GENDER ANALYSIS FOR THE KNOWLEDGE SUCCESS PROJECT

K. Plourde and R. Thomas, August 2019

CONTENTS

ACKNOWLEDGMENTS

Recommended Citation:
Plourde K, Thomas R. Gender Analysis for the Knowledge SUCCESS Project. Baltimore, MD: Knowledge SUCCESS Project, Johns Hopkins Center for Communication Programs; 2019.

ACRONYMS

ADS	Automated Directives System
CCP	Center for Communication Programs
CoP	community of practice
CSO	civil society organization
FP/RH	family planning/reproductive health
GSMA	The GSMA association, commonly referred to as the Global System for Mobile Communications
HIFA	Healthcare Information for ALL
IGWG	Interagency Gender Working Group
ITU	International Telecommunications Union
KII	key informant interview
KM	knowledge management
LMIC	low- and middle-income country
M&E	monitoring and evaluation
SDGs	Sustainable Development Goals
SUCCESS	Strengthening Use, Capacity, Collaboration, Exchange, Synthesis, and Sharing [Knowledge SUCCESS project]
USAID	U.S. Agency for International Development
WHO	World Health Organization

GLOSSARY

Gender	Gender is a culturally-defined set of economic, social, and political roles, responsibilities, rights, entitlements obligations, and power relations associated with being female and male, as well as the relationships between and among women and men. The definitions and expectations of what it means to be a man or a woman, as well as sanctions for not adhering to expectations, varies across cultures and over time and often intersects with other factors such as race, class, age, and sexuality. Transgender individuals, whether they identify as men or women, can be subject to the same set of expectations and sanctions (Interagency Gender Working Group [IGWG, n.d.).
Gender accommodating	Gender-accommodating programs and policies recognize gender inequalities, but they work around them rather than reduce them (IGWG, 2017).
Gender aware	Gender-aware programs and policies examine and address the gendered socioeconomic and political context and the associated gender dynamics (IGWG, 2017).
Gender blind	Gender-blind programs ignore the economic, social, and political roles, responsibilities, rights, entitlements, obligations, and power relations associated with each gender and also ignore the dynamics between men and women (IGWG, 2017).
Gender continuum	In a continuum, many small and subtle differences exist side by side between two distinct extremes. In a gender continuum, traits, behaviors, values, and power may be associated more with masculinity or femininity, but they are expressed and experienced to varying degrees by different people (Clow, 2012).
Gender equality	Gender equality is the state or condition that affords women and men equal enjoyment of human rights, socially valued goods, opportunities, and resources. Genuine equality means more than parity in numbers or laws on the books; it means expanded freedoms and improved overall quality of life for all people (USAID, 2012).
Gender equity	Gender equity is the process of being fair to people across the gender continuum (including but not limited to women, men, and gender non-binary people). To ensure fairness, measures must be taken to compensate for cumulative economic, social, and political disadvantages that prevent women and men from operating on a level playing field (IGWG, n.d.).
Gender homophily	Gender homophily is the preference to interact with people of the same gender (Queupil and Munoz-Garcia, 2019; Tariq, 2018).
Gender identity	Gender identify is one's internal sense of being male, female, neither, or both (IGWG, n.d.).

Gender integration	Gender integration refers to strategies applied in programmatic design, implementation, monitoring, and evaluation to take into account gender considerations (as defined above, in "gender") and to compensate for gender-based inequalities (IGWG, n.d.).
Gender non-binary	People who are gender non-binary may identify as either having an overlap of, or indefinite lines between, gender identity; having two or more genders (being bigender, trigender, or pangender); having no gender (being agender, nongendered, genderless, gender-free, or neutrois); moving between genders or having a fluctuating gender identity (genderfluid); or being third gender or other-gendered, a category which includes those who do not place a name to their gender (FHI 360, 2018).
Gender non-conforming	Having a gender identity or gender expression that does not conform to a given society's dominant gender roles (Statistics New Zealand, 2014).
Gender transformative	Gender transformative refers to policies and programs that seek to transform gender relations to promote equality and achieve program objectives. This approach attempts to promote gender equality by: (1) fostering critical examination of inequalities and gender roles, norms, and dynamics; (2) recognizing and strengthening positive norms that support equality and an enabling environment; (3) promoting the relative position of women, girls, and marginalized groups; and (4) transforming the underlying social structures, policies, and broadly held social norms that perpetuate gender inequalities (IGWG, 2017).

EXECUTIVE SUMMARY

PROGRAM

Knowledge SUCCESS (Strengthening Use, Capacity, Collaboration, Exchange, Synthesis, and Sharing) is a five-year (2019–2024) global project led by a consortium of partners and funded by USAID's Office of Population and Reproductive Health to support learning and create opportunities for collaboration and knowledge exchange within the family planning and reproductive health (FP/RH) community. Knowledge management (KM) systems are not immune to the gender inequities that affect social, economic, and political structures and systems in which people operate. Therefore, effective knowledge management with Knowledge SUCCESS requires a gender-equitable approach over the course of the project to ensure that appropriate FP/RH knowledge and information reach the right people at the best time possible.

