the processes affecting how community knowledge is used by the ACPH IR team, specifically examining systemic factors that impact how community knowledge is incorporated into the project. Specifically, the **primary objective** of this research was to identify barriers and facilitators within the KT process as executed by the academic body that is the ACPH research team. The **secondary objective** of this research was to introduce a critical approach to evaluating the KT process within IR, evaluating KT as an important factor in the risk for research fatigue, into the academic literature. To meet both the primary and secondary purposes of my research, I outlined the following research questions:

1. How do team members view the process of KT within the ACPH project?
2. In what ways has the knowledge gained from the community during the project been used to inform subsequent project interventions?

3. What strengths have helped the research team incorporate community knowledge into project implementation?
4. How does the structural context of research for development influence how community knowledge is incorporated into project implementation?

The following thesis is divided into 5 chapters. Chapter 1 provides the background/rationale for the project, as well as an overview of the KT and IR research. It also includes a review of the existing literature examining the phenomenon of research fatigue. Chapter 2 provides a methodological overview of data collection and analysis. This will be followed by two findings chapters – Chapters 3 and 4. Chapter 3 focuses on the research team’s KT process, with the systemic barriers to KT providing the focus for Chapter 4. Finally, Chapter 5 covers both the discussion and conclusion, providing a summary of key findings, contextualizing findings from this project to the broader area of development research and projects, and future directions.

## **1.2 Literature Review**

### **1.2.1 What is Knowledge Translation?**

With other disciplines starting to focus on translating their findings into real world actions in the mid-20<sup>th</sup> century, one of the earliest being the field of rural sociology in the 1950s looking at how innovation diffuses among people (20), the health research field was relatively late to the game. It was not until the year 2000 that the term *knowledge translation* started to be used within health research, when the terminology was coined by the CIHR (4). As highlighted by the National Centre for Dissemination of Disability Research, it is “a relatively new term that is used to describe a relatively old problem”(21). The term is now one of the most commonly used terms in the Canadian health field when referring to the process of turning theoretical and substantive knowledge into action (22).

In the years since CIHR first introduced knowledge translation, there has been a proliferation of interest on the process of turning knowledge to action. Alongside this growing interest has been a multitude of different terms used to describe various aspects of this knowledge to action process. In 2006, Graham et al. (3) identified 29 different terms that refer to different aspects of KT. In 2009, McKibbin identified over 90 different terms (22).

In this mess of terminology, it must also be noted that terms have sometimes been used interchangeably, such as “knowledge translation” and “implementation science” (23).

Additionally, there is disagreement on definitions or specific connotations (24, 25). Term use also varies in frequency depending on geographic location (22). For clarity, this thesis utilizes the terminology first introduced by Graham et al. (3). Several key terms that are featured in this thesis are:

**Knowledge translation** – Graham et al. referred to the widely accepted CIHR definition, which states that knowledge translation is “a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of [citizens], provide more effective health services and products, and strengthen the health care system.” (26) Notably in this definition, KT is a continual process that must include the application of the knowledge in question. As put forward by Straus, Tetroe, and Graham (22), there is also an emphasis on the knowledge being *actively* applied, as opposed to thinking of KT as a passive process.

**Knowledge transfer** – this term is similar to knowledge translation, as it is used to refer to transferring knowledge to stakeholders in order for the knowledge to be put into use, and also acknowledges that there are multiple ways of knowing (3). However, the biggest difference is that this term sometimes regards the knowledge transfer process as being only unidirectional, with the stakeholders not having any knowledge worth sharing with the researchers, though this is not always the case with all institutions that use the term (3). Additionally, a criticism of the term is that it may be misinterpreted by readers as only the first step in the knowledge use process, even though this is not the case when looking at the context in which the health field generally uses the term (3).

**Knowledge exchange** – this term is the same as knowledge transfer, but is more widely accepted since it explicitly acknowledges that the knowledge sharing is not unidirectional (3).

**Knowledge dissemination** – this term simply refers to the spread of knowledge that has been created in the research process, but dissemination itself does not involve the creation of knowledge, nor does it emphasize the importance of the involved parties using the knowledge once it has been spread to them (3)

In addition to the above terms, it is also important to highlight that the term “translational science” also appears in the literature. Though the concept of translational science is similar to knowledge translation in the fact that it aims to turn knowledge into something tangible, its focus

is more towards the end of the spectrum that turn laboratory based research into biomedical interventions (3, 27, 28). Woolf (29) highlighted in 2008 that although the technical definition of translational research encompasses the whole spectrum of taking knowledge from laboratories or communities and using it to develop/implement interventions that benefit the health of the population, more people think of the bench-to-bedside part of the spectrum that emphasizes the development of NEW interventions. Thus, the National Institute of Health in the US subdivided "translational research" into two subcategories in 2003, with "T1" translational research aiming to turn laboratory based biological discoveries into new medical interventions, and "T2" translational research aiming to make sure that the knowledge we've developed through scientific studies is actually applied in real world and is used to improve people's health (29). The research process has now been further subdivided into T0, T1, T2, T3, and T4 translational research, but the assumption that all translational research is biomedical and laboratory based research still persists (28). Thus, Fort calls for the NIH and the broader US research community to adopt some other term (such as knowledge translation) to describe translational research that occurs in other parts of the knowledge to action spectrum (28).

Understanding these differences in terminology provides implementation science researchers with guidance on what constitutes knowledge translation, and what distinguishes it from other knowledge-sharing processes. Knowledge translation is meant to be a dynamic, collaborative, and active process that concerns the ethical *application* of knowledge. This use generally occurs in one of two ways: either at the end of a research project (end-of-grant KT), or it can occur within the research process (integrated KT) (26). With the latter, it is expected that the ultimate knowledge users/stakeholders will then be actively engaged with the research throughout the entire project, whereas this is not the case with end-of-grant KT (26). When knowledge translation only occurs at the end through by sharing findings with academic peers via publications and conference presentations, then this is not considered true KT since it in itself is not applying the findings, but instead disseminating the findings for others to go on to apply (22). Despite this, the CIHR still lists these "typical dissemination and communication activities undertaken by most researchers" as a form of end-of-grant KT (26), contradicting the organizations' own definition which requires that the knowledge must be applied in some way for it to be considered KT. It should be noted though that the CIHR doesn't separate bench-to-bedside research from non-



laboratory research, as the NIH does, meaning that the definition of application may vary between the different types of science despite being bundled together under the same definition.

Another debate that exists in the KT literature is centred around the nature of “knowledge”, including which knowledge should be eligible for translation. The body of KT literature mostly relies upon empirical knowledge that only draws upon knowledge acquired through scientific research (30), which is in line with a positivist worldview. Indeed, Grimshaw et al. (31) submitted a debate paper to *Implementation Science* that the KT field should narrow this focus further to only include systematic reviews, with even single studies presenting too little evidence to be appropriate for anyone other than an academic audience. However, Kothari et al. (30) argue that tacit knowledge – context-specific knowledge discovered through practice and experience – also has a role to play in knowledge translation (30). This type of knowledge is aligned more with a social constructivist worldview (30). Given the distinct philosophical underpinnings of these two approaches, and the specific problem that the research team members may be exploring, the choice of knowledge-to-action approach would affect what knowledge is considered valid, and subsequently what knowledge should be integrated into project interventions.

### **1.2.2 Knowledge Translation Theory and Frameworks**

When implementing an intervention, having a theoretical basis to inform the knowledge translation process helps lead to successful implementation. Indeed, Eccles et al. have referred to research done without a theory as “an expensive version of trial-and-error, with no a priori reason to expect success or to have confidence of being able to replicate success if it is achieved” (32). Like terminology, there is also no shortage of KT theories to choose from. A review of KT theories within cancer and chronic disease research identified 159 different KT theories, models, or frameworks (33). However, of those 159, 60% of them were used only once within the 627 interventions. Additionally, 3228 publications were excluded during screening because the study did not report using any sort of theory, model, or framework to guide implementation. Since having a theoretical basis for implementation both improves likelihood of success, as well as making it easier to evaluate why any particular intervention failed or succeeded, researchers’ neglect of KT theory is detrimental to the field and has certainly contributed to implementation research being considered a “poorly understood field” (34).

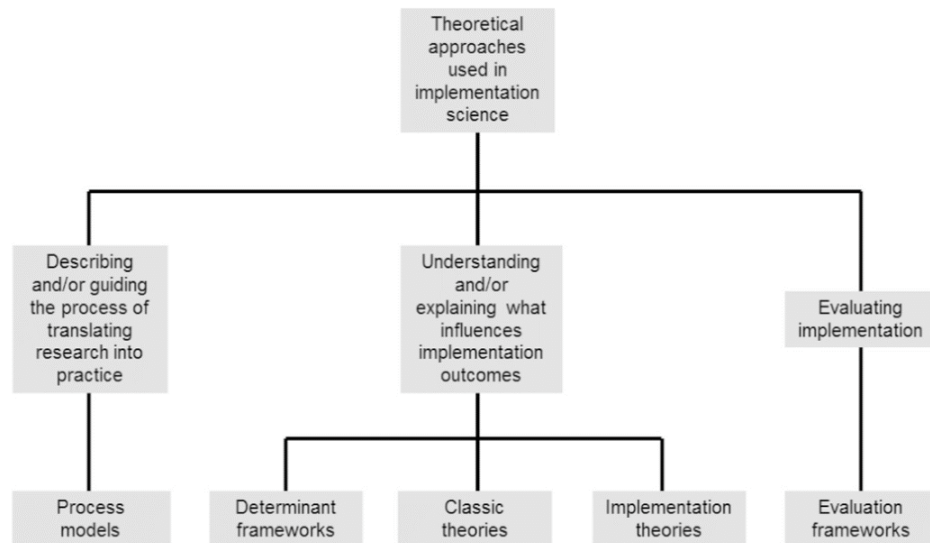


Figure 1. 1 - Nilsen's categorization of implementation models/frameworks/theories based upon approach (32)

These overabundant and underused theories also vary in their approach to KT. Nilsen et al. (35) have broken down KT theories into three major categories, as outlined in Figure 1. The three categories are as follows: frameworks that examine the process of knowledge implementation; frameworks that examine the factors that influence implementation outcomes; and frameworks that examine the outcomes of implementation (35). The frameworks that examine the factors that influence implementation outcomes (middle of diagram) can be further broken down into determinant frameworks, classic theories, and implementation theories (35).

In a scoping review by Strifler et al., the most commonly used theories would fall under Nilsen's categorization of classic theories, and include work conducted using Social Cognitive Theory by Bandura, Transtheoretical Model of Behavior Change by Prochaska and DiClemente, and the Health Belief Model by Rosenstock (35). These classic models are most applicable when working towards individual behaviour change within a target group, though there was evidence of researchers occasionally applying the theories at the organization or community level (35). In a 2020 scoping review by Esmail et al. building upon the 2018 Strifler et al. paper, new frameworks were noted as hybrid theories/frameworks that encompassed more than one of Nilsen's organizational categories (36).

In the realm of Canadian health research, one particularly notable KT specific process theory is the Knowledge-To-Action framework (Figure 2) by Graham et al. in 2006 (3), which has been adopted by the CIHR (26). It was designed by incorporating elements from 31 pre-existing frameworks in order to create one single model that would incorporate all steps from knowledge creation to the end of implementation, while also illustrating that KT should be cyclical and that

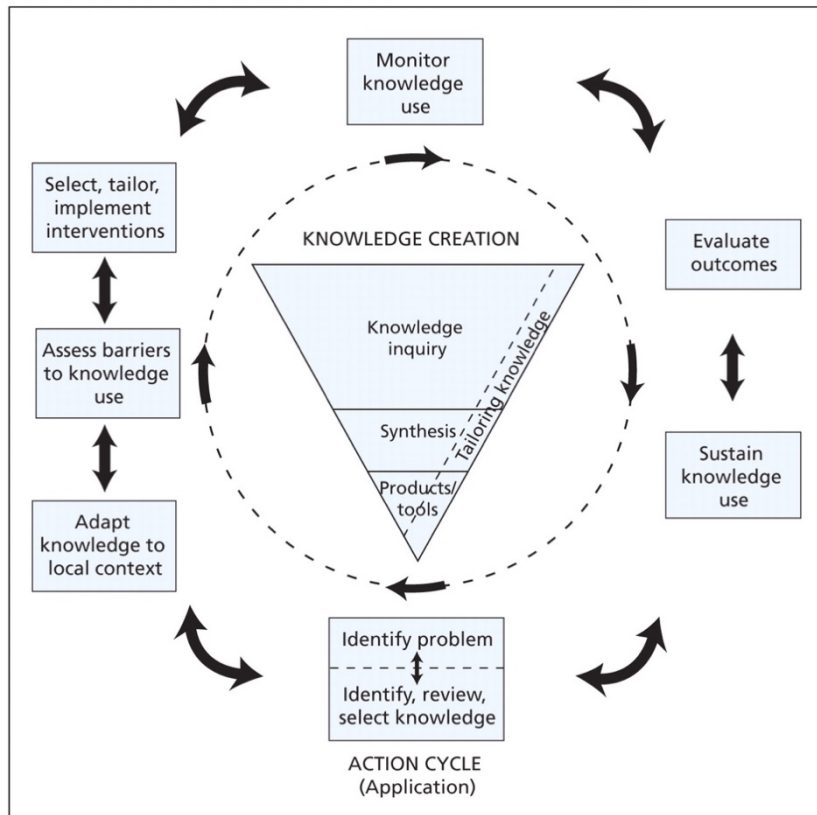


Figure 1. 2 The Knowledge-To-Action Cycle, from Graham (3) as presented in Straus et al. (16)

research (or knowledge creation) can happen at any point in the cycle (3). This framework had 470 unique citations between the time it was published and June 2013 (37). For context, that is four times as many citations as the next most-cited article published in the same journal that year (37). However, even though it is one of the most cited KT specific frameworks, it still suffers from underuse. In the citation analysis paper by Field et al., 146 of the papers reported actually using the framework in some way, but most of these references were vague and gave no details of how the framework guided either implementation or retrospective analysis of implementation (37). Of these 146 articles, only ten gave examples of how the cycle was used, and only seven incorporated both the knowledge creation and knowledge application components that were called for in the original paper (37). This further illustrates the neglect of underlying theory that occurs within the

knowledge translation field. One of the criticisms of KT theory has been that they are incompatible with real life application due to their linearity, which has led to some recent work looking at the combination of KT and complexity theory (38-40). Through the combination of these two fields, authors hope that KT theories may be applied more, especially in complex areas such as health systems where linear KT models are less applicable.

### **1.2.3 Knowledge Translation Tools and Future Directions**

Aside from concentrating on knowledge translation theories, the literature also has suggested the use of various types of tools that may be able to increase knowledge translation within the health field. One proposed solution calls for the use of knowledge brokers (KB), who would have the job of consulting the most recent academic literature and working with their respective organization(s) to figure out the best way to integrate the new knowledge into the organization's policies or practices (41, 42). In a research article by Hamel & Schrecker, it was brought forward that civil society organizations could even serve as a form of KB in LMICs for local policy-setting organizations (42). However, Dobbins et al. conducted a Canada-wide RCT on implementation of public health interventions and found that KBs were not always an effective way to increase knowledge use, and argued that they should not be considered a one-size-fits-all solution given that they often require a large amount of resources (43). A 2018 publication by Dobbins et al. noted that KB success was largely dependent on organizational factors such as leadership and strategic prioritization (44). Another tool that has been suggested to increase knowledge translation includes the use of knowledge mapping (45), which Ebener et al. argue would be especially useful in the complex domain of KT within global health. In a paper by Azimi, Fattahi, and Asadi-Lari they called for librarians and information scientists to play a larger role in the process, specifically in organizing the data so that the transition to application of the knowledge can go more smoothly (46).

However, moving away from these technical adjustments to the KT process, the most recent push in the knowledge translation literature is towards the use of IKT and/or scholar-practitioners (47-55). This approach to facilitating KT is more user-centred as it changes the way that knowledge is *created*. IKT acknowledges that knowledge created by academia is not always relevant to many users. Thus, IKT differs from traditional KT in that the knowledge users will *actively* participate from the first stage of the KT process – understanding the research context, identifying the problem that the research will address, and subsequently creating the research

question(s) – all the way until the end of knowledge implementation (56, 57). As defined by Graham and Tetroe, IKT “involves collaboration between researchers and research users in the research process including the shaping of the research questions, deciding the methodology, involvement in the data collection and tools development, interpreting the findings and helping disseminating the research results” (58). Plamondon and Caxaj further suggest that deliberative dialogue can be used as a tool within IKT based on the relational nature of KT within complex systems (59). Gagliardi, Kothari, and Graham commented in 2017 that using the IKT approach to KT research was “promising”, though they also noted that it still has many hurdles to overcome such as deciding on how to ascertain intervention effectiveness, deciding on common terminology, and changes to funding structure to accommodate the longer timeframe required to establish good relationships between researchers and stakeholders (47). Smith and Wilkins also noted that a challenge specific to scholar-practitioners conducting IKT research is that knowledge generated by these individuals is sometimes not considered valid knowledge by the larger academic community (53).

It has been noted that IKT has similarity to participatory research (58), a type of research that is a useful tool for anti-oppressive, critically oriented researchers (60). Additionally, IKT has been cited as a tool to connect knowledge to action in order to advance health equity (61), and has been suggested for use in global health governance to address “wicked” problems (62). However, despite this anti-oppressive alignment, a 2020 paper noted that widely used KT (including IKT) was criticized as only supporting colonial ways of knowing (63). To this end, the authors suggested the use of institutional ethnography as a tool to implement IKT, since institutional ethnography illustrates how people working within institutions, such as governments or healthcare systems, can unintentionally reinforce unjust power dynamics (63). By using IKT within institutional ethnography, the authors propose the research can be a tool for decolonization and work towards institutional change if stakeholders from the institutions being studied are included throughout the research process (63).

#### **1.2.4 Research Fatigue**

Any time that research is conducted, researchers need be cognizant that all potential risks and benefits are weighed against each other. Academia’s history is littered with examples of populations that were exploited for knowledge and harmed in the process of conducting health research with human subjects, such as nutrition experiments in Canadian residential schools, the

Tuskegee Syphilis Study, to experimentation done in Nazi Germany (64-66). The first two experiments continued beyond the international community's acceptance of the Nuremberg Code in 1947, and the Tuskegee study even continued beyond the Declaration of Helsinki in 1964 (67). Some Western scientists at the time even held the view that the Nuremberg Code in particular was "a code for barbarians and not for civilized physician investigators" (Katz, 1996, as in (64)). Research ethics has slowly improved with time, with more scientists adhering to professional codes of ethical conduct, such as the Canadian Coalition for Global Health Research Principles for Global Health Research (68), but academia still has ethical issues to confront. One of these emerging issues is research fatigue (17-19, 69-72).

*Research fatigue* is a phenomenon that occurs when communities have had too much research done on them (referred to as having been "over-researched" (17)), and subsequently becomes exhausted and jaded by the research process (17). Clark defines research fatigue as "when individuals and groups become tired of engaging with research, and it can be identified by a demonstration of reluctance toward continuing engagement with an existing project, or a refusal to engage with any further research" (17). Finau et al. noted that other possible results of research fatigue include respondents giving "white lies" as answers to researchers' questions, or simply providing answers that participants thought the researchers wanted to hear regardless of whether they were true (69). Lying to researchers was also found to be a common response to over-research when Sukarieh and Tannock investigated research fatigue within the context of a Palestinian refugee camp (18), as well as by Zahidie et al. when studying injection drug use in Pakistan (72). Research fatigue can lead to a distrust of research, and it damages the community's relationship with researchers (17-19). In a 2019 piece on Rwandan refugees observed to be showing signs of research fatigue, one of the refugees noted that, "We think that researchers take pride in our increasing problems in order to research more. ...We are still facing the same problems despite the number of researchers we have met." (73).