METHODS

From May to July 2019, FHI 360, on behalf of Knowledge SUCCESS, conducted a gender analysis to inform the new USAID-supported project. The gender identities in consideration were female, transgender, gender non-conforming, and male. This analysis was designed to explore gender-related barriers, gaps, and needs among health professionals across the KM landscape, particularly in low- and middle-income countries (LMICs). The gender analysis consisted of two activities: (1) a literature review and (2) key informant interviews to analyze gender equality within knowledge products, platforms, and structures. Interviews were conducted with individuals representing Knowledge SUCCESS partners, FP/RH implementing organizations, donor organizations, large coordinating mechanisms, technical working groups, national governments, and civil society organizations.

FINDINGS

Although we found limited information in the literature review and interviews, we were able to identify the following challenges and opportunities.

CHALLENGES

- Positions of KM leadership are less likely to be filled by women.
- Women are less likely than men to be published or cited in peer-reviewed literature.
- Reduced access to the Internet in LMICs affects women more than men.
- Women are less likely than men to own mobile phones in LMICs.
- Women may have more limited use of social media than men.
- Unequal access to technology has important implications for KM, as it affects access to evidence-based information.
- Gender homophily (the preference to interact with people of the same gender) may be stronger for men than women. This can potentially act as a barrier to women's ability to access knowledge within an organization if they are excluded from male-dominated partnerships. It can also limit men's access to, and engagement with, the diverse knowledge and unique perspectives of women and people of all genders.
- Country- and organizational-level laws and policies may directly affect the gendered knowledge being produced, shared, accessed, and used, but there is little information available to fully understand this issue.

- Gender norms, stereotypes, and gender roles affect engagement and participation in trainings and meetings. For example, gendered home and social responsibilities may limit engagement with certain KM platforms (e.g., webinars and conferences).
- Men's ideas tend to hold more power and value than those of women in various KM spaces.
- Levels of gender-related KM barriers vary depending on the other identities a person may have (e.g., race, age, class, citizenship, geographical location, language of preference, position within an organization, and cultural identity).
- Gender roles and responsibilities may be reflected or reinforced through participants' interactions via in-person KM platforms.
- The creators of digital knowledge management platforms are often men, potentially leading to the development of KM platforms that may not be responsive to the needs of users of all genders.
- There has been very little to no attention to the challenges faced by gender non-conforming people.

OPPORTUNITIES

- Women may use e-learning platforms at similar rates as men (unknown for gender non-conforming people), and the flexibility of e-learning platforms may provide an opportunity to reach women with information.
- Participation in global listservs and communities of practice (CoPs) seems equal across genders.
- Deliberate methods to engage particular gender groups in knowledge sharing and discussions have created more outlets for under-represented voices and ideas.
- A variety of KM approaches and communication channels may help increase engagement among audiences of all genders.
- Extending the time that knowledge resources are kept available may increase access to resources for people of any gender, as gendered work and home responsibilities may affect when people can access online KM platforms.
- Codes of conduct, terms of engagement, and gender-aware meeting facilitators can create a safe and respectful environment for in-person and online KM platforms.
- Intentionally seeking out and consistently highlighting diverse perspectives from diverse sources can change the norms of knowledge production.

CONCLUSIONS

Given the influence of gender on the production of and access to FP/RH-related KM products and activities, Knowledge SUCCESS will need to address the gender inequities presented in this analysis to meet its objectives. Underlying the challenges is the lack of gender equity and unequal power dynamics within the field of global health overall. Knowledge SUCCESS commits to eliminating those inequities within this project. Opportunities exist to harness gender-integrated strategies through all project activities and products over the next five years. We must continue to consider the role that gender plays at each step of the KM cycle to reach sustainable FP/RH outcomes.

WHAT IS KNOWLEDGE MANAGEMENT AND WHY IS IT IMPORTANT?

Evidence-based development solutions are needed to address global and country-level barriers to quality family planning and reproductive health (FP/RH) information and services. While key gaps remain for many of the hardest-to-reach populations, this evidence is available in most cases. Yet, often this high-quality health information is not making it into the hands of key audiences so that they may improve health policies, programs, services, and practices. In fact, research demonstrates that the translation of evidence to practice in health and development programs can take over a decade (Balas, 1998). Bridging the gap between evidence generation and practice requires efficient knowledge management (KM) approaches to ensure that useful, accurate, and actionable FP/RH knowledge and information reach the right people at the best time possible. KM is the systematic process of collecting and curating knowledge and connecting people to it so that they can act effectively (Sullivan, et al., 2015).

Knowledge SUCCESS (Strengthening Use, Capacity, Collaboration, Exchange, Synthesis, and Sharing) is a five-year (2019–2024) global project led by a consortium of partners and funded by USAID's Office of Population and Reproductive Health to support learning and create opportunities for collaboration and knowledge exchange within the FP/RH community. We apply KM strategies to help programs and organizations working in FP/RH collect knowledge and information, organize it, connect others to it, and make it easier for people to use. Our approach is guided by behavioral science and design thinking principles in order to make these activities easy, attractive, and timely—with the intention that this will eventually result in widely used, optimized FP/RH programs and services that improve the health of women, men, and families everywhere.

WHY DOES GENDER MATTER FOR KNOWLEDGE MANAGEMENT?

Knowledge in the development space is intricately linked with power and growth. Ensuring the power of women, girls, and gender non-conforming people in development means investing in knowledge initiatives that raise awareness of gender inequality among a range of people or directly supporting knowledge-creation processes among the most marginalized people. This allows for a challenge to unequal, gendered KM power and social structures and a disruption of broader systemic inequalities instead of pointedly focusing on individual access to knowledge (Narayanaswamy, 2017). To ensure that equitable KM systems are in place, we must ask ourselves these questions: Do all people have equal decision-making agency when it comes to how knowledge is created, shared, packaged, or used? Do all people have equal access to networks of knowledge, knowledge products, and/or KM activities that are key for their work? Do gender norms and stereotypes affect how and when knowledge is shared or received?

This is particularly relevant in today's global health climate where there is a juxtaposition between the practices and goals of the sector and the lack of gender parity and the experiences of violence among women who work in the sector (Dhatt, et al., 2017). The role of gender inequality in global health research and programs is well established. In fact, the 2030 Sustainable Development Goals (SDGs) recognize that gender equality is a fundamental, foundational component of overall development and that improving it and promoting women's empowerment are critical for achieving all 17 SDGs (UN

Women, n.d.; Dhatt, et al., 2017). Unfortunately, despite the increased focus on gender equality in the design of global health programs and research, within the global health workforce it is sorely lacking; while women make up a large proportion of the global health workforce, only a small percentage of leadership positions are held by women (Talib, Burke, and Barry, 2017; Dhatt, et al., 2018; Global Health 50/50, 2019). Worse, in the wake of the #metoo and #AIDtoo movements, women in global health are increasingly reporting gender discrimination, harassment, and sexual and gender-based violence perpetrated by their male colleagues (Ravelo, 2019). This is a stark reflection of deeply entrenched gender bias and power differentials. Several global movements and efforts have emerged over the past several years, including Global Health 50/50 and the Women Leaders in Global Health conference, to address the lack of parity and the presence of gender-based violence throughout the global health field.

The Knowledge SUCCESS project is grounded in a KM Capacity Ecosystem framework, which recognizes that for sustainable, institutionalized capacity strengthening to take place, KM interventions need to go beyond individual skills to also strengthen the organization within which the individual operates. Furthermore, the ecosystem framework recognizes that organizations do not operate in isolation but as part of a health system. In the context of KM, it is important to recognize that the gender inequality currently seen across the global health workforce may influence how knowledge is used and shared, as well as how it is detrimental to women, girls, men, boys, and people of all genders.

METHODS

From May to July 2019, FHI 360, on behalf of Knowledge SUCCESS, conducted a gender analysis to inform the new USAID-supported project. The goal of this gender analysis, and the subsequent gender strategy, is to ensure that gender transformative practices, as identified by USAID, underlie all Knowledge SUCCESS activities. We sought to understand gendered barriers to the full participation of women, men, and people across the continuum of gender expression in potential Knowledge SUCCESS activities and obtain suggestions for how to address those barriers. As such, this analysis was designed to explore gender-related barriers, gaps, and needs among health professionals across the KM landscape, with a particular emphasis on LMICs. Through the analysis, we assessed how gender and power dynamics may affect the production of, access to, and use of knowledge, including access to and use of technology for information access and sharing; participation and leadership/decision making in knowledge exchange mechanisms; and participation in KM capacity strengthening efforts.

For the purpose of this analysis, we define gender as "a culturally-defined set of economic, social, and political roles, responsibilities, rights, entitlements obligations, associated with being female and male, as well as the power relations between and among women and men, boys, and girls" and "in some cultures third or other gender" (IGWG n.d.; FHI 360, 2018). We use the FHI 360 Gender Equality and Social Inclusion definition of gender non-binary: "People who are gender non-binary may identify as either having an overlap of, or indefinite lines between, gender identity; having two or more genders (being bigender, trigender, or pangender); having no gender (being agender, nongendered, genderless, gender-free, or neutrois); moving between genders or having a fluctuating gender identity (genderfluid); or being third gender or other-gendered, a category which includes those who do not place a name to their gender" (FHI 360, 2018).

The gender analysis consisted of a literature review and key informant interviews to analyze the landscape of gender equality within knowledge products, platforms, and structures. This analysis was accorded a non-research determination by the Institutional Review Board Office at the Johns Hopkins Bloomberg School of Public Health.

LITERATURE REVIEW

We identified relevant literature through a three-phase process. First, we conducted an electronic search of PubMed, Web of Science, Scopus, Global Health PsycINFO, and Academic Search Primer, using the search terms outlined in Table 1 (Phase 1). The search produced 860 articles and included any relevant article published within the last 10 years (2009–2019) and available in English. Twelve of these articles and documents were deemed relevant and included in the results of the review.