Sukarieh and Tannock listed three contexts which have historically been over-researched: marginalized populations, populations which have experienced some sort of disaster, or communities that are close to an urban centre or university (18). Clark also noted that populations that were frequently asked to participate in research were more likely to become fatigued (17). Other risk factors included participants being asked to complete the same types of questions on multiple, subsequent questionnaires (17, 19), or researchers focusing on community weaknesses

instead of strengths (18). Another study looked at how risk for research fatigue was exacerbated when the research required participants to recount trauma, such as research on sexual violence (74). A commonly cited reason for research fatigue was if participants did not perceive a benefit from being involved in the research (17, 18, 69, 70, 73). Conversely, if the participants have perceived a change as a result of research engagement and from sharing their knowledge with the researchers, then this can be protective against research fatigue (17, 73).

More meaningful engagement in a project does not automatically ensure the participants will perceive a benefit, though. Thus, simply switching methodologies to a community engaged format is not a one-size-fits-all answer to protect against research fatigue. Sukarieh and Tannock warn the academic community that this methodology shift, to methods such as community based participatory research (CBPR) or action research, are not “a panacea”, highlighting how even community based research in an extremely over-researched refugee community was problematic (18). One resident of the refugee camp being studied commented on participatory research by pointing out that:

“In normal research, you just meet that person one time, they interview you and they go ... In this participatory research we are stuck till the researcher finishes all the workshops. Sometimes there are twenty or more [workshops], and they are long and boring” (18).

Thus, the researchers encourage the academic community to instead ward off research fatigue by applying a critical lens to the local context and the position of power bestowed upon researchers through global institutional structures instead of assuming community engaged research would be ethical.

Considering these risks for research fatigue, Finau et al. make the acute observation that “Knowledge and experiences (data) are finite resources and shouldn't be mined mindlessly and recklessly” (69). Yet, despite these known risks to both the community and to research integrity, research fatigue remains absent from international research ethics' guidelines (70). This then propagates the problem as researchers are less likely to be aware of the issue. In a 2017 publication (70), researchers' and research stakeholders' perceptions of “over-research” in South African communities was investigated. The researchers interviewed reported that they did not fully understand the term “over-researched community”, and then went on to give a variety of answers about what would constitute an over-researched community. These answers often reflected an over-

simplified interpretation of the term, such as one researcher's response that, "... to me when it is said the community is over-researched, [it's] ... when two researchers are researching the same people" (70). Some researchers deferred the responsibility to research ethics boards, saying that these committees would have considered it if it were actually a problem (70). Lastly, though many of the interviewees denied it was a potential problem in their own research community, they were also not willing to completely dismiss it as "a theoretical possibility", indicating a "sense of ethical discomfort" with the issue (70). Koen et al. argue that we should be hesitant to use the term since researchers and stakeholders are unclear about what it means, and that we "lack a standard definition or objective epidemiological calculus" (70). Alternatively, Sukarieh and Tannock call for a different approach, saying that over-research and research fatigue should become more prominent topics in researchers' ethical training (18).

### **1.2.5 Research Gap**

When combining the concepts of KT and research fatigue together, a new way to frame KT appears. The community of Naticiri has multiple risk factors for research fatigue. These include: being in close proximity to a university, having had multiple other research projects occur in the area. These include a study on child marriage spearheaded by Plan International (64), a study on factors influencing teenage pregnancy, a study on perspectives on female initiation rites, and ongoing health research through UniLúrio's "One Student, One Family" program, just to name a few.

Additionally, it already has shown some signs of research fatigue, as I saw while doing fieldwork as a research assistant during May/June 2017. This round of fieldwork was intended for me to get a feeling for what the project was, get to know the research team, and to try decide on what I would like to my own thesis research. During this time, I had the opportunity to spend a day with students participating in the "One Student, One Family" program. This program connects health sciences students at UniLúrio with a family in the community that has volunteered to be a part of the program. The student visits the family once per week for the duration of their multi-year degree to survey the family's health knowledge and then provide follow-up education on that week's health topic. While spending my afternoon with a group of students and visiting their assigned families, more than half of the families weren't home for the visit. This is despite the fact that the students visit at the same time each week, so the families know when to expect the visit. A preceptor for the students commented to me that she suspects some of the students do a poor job



of establishing rapport with the families on weeks when they aren't being evaluated, so the family will then avoid being home when the students are scheduled to visit. This avoidance of participation aligns with a potential symptom of research fatigue, as outlined above.

The ACPH project, as an IR project, has the goal of utilizing “on-going IR to provide regular, updated information regarding each objective throughout project implementation enabling continual quality improvements.”(15) As an IR project with the explicit goal of continual “quality improvements” based on new information attained during project implementation, this could be seen as an application of KT as it is taking new knowledge from the community, and turning this knowledge into action to improve project implementation. Viewing this as an application of KT, the IR team is filling the role of knowledge curators, knowledge creators, and knowledge applicators, and KT is a continual process. The team collected knowledge (both from the academic literature, and from the community), designed and modified the project's interventions based on the community's knowledge, and is undertaking ongoing monitoring and evaluation of the project. Thus, within this process, the research team serves as the gatekeepers of KT as they are ultimately in control of how knowledge goes on to influence project implementation.

This application of KT (outlined in the previous paragraph) has not been thoroughly addressed within the existing KT literature. The intended method for how community knowledge would be used to affect ongoing project implementation was also not named in the official project proposal or project implementation plan. Comparing the project's structure to the literature on KT, it does not align with end-of-grant KT, as the process is not trying to simply bridge academic knowledge creators with clinical practitioners or governmental policy makers who are tasked with the job of applying knowledge that the academics create. However, it also wouldn't align with IKT given the participation level of the community. As discussed in section 1.2.3, IKT requires stakeholders to be actively involved in deciding the research question, research methods, analysis, etc. The ACPH project is a community based project, as it consulted with community stakeholders throughout the development and implementation phases of the project. The community stakeholders then provided feedback when deciding project priorities and voicing opinions on project effectiveness. However, the research also isn't completely aligned with all aspects of IKT since the academic team retained control of project methodology, knowledge collection methods, knowledge interpretation, and funds.

Considering these theoretical bases for KT, the KT process identified as the object of study within the IR project can be considered a “community based” project since it is oriented towards creating community level change, but does not integrate the community within the whole research process (75). Although the KT literature has started to explore KT within complex systems, (38-40), the exact form of KT being studied (bridging community knowledge into project interventions via the research team) is a form of KT that hasn’t been directly addressed. It is unsurprising given that the field of implementation research is regarded as highly complex and “poorly understood” (34), and that the topic of KT within community-based IR hasn’t been a main focus. Adding another layer of complexity, the research team and research funding bodies are forms of academic institutions. Institutions themselves have organizational structures and “unwritten, customary behaviours” that affect members’ decisions and actions (76). Between bureaucratic processes, organizational structures, other institutional influences, and being embedded within the realm of research for development, there are structural factors that have the potential to affect the IR team’s actions and decisions, which would in turn would affect the knowledge translation process. Thus, it appears that this type of KT process located within an IR project is a unique area that could be investigated.

Drawing back to relevance of KT to research fatigue, the KT process within the ACPH IR project has a further impact on the community’s risk for research fatigue. As noted in the literature review, the research participants perceiving change in response to participating in research reduces the community participants’ risk for research fatigue (17). Within the ACPH project, there are three main ways in which knowledge is continually gained from the community: yearly focus groups held with community stakeholders, questionnaires about various community health indicators that are administered to the community every 6 months, and then additional meetings as needed with specific groups as issues arise or new parts of the project are implemented. This large amount of data that is collected has potential to assist the team in tailoring interventions to the community needs. If the interventions are well-tailored based on community knowledge, there is the potential that it can be perceived by the community as change based on community input, thus could decrease the risk for research fatigue. However, an intensive data collection regimen also puts the community at a great risk for research fatigue, as any knowledge taken from the community which does not result in perceivable changes (as the case would be if there are barriers within the

KT process) are risk factors for research fatigue that may make the community more likely to want to disengage with the research process.

If KT is well implemented, it has the potential to neutralize these risks. For the community to perceive that their knowledge has impacted the project trajectory, it is then a logical step that new knowledge from the community would have to be taken into consideration via KT to make a perceivable difference in project execution. With the research team directly controlling this process, the academic institution then has the power and the ability to reduce the risk of research fatigue through the application of a sound KT process that uses the community's knowledge to influence project implementation. Considering this, the lack of research on KT processes within academic institutions conducting IR becomes problematic.

## 2. Chapter 2 - Research Methods

For my master's thesis project, I conducted a case study of KT within the ACPH research team's IR project. The **primary objective** of my thesis research was to investigate the KT process used by the ACPH team, and subsequently identify barriers and facilitators of this KT process. Analyzing the factors that either hinder or help the KT process gave the research team the opportunity to use these results to optimize their KT process throughout the remainder of their project. The team aspires to be community informed to ensure the project is both acceptable to community members as well as sustainable in the long run. As such, the IR team want to ensure that their KT process is allowing them to successfully incorporate the community's knowledge and feedback, and they are open to finding out ways to improve community knowledge integration via KT. Illuminating KT barriers is a necessary step if the research team is going to address any limitations within their KT process. However, by concurrently uncovering the team's KT strengths, this helps to facilitate improvement of the KT process since the strengths are resources that can be drawn upon to help address identified barriers.

The **secondary objective** of my research is to introduce a critical approach to evaluating the KT process within IR into the academic literature. Since research fatigue is not yet regularly considered as a potential risk to research populations, critically oriented researchers must instead find ways to adjust for the risk within our own research designs. As outlined above, the task of KT within implementation research is a complex endeavor. If the structure of the academic team and its organizational processes affect the project's ability to incorporate the community's knowledge into ongoing interventions, then highlighting these trouble spots will alert future implementation researchers to areas of their own KT process that should be given extra care when deciding on their own KT framework and process. The combined lack of theoretical knowledge within the KT field as it applies to IR (as outlined as the research gap in section 1.2.5) and the impact that ineffective KT can have on a community's risk for research fatigue compound into an ethical problem that deserves attention within the academic literature.

To meet both the primary and secondary purposes of the research, the following questions were chosen:

- 1.) How do team members view the process of knowledge translation within the ACPH project?
- 2.) In what ways has the knowledge gained from the community during the project been used to inform subsequent project interventions?
- 3.) What strengths have helped the research team incorporate community knowledge into project implementation?
- 4.) How does the structural context of research for development influence how community knowledge is incorporated into project implementation?

## **2.1 Research Setting**

### **2.1.1 Geographic Area**

The Natikiri district is an administrative area in the city of Nampula, Mozambique. The district is serviced by the Marrere General Hospital, which has close ties to UniLúrio (the project's host research institution). Nampula, which is capital of Nampula province, had a population of 743,125 people as of 2017 (77). This urban centre is the fourth largest in Mozambique. Portuguese is the official colonial language of Mozambique, though traditional languages are still spoken across the country. According to the 2017 census, only 16.6% of Mozambicans learn Portuguese as their first language (78). In Nampula, the largest ethnic group is Makhuwa, and the Makhuwa language is spoken widely (79, 80).

### **2.1.2 Sociopolitical Context**

#### **2.1.2.1 Mozambique**

Mozambique's history and political context has been shaped by its colonial past. After initial European contact and colonization in the 1500s, Portugal held power in Mozambique until the 1969-1974 Mozambican War of Independence (81). The war ended with the signing of the Lusaka Agreement on September 25, 1974 (81). As a newly independent state, Mozambique began the transition to socialism (81) and established a successful health system based on the principles of comprehensive primary health care (82). Still recovering from its recent war, Mozambique was receiving foreign aid to supplement its healthcare system, with all aid channeled through the national government (82). From there, funding was distributed through the national health service so that each area of the country could spend the money as best lined up with their own health needs

and priorities (82). However, all of that changed after the 1980's RENAMO (Resistência Nacional Moçambicana) rebellion, where the newly formed militant group RENAMO fought against the rule of the Frelimo political party.

During the rebellion, the RENAMO forces destroyed public infrastructure, severely reversing the country's progress in establishing public health and education systems (82). Most notably, RENAMO destroyed 822 primary healthcare centres (81). In 1987, near the end of the war, the country was heavily in debt (83). Mozambique signed onto a structural adjustment program in order to receive loans from the World Bank (83). This structural adjustment plan required the country to reduce health spending and encouraged private sector health initiatives (84). The wages of workers within the healthcare system were slashed, and future aid to the country was channeled through independent NGOs (85). This resulted in a disjointed healthcare delivery system that focused on short-term improvements with acutely measurable metrics instead of developing a long-term and sustainable system (84). Additionally, the higher wages and *per diem* reimbursements offered by internationally funded NGOs removed skilled workers from the national health system, and further demotivated local workers involved in providing services through the national health service (84).

In 2000, the government made an effort to curtail this problem by implementing the Kaya Kwanga Code of Conduct, which asks NGOs to pay healthcare workers a wage that is equal to that of the national health system and to avoid incentivizing workers to leave the national system (86). This was part of a movement to encourage a "Sector-wide approach" (SWAp), which was a government initiative to strengthen the public health system and reduce vertical programming (83). To support the Code of Conduct, a "common fund" was created to centralize donor funds (83). Although the intent of this approach was seen as a step in the right direction, the Code of Conduct was criticized because the code was non-binding, the government was still encouraging privatization within the health sector (85), and major donors such as the US Government and the Global Fund did not sign the agreement (83). As such, any progress made by the agreement was largely negated by the large influx of vertical program funding for HIV/AIDS provided by the United States' PEPFAR program in 2004 (83).

In 2008, the Mozambique Compact was implemented as an attempt to address shortcomings of the Kaya Kwanga code and streamline funding from donors who hadn't signed the Kaya Kwanga (83). However, PEPFAR (the largest single donor) still fell outside of this

agreement (83). Mozambique's continued dedication to SWAp became more hopeful with USAID's agreement to provide their funding within the centralized SWAp funding in 2016 (MISAU, 2016a, as in (83)). However, many of the spending limits originally imposed by structural adjustment in 1987 and the resistance of all donors to cooperate with the centralized plan continue to limit the effectiveness of the SWAp initiative (83).

In this already underfunded health system, problems were made worse since 2016 and the present following a public financial scandal regarding a \$2 billion loan from Credit Suisse and a Russian investment bank (87). As a consequence, the IMF (international monetary fund) pulled out all aid funding in 2016, leading to the country being given a poor investment rating (87). This, in turn, led to a significant decline in foreign investment (87), an economic driver that Western powers had pushed to make the economy reliant on in the first place.

#### 2.1.2.2 Canada

Throughout the colonial age, colonizing countries directly exploited the resources and labour in their claimed colonies. Canada, as a settler colonial state, was then economically strong around the time when many countries started claiming independence from colonial rule. Canada has continued to benefit from this early accumulation of wealth and the global colonial order, which enables ongoing imperialism. Some of this happens through how Canada negotiates free trade agreements, including clauses that allow Canadian corporations to sue foreign governments if their policies threaten the company's profits (88). These have often been used by mining companies to sue foreign governments for passing laws that protect water or other ecosystems (88).

In other areas, Canada's contribution to "brain drain" of health professionals from LMICs which provide a perverse healthcare subsidy from LMICs to a HIC, Canada being one of four countries internationally that voted against the United Nations Declaration on the Rights of Indigenous Peoples, as well as Canada's role as a global mining giant – despite mining being a sector known to harm health and that has a long history of human rights abuses – all highlight the paradox between Canada's stated aspiration to decrease global health inequity and actions that instead exacerbate it (89). This paradox has been especially exacerbated since the Harper era of Canadian politics, which saw Canadian development and corporate interests formally combined when the Canadian International Development Agency was amalgamated with the Department of Foreign Affairs and International Trade to form the new Department of Foreign Affairs, Trade and Development (89). This led to a more overt alignment of Canada's trade interests with its

development agenda (89). There had been overlap and alignment before, such as the incident which saw the Canadian International Development Agency helped to re-write the Columbian government's mining code (90), but this change of departments made the alignment more obvious and was accompanied by an official "Canada first" development approach (89).

When "development" projects are aligned with corporate interests, the corporate projects often go on to harm host populations, such as through displacement and/or impoverishment (91). However, the Canadian state then makes money off the companies' taxes, while the host countries populations have to pay the environmental, health, and social costs of resource extraction without seeing economic benefit. Looking at the case of sub-Saharan Africa, a 2017 analysis funded by Global Justice Now found the region to be a net creditor to the rest of the globe when all outflowing assets (including corporate profits from externally located multinational companies) are weighed against aid, grants, and loans given to governments (92).

### 2.1.2.3 The Realm of Development Aid

Development aid is one way through which Canada and Mozambique are connected, such as through projects funded by the International Development Research Centre. However, development aid has been described as an "inadequate, donor-determined, charity-modelled transfer of funds that obfuscates the historic reasons for why today's rich countries are rich and poor ones still poor" (13). A 2020 paper critiquing the implications of the term/application of "international development", such as how it doesn't acknowledge that international capitalism is relational and that poverty in one area can be connected to the generation of wealth in another, noted that the implications of an international development approach is not well suited to the interconnected, globalized world (93). Specifically looking at the domain of development research, a subset of development aid, Crane explored how the rise of academic global health programs that accompanied the HIV treatment era in Africa creates unequal partnerships since the "global health" departments and programs in North America and Europe are dependent upon and benefit from the very health inequalities that they aim to serve (94). Furthermore, the very definition of "global health" that the Consortium of Universities for Global Health established in 2008 relied upon the input of institutions in the Global North while disregarding input from their partner institutions in the Global South (94). Although noted that this does not mean the field is simply opportunistic and lacks humanitarian roots, Crane argues that even humanitarian efforts are embedded within political systems and should be critiqued as such (94).



## **2.2 Research Design**

### **2.2.1 General Methodology**

To conduct my research on KT strengths and barriers within the ACPH project, I designed a research project in the form of a case study. Preliminary fieldwork occurred in May to June 2017, when I spent time in Nampula becoming oriented to the area, getting acquainted with the research team, and doing some baseline research assistant work for Strategy #1 in the ACPH project. Primary data collection occurred between September 2018 and March 2019. As an evaluation of the research process itself, the participants in this study were research team members rather than community of Natikiri.

### **2.2.2 Case Study as a Research Tradition**

A case study of the ACPH project's knowledge translation process was the best research methodology for this project because it is a good methodology for the description of a phenomenon in a holistic manner and within the phenomenon's natural context (95), and it is regarded as one of the best research methodologies for answering "how" and "why" questions (96). Though the positivist era of research regarded the case study as a poorly defined type of research that was not scientifically rigorous, it has now come into favour within the recent postmodernist movement that acknowledges a socially constructed reality and multiple ways of knowing (95). A case study is particularly applicable to this project because it is attempting to study a process that could not properly be studied outside of its natural context, and it is best analyzed using multiple sources of data (97). This was optimal to address my primary research objective, as the barriers and facilitators of KT within the ACPH project are revealed in the natural context.