Table 1. Databases and search terms for Phase 1	
Database	Search Terms
Global Health PsycINFO	("knowledge management" OR knowledge OR "knowledge sharing" OR "knowledge dissemination" OR "knowledge collection" OR "knowledge capture" OR "knowledge synthesis" OR "knowledge generation" OR "knowledge assessment" OR "knowledge production" OR learning OR "collaboration, learning, or adaptation" OR CLA OR "learning agenda" OR "health information") AND (gender OR "gender integration" OR "gender equity" OR "gender equality" OR "gender inequality" OR "gender dynamics" OR "gender roles" OR "gender norms")
Academic Search Premier	("knowledge management" OR knowledge OR "knowledge sharing" OR "knowledge dissemination" OR "knowledge collection" OR "knowledge capture" OR "knowledge synthesis" OR "knowledge generation" OR "knowledge assessment" OR "knowledge production" OR learning OR "collaboration, learning, or adaptation" OR CLA OR "learning agenda" OR "health information") AND (gender OR "gender integration" OR "gender equity" OR "gender equality" OR "gender inequality" OR "gender dynamics" OR "gender roles" OR "gender norms")
Web of Science	("knowledge management" OR "knowledge sharing" OR "information sharing" OR "knowledge dissemination" OR "information dissemination" OR "knowledge collection" OR "knowledge capture" OR "information capture" OR "knowledge synthesis" OR "generating knowledge" OR "knowledge assessment" OR "producing knowledge") AND ((Gender OR "gender identity" OR "gender equity" OR "gender inequity" OR "gender dynamics" OR "gender roles" OR "gender norms" OR (integrat* AND gender)) NOT sex)
Scopus	("knowledge management" OR "knowledge sharing" OR "information sharing" OR "knowledge dissemination" OR "information dissemination" OR "knowledge collection" OR "knowledge capture" OR "information capture" OR "knowledge synthesis" OR "generating knowledge") AND ((gender OR "gender identity" OR "gender equity" OR "gender inequity" OR "gender dynamics" OR "gender roles" OR "gender norms" OR (integrat* AND gender)) AND NOT sex)

PubMed	(knowledge management[Mesh] OR "knowledge sharing" OR "information sharing" OR "knowledge dissemination" OR "information dissemination" OR "knowledge collection" OR "knowledge capture" OR "information capture" OR "knowledge synthesis" OR "generating knowledge" OR "knowledge assessment" OR "producing knowledge") AND ((Gender OR "gender identity" OR "gender equity" OR "gender inequity" OR "gender dynamics" OR "gender roles" OR "gender norms" OR (integrat* AND gender)) NOT sex) (knowledge management[Mesh] OR "knowledge sharing"[tiab] OR "information sharing"[tiab] OR "knowledge dissemination"[tiab] OR "information dissemination"[tiab] OR "knowledge collection"[tiab] OR "knowledge capture"[tiab] OR "information capture"[tiab] OR "knowledge synthesis"[tiab] OR "generating knowledge"[tiab] OR "knowledge assessment"[tiab] OR "producing knowledge"[tiab]) AND ((gender[tiab] OR "gender identity"[tiab] OR "gender equity"[tiab] OR "gender inequity"[tiab] OR "gender dynamics"[tiab] OR "gender roles"[tiab] OR "gender norms"[tiab] OR (integrat*[tiab] AND gender[tiab])) NOT sex[tiab])

Secondly, the team sought to identify additional relevant literature through a review of the citations of these 12 publications and a search for grey literature (Phase 2). We searched for literature produced by the Knowledge for Health (K4Health) Project, along with selected health organizations, institutions, international bodies, and donors such as the World Bank, World Health Organization (WHO), UNICEF, United Nations Development Programme (UNDP), the USAID LEARN Project, the Bill & Melinda Gates Foundation, Healthcare Information for ALL (HIFA), and others identified through a Google search. An additional 11 articles and documents were deemed relevant and included in the results of the review.

Finally, given the small amount of relevant literature identified, we conducted a complementary search of PubMed, Scopus, POPLINE, Google Scholar, and African Journals Online (Phase 3). The Phase 3 search used combinations of the following search terms:

> ("knowledge management" OR knowledge OR "knowledge sharing" OR "knowledge dissemination" OR "knowledge collection" OR "knowledge capture" OR "knowledge synthesis" OR "knowledge generation" or "knowledge assessment" OR "knowledge production" OR learning OR "collaboration, learning, or adaptation" OR CLA OR "learning agenda" OR "health information" OR "knowledge sources" OR "knowledge source" OR "information communication technology" OR ICT* OR "information services" OR "information sources" OR "information dissemination" OR "information networks" OR Internet) AND (gender OR "gender integration" OR "gender equity" OR "gender equality" OR "gender inequality" OR "gender issues" OR "gender relations" OR "gender dynamics" OR "gender roles" OR "gender norms")