Case studies as a research tradition are well poised to give an in-depth understanding of a particular phenomenon, as opposed to giving cause and effect explanations (98). The knowledge translation process is complex, and becomes even more so when applied within a real world context. Looking for simple cause and effect explanations, as can be offered by more quantitative research methodologies, does not do these intricacies justice. Additionally, case studies are able to respond to unexpected variables, as they allow the researcher to shift their focus to "emerging issues" discovered during the study instead of being restricted to a small number of pre-determined factors (98). Even given this exploratory nature, another one of case studies' strengths lies in the fact that it is empirical research since it relies on observable phenomenon.

Some quantitative researchers take issue with the validity of results of qualitative studies as they inherently rely on the researcher to interpret the results (99). However, this is an unfair standard to hold qualitative research to since quantitative research is also prone to researcher influence. As highlighted by Yin (99), quantitative studies are not free from researchers' personal interpretation even though these scientists (with a more positivist epistemology) often assume them to be. In quantitative studies, the perspective and worldview of the researcher can frame the interpretation of the results through the underlying assumptions behind the formulation of the research questions. Qualitative studies do rely on interpretation, but are up front about these interpretations and include checks and balances into the research methods, and are upfront about research ontology/epistemology, to ensure that how conclusions were reached is transparent. In my own research, I ensured a detailed data collection plan (as outlined in the remainder of the "Research Design" section) was in place before beginning data collection, and also used reflective journaling throughout the data collection period so that I could reflect on of my own attitude or pre-conceived notions about the data. Unless otherwise noted, I followed the case study methodology put forward by Stake, 1995 (98)

### **2.2.3 Case Selection: The ACPH Project**

As classified by Stake (98), there are three types of case studies: intrinsic, instrumental, or collective. In the two types of case studies where only a single case is looked at (intrinsic and instrumental), the largest difference is the researcher's purpose of doing the case study. If the researcher's main goal is to examine the intricacies of a **specific** case, then it is an intrinsic case study (98). Here, an in depth analysis is sought to highlight the uniqueness of the particular case of interest. When instead the researcher's focus is to explore a particular phenomenon through a focus on its expression within a bounded context, it then becomes an instrumental case study (98). In this type of case, the case itself is only the secondary focus, and is chosen as a vehicle in which the researcher can investigate the issues or the research question at hand (98). Though not always clean cut or mutually exclusive, it is considered helpful to identify which type the case primarily is as it will guide data collection and analysis. Since the primary purpose of my thesis is to investigate KT issues that are systemic within the realm global health projects by looking at KT within the ACPH project as a representative case, I applied an instrumental case study design.

## **2.2.4 Conceptual Framework & Research Participants**

I have defined my case as the phenomenon of knowledge translation within the context of the ACPH IR project. Thus, since the IR team themselves serve as the gatekeepers for the KT process (e.g., deciding what knowledge is collected, how the knowledge is attained; see pp. 26 for further discussion) the boundaries of my case study only include these researchers and do not directly include community stakeholders. These community members were present at some events where I made participant observations since they serve an important role of informing the project's direction, but they were not the primary subjects in these observations. Instead, I focussed on the IR team and how the team interacts with community members/stakeholders, how the IR project events were organized, the IR team's own internal processes, knowledge collection and translation practices, and project documents.

## **2.3 Research Tools**

Data collection took place through participant observation, semi-structured interviews with the IR team, a document review, and a focus group, which are all common forms of data collection within case study research (95). Though the format of the observations and focus group was not the traditional format as proposed by Stake (98), the use of other data collection styles are not precluded in the case study literature. Stake asserts that researchers are the best judges of which data collection methods are best suited to their particular case (98), so data collection tools have been slightly modified from his originally proposed format to better serve the purpose of my case study.

### **2.3.1 Document Review**

The document review was chosen to inform research question 2, "To what extent has the data collected during the project been used to inform subsequent project interventions?" (100). The document review consisted of collating a list of all the types of community knowledge/feedback the team gained by reviewing the archive of group emails, which included circulated project documents including questionnaires, records from community focus groups, meeting minutes, general research team correspondence, and activity reports. All communications and documents were reviewed for relevant content regarding KT, and any relevant information was transferred into a summary document organized by email date. Given the large volume of project documents,

it was be important to have a system developed beforehand so that data collected from these documents could be organized (98). Thus, by reviewing all communications and circulated documents and considering whether or not any information reflected any aspect of KT before coding, this subset of information allowed me to turn this large dataset into a manageable document.

### **2.3.2 Semi-Structured Interviews**

All members of the IR team (N = 15) were approached and asked to participate in a semi-structured interview, and 14 of the team members chose to participate. Interviews took place in an area of the participant's choosing – either an office on campus, the interviewee's home, or a neutral third space of the participant's choosing, such as a hotel lobby – with one participant opting for a phone interview. All interviews were conducted in English, with the use of a Portuguese translator offered for those whom were not comfortable speaking in English. Interviews took approximately one hour each.

While conducting these interviews, I made an effort to ensure I practiced active listening as this results in richer answers from the interviewees (95, 98). These interviews focused on the team members' own perspectives of KT, how they saw knowledge being incorporated into ongoing project implementation, how decisions were made regarding the incorporation of the data, and who made these decisions. Interviews were semi-structured to allow for the discussion to be adapted to any emerging themes/issues. An outline of pre-chosen research questions has been included in Appendix A. Interviews were recorded and transcribed.

### **2.3.3 Participant Observations**

Participant observations included research team interactions, particularly meetings at which project implementation decisions were made. Other times where observations were made included meetings with stakeholders, meetings with community groups, a theatre group performance, and traditional birth attendant (TBA) training sessions. Observations were recorded as field notes. Acknowledging the impact that institutional practices can have on the members' actions (76, 101), extra attention was given to the context, climate, and power dynamics present in situations, including when the research team interacted with other stakeholders. These observations were planned to help to understand the process the team goes through when incorporating community knowledge into project interventions (research questions 1, 3, and 4).

The key way that I approached this differently from Stake's (98) recommendation for observations within case studies is that I did not take a non-interventionist approach. Though he suggests naturalistic observation, in which the researcher tries to be akin to a fly on the wall and watch processes unfold as they ordinarily would if the researcher wasn't there, I instead used participant observation. As an integrated member of the IR team already, it would be inappropriate to purposely not engage in any of the meetings. This is more in line with an institutional ethnographic approach to observations (102). I accounted for this participation by including self-reflections along with my observations after every encounter. Observations and reflections were recorded in an observation guide adapted from Creswell (103), and is attached as Appendix B.

#### **2.3.4 Focus Group Discussion**

An invitation was extended to all research members present in Nampula during the bi-annual Canadian research team visit in late October 2018 (N=10). Of these team members, 6 chose to participate, and the focus group was scheduled for the beginning of November 2018 based on the availability of the willing participants. The focus group took approximately 1.5 hours, and took place on campus at UniLúrio. The discussion was conducted primarily in English with some Portuguese-to-English translation. I moderated the discussion, following the outline presented in Appendix C. The focus group discussion was audio recorded for later transcription.

In line with the primary goal of my research, I wanted to elicit challenges that the team experienced when trying to incorporate community knowledge into ongoing implementation. However, eliciting potential project barriers from members of a united team can be challenging. Team members may be hesitant to highlight project weaknesses as group dynamics can create an optimism bias, since team members do not want to be the one to doubt the project's potential (104). This can be compensated for if a group discussion is instigated where members are asked to assume we are at the end of the project and that our knowledge translation process definitely has failed, and they are asked to brainstorm ideas why this might have occurred. When finding flaws is regarded as a team effort that helps move towards a common goal, then teams are more willing to voice ideas regarding what the problem might have been (104). This technique, based on the concept of "prospective hindsight", was developed for use in identifying risks for business ventures in complex fields where risks are not always predictable (105). KT within IR is similarly complex, so I expected that Klein's method could be useful for eliciting challenges within the KT process that may not otherwise be uncovered. I incorporated this type of focus group discussion into the

end of my data collection, and adapted Klein's "pre-mortem" process into a focus group discussion guide that was tailored to the ACPH research process (Appendix C).

## **2.4 Timeline**

Research took place between September 2018 and March 2019. The document review was started immediately upon arrival in Nampula during the first week of September 2018, and was completed December 2018. Interviews with the Mozambican team members took place between early-October and mid-November 2018, and with the Canadian team members during the last two weeks of October 2018 during their semi-annual visit. Interviews with Canadian team members that were not present in Mozambique were completed between February and March 2019 both in person in Saskatoon, as well as one completed by phone. The focus group occurred in November 2018. Lastly, participant observation spanned occurred between September and November 2018.

## **2.5 Data Analysis**

As with all research, the analytical lens through which I view the data has a huge impact on the analysis. This lens is shaped by many things, including the research purpose, and the intended audience. By acknowledging and presenting the lens through which data has been analyzed, it provides transparency to the analysis process. I have approached this work with a social constructivist worldview, which acknowledges the inherent depth of the data and multiplicities of truths (106). Additionally, I would like to emphasize that I am approaching this as an instrumental case study – looking at how this particular case reflects the larger system of KT within IR, as executed within development aid – and I have used a critical lens (informed by critical theory, as outlined by Kemmis (107)) in order to do so.

Critical theory is distinct from other theories as its unifying theme is a goal of overcoming social injustice (107). As such, it requires special attention be paid to social structures and aspects of power (107). By using a lens informed by this theoretical backing, I looked at the data to determine not how we can work within the established system to minimize the risk for research fatigue, but instead questioning how the system is constructed to either protects against or create risk for research fatigue in the first place. Additionally, to identify how the process aligns with different aspects of the KT as identified in the literature, I will be specifically referring back to the KT literature review.

During the analysis process, the document summary, the interview transcripts, the focus group transcript, and the participant observation notes were uploaded into NVivo 12.6.0. The data was reviewed for information that pertained to the KT process such as what community knowledge was attained by the research team, how community knowledge was incorporated into the project, how the KT process (in regards to knowledge from the community) was executed, and how KT decisions were made. Inductive coding was used. After the initial round of coding, the codes were reviewed for duplicates/significant overlap, with these redundant themes then being consolidated (ex. community inclusion and community participation). To increase the validity of the coding, I then completed a subsequent read through of the entire dataset while comparing it to the final list of codes to ensure all data was coded consistently before I located the findings within relevant academic literature (95).

In this analysis, abductive reasoning – a common type of reasoning based on using the best available evidence to reach the most probable conclusion (108) – was used to interpret the meaning of the data. I attempted to ensure the trustworthiness of findings was through the use of crystallization (as outlined by Ellingson, 2008 (109)). This approach is particularly suitable for case studies, as it aligns with creating a rich description of the phenomenon in question. In crystallization, multiple methods are used to complement one another to create a “deep and thick” description from which multiple truths can be gleaned.

## **2.6 Strengths and Limitations of the Research**

As a university educated individual who grew up in a high-income country of the global north, my privileged upbringing has coloured both my conduct as a researcher as well my interpretation of the data. The research is written from a Western standpoint, and most of my previous research training has emphasized positivist epistemology. I tried to reflect on my own positionality throughout this work through a combination of self-reflection, journaling, and introspective discussions with others. Additionally, I tried to adhere to the list of ethics for global health students as outlined by Pinto & Upshur<sup>1</sup> (110). In particular, I journaled along with all of my interviews and observations so that I could reflect on my own feelings/perceptions, and

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<sup>1</sup> Pinto and Upshur (2010) published a paper examining global health ethics for students. and outlined humility, introspection, solidarity, and social justice as key ethical values for students to apply when participating in global health work

incorporated reflections about my fieldwork experience into essays and reflections for nursing coursework that I did alongside my fieldwork. The purpose of this self-reflection was to help make me more aware of my own background and assumptions, to consider my personal context, and to make self-evident the theoretical lens through which I see the world, which I was then able to reflect upon and bring to bear on the analysis of my field notes. Using reflexivity and having introspective conversations with others helped me identify and clarify my own positionality, to see and name power issues more clearly, and to compare my emerging understandings with others. Seeing that as a strength was a new stance for me as a researcher trained in more positivist science.

There were limitations on the findings of this study due to it being conducted in a multicultural, multilingual setting, where English was not the first language for several of the interviewees. This limited my understanding of their responses, as a few of the interviews had to go through a Portuguese to English translator. My Portuguese is not at a high enough level that I would have trusted my ability to accurately convey my ideas, nor fully understand their responses in depth, so a translator was necessary. Additionally, other subtleties in non-verbal communication that vary between the cultures were a limitation on the study. To address this, I incorporated reflective listening into my interviews in order to clarify the meaning of the interviewees responses and ensure that I have interpreted the meaning correctly.

Being an established member of the research team gave me access to team activities, and made participant observation more natural and feasible. However, this may have impacted how my colleagues conducted themselves during one on one interviews, and may have influenced what information they are willing to share with me as a peer. Additionally, since the research team is small, anonymity is harder to maintain. This may also have impacted how much the team members were willing to share in their one-on-one interviews.

The research team members were aware and supportive of my investigation of how community knowledge was being used to inform the project. The act of studying this process drew attention to KT, which may have impacted the team's KT process. Notably, discussions with team members regarding the lack of an established KT process that became apparent during the interviews may have spurred the focus group discussion regarding how a framework could be beneficial. If this served to advance how much community knowledge went on to inform the research team's interventions, then this could be seen as beneficial to KT even if it changed my own case study's data.



Lastly, my work on this project was limited by the amount of time which I could spend doing fieldwork in Nampula. All fieldwork had to be completed within a 90-day period due to visa requirements.

## **2.7 Ethical Considerations**

Given the fact that this study is being done on the premise of optimizing data collection to reduce the risk of research fatigue, extra care was taken during data collection process so that it didn't contribute to the very problem that it was trying to avoid. Thus, the research questions were pared down to address the key issues being studied, and data that there was no specific use for or data that will not directly benefit project implementation was not collected.

Secondly, there were ethical considerations in regard to anonymity of research subjects since the research team is small, and it even anonymized responses in the final analysis may be identifiable by other members of the team. To address this, participants were informed during the consent process that anonymity was not guaranteed, but that best efforts will be made. In this final document, all personally identifying information such as names of participants or research roles of participants have been removed. Interviews were anonymized by using a numbering system (Participant 1, Participant 2, etc.), while focus group participants are identified by letter (Participant A, Participant B, etc.). However, it is worth noting that the ACPH project itself is supportive of this research, so participation of research team members should not negatively impact them even if anonymity is not guaranteed.

This research and the overall ACPH project received ethical approval from both the University of Saskatchewan Behavioural Research Ethics Board (Beh-REB 15-112) and the Universidadé Lúrio Research Ethics Board (07/Abril/CBISUL/17).

## **2.8 Framework for Ensuring Quality Research**

To ensure high quality of this research, all eight principles of from Tracy's 'Eight "Big-Tent" Criteria for Excellent Qualitative Research' were considered in both the research design, execution, and analysis (111). These criteria include ensuring the research has: 1.) a worthy topic, 2.) rich rigor, 3.) sincerity, 4.) credibility, 5.) resonance, 6.) significant contribution, 7.) ethics, and 8.) meaningful coherence (111). First of all, the topic is worth researching due to the significant impact that KT processes may have on research fatigue, as laid out in the literature review. Rich rigor was assured by having outlined the theoretical constructs clearly and transparently, including

multiple forms of data collection, and including abundant voices from the one on one interviews. Sincerity has been addressed through the outline of my own positionality, and through transparency of methods. Credibility is improved by using a thick and rich description, crystallization, and multiple different interviewee voices. Resonance is achieved through studying a context with transferrable findings, and by attempting to convey the findings in a way that has have aesthetic merit. The research is significant since it generates new knowledge that hopefully implores change in research practice in the future. It was conducted in a manner that acknowledged both procedural and situational ethics. Lastly, meaningful coherence is pursued by showing the complexity of the KT process within IR, especially when working in the field of development aid, which is the goal of the following three chapters.

### **3. Chapter 3 - The Role of KT in the ACPH project**

In the data analysis process, a total of 42 codes and sub-codes emerged from the complete body of data. These are presented in Appendix D. From these codes, broader, interconnecting themes were identified and will be explored within Chapters 3 and 4. Direct quotations have been corrected for readability. Laughter by the interviewee or focus group participants has been denoted in the transcript by using asterisks around the word laughter.

In this chapter, these themes are first explored as they pertain to the first two questions set out in my thesis: 1) How do team members view the process of knowledge translation within the ACPH project; and 2) In what ways has the knowledge gained from the community during the project been used to inform subsequent project interventions? To answer these questions, I primarily use data collected from one-on-one interviews with the research team. From there, I expand upon these findings drawing upon discussion from the focus group and document review. Lastly, I wrap up this section by exploring my third thesis question: 3.) What have been the team's strengths that have helped incorporate community knowledge into project implementation? I present this together with data from my second research question as there was significant overlap and interconnectedness between the data pertaining to my second and third research questions.

#### **3.1 The Process of KT within the ACPH project**

##### **3.1.1 What is Knowledge Translation?**

To start exploring my first thesis question, I will first focus on participant responses to the first two interview questions. Considering, "What does knowledge translation mean to you?", the answers that were given directly by the researchers mostly focused on the concept that knowledge from a study was supposed to be shared with either the community where the research was done or with stakeholders in a way that the results could be understood by the target group. Most of the answers focused in this way on knowledge transfer, possibly so that the knowledge could be used by that group, by not directly involving change invoked by the IR team. As explained by Participant 10:

So, for me knowledge translation is a process, right? Of trying to transmit the different findings that you get from our research – the different insights that we get from our research – and trying to get this information to the right people so they can use it and so that it can have an impact on the health.

Participant 3 elaborated:

For me, I understand knowledge translation as the way to present the results of a study ... the presentation of the results of a study in a way that the beneficiaries or stakeholders can understand it easily, because most of the times researchers they present results as scientists, no? And sometimes the audience doesn't understand exactly what the researcher wants to say. So knowledge translation is this process, to take the research results and make it easy for the audience to understand.

Only one participant directly included a referral to action/change in their definition of KT:

Taking results from our research project and using them in an effective way to produce change and improvement in knowledge ... um, acquisition both at a community level, and at a structural level, and then hopefully at the evidence based policy decision making at the government level.

- Participant 12

Participant 7 noted a difference between how they personally defined KT and how they thought it is academically defined:

As far as I understand it, kind of academically, it's how knowledge gained through research is translated to decision makers, particularly policy makers. But, in our case, and in general, I have a bigger definition, or a wider definition, in the sense that our responsibility is to not only translate the knowledge gained from the research back to the policymaker, but back to the community. And in all research, back to the subjects anyway, so that they can understand and learn from what they've participated in. So it would be a wide range of audience. And also, basically, to me too, knowledge translation is even just publishing a paper. It's taking the data and putting it in a form that other people can understand and can use for whatever their purposes are. It could be further research, it could be decision making of some kind of policy or program, or NGO, or whatever. It's just ... very wide.

- Participant 7

In the conversation following this quotation, the research team member elaborated that it was the APHRC – who is the consulting group hired by the IMCHA project to facilitate knowledge translation – who defined it as just taking research results to policy makers. As stated by Participant 7: “I think that this APHRC, or whatever that acronym is ... their idea of knowledge translation is translating our results to government, very narrow ... I think.”

Looking at the documents circulated by the research team, Participant 7's

impression of the APHRC definition of knowledge translation aligned with the activity report from the KT workshop hosted by the APHRC for IMCHA research teams. In the activity report, the event was summarized as follows:

The training was very informative as we covered a variety of techniques for knowledge translation such as: identification of the target audience, crafting of a compelling message, making the message news worthy, writing a policy brief and drafting a dissemination plan.

- Activity Report from Sept 2018 Knowledge Translation Workshop

The schedule from the same workshop listed the “Aim” of the introduction to knowledge translation section as “Introduction to knowledge translation and its value in policy engagement”, and the subsequent sessions had an emphasis on how to engage policymakers/decision makers, and also notably talked about knowledge “dissemination” without focusing on how to act on research results.

In one interview, the research team member at first gave a definition of knowledge translation that focussed on disseminating knowledge to the community where the project is occurring, but then continued on and acknowledged the complexity of KT within implementation research specifically, acknowledging how social realities affect what is easily implemented:

Well, for me, knowledge translation means somehow give back to the community all the knowledge and all the evidence that was raised throughout the study. Right? So it's translating the evidence back. It's the process of looking at our results and saying to the community, "That's what you can do ... you know, what we've found so far." But I also think that knowledge translation has different meanings in different type of studies, right? So, in implementation research, it means something a little bit different, and it's definitely more complex in my opinion than in clinical research, for example. You know? Because in clinical research the evidence sometimes is really clear. Sometimes it's not, but in most of the time it is. In implementation research, the social schema is so complex that it's really hard to say, "Okay, we found out that it's good for pregnant women to take iron pills." So let's go back to the pregnant women and say, "Okay, take iron pills." "But we don't have money... when, where, what time?" So it's a little bit more complex. It's not just going back to the community and saying, "We found out that this is good for you. Do that." You know? Because where are the women going to get that thing? You know, like transportation and all those things. The relationship of that women with their partners, and all those little things that are just beyond our control. So in implementation research it's a little bit different.

- Participant 13

Here, the IR team member acknowledges that affecting change requires more than just sharing information, since there are barriers to implementation.

These definitions given by the IR team members in the interviews focused on simply bringing knowledge attained through research to other groups, be it back to the community where the research was done or to other stakeholders or policy makers. This aligns more with the definition of knowledge dissemination or knowledge transfer (3), rather than the action or implementation piece emphasized in KT. Though these definitions didn't align with the generally accepted definition of KT, it does align with the finding from the literature that there is a lot of confusion around the similar terminology (22) and suggests IR's roots in adoption of evidence and the related behavioural change, without considering the complex systems within which the behaviour takes place that has become a more recent focus (112).

### **3.1.2 What counts as knowledge?**

While the research team's definition of KT wasn't centred on community knowledge use within the project, this did not mean that the research team did not believe the community's knowledge should be influencing the project. When discussing what kinds of knowledge from the community should influence project implementation, the interviewees reported that the community's knowledge should be incorporated, and the answers acknowledged a broad definition of knowledge. Participant 2 explains,

There's too much good information. There are many things in the community that can be used in the project. ... [It is] always good to keep on adjusting, because people and communities are dynamic. We may not have gotten all the data, and as we implement we may get new information, so it's always good to implement and digest. There's a need to have a continuous study as we implement.

The research team gave a variety of answers that all implied a broad view of what should be counted as knowledge, including a reference by Participant 3 to include knowledge that community members may have had passed down from their ancestors. Participant 4 referenced respecting existing community structures, such as the work of the local health committees, as well as including traditional rituals that are practiced. All of the answers attained from the research team aligned with this broad definition of knowledge. As stated by Participant 8, when asked what types of knowledge from the community should be used within the project:

I think basically everything in the sense of honouring and understanding and

respecting who they are and who we are. And what their belief system is. And their experience. I don't believe that knowledge translation ever works if I think that I have the answer, or I know that I can make those decisions for them. So they've got ... I think we have to listen to all of that.

As noted in the literature review (pp. 16), there is an existing debate about what should count as knowledge within KT. The answers put forward by the IR team align with a broad definition of what should be considered as knowledge, which is what was proposed in Kothari et al.'s 2011 proposition of ensuring that tacit knowledge is considered (30). There were no answers given by the research team or evidence within the other parts of the case study that only data from academic journals was to be regarded as knowledge within the IR project's KT. As stated in the literature review, this aligns well with a social constructivist worldview. Taking together these two findings about the research team's definition of KT and what is considered to be valid knowledge, although the IR team wasn't automatically associating the process of incorporating the community's knowledge into the project as a form of KT by that name, the team did believe that the community's knowledge and lived experiences should influence the project and be taken into consideration during project implementation.

### **3.1.3 How does the research team decide how knowledge is incorporated into the project?**

This intention to incorporate a broad spectrum of the community's knowledge relies upon a successful knowledge translation process. This brings us to the last interview questions that directly pertained to analyzing the team's KT process: When we get new knowledge from the community, how does that new knowledge go on to affect implementation? Is there anyone in particular who makes the decision of how the knowledge is incorporated into the project?

When analyzing the responses to this question, no common themes were identified. Rather, answers were inconsistent across the team. Some team members answered that all decisions are made on the Skype meetings with the whole group present, while one member said decisions about project changes based on new community information is made at the semi-annual monitoring and evaluation meeting with the stakeholders present. Other members thought people made decisions independently in their own areas of the project and only sometimes brought issues forward to the whole research team. Another member mentioned some decisions are made by just a sub-section of the group. This indicates a lack of a defined decision making framework, and is evidence that the decision-making framework for incorporating community knowledge had not

been talked about by the research team as a whole. No evidence of a defined decision-making framework was found in the document review.

Furthermore, when looking at the broader IR project, it was noted in an email that a specific research framework had not been chosen. It was noted that the IR project purposely hadn't planned on using a specific research framework, and instead were just going to focus on the implementation research variables of acceptability, adoption, cost-effectiveness, and sustainability. An implementation plan had been laid out in the Project Implementation Plan that contained research methods, but there was no distinct research framework outlining epistemology, ontology, or methodology. Looking at the literature, not using a framework to guide IR (or KT in general) was common, but it was identified as problematic since it reduced the ability to replicate results found during the IR project or know why successes were achieved (32). This ability to know why successes were achieved is one of the pillars of the IR field.

At the focus group discussion, which was notably conducted after all of the interviews in Nampula had been completed and the team members had already discussed KT strengths/barriers in the one on one interviews, one of the problems identified was a lack of a decision-making framework. As stated by the focus group participant, one of the possible reasons we may fail to incorporate community knowledge was:

Tools for knowledge translation [are] not developed. But what I want to say is ... are we prepared if we find something in the community, something that can impact the implementation of our project activities, so if we designed a way the feedback from the community will be integrated in the project implementation. What's the way?

- Participant A

Here, the participants in the focus group noted that although the community's knowledge may have been incorporated so far, a framework would ensure consistent incorporation into the future.

### **3.2 KT in the ACPH Project Based on Structured Data Collection**

Not having an defined KT process to incorporate community knowledge does not automatically infer that no community knowledge was incorporated. Instead, it indicates that it would either have been an unstructured process and/or have been conducted without a framework. Thus, I will now present evidence that helps to explore what ways knowledge gained from the community through structured data collection methods (ex. surveys, focus groups) has been used



to inform subsequent project interventions. To look at the different aspects of this, I first present evidence from the interviews and focus group as they pertained to structured data collection and data analysis, which was recurrently seen as a barrier to knowledge translation. I then move on to compare this with data from the document review, particularly findings from reviewing the data collection tools. From there, I will move on to presenting how tacit knowledge (gained through informal interactions, consultation, and relationship building) was incorporated into the project. Due to its overlap with community participation/inclusion, which was cited by participants in the interviews as one of the project's biggest strengths, it will be presented together with results from my third thesis question, "What have been the team's strengths that have helped incorporate community knowledge into project implementation?"

### **3.2.1 Structured Data Collection and Analysis**

To begin looking at how the structured data collected in the IR project's monitoring and evaluation surveys has been incorporated into the project, I open with a comment made by one of the research team members during the individual interviews, as it provides a good summary of the themes that emerged throughout the case study in regards to data collection and analysis:

Right now, survey information that we're getting we're not integrating. Well, here's an example. We bring information from hospital records to the last Skype meeting that show that the indicators that we've looked at for health are not improving within our project. So, we discussed why that might be. And we said we need to look at ... have a deep discussion on what we can do to see if those indicators can improve. But we're limited now by time, and lots of the indicators we know ... will probably be the major issues are 80% budget cuts ... in the hospital. And loss of 25 workers out of the hospital, something like that, to other places and other places. And terrible morale. So what do you do with that? ... So your question is, how do we implement it? We go back, and we say, "Okay." We discuss it at a group level and make some decisions as things come up. And look at ways to try to improve that in further discussion with the... like, for example, we would say to [the head of the hospital at the time], "What do you think can be done to improve these health indicators?" Our time ... when I go to Mozambique this time, I'll be spending a day in the delivery suite, and a day in the operating room, and just being there and working with them and talking with them and looking at what's working and what's not working. So some ethnographic observations, and further discussions at a group level to see where we can change. So I think we're taking that information, bringing it in front of the group and talking from both a Canadian and Mozambican perspective, and deciding on a plan from there. I think that's probably how we've mostly been doing things. We've been taking our things to IDRC and they've made some suggestions. We've taken it to the national level - the INS, which is their research arm, and the department of public health, which is the department under which this is happening

- and passing on information to them and what's happening to see if that... if we need to change anything from their point of view. We've had intermittent 6-monthly stakeholder meetings, with everybody involved to inform what's going on, and people there stand up and say, "Why isn't this happening?" or "Why did this not happen?" And we take it back to team meetings and make decisions. So, continue to glean... I would say we're not using our survey information as well as we could, but we're doing a heck of a lot of consultation, which I think is helpful.

- Participant 10

This statement acknowledges that a lot of the structured survey data was not being well incorporated. As will be explored in the upcoming section, this seems to be rooted in having a large quantity of data and having inadequate time/expertise to fully analyze it. The statement also acknowledge that a lot of information has been acquired through informal avenues and community consultations.

In the interviews, members of the IR team brought up the sheer quantity of data that the project has accumulated. Participant 3 noted in their interview that it may even be too much data:

I think it's a very rich project in terms of we are collecting too much data and information. It's a rich, like with different activities touching different matters and subjects in the community. They are touching on, even like men and human interactions in the family. We know that here the men are like the boss, and ... the power is not shared between women and men. He decides everything, and we are touching that as well with the project. They are touching cultural issues in the initiation rituals. We are touching even the scientific part, like in the hospital training that nurses... so we are touching different domains, and it's rich in our project.

- Participant 3

Participant 2 also noted this richness of knowledge, talking about how there was “too much good information.” Participant 4 also touched on this, talking about how there was so much information that it was hard to incorporate all of it given the project structure/timeline:

Along the process we are discovering new things. It is not easy to immediately adjust and include all of the things. This is one of the points... there is a lot of knowledge, but if we have objectives and we have the specific time to implement specific action, and then we discover other things... or sometimes a bit conflicting. Maybe what we need is a... we need a report where people discuss about this information, and the right time to use data

- Participant 4

With this plethora of data from such a knowledge rich project, it started becoming clear through my research that one of the problems being encountered in the KT process could be linked to data management and subsequent analysis. This issue of data management and analysis was a recurrent theme throughout my data. It came up in multiple meetings I attended as a participant observer, was discussed in other interactions I had with team members, and also came up in the one-on-one interviews. For example, Participant 3 talked about how the IR project had so much data, but we weren't effectively using it:

I feel that we are, since 2016, collecting a lot of data. But I'm not sure if we are already using this knowledge that we are being exposed to, because it is too much data. And I think we need to organize this knowledge in a way that will facilitate the translation. To make the influence that we would like at the provincial level. Even the national level, and the ministry of health. So there's a lot being collected, but I think we need to work hard to translate it in the right way, and in the right... maybe direction.

- Participant 3

This was also touched on by Participant 7:

Perhaps we're not analyzing the data as well as we should be. We're ... in a way, we're definitely not analyzing the data as a group, because we don't have any kind of group meetings, and so... because of the distance and all that sort of thing it makes a bit of a barrier. But we should be maybe having sessions, not just dealing with administrative things, but we should be having sessions dealing with the substantive things. Like we did spend probably most of the meeting - half of the meeting or more on administration. That was one of the first times I think that we've had a really long conversation about one thing, aside from the motorcycles. Like that often dominates. But we've never had like a scholarly meeting. It's mostly an agenda of things that need to be ticked off, and make sure that progress is being made.

This participant brought the lack of analysis to light from the perspective of not having an organized forum in which to discuss it, and that a lot of the project time is used to simply deal with day-to-day implementation. With the breadth of the project and team members' many obligations, more of the effort has been exerted towards simply keeping the interventions going without scholarly reflection on what we're learning.

Similar themes were brought up by Participant 11. In this interview, the interviewee first brought up an example of focus group discussions with participants to learn about the practice of girls' initiation rituals. A one-page activity report was circulated with a five-sentence summary of

the findings from this event, with the expectation that a more thorough report would follow. However, as of a year later, there still wasn't a report, even though the participant repeatedly talked about the focus group as being phenomenal. The interviewee then linked the knowledge gathering back to how data analysis was a serious barrier:

I think that we don't have problems with collecting knowledge. I think we're really good at it. I think we're doing a really good job at getting information, collecting data, and that's not the issue. For me that's not the issue. The issue for me is, I would say the analyzing that knowledge is maybe where we're a little bit raw. Like, you know we talked about the focus group before, and how the report seemed too... how can I say? Too small, maybe. So, from what I've been seeing from our activities and everything else, and the data that we get. Through SPSS, we get a lot of data. ... But I think qualitatively we're still more... I think our activity reports should be a little bit more flourished, and they're still very didactic... how can I say it? Very objective. ... But in qualitative I can say "No" and "Yes" for the same thing, and I can have divergent opinions about one subject, and I think our reports don't exactly convey that. It's more... it's more like, okay, this this this this this happened, right? ... It's very... this was done, like this, like this... like list, kind of? I think we don't elaborate. We don't try to get the understanding or the knowledge from it, so I think that's a problem in the analysis.

- Participant 11

The interviewee then went on to elaborate:

Let's take an example of the consultation at the pre-natal... the prenatal consultations. And we found that they had a material deficiency, and then we kind of took care of that. We found that there weren't enough activists that would explain what the consultations are about in the beginning. We took care of that. So basically, we collect, we look at the deficits, and then we take care of it. We materialize what is needed to fix that. But where I still think that we're lacking is the why. For example, okay, the consultations are going like this, like this, and like that. And then we saw a report of how many people went to their consultation, how many babies died... and we're like, "Oh, so this is happening." Why is it happening? But then I don't think that we follow through that well. So why is this happening? So, like I said, we're really good at collecting data, and looking at what's missing and fixing it, but we're still not trying to look at the whys.

- Participant 11

This highlights that the project is putting a lot of energy directly into implementation, and is working hard to collect information, but that information is not necessarily being used to address the underlying causative factors. I followed this up by asking the interviewee how they thought we

were handling data that brought up something that didn't just reflect a material need. That interviewee laughed a bit, and then replied:

I don't think we are. We're trying, but I don't think we are. Because I think it's... because it's more of a psychological area. And our group, our team, is not prepared to deal with that part. So material things we can, and diplomatic issues we can, and maybe looking at staff members we can, but I have... a thing for you. If we look at the beginning - like the first training sessions that we had, until the ones that we're having here, the number of healthcare providers participating has decreased, and we are not looking at that. We're not doing anything about people that don't go. And of course we can't force them to go, but we have to find out why they're not going, right? And that's a thing that we know is happening, but we're not taking care of it. And I think because our team is not... was not created to... we don't have a psychologist on our team. We don't have, for example, someone that can talk to healthcare providers and find out what they're unhappy about. In our surveys, we don't ask, "Are you satisfied with the trainings that you're receiving? And what have you learned from it?" We haven't had that conversation. We have a pre-test, and a post-test. What do you know? What have you learned? And that's it. But in terms of satisfaction, we're not looking at that.

- Participant 11

Here, two themes are noted. As will be discussed in Chapter 4, local health system funding is a significant issue and will impact the sustainability interventions. Additionally, this participant noted that the information we were collecting in the surveys she referenced was knowledge based, but did not look at aspects of tailoring the interventions to the local context. The next section will consider the content of the survey data that is being collected.

### **3.2.2 Types of Information Attained through Surveys**

In addition to looking at the data analysis process (or lack thereof), an additional factor to consider is what type of survey data was collected and how the surveys are processed. Reviewing the content of the surveys, the questionnaires which had been applied in the community focus largely on questions that address knowledge, attitudes, and practices of either sexual and reproductive health, or of healthcare practitioner practices, or of pre-natal consultation use, etc. This type of survey data requires statistical analysis to inform the implementation research principles that the project aims to accommodate (acceptability, adoption, cost-effectiveness, and sustainability, as outlined in the project implementation plan and highlighted in the introduction of this document) in its interventions.

Research team emails reveal that survey data is first entered into an excel file. This file is then passed along to the project's affiliated statistician, who produces a report from SPSS. However, these reports only contain descriptive statistics, and do not provide more complex regression analysis that could be used to infer associations. The team's statistician was once referred to by Participant 13 as a "ghost member", as the statistician didn't attend meetings, discuss what the data could mean, or become involved in the other aspects of the project. Descriptive statistics may inform an assessment of intervention effectiveness, but it does not provide information on the implementation research variables. It doesn't address whether the intervention has been acceptable within the implementation area, if people are adopting it, whether the intervention is feasible, or if it's sustainable.

Participant 9 noted that it was hard to get the team member to participate in data analysis:

So, after data treatment, for me, it's okay, ... maybe we could also do better interpretation. So I don't think there is enough discussion about interpretation. ... In fact, feedback is very small. And here, so I send everything to everybody. There are the three last reports, the last three reports about pre-natal consultation, neonatal consultation, institutional delivery. I only got one comment from the [local research team]. So... data collecting, and data interpretation.

However, considering that these reports aren't well suited to give information on implementation variables, we can question whether it is a lack of participation, or if the data just is not useful for impacting the research team's implementation activities even if there is participation in the analysis.

Regardless of how well suited the data is for analysis, the research team is lacking some of the expertise required for conducting this type of research. As pointed out by Participant 3:

[A barrier is] capacity of the people involved, because in the team we have lecturers, and students, and masters students. And not all involved, like experts [in] research, and particularly in implementation research. So it's not only lack of organization, but abilities as well. Of the team. We don't have all the abilities, so... yeah, I think these two aspects... yeah, because the project, it has different objectives.

This lack of research training was brought to light even more clearly when interviewing Participant 7:

Yeah, we really don't do a good enough job on data. We just rely on one person,

kind of, to do it. And he's good, but he's not a trained researcher. He's trained himself, for sure... and has a good head. But...

Participant 7 went on to elaborate that he didn't think the IR team had a lot of research training:

There's a few people with a master of science degree. I'm the only PhD. You know, we have MDs, MPHs... but they're not really a research degree. They might do something, like some kind of small research project, but it doesn't undergo any sort of thorough criticism and analysis at a research level. And you know, even like [the medical resident who was thinking about doing her residency research project within the ACPH project], she has to do a research project, but she's not going to be tested on the results and her analysis or anything. In fact, she could pass it on to the next resident if she doesn't finish it in her residency. Well, we encouraged her to finish it... . . . Yeah. So we're not really big on trained researchers. Yeah. Which is kind of interesting. I had not thought of that before. And it is a research project. It's funded as a research project.

Learning that the project is lacking people with advanced research training ties back to the finding from the document review that the project lacks a formal research protocol.