We expanded the period of review to include documents published from 1999 to 2019 for the phase 3 search. This search returned an additional 29 articles that were potentially relevant. After review, 10 additional articles were included. The diagram below illustrates the multiple phases of the search. In the end, we included 33 relevant articles and documents in the literature review (Figure 1).
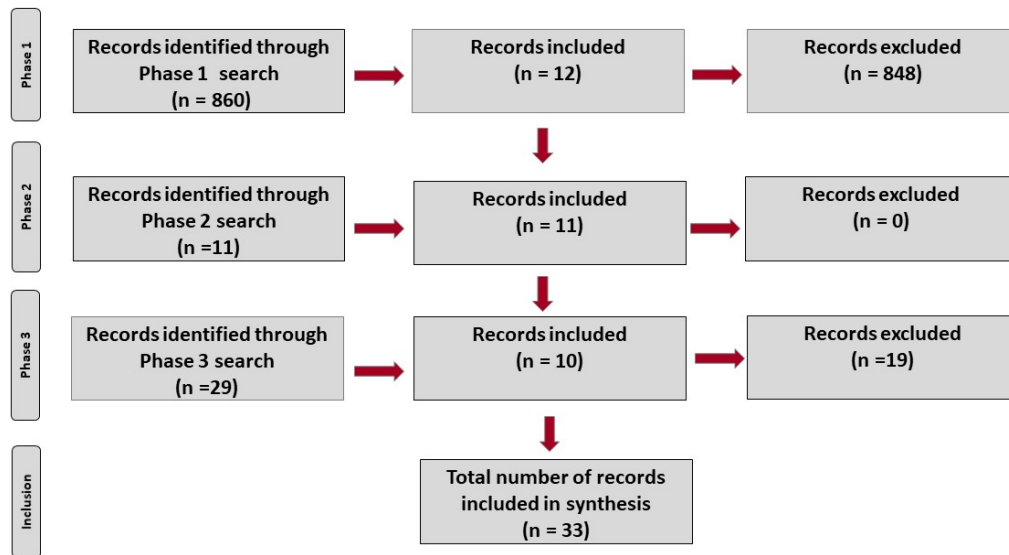
Figure 1. Phases of the literature review

KEY INFORMANT INTERVIEWS

Key informant interviews (KIIs) were conducted via telephone and Skype with informants from seven different participant groups:

- Knowledge SUCCESS partners
- FP implementing organizations
- Donors
- Large coordinating mechanisms
- Technical working groups
- Government
- Civil society

Participant demographics, organizations, and locations are shown in Table 2. We used purposive sampling to identify one to three participants per participant group, and we conducted a total of 16 interviews. Participants included 13 female-identified individuals and 3 male-identified individuals. Participation in the interviews was based on participant availability. It is important to note that this convenience sampling process resulted in a participant group that was unequally stratified by gender. All participants identified as either male or female; no participants identified as gender non-binary or gender-nonconforming. Furthermore, there were more female-identified participants than male-identified. It is possible that the gender inequality in our sample may have biased the results of the analysis.

Table 2. Participant demographics	
Gender	*(n)*
Female	13
Male	3
Organization Type	*(n)*
Knowledge SUCCESS partner	5
Donor	2
Large coordinating mechanism	3
Technical working group	2
Family planning implementing organization	1
Civil society organization	2
Government	1
Work Location (Country)	*(n)*
USA	10
Jamaica	1
Ghana	1
Switzerland	1
Uganda	1
Kenya	1
Niger	1

To best capture the perspectives of each participant group, we developed an interview guide to identify specific gender barriers across the KM ecosystem and in accordance with USAID's Automated Directives System (ADS) domains for a gender analysis (USAID, 2017) and the FHI 360 Gender Integration Framework (FHI 360, 2018). These domains, along with illustrative interview questions for each domain, are outlined in Table 3. (For a full list of interview questions, please see the Appendix.) Interviews were not recorded and transcribed, but extensive interview notes were taken; thus, quotations included in this report are paraphrased from the interview notes.