As discussed in the literature review, any data collection has risks, but especially exposing participants to repetitive questionnaires. Without targeting data collection to the IR variables, and without proper data analysis of the knowledge being collected via these data collection tools, benefits of data collection may not outweigh the risk or burden to the community. If using research traditions with high risk types of data collection, then data must not be treated as a limitless resource if we are being cognizant of limiting the risk for research fatigue. In this light, the lack of research training is problematic. Without advanced research training or an overall strategy/framework to guide the research part of the project, data analysis is stifled. This stops the research team from being able to make the project more appropriate, feasible, or sustainable based on the community's knowledge. It is simply data the community expends energy to give the research team that then doesn't go on to make any real impact in implementation.

Based on one of the researcher interviews, it appears that the funders were aware of this potential problem before project implementation. The history of this was described by Participant 12:

Participant 12: Even from the very start 6 years ago when we were putting the project in, the comment was, "Looks like great implementation. How are you going to do the research on it?" Where's the research versus just doing it? The answer has always been a bit of a push and pull of how to... what data are we going to collect?

How are we going to answer our things? Versus these people are dying and we need to help them. So you always... this is always a bit of a push and pull in global health, I think, and one needs to steer that line. And sometimes we're on one side of it, and sometimes we're on the other.

Interviewer: When you're saying you got that feedback about saying "Great implementation, but where's the research?", I'm just curious where that kind of feedback would have come from?

Participant 12: IDRC accepted our proposal, and said, "Okay, you've won the million-dollar project." Then they said, "Okay, now we're going to totally rewrite this project." So it was something that was new to us. Because we were sort of the idea when you receive a grant, you do the money according to what you said you were going to do. The IDRC was very hands on in helping us improve things from their point of view. So they were saying, "Well, we need to tighten up the research questions here? Because it's great implementation, but we're not implementing. We're doing implementation research." And that's always been a bit of a hassle, because we have to implement it to be able to do research on it.

This tension between implementation and research was seen elsewhere in the same interview, where the pressure was felt between the time/energy required to implement, and the time/energy required to research the implementation process. It was noted that it was hard to find a balance without letting the actual implementation fall short.

If research funding is being granted to teams who have very little research experience/support, then this would inadvertently be increasing the risk for research fatigue if those same teams are facing barriers moving from data collection to organization/analysis. In this case, the research team was aware of their lack of research expertise, and did actually try to remedy it. One of the interviewees touched on this after acknowledging the data analysis barrier that the team has faced:

Taking the data, analyzing and getting some good perusal of it and making some good decisions from it, that's where we're very weak. And that's where... that's why in situations like that sort of thing you may have felt that, "Why don't you take care of that Lindsey?" Because that's sort of something that's not a strong expertise on. So, we brought it back here in June, and we talked to [some data analysis specialists and statisticians at the U of S] about helping us out with that. And they met with us, and they're sort of... helpful, but not ready to get into it in a... like [one of the people we talked to], for instance, is interested, but he was going on sabbatical this year. So we then said, "Well we'll use [our statistician]", who's the guy you've met in Mozambique who is the statistician, and he gives us basic information, which is reasonable, but where do we go with it from there, and how do we use it? And that's where I feel weak in my own skills and looking for someone to do that. Which is



what brought about bringing [a student from UniLúrio] here for research improvement, talking to our research division, trying to find ways to make that better. Bringing yourself in, things like that. And I think that you're just... it's become clear to you, in a way, and it's led to this. That weak area.

- Participant 12

### **3.3 Strengths in KT from Tacit Knowledge**

In the previous section, I focused on how the evidence from my thesis research pointed to flaws in the structured data collection process. This led to information being collected without being subsequently analyzed, thus not being able to impact project implementation. However, this barrier to KT does not indicate that no community knowledge went on to influence the project. Returning to what was considered “knowledge” and eligible to shape the project, the research team members acknowledged a very broad definition of knowledge, and did not exclusively say that knowledge had to come from a structured form a data collection. The use of tacit knowledge, attained through community participation and interactions outside of structured focus groups and surveys, was seen as the project’s biggest strength throughout the interviews and is supported by the document review. The knowledge attained in this way shaped large parts of the project. This evidence presented in this section completes the picture of how community knowledge has been incorporated into the project, and will wrap up this chapter looking in depth at the ACPH team’s KT process.

A strength that was noted within the project has been how the research team has managed to navigate the local hierarchies and involve many of the local leaders before making other community contacts. Participant 12 explained how important it was to follow the community’s communication “protocols”. The importance of this was also emphasized by participant 3, who noted how important it was to follow community protocols when disseminating information, such as when trying to disseminate IR new information about sexual and reproductive health through the local health champions. Participant 3 noted here that if youth are bringing in the new information which contradicts common beliefs, it’s problematic:

[The sexual and reproductive health messages] are information that go against their background information. If it's a young girl from the community who brings the information, [the community] knows that this person got this information somewhere else. So, the ideal is to work with people who have influence, or influence people in the community.

Similarly, the team has tried to inform all local political and/or traditional leaders before any community meeting. Failure to do this risks the appearance of favouring a certain leader or political party:

What happens is like in each community, there is a community leader, and in some cases you can find the three of them in the same community, depending on the situation. So, there is no way how to avoid this political leadership at the local level. We're not going to the headquarters of the party, but at the community level, yes. Because those leaders will play different roles. Some will be the traditional leaders at the same time. They are political leaders, and then traditional leaders. And then, the other way - for example - there is a community down there, I think Lusaka B, yeah... down there, there are two community leaders. One from MDM, the other one from Frelimo. And we know that they were working together. So what happened is one is a member of the local health committee, and usually is here, and the other one is right there. Is not in this group. So, what happened is like if you go to that community, he will say, "Okay, before we have this meeting, we need to call the other guy." So I think they're still having this peaceful environment. It's a good example that we have. But there are communities where they don't talk to each other. As you remember, we went to Incomate, the limit to Rapale. So what happened was that they informed only one or two of them, but at the traditional level, they didn't inform the one who has more power, so yeah, things happen. We have to be aware. If we, from... before 2013, we had only 1 centre in these communities, because there was only 1 party, but now you may find 3 or 2. And then you have to involve all of them.

- Participant 3

It was noted in other interviews that the team values learning from and abiding by local social norms, but especially for IR team members who aren't from the country. For instance, Participant 8 noted how they wanted to be careful how we use computers as they felt it could "distance you" from the people with whom you were interacting:

I think one of the things we need to be really clear about in this project is that people, number one, may not speak Portuguese. Of course you have people like me that don't speak Portuguese, but the... you know, they speak different languages. Many times not literate, or low literacy skills, so if we sit there with a pen and paper I'm always very cognizant of that. Even when I sit with my computer, I have to be careful of that, because it sort of distances you I think. I think this kind of way that you're talking - it's more conversation, it's not, "Here's my question, and you know these answers." Right? I think it's a much more respectful way.

- Participant 8

With this as the basis for how the research team attempted to interact with the

community members, the project was born out of these types of community consultations. It was not simply designed by the research team and then imposed upon the community. This was highlighted by participant 6:

The project actually started from discovering a gap or a need, and you develop an action plan, and then you find a way to implement to get the results. That's a common idea of all the projects. What is different with the [ACPH] project is that first they prepare the ground. Like they do something with the community, and then they wait to receive feedback from the community. It's different with others - they come... they plan, they come to implement, they disappear. The [ACPH project] comes, enters into the community, does something in the community, and waits to get feedback, so that's what makes it different.

- Participant 6

The ACPH project is very much rooted in the community that it is trying to serve, and that was cited by the interview participants. There was a recurring theme that the IR team felt community participation/inclusion was its biggest strength, and allowed us to incorporate community knowledge into the project. Participant 1, when asked whether the project had successfully incorporated community knowledge, responded:

One of the positive aspects is that since the project began, it involved the community in many participation [sic]. The problems that the project was trying to solve were identified in this context in the communities. The solutions also aim to satisfy or to meet the community needs.

- Participant 1

This type of project design – with community input, and with the specific context in mind – was regarded by the researchers as a huge strength when it came to incorporating community knowledge.

When designing the project, the project team held a workshop to which all different types of community members were invited. Along with stakeholders and health officials, attendants included traditional birth attendants, mothers, fathers, traditional healers, and local leaders. Focus groups were arranged with different community groups, to look at what they saw as the biggest health challenges that mothers faced. It was at this workshop that the premise for the project was established, and themes such as transportation, corruption at the hospital, high rates of teenage pregnancy, and needing better training for both the healthcare staff and the TBAs emerged. After this initial consultation, the community has been repeatedly invited back to participate in biannual

workshops where progress is shared and feedback is sought. There is more frequent contact with the community health committees via the co-management committee, which meets monthly and at which research team representatives are present to take concerns back to the project.

With this involvement and consultation, the project has been designed within the pre-existing structures in Nampula instead of creating all novel structures. The project also ensures that communication occurs within the community's established avenues of communication. It was noted by one of the interviewees that this was one of the first things that it was important to learn before it was designed:

First of all, the knowledge of how to address the community - so in other words, learning who to speak to first, who to go through first, and so that knowledge of speaking to the traditional leaders, making sure that they are behind what they're doing and making sure that they are behind what we're doing. And speaking to the political arm just so that they know what's going on. The administrative arm, sort of idea. So I think it's... the first thing to do is to learn protocol, and that is very important in any situation, so if we learn the protocol of how to address people and things, we've certainly learned interesting things through that.

- Participant 12

It was noted in another interview that using the community's communication protocols, and ensuring that we as a team have talked to the right people at the right time, was one of the reasons why it was so successful:

The project has been accepted because of how [the project] addresses [the community leaders]. That's why the information is well developed and addressed in a clear way. There are groups in the community, so of witch doctors, community leaders, attendants, who have already received this information and they accept it, so they are the ones who keep on disseminating, and almost everyone in the community accepts it. ... If we can win [the community leaders], we have won more than 50% of people.

- Participant 2

In addition to the ongoing consultation and meetings, there is also contact between the IR team and community members through project interventions. For example, there are monthly training meetings for the TBAs, monthly meetings for radio listening groups which are a part of the multimedia campaign, and regular meetings with champions who do community theatre

performances. This has allowed the research team members to form relationships with the community:

This regular contact that we have... for example, we have the multimedia groups, it's a regular contact. The interaction is deeper. You get more information. So I think that having this organized groups in the community, and regular contact, like a weekly or monthly meeting to discuss the problems, the challenge, and the solutions, is the best way. You may conduct the research to inform, but you need other means to get more information.

- Participant 4

As emphasized here by Participant 4, this type of interaction allows us to learn a lot more from the community members than putting out a questionnaire or holding a one-off focus group. The community members get to discuss problems and challenges they're facing with incorporating the health messaging discussed in that week's radio production. For example, it was through interaction with the radio listening groups that the team learned it had to change its messaging around contraception, as the way it was initially being disseminated gave the impression that contraception was trying to prevent women getting pregnant indefinitely and not simply using contraception to choose when to have children. Similarly, it was observed that at the beginning of every TBA meeting, the research team member leading it would give a few minutes for the TBAs to bring up any concerns or requests they had. This team member would personally follow-up on the matter if it was a small thing to be dealt with, or bring it to the next research team meeting if it was a larger problem that required a group discussion and further steps to resolve. These types of interactions didn't necessarily have structured data collection methods or documentation, but they were an important part of IR project's implementation process.

Tacit knowledge collected through interactions was also seen to be beneficial because of the power differential that separates institutions and community members. The power of tacit knowledge collection was brought up by one of the researchers when talking about the best way to gain knowledge from the community:

I think informal information is useful because sometimes there's no influence. There's no influence from the researcher. Because when you're doing a formal interview, or a formal focus group, the fact that the community knows you're a researcher might influence what they tell you. So looking from that perspective maybe the informal input that the community gives us might be useful. But also since we're doing research, there has to be some kind of structure, some kind of

methodology. From that point of view, maybe the focus groups are better or interviews also... you document the input that the community is giving you... yeah, so, that's what I think about that.

- Participant 10

This quotation acknowledges the value of tacit knowledge collection and shows that attaining knowledge in this way – through building relationships, and working to break down power differentials – serves to both make the knowledge givers more comfortable, along with attaining more accurate knowledge in certain social contexts. This will be explored more in the next chapter, but it does highlight the importance of tacit knowledge in order to gain accurate community knowledge.

Overall, this community-centred approach seems to have established a good relationship between the research team and the community members. It was noted in multiple interviews that the research team members had the feeling that the community members liked the project. The reason behind this feeling was described most in depth by Participant 11:

Interviewer: What was your impression of what you think the community thinks of this project?

Participant 11: They love it! They love it!! We had a training for basic, elementary emergency care in the university. It was for the TBAs, the champions, the motor-ambulance drivers... so a big team. A lot. And we had so much fun. Like it was not just delivering knowledge. It was actually having fun. And we had so many activities. They remembered so much. And they were just like, "This is great." UniLúrio is a university that works a lot with the community, and especially with the Natikiri community, through a project called One Student One Family. But the biggest issue with that project is Knowledge Translation. It's collecting data, ALWAYS. All the time. Twice a month. But results? They're just not there. Like the community doesn't know what we're collecting, they don't know what they're supposed to do. I mean, we do mention certain prevention methods that they need to take care of, but... people get annoyed. Especially when it's just for you to go there, get data, and then talk talk talk talk. Like I mentioned in the beginning, the community learns a lot through music, through theatre, through discussions and groups... like they really like that. And the One Student One Family program doesn't have that component. So it annoys the community. So the fact that we are taking people now from where they are, and bringing them to our house, and teaching them new things, and learning from them, getting their opinion... it's making them so happy and so excited. And we always... like we're able to talk to them as equals, not as project-community, but as equals. ... [And] the fact that we acknowledge our difficulties and our barriers - what we can and what we can't do - you're not just delivering promises is what makes us... makes this bond really strong.

Based on the evidence presented in this section, the research team has worked to ensure that their planning and interventions are community centred, and that there is community participation. Additionally, select decisions have been put completely into the hands of the community to make, such as setting up and running the motorcycle ambulance system. These decisions have been given to the co-gestão, the hospital co-management committee, and is led by members of the local health committees. This IR project's level of community engagement is aligned with good community-based research principles. However, recalling that there is a spectrum of engagement, we can then look even further along the spectrum of engagement to see what further action could be undertaken to strengthen this community involvement. By aligning further with IKT, where the community becomes more of an equal partner and gains power over more decision making within the project, helping to both ensure the project is completely oriented to the community's needs (and thus using community knowledge) as well as helping to address power differentials (113).

This desire for even more community-based approaches did come through in the interview with Participant 11. After having talked about how much the community liked the project, the researcher spoke more about the community's desire to further break down the institutional walls:

There's a knowledge of habits that we have about what they do in the communities, and we try and talk to them through workshops in the university, but that's not what they want. They want us to go there. They want us to sit in their conditions. They want us to be under the mango tree, and talk about those things and in the same language.

- Participant 12

The language barrier alluded to here was that most of the research team speaks Portuguese. Portuguese is the colonial language in the area, but the mother tongue of most people in the area is Makhuwa. This language divide is explored more in the next chapter, but here it illustrates that although the community has been involved, the research team gets the impression that community members would like to be more equal partners in the research.

### **3.4 Chapter 3 Conclusion**

In conclusion, this chapter has reviewed the evidence from the case study in relation to examining the ACPH project's KT process, as well as looking at how the community's knowledge has been incorporated into the KT project. The beginning of this chapter revealed that the IR team

all defined KT in a way that was most consistent with knowledge transfer that happens *between* two groups, and focuses on sharing information instead of instigating action. Although incorporating a broad spectrum of community knowledge into the project was not included in the IR team's definition of KT, it was nonetheless accepted as an important aspect of the project. That being said, the IR project had no formalized KT process, regardless of whether or not the information was considered to be part of KT. Further, there was no research framework to guide what data was being collected or how it was interpreted. Although one review of KT/IR projects highlighted a tendency to not use frameworks (33), it is problematic as it does not provide a framework to guide what type of data to collect, there is no guidance for what to do with collected data, and it makes any research findings less useful since it will be unclear how the results were attained and can be further reproduced if successful. Most importantly, for the community involved whose information has been gathered, not having a set process of what types of information should be collected and how to use it to inform the project puts the community at risk for research fatigue since the knowledge may not go on to have any impact, and thus it will have been collected for no meaningful end.

Looking more specifically at the ACPH project, the KT process for the structured data has been further impeded by not having a robust data analysis plan. The knowledge that has been collected in surveys does not lend itself to informing implementation of the IR's interventions, as the data collected was geared towards knowledge/attitudes/practices instead of looking at the IR variables. Additionally, the IR team members' time had been devoted to implementation, but not scholarly analysis to analyze the survey results and gain more in depth knowledge of what changes were occurring. However, this time dedicated to implementation did produce tacit knowledge to be used in KT through consistent community involvement, which proved to be the project's biggest strength. Through building a relationship with the community members, it allowed the research team to glean more genuine information due to breaking down some of the power dynamics. Although the KT process in this project was not framed well and was seriously impeded by the structured data collection/analysis process, the influence of the tacit knowledge within KT allowed the project to be tailored to community's voice and incorporate the community's knowledge, which then has the potential to reduce the risk for research fatigue.



## **4. Chapter 4 - Systemic Barriers to Knowledge Translation**

After discussing all but one of my thesis research questions in the previous chapter, this chapter focuses on the last remaining question: How do the structural context of research for development influence KT? In this second results chapter, I will discuss these impacts by presenting information from a combination of interview quotations, discussion from the focus group, some participant observation, as well as evidence from the document review. When examining how these factors fit together within the realm of research for development, the findings for this research question are presented under four broader themes. These themes are: the structure of development aid funding, the underfunding of health systems and public infrastructure, limits to social change, and a lack of local knowledge. The chapter concludes with locating the impact on KT found within this case study within the broader domain of development aid.

### **4.1 Structure of Development Aid Funding**

A significant critique of how funding was structured for this project which then impacted KT was that the funding structure doesn't allow for a systems based approach. As outlined in one of the researcher interviews:

Anybody who studies management or organizations knows that if you want to have a system, you have to resource the whole system. You can't just pick and choose what part you like. I used to think that, years and years and years ago, because I was primary health care focused. I thought, 'Okay, that's where the answer is.' But I quickly learned that if the primary care system can't refer a patient to the next level, then the primary level will fall apart. Because what's the point of going if they can't help you? If you're going to die... so you have to have all sectors taken care of.

- Participant 8

In my interview with Participant 8, the topic of systems and the need to address funding in a holistic manner came up. This introduces us to the first KT barrier that is discussed in this section: the structure of development aid funding. One aspect of the development aid funding

structure that is problematic is that it addresses individual projects/programs without addressing the system in which the project/program is embedded (114). The ACPH project has tried to take a systems approach, encompassing a community-to-hospital spectrum and working within the existing healthcare structures. However, throughout the interviews, it became apparent that there were still a few ways in which the project was constrained and unable to take a holistic, systems approach. For example, Participant 11 noted how a lack of clean water was having an impact on the community's health:

So, there's lack of water, and the TBAs always mention, 'Okay, like you want us to do in sanitary condition? You want us to do this, you want us to teach this to girls, but we don't have water.' Right? And so... because they had already started talking about the chicken project<sup>2</sup>, and they're like, 'Oh, we're very excited about that, and we're going to be able to do a lot of things, and the chickens are going to be here, and our salaries are going to be here. We're going to get motor-ambulances. It's going to be great!' But then I remember one of them asked me and said, 'Okay, so... we're bringing chickens, and this is a very good project... but chickens drink water.' And, you know, she was like... she just... it was an old lady, and she did not talk all throughout the focus group, but then she mentioned that. It's like, 'Chickens drink water. We drink water. To deliver a baby, we need clean water. So we thank you for everything that you're doing, but there's an issue here which is water which is the first thing that you should deal with.' And of course, you have to say, like 'Oh, I'm sorry, but our project doesn't look at the water component. It looks at habits and ways that we can improve your communication and limit the distance between Spot A to hospital,' and she's like, 'Yes, of course! And I thank you for that. But, we *don't* have water.'