Table 3. Gender analysis domains and definitions		
Domain	**Definition**	**Illustrative In-Depth Interview (IDI) Questions Connecting the Domain to KM**
Access to and Control over Assets and Resources	*One's ability to use financial and other resources/assets.* Having access to resources and control over them is fundamental to being a fully active and productive (socially, economically and politically) participant in society. Resources and assets include national and productive resources, information, education, income, services, employment, and benefits.	• Thinking about some of the KM resources you listed, how does access to those resources differ by gender? • What kinds of trainings, meetings, seminars, or other knowledge-sharing events do people have to improve their FP/RH knowledge and skills? How do opportunities to participate in those events differ by gender?
Cultural Norms and Beliefs	*Beliefs, perceptions, knowledge, and social norms of women, men, girls, and boys, and beliefs and perceptions about women, men, girls, and boys.* Women, men, girls, and boys are privy to different types of knowledge and experiences; thus, they have diverse beliefs and may perceive situations differently. This domain also includes beliefs and social norms about acceptable behavior for women and men, how they are differently valued in society, and their capabilities.	• How do gender stereotypes and gender roles influence the types of KM activities that a person is responsible for? • How do gender norms impact how people of different genders engage in different aspects of KM?
Gender Roles, Responsibilities, and Time Use	*Peoples' behaviors and actions in life and how they vary by gender.* The domain encompasses gendered differences in freedom of movement or autonomy to enable participation in activities, the types of activities and practices in which people engage, how people engage in development activities, and their allocation and availability of time to participate.	• How do people's home responsibilities affect their participation in KM (e.g., if a KM event were to be held "after hours")? How does this differ by gender?
Laws, Policies, Regulations, and Institutional Practices	*How people of different genders are regarded and treated by the customary and formal legal codes and judicial systems.* Gender-based differences in legal rights and status may affect girls and women or gender non-conforming people differently than boys and men.	• Does your institution have formal policies that relate to accessing, using, or producing knowledge? An example of a formal policy might include primary authorship only being available for people with a PhD. How do those policies differ for men and women differently?
Patterns of Power and Decision Making	*Gender norms and relations influence people's ability to freely decide on, influence, control, enforce, and engage in actions.* Power is a part of each of the four domains, as well as a domain in its own right.	• Who makes the decisions around the KM activities and products your team uses or shares? How does gender influence the decisions that are made around knowledge sharing, use, creation, or access?
Source: GESI, 2018; ADS, 2017		

In addition to analyzing data per the domains above, we also examined interview responses per the Gender Integration Continuum (Figure 2). The Gender Integration Continuum is a framework that "categorizes approaches by how they treat gender norms and inequities in the design, implementation, and evaluation of a program/policy" (Interagency Gender Working Group, 2017). Approaches are classified into two broad categories: gender blind or gender aware. Gender blind programs ignore the economic, social, and political roles, responsibilities, rights, entitlements, obligations, and power relations associated with each gender and also ignore the dynamics between men and women. In contrast, gender aware programs and policies examine and address the gendered socioeconomic and political context and the associated gender dynamics. Gender aware programs can further be classified as gender exploitative, gender accommodating, or gender transformative. Gender exploitative programs intentionally or unintentionally reinforce or use existing gender inequalities and stereotypes to ensure project outcomes; programs should avoid such approaches. Gender accommodating programs and policies recognize gender inequalities, but they work around them rather than reduce them. Gender transformative programs and policies—the ideal that programs and policies should strive for—reconstruct gender relations to reach and sustain gender equality in program objectives.

For a program or policy to become gender transformative, it must:
- Foster critical examination of gender norms and dynamics
- Strengthen or create systems that support gender equality
- Strengthen or create equitable gender norms and dynamics
- Change inequitable gender norms and dynamics (as seen in Figure 2) (Interagency Gender Working Group, 2017)
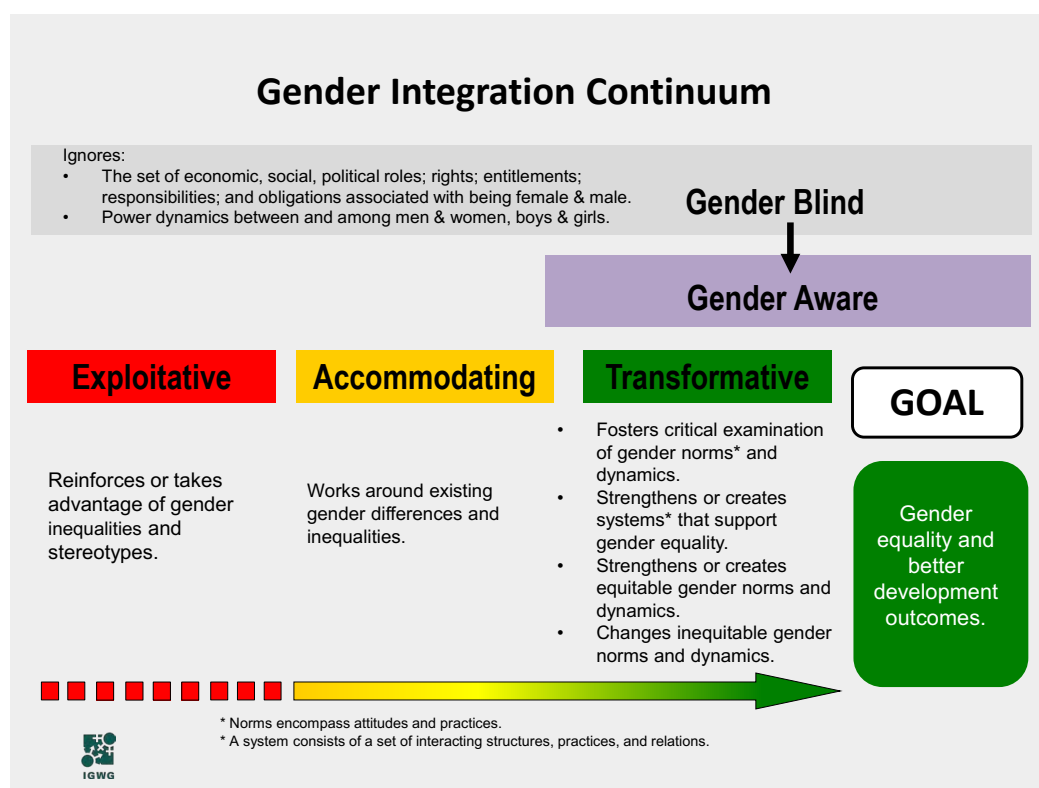