As noted above, the TBAs from the project area are aware that access to clean water is one basic requirement for health. However, as an IDRC-funded research project on international maternal and child health, the funding could only be used for very specific activities as dictated by the funders. It had to directly contribute to maternal and child health, and it could not be used for construction of any structures. As stated by Participant 3, "They don't fund constructions or renovations ... It's a rule. I'm not sure why. But they made it clear from the beginning."

This theme of not being able to meet basic material needs was recurring. As stated in another interview:

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<sup>2</sup> The IR team has been independently fundraising for a chicken farming micro-economic development project that would be used to sustain funding for the motorcycle ambulance project after the IR funding comes to and end

The community, they're able to talk to us whenever they want to. They're able to tell us when they're having issues, how they feel about, what they would like to change, because we meet with them all the time. But the part with the material part - which is basic needs - that's what we are not being able to act on, even though we have the knowledge.

- Participant 11

The inability to help with water access was also mentioned in another one of the interviews:

We went to visit a community down there. We had a meeting - small meeting - with some of the local health committee members, and one of the challenges they think they are facing there is water shortage. ... So, it's there, you know they don't have running water. They get water from small rivers, and this water is not treated. Solutions - there are many solutions. One which is drilling a water pump, so that it's healthier, because we get from deeper baths. Do we go through this, or do we go to [maternity waiting home]?

- Participant 4

The maternity waiting home to which Participant 4 referred was another one of the community's desires since the outset of the project. During the community consultation phase of designing the project, a large community workshop was held where they broke off into eight focus groups to discuss the problems that contributed to poor maternal and neonatal health in their community. One of these focus groups was for the community leaders, another for mothers, one for fathers, two for traditional healers, two for the TBAs, and one group that was a combination of mothers and TBAs. The distance to the hospital and/or lack of transport was listed as one of the top three priorities in each focus group during the community consultation process. Building a mother's waiting house was suggested by seven out of the eight focus groups as a possible solution to this barrier. However, the project was unable to address this because of the restrictions on the use of funding for construction. To remedy this, the team explored alternative sources of funding for the waiting home. The IR team also fought to address the transportation barrier in another way since it had been so widely cited as being an integral component of addressing maternal health. Thus, a motorcycle ambulance (motor-ambulance) system was envisioned. The funding body initially didn't want to fund this endeavor, but were eventually convinced. As stated by Participant 8:

At first, they were so stingy on the budget, we had to jump over hoops to.... well not just to, but to introduce the motor-ambulance. They didn't like that at all. And so we

told them, how do we link the community to the hospital? There's just no way. And so they caved in on that.

- Participant 8

A similar sentiment was noted by Participant 3:

Even for equipment, it was very difficult to convince them to buy equipment for the surgery room, but we've shown them that it's a crucial part of the project. And if we are promoting women to go to the hospital, then if they need a C-section because of a complication and there's no way to do that, then what we're doing? We're promoting the use of hospital services, but there's no capacity to do C-sections there? So that's why they have accepted [to allow funds to be used for equipment], but it was difficult to convince them. But fortunately they've accepted to buy the equipment. The equipment, the motor ambulances, it was a bit difficult to convince them.

These funding limitations resonate with the quotations that opened this section: holistic approaches are needed for functioning health systems. As noted by Participant 3 above, the funding body wasn't prepared to buy equipment to have an operational surgery theatre for caesarian sections, yet the hospital was expected to be a referral centre for women needing emergent caesarian sections. This is another example of how verticalization instead of systems approaches can cause problems within healthcare (115).

Drawing back to the transportation issue that the project is attempting to be remedied through the establishment of the motor-ambulance system, this in itself is still faced with significant barriers since the bikes and trailers are one part of a functioning transportation system. This program relies on other public infrastructure, as noted in another interview:

I remember when we wanted to do the focus groups it had rained. And there was this hole - gaping, trench, from here to that building, deep like this - in the middle of the road. And so, we dropped the car at the beginning of the trench, and we walked until we got there. And they were like, "Oh, you came!" And we were like, "Yes." And they're like, "Yeah, that's what we're going to have to deal with when the motor ambulances come." We're like, "Ohhhh." And we did, we mentioned that. The motor ambulances are going to have to deal with trenches when it rains. How do you carry... you have your motorbike, you have the ambulance that has four wheels, and then you have two people there and one of them is pregnant, and you're trying to dodge a huge trench.

- Participant 11

Having a project address the vehicles without any power to address deficiencies in basic infrastructure of roads leads to challenges. The mothers' waiting home may have been more appropriate given this infrastructure deficit, since it would have relied less on roads that vehicles could pass through at all times. However, this was determined to be outside the funding regulations. This restriction then means that the community's transportation problem could not be addressed in the way that the community had realized was the most appropriate given the state of the area's infrastructure.

When talking to the members of the IR team in the focus group, poor communication with the community was perceived and named as a possible risk factor for research fatigue. However, when looking at the reasons why poor communication with the community would cause this, it tied back to structural issues regarding what funding covers. Comments revolved around the community not understanding the scope of the IR project. As discussed by the IR team:

Participant D: When we have one problem, and we bring one solution, you are discovering two more problems that the project is not aiming to solve, so this can give a feeling that your same population is not glad we have solutions, because we solved *this* problem, but we did not solve the other two problems that we discovered meanwhile.

Participant A: And what I understood was, for example, when we did like the baseline study meant to find what are the maternal and child problems they have, they are giving us *all* the problems they have! But then we told them, "Okay, but we will focus on this ones, not on that one." So at the end they say, "Okay, you came and you said you would solve problems, but we still have *these* problems!"

Participant C: Like water shortage.

This was yet another instance of the water shortage coming up in discussion. Though water access and other basic needs are a maternal health issue, the team could not address it given funding agency limitations. The team perceived and named this as a problem of communication, as they wanted to ensure that the project's scope and funding constraints were communicated clearly, and that the community understood the IR project's goals. Later in the focus group, the sentiment came up again:

Participant A: It's a challenge to make [the community] understand that we will just do this one [type of intervention], this small one, because for them it's like, "You're coming to help us, so you will need to do what we are [telling] you to do."  
\*laughter\* Like everything, not just this part. Not this small part. They were asking

at the beginning [of the IR project] - "You need to build a new healthcare centre." I think it was one of the small communities, I've forgotten now. Like there is the community expectations, and then there is this challenge from us as a research team to make them understand that, "Look, we will just work on THIS issue, not A, B, C, D. Just A." And like work together. And ensuring that they understood that we will work just on A, and not on B and C. It's a challenge, huh? We have read a lot, and they not, so our way of thinking is not their way of thinking, so we need to go and think like them to make them understand what we are doing.

The disconnect between community desires and project direction being perceived as a communication barrier is based on an assumption that the limitation of the IR project's scope and funding limitations are an impermeable barrier. However, when viewed while keeping critical theory in mind, questions arise about how global health funding is dispersed in the first place, we can start to question whether it should be considered a communication problem or a systemic problem. Development aid, which is an umbrella term which the ACPH project's funding falls under, has been looked at in the literature as a form of neocolonial control due to funding conditions and agenda setting that does not reflect the true needs/wants of host locations (116-118). Additionally, donor countries are known to sometimes use health development aid funding to advance their own political interest (13).

To counteract barriers associated with earmarked funding, the research team made efforts to secure other donations to fund the mother's waiting home and to start a chicken farming micro-economic development project that could be used to sustain the motor-ambulance system after ACPH project funding ends. Throughout the interviews, this commitment to secure other funding emerged as a strength of this team. As summarized by Participant 3:

So there were some requests from the community that we didn't respond, or were not addressing within the project because it was not possible, and what we're doing is to find additional funding. One example is the project frango<sup>3</sup>. It's like additional funding to increase the economic power of the families. For them to have a business, and have money, not only for themselves, but to contribute to the project. To make it sustainable. The idea is to have these families working with cheap chicken raising activities, and then the profit part will go to the family doing the activity, and a small percentage to the project for the motor-ambulances to buy fuel, to repair the motorbikes when they're damaged, and to keep it running because the project will end. Another one is funding for the maternity waiting home. They have asked from the beginning - "We want a maternity waiting home." - and we get it now from donors from Ireland, and we are still waiting for them to make the money available,

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<sup>3</sup> "Frango" is a Portuguese word that translates to "chicken" in English

but they told us that they have already the money to build the maternity waiting home. So yeah, we were searching additional funds to respond to the problems that the community presented in the beginning, because the alert community project is just addressing part of the problems presented in the beginning of the project.

This strength of finding additional funding to address community needs relied upon donations from the global north. Although a strength in that it allows community needs to be addressed which weren't possible with project money due to the funding rules, it simultaneously forces the community to rely on charity, which is problematic in the broader picture. In charity models, the implicit and complicit role of the donors from the global north in creating the globe's inequities and power structures are not acknowledged, yet the act of charity itself reinforces the unjust global power structures which made it necessary to begin with (119-121).

As a last note, the structure of development aid is problematic in yet another way: how compensation is divided between team members of the global north and global south. As stated in an interview with one of the researchers:

I think that sort of maybe I could call it the lack of adequate compensation for some of the works some people are doing. I have heard that. You know, we pay a few people in the project, but they get very very little, and are expected to do a lot. Yeah. And in addition to all their other duties. And in a... it doesn't really matter, in any university, but I think in particular a university like [UniLúrio] which is very resource constrained, people have excessive responsibilities teaching and stuff that we wouldn't experience at home. What we consider as heavy course loads and stuff, but I don't know... if here is more. But I would assume it would probably just be because of lack of resources they have to teach more classes than we would consider a fair teaching load and stuff.

- Participant 7

This interviewee highlighted the heavy workload of these team members who have many different demands on their time, and are being relied on to do hours of project work. This overwork (and under compensation) is problematic in itself. Additionally, it leaves less time for the researchers to analyze what has been learned and how it can be incorporated into the project, which adds to the data analysis issue discussed in the previous chapter.

## **4.2 The Underfunding of Health Systems and Public Infrastructure**

Given the colonial history and ongoing development paradigm in which Mozambique and this project are embedded, this section looks at how Mozambique's poorly funded health system

directly impacts the research team's ability to incorporate community knowledge. There are multiple project documents referencing how the health system has been asked to supply more staff throughout the project. At the outset, it was envisioned that the hospital should be able to provide 24-hour C-sections since it is the referral centre for 450,000 residents. However, there have not yet been enough surgical technicians hired to make this level of staffing possible since the project began. In fact, within the 2017 calendar year, the number of nurses/technicians employed at the hospital was cut in half from 48 to 24, and fell as low as 22 in early 2018 according to reports from the hospital co-management committee. In addition to this, the provincial health system regularly moves staff to different locations in order to meet its staffing needs elsewhere. Thus, though there are specialized trainings being offered regularly on topics such as neonatal resuscitation and performing ultrasounds, many staff trained by the project get moved to areas outside of the catchment area, and the hospital is then given new, untrained staff. As noted in the interview with Participant 3:

Participant 3: The turnover of staff in Marrere hospital is very quick. They can put two nurses, but then two months later they can take three. It's very quick turnover of healthcare staff.

Interviewer: Like we are still short-staffed there?

Participant 3: Yeah, but even short, but they are always changing. If you are like training the nurses, and training the administrative staff, but then they're always changing, so then we're training people who are going out very quickly, you see?

This staffing issue was noted in the document review, the focus group, multiple interviews, and participant observations. As was noted by Participant 4, this constant turnover also includes high level hospital management:

Even the hospital component there is a human resources barrier. I don't know what is happening there. Like each semester [the IR team] will be informed that, 'Oh, we no longer have that, and the other guy we already trained to support our project.' So, maybe there is need of more collaboration with the health department so that they can retain those people that are trained through the project, because the idea is to respond the needs of the project. But yeah, I know that last year maybe ten or more health workers from Marrere hospital were transferred. I think... yeah, that's another barrier. Then, one of the specialists in obstetrics was transferred to Marrere, and then he left to Japan or Portugal for some big conference or training something.



Participant 4 went on to mention that there had also been two hospital directors reassigned to different locations during the IR project's timeframe. After the interview with Participant 4 was conducted, a third hospital director was hired. However, that person was then subsequently assigned to a different provincial posting and had to leave the position. A fourth director was being assigned to the hospital as of the start of writing this manuscript, and a subsequent fifth director is being sought out as edits are completed. Through this underfunding and constant need to shift staff to address country/province wide staffing issues, the IR project faced a dilemma: the community wanted their hospital to have more staff and more specialized training for their staff, but this is largely outside of the scope of what the project can directly control. The research team made attempts to lobby the government for more staffing, including efforts through a media campaign to induce public pressure. There was some success noted with the occasional hiring of a surgical technician or the assignment of a pediatrician to the hospital, but the overarching problem remained.

Another issue with the training hosted by the project that was brought up in the IR team interviews was that the trainees aren't being paid, and nor did the project intend to pay them:

We learned from teachers - and oh, it was hard, because they did not want to talk to us - but we learned from teachers about their difficulties. But, the way that we work was fast. Oh, let's give them a training on that area. Barrier: We want to get paid. We don't want to go to a training without getting paid. And we want transport. And we want that. And the project was not prepared for that. There was no money to pay trainees. Only to pay trainers. And that's a problem that we have encountered even with working with nurses from the Central hospital. They don't want to come to our trainings because they're not getting paid. So the staff that I mentioned - the decrease in staff in trainings - is also due to that. They want to be paid. Everybody wants to be paid, but we don't have money to pay them. And we believe, like we strongly believe that for you to get knowledge you shouldn't have to be paid for it because it's for you to work better at what you're doing. So that's been a barrier that we have not been able to overcome. I don't think we will be able to overcome it. And making the institutions to force people to come to trainings is not going to have the desired effect. Which is people will be demotivated, and annoyed, and they may end up doing completely the opposite of what we want.

- Participant 11

Asking the staff to attend extra trainings without compensation placed a double burden on the staff: asking them to give up their limited free time, along with not offering any type of compensation. It came up at a project meeting that, due to the staff shortages, the staff at the hospital

had been expected to work 1.5x their normal work hours, yet had not received any overtime pay for the past one and a half years. After experiencing such low turnout, the project intended to test out a “learn while you work” based training model for the next hospital-based trainings. This would help to counteract the lack of extra compensation by moving the trainings to occur during normal working hours that the staff would be compensated for.

Public sector underfunding also impacted the IR project in other areas aside from the health system. In this research that is seen most clearly by looking at the community’s limited access to transportation. This directly impacts the research team’s ability to incorporate the community’s knowledge into action. For instance, it was noted from the project’s written activity reports that only one teacher attended a meeting the IR team had scheduled to discuss the results of the adolescent sexual and reproductive health survey with the high school teachers. In one of the research team meeting minutes, transportation was noted to be a barrier that caused this low turnout, since most people didn’t have their own transport and also didn’t have extra money for public transport. Providing transportation for these meetings also hadn’t yet been considered in the project. Additionally, Participant 3 noted that one of the community leaders was interested in becoming more involved in the project, but that this wasn’t feasible because the leader also didn’t have access to transport. This transportation barrier thus impacts the community’s opportunity to be further involved in project and discuss ongoing implementation.

## **4.3 Limits to Social Change**

### **4.3.1 Social Roots of Gender Inequality**

Another aspect to consider is how women’s health is framed, and how it impacts the implementation of maternal and child health projects. This impacts what types of interventions are attempted. One member of the research team mentioned in their interview that gender was approached in the project using a biomedical approach:

One thing that I think would be helpful in this project. I've been involved in other projects as well in Mozambique - even in [my home country] we have tons of these types of projects. I think that having a more interdisciplinary group would be really good. For not only this - any project actually. Like this multidisciplinary thing, because... when you have too much health professional involved, then they tend to focus a lot in health related problems, when actually to improve maternal health... you know, it goes beyond having iron pills available, or a new ER, you know it goes beyond. And when I say "goes beyond", it's kind of more related to social aspects.

Like it's this complex net that sometimes physicians and me as a [healthcare worker] we're not aware of, because we are not trained to see those things, right? We're trained to approach human health in a different angle. But it's so complex. .... And I know we had a few anthropologists, and I think people from education, but I still feel - and felt - I remember feeling that we are missing something. You know? We need a stronger voice outside of the health angle. A stronger voice, you know? Not someone who speaks up, but people say, "Yeah, okay, that's fine, we're going to incorporate later," and then you go back to the... you know what I mean? Someone who is in the position of a PI kind of thing. Of course the medical view is important, and ultimately that's what we want to change, right? But I think having a stronger voice coming from the social sciences... I think it would be beneficial. Like, for example, I don't remember us discussing gender issues. You know what I mean in this project? It was right there. And nobody brought it up. Never. And it wasn't anywhere in the project. Anywhere. And it's one of the main issues. You know what I mean? So these little things that I think would benefit the project. But... we did good. I think we did good. I think the team partnership... the partnerships we have with Mozambique and everything is really good, but again... if we had a chance to go back and, you know, do it differently, do something different, I think having a stronger voice from the social sciences would be really nice.

- Participant 13

This participant also raised the point that approaching maternal health is not the same as dealing with gender. The participant elaborated further when discussing how gender was a barrier that the project was facing:

Um, well, to summarize in one word, 'Patriarchy' for sure. I think in my opinion that was the main issue in implementing anything in Mozambique. Because the women are still so tied to men's will and wishes, right? It's something that honestly I never thought I would experience, you know? Like having a woman in the OR like bleeding, in obstetrical emergency or whatever, and before doing any medical intervention we actually had to ask her husband's consent, or her dad's consent, or brother's consent, you know? Like whoever was the next of kin that was available for us to contact. So I think it's... and I don't even know if I can define that as patriarchy, but something along those lines. These women... kind of powerless, somehow. Like you can have mosquito nets for all these women, you can have transportation, running water, food, job... but if they don't have the will, or like the final word to say, "I'm taking the contraception pill because I don't want to be a mom anymore. I had seven already. I'm done parenting." You know what I mean? You can give everything to these women, but if you don't give power and a voice...

- Participant 13

This project is funded through IMCHA, a “seven-year, \$36 million initiative — jointly funded by the Canadian Institutes of Health Research, Global Affairs Canada, and IDRC — [that]

illustrates how partnerships serve to advance Canadian global health priorities.” (11). It’s notable that the explicit purpose is to advance the Canadian priorities, which is a colonial statement that is problematic. It becomes doubly problematic when we look at how global maternal health is often approached, as it mimics society’s tendency to value women based on their reproductive potential (122). Gender mainstreaming within global health discourse has been noted to have disconnected gender barriers from social justice roots (13). Public health interventions focused on girls’ education have sometimes been justified on the premise that educated girls have healthier children/families (123). This justification overlooks the fact that the girls themselves have the human right to an education and will be healthier, making the girl herself the means to an end (124). This narrative where the point of having healthy, educated girls and women is not a worthy cause in and of itself reflects women’s reproductive value within our patriarchal society.