Figure 2. Gender Integration Continuum (Image replicated from IGWG, 2017a)

RESULTS

Overall, results from the literature review and KIIs demonstrated a lack of awareness of and attention to gender and its influence on KM. The dearth of literature on this topic suggests an absence of research dedicated to examining issues of gender and their relationship with KM. In addition, the interview responses reflected the respondents' unfamiliarity with and the lack of discourse about the topic. Despite these challenges, some important themes emerged from both the literature and the interviews.

LITERATURE REVIEW

The review revealed limited literature examining the intersection of gender and KM activities for all fields (Durbin, 2010). **Research and information related to gender and its intersection with KM is particularly lacking for FP/RH.** Some key themes, however, did emerge.

> **Key Finding:** There is little information available in the literature about the intersection of gender and KM for FP/RH.

GENDER INEQUALITY IS EMBEDDED IN GLOBAL HEALTH INSTITUTIONS

First, the literature suggests that gender inequality is embedded within global health institutions writ large; men and women working in this field do not enjoy equal rights, opportunities, or access to resources. In the book *Gender, Power and Knowledge for Development*, author Narayanaswamy writes about the power differential in global health KM between women in the Global North and women in the Global South and how even within gender groups, there is unequal representation in KM that must be recognized and addressed (Narayanaswamy, 2017). These intersections of identity affect all KM products and activities described in this review.

WOMEN OUTNUMBER MEN IN THE HEALTH WORKFORCE BUT ARE UNDERREPRESENTED IN LEADERSHIP

A second theme was that women continue to represent most of the health workforce worldwide, accounting for up to 75% of it in some countries, yet they remain underrepresented in global public health leadership positions (Talib, et al., 2017). Only 25% of global health organizations have achieved gender parity on their boards. In addition, women hold less than one-third of senior management positions in 38% of global health organizations, and 5% of global health organizations have no women in senior management positions (Global Health 50/50, 2019). Furthermore, there is a 13.5% gender pay gap between men and women working in global health (Global Health 50/50, 2019). Women account for only one-

> **Key Finding:** Gender inequality in the global health workforce, particularly in leadership positions, may influence how knowledge is used and shared.

quarter of global health faculty positions and one-third of global health center directorships at the top 50 U.S. universities (Talib, et al., 2017). Only one chief executive among the 27 health care companies listed in Fortune's 500 in 2017 was female (Talib, et al., 2017), and only 31% of the world's ministers of health are women (Barry, et al., 2017). Gender inequality across the field of global health influences the

success of KM activities in a multitude of ways. In addition, the literature suggests some indicators of inequality in the field of KM (Boyes, 2018). For example, among the 211 professionals listed among the top KM Thought Leaders, only 16% are female (Boyes, 2018.)

KNOWLEDGE PRODUCTS ARE MORE FREQUENTLY DEVELOPED BY MEN THAN WOMEN

There are well-documented disparities seen in the published scientific literature across all fields, with female researchers publishing fewer research papers on average compared with male peers (Shannon, 2019; Holeman, 2018). Furthermore, a recent study found that research papers written by female authors are cited less than those written by male authors (Queupil and Munoz-Garcia, 2019). A study exploring gender differences among conference speakers from 50 U.S. universities found that men were more likely than women to speak at conferences (Nittrouer, 2018).

Key Finding: Women are less likely to be published or cited in peer reviewed literature than men, and they may have fewer opportunities to produce other types of KM products.

This disparity may also be present across less traditional knowledge outlets, such as blogs. While no studies examining blog authorship for the field of global public health could be found, studies exploring the issue in the field of political science found that only 10% of the top bloggers were women (Dustin and Mark, 2006). Those authors argue that this is likely a result of the history of male-dominated online participation and a failure of the political blog community to link to female-authored pieces (Dustin and Mark, 2006). Given the absence of literature on this topic in global health, and particularly in FP/RH, these findings suggest that exploration of gender and blog authorship may be beneficial for FP-related KM efforts. These gender-related biases in knowledge production are exacerbated for women and women's organizations based in Africa (Radloff, 2002).