Global health funding often follows this same narrative of females often only being given value based on their reproductive potential. It has been noted in the literature that “it is unacceptable and unethical to prevent a woman from dying in childbirth, yet to allow her to die of a preventable or treatable condition such as cervical cancer or diabetes” is somehow acceptable (125). Knaul et al. (2016) approach women’s health from only a biomedical approach without looking at the social factors, though it does at least call out the discrimination of women’s health issues being much more than simply the nine months prior to and six months after a child’s birth. However, as we know that inequity itself is the top contributor that causes health issues in the first place (126), a feminist approach would be required to address the root causes of health disparities faced by women. The Muskoka initiative, as referred to in the introduction as shaping Canadian policy initiatives, has also been criticized for taking this very narrow approach to women’s health, looking only at biomedical aspects of women’s reproduction but not considering the social factors that contribute to health inequities (89). By approaching women’s health whilst only considering biomedical aspects of reproduction, we simply set women up to “better tolerate deprivation without changing the material or non-material injustices that led to the deprivation” (127).

When Participant 13 was talking about the relationship of sustainability/empowerment, the reality of our current funding timelines also came up:

Well, when I think about research fatigue, I think about how to make these changes sustainable, and of course empowering the community is a way of making this change sustainable, but the empowering process itself, it's long, you know? And complex. It's not like a 3.5 year project.

Not only is this type of project not aimed at women's empowerment and addressing the underlying health inequities, but the timelines also don't allow for social movements and change to evolve. In a review of global health research funding, Stephen and Gaibes (2010) asserted that the short term funding cycles of 2-5 years for projects focusing on strictly defined biomedical health issues will not allow for the change that longer term projects focused on more social factors would produce (128). To reiterate the statement made by Participant 13, empowerment is not a 3.5-year project, and a longer timeframe is needed.

#### **4.3.2 The Role of National Policies**

The issue of gender discrimination also arose when looking at national policies. There were multiple accounts of how national policies posed a barrier to being able to integrate community knowledge. It was noted that one of the schools in the project was forced to stop allowing pregnant girls/young mothers to attend school during the day, as national policy stated they could only attend night school. However, with the transportation challenges in the community (pp. 97), these girls don't have transport to the school and it was not safe for them to walk home in the dark. The school was supportive of allowing the girls to continue attending, but non-compliance with national policy was said to put the teachers at risk of not having their salaries paid by the government. Due to this risk, the schools started turning away pregnant girls/young mothers during the timeframe of the project.

Another problematic national policy implemented during the project was regarding prenatal consults. A law mandated that the fathers must be present at all prenatal consults. This limited single mothers' access to care and makes partnered mothers' access dependent upon another's wishes. Participant 4 explained:

For example, now there is a law that obliges the women to bring their companion for their pre-natal consultation. Especially the first one. ... To have a service, you have to bring the partner to the consultation, and then be registered. So, the thing is good, but it's not good. Maybe we mobilize more people going for prenatal consultation and having facility delivery, and so on. But it's not good because it's against the human rights. If you have a case where a lady decide to have a baby, but she doesn't care having a husband, she's free, because our laws say that you are free to choose this and that. That's one point.

- Participant 4

## 4.4 Lack of Knowledge About Local Community

### 4.4.1 Knowledge Specific to the Community

The last of the four umbrella categories that KT barriers fell under is a lack of local knowledge held by the research team. This can be viewed from many different perspectives, but the first perspective that I would like to explore is how the system of development aid funding drives researchers to collect local knowledge in the first place. Participant 13 outlined in their interview how much of the data that is collected is used to justify interventions to funders, as opposed to being collected to inform ongoing implementation:

Participant 13: I think most of the things that were mentioned [in the survey], I think the locals already knew. Maybe not [project members from a HIC], but I'm pretty sure [all of the members from Mozambique] ... I'm pretty sure that the locals know. All the information that was disclosed during the interviews. Not all of it, but 90% of them. When I think [about my own country's health system], I know the struggles of my system, you know? And I did all my practicums and all my internships in the public system. I used to see patients every day. Me as a healthcare professional, I know the struggles of the system [as a citizen]. So the Mozambique team I'm pretty sure they had a good idea of what was... for the Canadian team maybe it was like, "Wow, they don't have mosquito nets?" But I'm pretty sure the locals already... "Yeah, they don't have mosquito nets." You know what I mean? Yeah, they don't have transportation, and everybody knows that. We, for us, it was maybe a new thing, but I'm pretty sure the locals... I'm pretty sure about it. Because like, me as a, I remember, back [at home] we would say, "Oh, you have to drink 2L of water a day, or 1.5L at least," or do any sort of health education/intervention, something like that, and the person would look at me and say, "But we don't have running water." And I KNOW that. That's why I wouldn't say, "Okay your kid is dehydrated, you have to offer water, you have to..." because I know that family doesn't have access to running water. I'm there. I'm in the community. I'm doing my internship there, my practicum there. Whatever. I know the reality. As a [resident], I see on the news, I see everywhere... you know? So we know. So I'm pretty sure the locals knew most of the things.

Interviewer: For sure. Just, coming from that, if you're saying most of the stuff we found out the locals already knew, what would you say was gained by doing the [survey]?

Participant 13: I think the main thing with implementation research is that you need the searching the facts stage. Even though the locals already know, but we need the evidence. We need the numbers. We need to prove for the funding agency that we actually gathered information from the community and these are the facts. We cannot say, "Oh the Doctor X that works there said that this is the list of problems based on his experience." No, we can't go like that. We have to interview patients,

we have to do all the research process, and create reliable and ethical evidence, and come up with interventions based on the evidence, not based on Doctor X or Doctor C or Doctor A who gave us a list of problems. But I'm pretty sure they already knew the problems. You know what I mean? But we still have to talk to the community to document, to do the research, but... I don't see all those things being a surprise for any of the locals. Like saying, "Oh, they don't have mosquito nets." "Oh my god, REALLY?! They don't have mosquito nets?!" Oh come on! Of course you know these people don't have mosquito nets! How come you don't know this?! But like, health information.... of course! The commerce people know that. Everybody knows that. The city councilor knows that. The director of the hospital knows that. But they can't do anything, or they can't do much, because of the corruption and because of all those things, and it's the same in [other countries]. But I don't see any of those problems being a complete surprise to any of the locals, in my opinion. It was not for me, and I'm not even from Mozambique, you know? So I don't think it was for them.

In the last chapter, it was discussed how the IR project's monitoring and evaluation survey data was based around knowledge, attitudes, and practices. This perspective from Participant 13 brings to light how some of this type of data collection is due to the funding system. In collecting information to justify funding when the information would be considered common knowledge in the research population, the priorities of the funders are prioritized over the risk posed to the local community from by repetitive type surveys.

#### **4.4.2 Language Barriers**

Next, a lack of local knowledge has served as a barrier through language. None of the research team members spoke Makhuwa, the local, non-colonial language. Most of the local members came from the south of the country when the university opened, as it is a new university and there weren't many local people with university degrees to fill the new faculty positions. Having subsequent community based research is then difficult as the "local" researchers are not local to the stakeholder communities.

The researcher team members not being able to speak Makhuwa created problems when trying to translate the project's health promotion messages. Participant 2 noted that the way the community messaging was initially worded conflicted with community perceptions and caused a negative reaction. The message promoting condoms to prevent pregnancy was instead being interpreted as trying to stop the women from having any children, even if they later desired to become pregnant. The interviewee outlined that this miscommunication was discovered by becoming involved in the community:

When they talked to the community about this information, the way of the community. That's why we're talking about different methods of getting people in the community, to observe their reaction. Most of the time when the community does not agree with something, they do not tell you. They have their way of reacting. Through the reactions, we understand what's wrong. And could understand that this practice is a shocking with the community and their habits. Then you have to start not talking about condoms, how to talk about family planning. They had an experience - he had entered a meeting when they were talking about the use of condoms to prevent early pregnancy, and that was when after that it changed, and it was clear.

- Participant 2

Here, it was highlighted how we cannot walk in as outside researchers and assume that we can effectively communicate without having that lifetime of unspoken cultural norms and other wisdom.

The need for language translation was noted in another one of the interviews:

Speaking about knowledge translation, so I would speak a little bit more in the base about concept translation. Ideal translation. Because even if you speak the same language, in fact many times the words do not match the significance of the concepts. So you probably might benefit from some cultural interpretation. What people are saying. Even if they speak Portuguese. So, we have several problems. For example, the other day when we are doing this meeting, and there was this interpretation in Makhuwa, somebody that understood Makhuwa he was saying that the guy is speaking in Makhuwa, he speaks a lot more. And I understand this, because I've seen this several times. I speak in Portuguese, [and] I say your immune system is not good. And the guy that translates in Makhuwa he says blah, blah, blah, blah, blah, blah, blah, blah, blah, blah, blah, blah... he never finishes! And I know why this happens. Because they have few abstract concepts. So when you give an abstract concept, they speak with examples, and they give several examples, to try to illustrate, to figure out what you're saying.

- Participant 9

This highlights how the language people communicate in impacts more than just the words that people use, but can also change people's understanding of concepts. Participant 10 shared a similar view:

Maybe language could be something that might impact. Because most of the community speaks Makhuwa, and most of the research team does not. So sometimes you use translators, but there are some things that you just can't translate in a literal manner from Makhuwa to English. Maybe sometimes the translator doesn't even know how to translate this, so he would do some paraphrasing ... and during this



process maybe some of the information gets lost, or at least the real essence of the information might get lost, so maybe that's something that might affect the way we get information from the community. The language barrier. But yet again, I can't be sure about that. I don't know Makhuwa, so...

#### 4.4.3 Institutional Power Dynamics

In this interview with Participant 10, it was also noted how a lack of local knowledge in the team could lead to impaired incorporation of community knowledge due to attaining incorrect information. The interviewee raised the concern that we might not be getting accurate knowledge from the population given our role as researchers associated with the university:

There's a tendency, I feel at least, in Mozambique - assuming I'm talking with the communities - they have a tendency to give you - if they feel that you're a formal, like... usually they associate any researcher with the government. Most of the time they think somehow you are affiliated with the government. But most big universities here in Mozambique are public universities, and there's that link with the government, so they tend to give you the answers that they feel you want to hear. So I remember in my undergraduate studies we did a qualitative study on cholera, the community's perceptions and knowledge about cholera. And some of the... because when we went there we talked to the ... local leader, and he helped us recruit members from the different communities for our research. So we had the feeling that they were giving us similar answers, like we felt that they were telling us what we wanted to hear. But in the community we know there are some attitudes that reflect some misconceptions, or negative attitudes. But we didn't find that too much in our study. So we feel that there's a tendency for communities - if it's a more formal setting - there's a tendency that they'll give you the answers you want to hear, but that may not really [reflect] their real opinion.

- Participant 10

During the TBA trainings, the project was able to try and negate this tendency to give expected answers instead of true answers (and, with it, some of the power differentials) by having the training done in Makhuwa instead of being done in Portuguese and using a translator. It was noted by Participant 11 how well received this approach was:

So, as soon as we arrived, right on the first day that room was packed! All the TBAs were there. **All** of them. And they all listened. They had such a great time because [one of the local nurses] was the one teaching, and she speaks Makhuwa, and she made jokes, and they were so honest and I remember I went there and I asked them a question, and so they answered in a diplomatic way. So, [the teacher's] like, "Hmm, stop lying please. Tell her the truth." And then they **all** started laughing, and they're like, "Oh yeah, we don't give it." So the relationship that she created with

them is so beautiful, it's so nice, that they're able to openly talk to her about things that they do, and things that they don't do.

It was noted in the same interview, though, that we still have further to go to keep addressing these power differentials caused by our association with the institution:

There's a knowledge of habits that we have about what they do in the communities, and we try and talk to them through workshops in the university, but that's not what they want. They want us to go there. They want us to sit in their conditions. They want us to be under the mango tree \*laughter\* and talk about those things and in the same language. And our team has a lot of people, from various backgrounds, and maybe just one person speaks Makhuwa? Language is a barrier that can lead to complete failure or success. There isn't much that we can do in our team. You know, we can get people to translate, that's great, but community like it when... you know, for example, when you go to Mozambique, and you don't speak Portuguese, right? But then when you say some small thing in Portuguese, don't people smile? Like don't they get really happy like, 'Oh, she's trying!'

- Participant 11

#### **4.4.4 Researchers' Desire for Knowledge Aligned with Colonial Worldviews**

Lastly, I would like to highlight instances a desire for local knowledge by IR team members was framed with language that conveyed a colonial worldview. For example, the language that one participant used to talk about when the IR team first became aware of the initiation rites is worth examining:

When I think of all the things that we've learned in this project, the one thing that stands out to me really strongly is the initiation rites. At the beginning, we didn't even know there were initiation rites. It was like a discovery... we were like Columbus, you know, coming to the new world, and we discovered all these people, this and that, that have been there for 1000s of years. We discovered that, and it is such an important component in all that we're trying to do in the communities...

- Participant 7

In the same interview as the previous statement, the interviewee talked about how finding out about the initiation rites was impacting the project partly because we find it "interesting":

"And that has changed things significantly in the project because... I guess even for the reason that we all find it sort of like - as somebody would say, it's anthropologically very interesting, and very unique. And so it's an attractive piece of learning, and not just kind of a mundane thing. And it's a giant challenge, actually.

A huge challenge. And it really complicated issues a lot. Especially when we found that they were teaching antithetical to our main messages, somewhat.”

- Participant 7

This falls into the trope of classifying the cultural practice of initiation rites as something that is “other” (129) and thus have it simply become something interesting to study for the benefit of the academic gaze, instead of considering whether it will be helpful or useful in regards to the community’s health to have it investigated.

## **4.5 Concluding to Chapter 4**

In this chapter, four themes have been discussed. The first section addressed how the structure of development aid restricts what community knowledge can be incorporated based on both funding restrictions and how compensation is given. The second section outlined how the underfunded local health system and infrastructure could be seen within the project as hospital understaffing as well as decreased community involvement in project implementation due to transportation barriers. In the third section, evidence was presented showing how the biomedical approach to women’s health falls short of addressing the societal power differentials that detriment women’s health, but that the timeline of the project also isn’t congruent with a deeper level of social change which could facilitate women’s empowerment and addressing social power dynamics, regardless. Lastly, in the fourth section, we saw how having a research team who doesn’t have local knowledge poses a barrier both because the shared baseline of what is “common knowledge” isn’t truly shared and because of language difference creates a barrier to KT. However, along with importing these experts, it can also import colonial worldviews that are apparent in our research approach and communication.

## **5. Chapter 5 - Conclusions & Reflections**

### **5.1 Summary and Discussion**

#### **5.1.1 The Goals of the Research**

The goal of this case study was to examine the ACPH project's KT process in regards to how community knowledge is incorporated into project implementation. Examining how community knowledge is incorporated within IR projects is a form of KT that had not yet been addressed in the literature. The main body of KT literature mostly focuses on KT as a process between researchers and other stakeholder groups instead of looking at its application as a process within implementation research. Though some literature looks at KT within complex systems (38-40), none addresses this exact situation of KT as a process facilitated by an IR team, nor does it take into consideration the ethical implications KT has for research fatigue. The collection of knowledge without use can serve as a risk factor for research fatigue, while perceiving change based upon participation in research be protective against research fatigue. Based on this, the goal of this work was to determine what the ACPH IR team's KT process was for incorporating community information, and to look for barriers and facilitators of community knowledge incorporation. The four specific research questions this thesis set out to address were:

- 1.) How do team members view the process of knowledge translation within the ACPH project?
- 2.) In what ways has the knowledge gained from the community during the project been used to inform subsequent project interventions?
- 3.) What strengths have helped the research team incorporate community knowledge into project implementation?
- 4.) How does the structural context of research for development influence how community knowledge is incorporated into project implementation?

### 5.1.2 The ACPH Research Team's KT Process

In chapter 3, evidence was presenting showing that how the IR team's definitions of KT were not aligned with the most widely accepted KT definition. Instead of focusing on taking action based on knowledge that has been gained, it focused more on knowledge transfer between groups. However, the finding that the IR team's definition didn't align with the literature definition is aligned with the fact that much confusion exists around the terminology in the literature. Despite these issues, the research team acknowledged a wide definition of what constitutes knowledge, and supported community knowledge use within the project. Thus, even though the research team's definition of KT didn't align with the formal definitions or with incorporating community knowledge within an IR project, the team did support the proposed application of KT as a form of incorporating community knowledge into project implementation. Based on this, even though it wasn't called KT, the research team did support the practice of what I have argued is an application of KT in this paper. However, it does highlight that incorporating community knowledge is not generally seen as a KT process.

The neglect of community knowledge in applications of KT within the literature has problematic implications in this study. It implies that academic knowledge is considered more valid for application through KT than community based knowledge. Knowledge translation as an academic concept arose from acknowledging that knowledge should be acted upon if its collection was going to be a useful exercise to communities from which the knowledge was attained. However, if implementing KT while only acknowledging the validity of using academic knowledge and not community knowledge, then this isn't respectful of the community's knowledge. The centering of community has been seen to become more prominent with the recent shift towards IKT/community-based participatory research (CBPR). However, even within CBPR there has still been academic analysis which frames the community's interests as things that may "bias" the research, whereas academics' interests are seen as "balanced" (130). This prioritizes academia and academic desires to generate scientific knowledge above the needs and desires of communities participating in research projects. Thus, this shift towards centering communities as partners through IKT/CBPR and not as passive recipients still has further to go before true partnerships are attained. Considering the KT issues highlighted in this thesis, the further centering of community should also include the respect of community knowledge as valid and important for inclusion through KT.

Moving beyond definitions, the IR team's KT process was not formalized by either a distinct research methodology. As noted, this is a common criticism of IR projects. Not having a framework is problematic since there is then no clarity on the type of data to collect or how to analyze it, and it makes it more difficult to draw generalizable conclusions from the results. This results in knowledge gained being less useful for projects trying to replicate or learn from successes. However, most importantly, a lack of framework becomes problematic for the community whose knowledge was shared, as the knowledge is then less likely used to create change in their own community. If the community participates in research but then fails to see a subsequent change based on their participation has the potential to increase risk for research fatigue (17).

Barriers to KT were seen in parts of the ACPH project, both with problems in the data analysis step as well as having much of the survey data focusing on knowledge, attitudes, and practices, instead of focusing on the implementation research variables of acceptability, adoption, cost-effectiveness, and sustainability. In general, the way in which there has been much structured data collected without a set framework, a well-tailored plan for what types of data to collect, or a data analysis plan is problematic, as the structured knowledge collection generally fell short of impacting project implementation. Much of this may have stemmed from a team whose strengths were in project implementation and not formal research. Due to these factors, the results of data collection have failed to go on and mitigate this risk for research fatigue by improving project implementation due to stifled data analysis. If IR projects are going to use this type of structured data collection, thorough, methodological planning of data collection and analysis would be needed to attenuate the risk. This barrier may be addressed by including formally trained researchers with backgrounds appropriate to the project, such as including scientists from both the social and biomedical fields in both the project design and data collection/analysis. All this being said, this evidence indicates that most of the questionnaires have not gone on to influence project implementation. This appears to be caused by a combination of factors, including the team make-up/team members' strengths, systemic time constraints, and a lack of framework to promote and guide this data collection/analysis.

The prioritization of project implementation had benefits though, such as producing tacit knowledge through relationship building and community participation. This was regarded by the team as an asset of the project. Though it was an informal process, this type of knowledge collection was seen as beneficial as it changed dynamics between the community members and the research

team, which the team felt contributed to more genuine knowledge from community members. Looking at the evidence of all the community consultation and community involvement, this tacit knowledge has clearly shaped both how the research team interacts with the community and how certain aspects of the IR project are implemented. This makes tacit knowledge an important aspect of the overall KT process, especially considering how knowledge gained through the structured surveys was stifled before having the chance to influence implementation. This strength of using tacit knowledge in the KT process did not guarantee that the knowledge gained went on to impact project interventions (as highlighted in the systemic barriers section), but tacit knowledge collection provided an avenue for the community's knowledge to be heard while also building a relationship between the members of the research team and the members of the community. Building this type of relationship is essential for good community-based research (131).

This strength of community relationship building and tacit knowledge collection could have provided a rich base of ethnographic data collection if the project methodology had been planned to document and analyze it. This type of data collection would complement the IR team's strengths of community relationship building and dedicating time/attention to the implementation side of the IR project. However, this draws back to the lack of project methodology and data analysis. Looking at the research methods weaknesses, and that the IR field is known for not having a strong use of theory, this starts to point towards an underlying issue. This relatively new field is a combination of project implementation – a niche of its own – and research. However, when the two fields overlap without proper care being given to both areas and more attention being given to implementation as it was in this project, then it is susceptible to cause harm through research fatigue. This heeds back to the literature on research fatigue, which reminds researchers that “Knowledge and experiences (data) are finite resources & shouldn't be mined mindlessly & recklessly” (69). However, when this new field both requires all of the expertise of project implementation to be combined with research expertise to ensure sufficient attention to methodology and data analysis, then it leaves room for error that can leave communities end up suffering from research fatigue. Though research can be used as an important tool for community knowledge creation, it has inherent risks that cannot be overlooked as it appears to be in the IR field. This tension between research and implementation also brings into question the what the role of research in development work should be. It is questionable whether it is fair to the communities involved in development projects to expect that they bear research's inherent risks in order to

produce knowledge for broader society in exchange for access to this earmarked and restricted development funding.

### **5.1.3 Systemic Barriers to KT**

In chapter 4, the focus shifted to explore the impact of the current system of development aid system. The structure of the overall system created multiple barriers which fell into four themes: the structure of development aid funding, underfunding of health systems and public infrastructure, limits to social change, and a lack of local knowledge. The structure of development funding imposes restrictions on how the money can be used to address health, taking away community autonomy, disabling development work to approach health in a holistic manner.

The rules about what funding can be spent on limits what community knowledge can be incorporated into project implementation. Improving the community's health becomes a secondary priority after first ensuring that spending meets the requirements outlined by the funding rules. This means that the community where the research is taking place is told that a project is aiming to improve their health, yet that it is not going to help with one of the most basic health needs. The system rules that define what health interventions the IR project money can be spent deprives the community of autonomy and self-determination. In the literature, this inability of communities to have control over how funding is spent has been noted to increase power differentials between the community and the project teams (132). This earmarking of funds has been considered within the literature. It was noted in a 2004 roundtable discussion in the World Health Organization bulletin that although earmarked funding isn't theoretically "incompatible with a sector-wide approach", in practice it is not necessarily compatible (133).

Funding restrictions meet the criteria of intellectual imperialism as outlined by S. Alatas in 2000 (134). The researched community is expected to conform to the funder's rules and expected behaviour, and the needs of the researched community are placed secondary to the requirements of the funders. This role of communities as secondary actors to academic institutions can be seen elsewhere in the literature. In a 2010 review on balancing science and community needs within CBPR projects, scientists were described as having "balanced" interests as they wanted to both do good for the community whilst also advancing science. However, the interests/needs of researched community members were noted as problematic, as they "may interfere with scientific [needs/interest]" (130), framing community needs as lesser than academic ones. Lastly, it meets the requirement of intellectual imperialism of "rationalization" (134). The earmarking is



rationalized by outlining a distinct subset of what can and cannot be accepted as a research activity. This justification relies upon the conceptualization of research and development as discrete domains. However, as was illustrated by multiple examples of how infrastructure is crucial to health outcomes, and thus the field of implementation research, drawing such a hard line between the two is incompatible with real world interventions if the community's needs are going to be central to the project instead of firstly prioritizing donor guidelines.

The subsequent section looked at how Mozambique's underfunded health system, the impact of professional trainings provided through the IR project have diminished results for the local community as staff are often re-located to other health centres to meet broader system demands. Additionally, trainings place a double burden on staff when held outside of work hours as they are already overextended and undercompensated for their current work. Outside of the health system, the transportation barrier discussed here illustrates the limits on how engaged the community can be in this project, reducing further input and preventing results from being discussed with certain groups of stakeholders. All of this can exacerbate the risk for research fatigue, since it limits community knowledge from influencing the implementation process, but the project couldn't address it since it's an issue of broader social systems.

Next, problematic policies were noted to be detrimental to the health of the population that the project says aims to serve, but the social pressure that would aid in changing these policies isn't possible within project timelines. As noted before, social change does not fit within 2-5 year timeframes (128), which limits the social pressure for policy change that can be created by the IR project. The timelines also aren't conducive to a feminist approach that looks at women's health as more than just biomedical factors regarding reproductive health. This kind of timeline lends itself to a less critical, biomedical approach to health without considering the underlying social causes. Any sort of social change that could instead address underlying power dynamics behind these disparities would require a different approach to how women's health is envisioned and longer project timelines to be effective. Lastly, it was shown that the lack of local knowledge (both of the IR team and the funders) increases the need for knowledge collection while also posing a barrier to KT. Having an academic research team (and funders) who don't possess local knowledge poses a barrier when trying to incorporate community knowledge into the project. There isn't a shared basis for what can be considered common knowledge, requiring more research to justify interventions. In the particular context of the ACPH project, there is the additional barrier of

speaking a different language. This language barrier is also exacerbated given the relatively new establishment of the local university, pinning people without local expertise as the experts leading community based research. Lastly, when searching for local knowledge, colonial worldviews can encourage extra knowledge collection where the inherent risk for research fatigue is not offset with benefit to the community

All things considered, the way that development aid is currently structured prevents IR projects from fully valuing and incorporating community knowledge. Funding is restricted by rules imposed by donor country institutions. However, the burden falls to the community as they may be blamed for not understanding the scope of the research project and what funding can be used for. Communication with the community may then be highlighted as a key to averting the risk for research fatigue instead of looking at the structure of the funding in the first place. Further, actions by the research team to meet these unmet community needs can easily revert to a charity model that reinforces global and local power disparities. Furthermore, the issues explored in Chapter 3 regarding shortcomings in data collection and analysis may be tied to the unequal compensation and work overburden placed on local IR team members. This then further increases risk for research fatigue, as data that is collected without being able to influence implementation or facilitate change runs that risk. Thus, the colonial system that established the development aid structures is readily apparent in its modern day applications, as the communities that host these research projects are denied self-determination and are subjected to increased risk for research fatigue throughout project implementation.

The four themes that were explored in this chapter tie back to structural determinants of health, and the power imbalances and inequities present in our world show through in the structure of the realm of development. As described by Labonté and Ruckert (2019), development assistance is described as “inadequate, donor-determined, charity-modelled transfer of funds that obfuscates the historic reasons for why today’s rich countries are rich and poor ones still poor” (13). Though early years of development assistance focused more on economic assistance and industrial development, there has been a significant shift in funding towards health since the release of the MDGs in 2000 (13). It was after this that the field of global health science boomed. Ethnographer J. Crane notes how this field is inherently difficult to critique because it is related to humanitarianism, yet it is also now a thriving industry that benefits from the inequities it seeks to address (135). She notes that “good intentions and compassionate action are not immune to the

power imbalances and inequities they seek to redress, and thus it is crucial that we do not obviate critical thinking about that which is done ‘in the name of global health’” (135).

The International Development Research Centre (IDRC) is “part of Canada’s foreign affairs and development efforts,” but it approaches development through research (136). Just as with Crane’s critique of the global health field being marked by power imbalances and inequities (135), research for development bears the burden of the colonial, capitalist system that created it. That burden then translates to systemic barriers to KT: the donor funding controls, the patriarchal approach to women’s health, the timelines that are too short to facilitate lasting social change, the prioritization of expert knowledge over local knowledge, and the overall setting of an under-resourced healthcare system that is a result of the global economic order from which Canada benefits. These macro level barriers of KT point out problematic aspects of attempting to “improve the lives of people in the developing world” (136) without first examining how the proposed solution is shaped by the ideology that created the problem in the first place.

Drawing in the findings from chapter 3, which looked at how the framework of the research project was lacking and that there was an imbalance between the implementation and research aspects, this can then be considered alongside these barriers experienced due to the structure of development aid. With the advent of IR, it appears that research has been placed within the development paradigm and has brought with baggage from both fields. The colonial roots have engrained inequities into the system, academia’s research and KT processes don’t inherently centre community needs and knowledge, and the data collection tools used by researchers can inadvertently do harm if proper attention isn’t given to data analysis. Thus, we have research and its inherent risks occurring within a development paradigm that has already been noted to be problematic in its approach/framing, and thus the risks then become amplified when adding in research. The barriers posed to community self-determination through development structures multiplies as an increased risk for research fatigue the moment that research data is being collected. Neither development nor research structures were designed to centre community needs, and thus attempting to do community based work within the confines of these structures ends up creating risks for the communities in unforeseen ways. The strengths of this IR team’s community relationship building was hugely beneficial to the project, and facilitated project implementation, but the community’s needs being incorporated into the project was still constrained by these larger

systemic barriers despite the years of effort to build relationships and collaborate with community members.

#### **5.1.4 Final Discussion**

In conclusion, respect for the knowledge we attain from community is missing from the mainstream academic literature. Regardless of whether it is referred to as KT, more care and attention should be given to how community knowledge is integrated into IR projects. If this research is being done using Western research traditions, the use of frameworks for both general research as well as knowledge translation could serve as a guide to ensure community knowledge is not collected without purpose. Regardless of which framework is used, community involvement allows for relationship building and tacit knowledge collection and implementation. In this case, this tacit knowledge being used in KT was done in a way that helped build a relationship between the researchers and the community, facilitating incorporation of the community's knowledge. This knowledge that has been so beneficial within this IR project may also be made to be more impactful if there was a way to capture it set out in the research framework, such as through ethnographic observation.

Changing these issues of methodology doesn't address the larger systemic barriers though. The barriers to KT will endure until we address how the power imbalances in our world and how these imbalances leave their fingerprints on the development aid system that our unjust world created. In early 2020, the Kampala Initiative<sup>4</sup> published a declaration specifically addressing how development aid often reinforces global power imbalances (138). To quote the declaration:

Across the world, health equity is denied, and development assistance for health – “aid” – often reinforces the power imbalances that underlie health inequities. The priorities of Northern donors dictate the aid agenda, implemented by NGOs and Southern ‘partners’ they fund. These priorities often clash with the needs and concerns of communities, governments and civil society in many countries around the world.

The aid space is dominated by powerful interests, while the voices of those most affected by health inequity are regularly tokenised or excluded from the

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<sup>4</sup> The Kampala Initiative is a civil society structure launched by Medicus Mundi in 2019. It has the goal of promoting “cooperation and solidarity for health equity within and beyond aid,” and looks to connect “independent, critical-thinking activists and organizations across Southern and Northern boundaries.” 137. Medicus Mundi International. Kampala Declaration on cooperation and solidarity for health equity within and beyond aid. 2019.

conversation. Many actors within the sector – even among communities and civil society – do not question the underlying premise and structures of health aid. Their own ideas and world views have been shaped by, and for, aid and the industry that supports it.

Disrupting the underlying power relations, such as those that underlie this field of development aid, are the roots of anti-oppressive work (60). Anti-oppressive work then becomes the integral to naming and addressing these underlying development aid structures which deprive communities of the global south of autonomy and self-determination.

As this thesis comes to a close, I would like to highlight that the focus of this particular thesis was to explore how the system within which IR and research for development takes place influences KT and the incorporation of community knowledge. The purpose was never to pick apart a particular project and find its individual flaws. The intention of the IR team under study here has always been to use research (and research funding) to make a difference in the lives of the people living in Natikiri. However, as highlighted here, the IR team has to work within a system that was not designed with communities as the first priority, which has ripple effects no matter how much the team has tried to base decisions around the communities' wants and needs. Furthermore, with my own data collection being completed while there was still over a year left in the project, subsequent changes were made in data collection processes to make data collected more actionable upon discussions with the IR team after the end of my own data collection. The overlying structural issues couldn't be addressed in this timeframe, but the IR team has worked to mitigate what was within their immediate power.

However, as a final point of discussion, I would like to conclude with a reflection on the power given to researchers in conducting research and “creating” knowledge. Specifically, I would like to show that researchers have the power to shape what knowledge is created through the choice of how to approach and frame their own research. In my completion of this case study, I was put into a position where I could choose to not take a critical approach to this research. This would allow me to list the community's risk factors for research fatigue as a largely local problem encompassing things such as poor understanding by members of the community, a poor local economy that I could blame on corrupt foreign leaders, and a poor government which isn't able to supply the health system with enough staff/funding. I, as the student from the global north, would then be able to receive my masters, benefit from the graduate level training, and attain subsequent publications while benefiting from the whole system that exacerbates unjust power differentials in

the first place. Any system which allows this state of affairs to continue has gross ethical issues. And as best stated by Arundhati Roy, “The trouble is that once you see it, you can't unsee it. And once you've seen it, keeping quiet, saying nothing, becomes as political an act as speaking out. There's no innocence. Either way, you're accountable” (111). So, being aware of this, I have the choice to either perpetuate these injustices by not acknowledging them, or I can choose to try and interrupt it. Since this thesis calls development aid and research practices into question, I hope that my choice is clear.

## **5.2 Future Directions**

I began this thesis with a quotation: “We know what we need to do” (1). It would be hypocritical to end this thesis by imploring the reader that there is an utmost need for more research on topic x, or theme y. There are mountains of knowledge that we as a society possess that are not being acted on. This includes knowledge of how to make healthy societies, and knowledge of the socio-political causes of much of the ill-health in our world today. This thesis has demonstrated that further research work done without attention to how community knowledge is used has the potential to do further harm to already marginalized communities through perpetuating risk factors for research fatigue. Rather than more research for the sake of research, what we need is to do take action on the things we already know.

If research is going to be done, researchers should ensure that community knowledge is respected and that methodological choice/planning reflects this. As seen in this research, insufficient theoretical planning can decrease community knowledge use, which then can exacerbate risk for research fatigue. On the contrary, this study also demonstrated that one way to increase the possibility that community knowledge is acted upon is through community involvement. This involves practices that elicit tacit knowledge and helps break down power differentials between the institution and community members. This could be strengthened further in future projects by adopting a participative approach to research, such as research that uses PAR principles. The empowerment and self-determination that PAR principles align with are a step towards overturning the unjust global power structures that marginalizes so much of the global population.

Since the completion of the data collection for this case study, some of the data collection processes within the ACPH project have changed to reflect information that is more actionable

given the research team's strengths. This change is what I had hoped could be an outcome of my research: taking action to increase community knowledge use and thus reduce risk for research fatigue. This action piece is what I believe is key moving forward. Whether this action is inside or outside of academia, the actions should be rooted in anti-oppressive theory if community needs are to be prioritized. Potts and Brown explain that to be an anti-oppressive researcher, actions must be anti-oppressive in both process *and* outcomes, which requires continual self-reflection, self-work, and critique (60). The work must also acknowledge the socio-political construction of knowledge, as how people understand the world is inherently a political act (60). Lastly, we must acknowledge the power-differentials present in all relationships, and do our best to minimize them (60). Though not an exhaustive list, it does provide a starting point from which to explore the anti-oppressive literature. With this as a jumping-off point, "We know what we need to do."(1). Now, we need to do it.

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# Appendices

## Appendix A: Interview Guide for Researchers

1. What does knowledge translation mean to you?
2. What types of “knowledge” from the community do you think should be taken into consideration when adjusting how we’re implementing the project?
3. How successfully do you think the data collected during this project has been integrated into project implementation so far?
4. When we get new knowledge from the community (and it can be any type of knowledge – whether that is feedback from focus groups, individual meetings, or answers to questionnaires), how does that new knowledge go on to affect implementation?
  - 4.1. Is there anyone in particular who makes the decision of how the knowledge is incorporated into the project?
5. If there is a piece of feedback we get from the community that we know would be able to make the project more well suited to their needs, is there anything outside of our control that stops us from incorporating this knowledge?
6. What do you think are strengths of the way our research team adjusts implementation based on the local context/knowledge that the community shares with us?
7. What barriers have you found that make it hard to incorporate data and community feedback into the ongoing project implementation?
8. What barriers do you think have made it hard for the rest of the members of the research team to incorporate data and community feedback into project implementation?
9. What do you think the research team could do better to incorporate data and community feedback into the ongoing project implementation?

10. Is there anything else you would like to add about improving our KT process that you think is important to know when reviewing our KT procedure?



## Appendix B: Observation Guide

(As based on Creswell (103))

<b>Activity Observed:</b>
<b>Day and Time of Observation:</b>
<b>Location:</b>
<b>Participants:</b>
<b>Observer's role: Participant ____ Non-participant ____ Other: _____</b>
Descriptive observations (individuals, setting descriptors)
Reflections (experiences, hypotheses, guidance)

## **Appendix C: Focus Group Discussion Guide**

Preamble: Imagine that it's October 2020. The project has just ended, and you're starting to hear back from the community members. The project has not been successful, and the community is giving you feedback they think this is because they didn't feel like the feedback they gave was used to change the project. They feel like they were asked for a lot of information, and that a lot of members of the community had to do surveys, but that it didn't actually end up making a difference in how the researchers completed the project. They feel like they haven't seen any value for how much input they gave over the 4+ years. You now have 5 minutes to write down as many reasons that you can think of that may have caused the project to fail. You may begin.

After the 5 minutes has ended, go around the group and have each member give 1 reason they came up with for the project possibly having failed. All reasons will be written down on a master list for the group to see. They can only give one reason at a time, but reasons will continue to be given in turn until all members' individual lists have been exhausted. With this list present at the front of the room, a group discussion will then be facilitated by using the following guiding questions:

Are these issues new? Have we thought about them before?

What can we do as a research team to make sure that the problems don't occur?

## Appendix D: NVivo Coding Summary

Node Name	Files	References
Amount of Data	9	20
Broad View of Knowledge	10	12
Communication	16	43
Community Inclusion & Participation	21	80
Data Analysis & Follow-Up	15	47
Data Organization	9	17
Decision Making	14	32
Evidence of Additional Programs	8	12
Feeling of a Project Success	5	9
Feeling of Community Satisfaction	10	15
Finding Alternative Funding	5	5
Funding	15	34
Funding Cycle	6	6
Gender	3	3
Global Political Economy	11	26
Health System Funding	16	34
Staffing	13	19
Incentives	6	10
Influence of Politics	7	12
Tacit Knowledge Collection	13	33
Local Knowledge	17	41
National Policies	5	7
Power Dynamics	3	4
Project Changes	10	23
Project Structure	11	20
Project Flexibility	7	12
Publication	9	12
Religious Beliefs	6	7
Statistical Analysis	4	9
Structure of Development Aid	16	42
Support from the Ministry of Health	7	13
Sustainability	10	12

Node Name	Files	References
Team Make-Up	14	54
Team Organization	16	37
Technical Expertise	3	4
The Desire for Data	11	21
The Development Approach	1	1
Timelines	9	14
Transportation	8	13
Type of Data Collection	16	52
Use of Data	3	4
Use of Students	14	23
Using Pre-Existing Partnerships	6	15