GENDER DISPARITIES EXIST IN INTERNET ACCESS

Alongside the production of knowledge, access to and use of web-based KM solutions is another important theme that emerged. Results from the literature review establish that **women and men in LMICs do not have equal access to the Internet, and subsequently to web-based KM platforms, including those that could be used by Knowledge SUCCESS—such as social media, e-learning platforms, and listservs** (Antonio and Tuffley, 2014; Gill, et al., 2010). In fact, the UN International Telecommunications Union (ITU) estimates that as many as 200 million more men may be on the Internet than women, while the GSMA estimates this number to be closer to 313 million

(Fatehkia, Kashyap, and Weber, 2018; Rowntree, 2019). Researchers from Princeton University recently used Facebook data reporting users' age and gender to predict digital gender gaps for over 150 countries. Their data suggest that Internet penetration is 24% lower for women than men (Fatehkia, et al., 2018). A report developed by ICRW states that this

Key Finding: Women and men do not have equal access to digital solutions such as Internet and mobile phones, particularly in LMICs. Furthermore, women may be limited in their use of social media. Unequal access to technology has important implications for KM, as it affects access to evidence based information.

rate is even lower in Asia and the Middle East, where women account for 22% and 6% or less of Internet users, respectively (Gill, et al., 2010). Women's organizations in LMICs may also face unique challenges in accessing the Internet and web-based KM resources. These challenges include poor infrastructure and disruptions in telecommunications; cost; the intersection of gender, poverty, and illiteracy; and a lack of policies that consider gender as it relates to universal access to technology. These access issues tend to be more acute for rural women's organizations (Radloff, 2002).

Access to mobile phones also affects gender-specific access to the Internet. Data demonstrate that in LMICs, the primary mode of Internet access for women is mobile phones (Rowntree, 2019). **While 1.7 billion women in LMICs now own mobile phones, women remain 10% less likely than men to own a mobile phone** (Rowntree, 2019). The most recent GSMA Intelligence Consumer Survey, conducted face-to-face in 18 LMICs, identified the following as the top mobile phone ownership barriers faced by women: affordability, literacy and skills, safety and security, relevance, network coverage, and family disapproval (Rowntree, 2019). **The unequal access to technology has important implications for KM, as it affects access to evidence-based information**.

USE OF SOCIAL MEDIA IS GENDERED

A fourth theme concerns the gendered use of social media. Research shows that many health researchers and clinicians feel that social media plays an important role in the communication of research findings and that social media is becoming an important approach to complement traditional information sources (Khoo, 2014; Tunnecliff, et al., 2015). Yet, the literature suggests that even when women do have access to the Internet and web-based KM tools, social media platforms are prone to gender inequalities (e.g., content bias and disparities in visibility), and gender may affect use patterns and interactions (Garcia, et al., 2018).

Using data from 217 countries, a research team from multiple universities recently examined Facebook activity rates between men and women by computing something they call a Facebook Gender Divide score. Their results show a direct relationship between rates of gender equality, as measured by the World Economic Forum, and the Facebook Gender Divide score (Garcia, et al., 2018)—demonstrating both that Facebook activity is impacted by gender and that this impact is most pronounced in countries with greater gender inequality. In contrast, a review of papers on social media use found that women used social networking sites more frequently than men. However, the way that women and men used social networking sites differed; women were found to use social media to maintain existing relationships while men tended to use the tools to develop new contacts (Khoo, 2014).

A study of research centers, educational and clinical institutions, and health professional associations in Australia, India, and Malaysia found that specific characteristics such as younger age, male gender, and undergraduate status in Malaysia and India were associated with increased likelihood of using social media for professional purposes (Tunnecliff, et al., 2015). Yet, another study examining the link between social media use and demographic factors in Bulgaria, India, Portugal, Russia, and the UK found no statistically significant differences in use of social media by gender (Bogolyubov, 2014). **Given the mixed results from this small sample of studies, further exploration is warranted of how demographic characteristics, including gender, may affect social media use, and ultimately access to quality FP/RH information.**

EFFECT OF GENDER ON E-LEARNING IS UNCLEAR

Findings from the literature review on the effect of gender on e-learning were contradictory (Cuadrado-García, Ruiz-Molina, and Montoro-Pons, 2010). Some authors argue that gender-specific behavioral patterns may inhibit women from using e-learning tools, while others argue that **the flexibility of e-learning platforms may encourage increased use among women** (Cuadrado-García, et al., 2010). Little information is available about the influence of gender on listservs. **As Knowledge SUCCESS implements its activities, it may be important to monitor any gender differences in access to and use of such web-based KM platforms .**

> **Opportunity:** Women may use e learning platforms at similar rates to men (rates unknown for gender non conforming people), and the flexibility of e learning platforms may provide an opportunity for increased use among women.

GENDER DISPARITIES ARE REFLECTED IN ORGANIZATIONAL CULTURE

> **Key Finding:** Gender homophily (the preference to interact with people of the same gender) may be stronger for men than women, potentially acting as a barrier to women's ability to access knowledge within an organization and limiting men's access to and engagement with the diverse knowledge and unique perspectives of women and people of all genders.

The final theme identified was the role of gender in organizational culture. **Research shows that gender inequalities and power differentials are often reflected in organizational culture and can impede women's access to key information, as well as women's ability to contribute to organizational KM** (Durbin, 2010; Martin, Lord, and Warren-Smith, 2018). Evidence shows that knowledge sharing is affected by personal relationships, and research on scientific collaboration has identified a phenomenon in the literature referred to as "gender homophily" (Queupil and Munoz-Garcia, 2019; Tariq, 2018). **Gender homophily can act as a barrier to women's ability to access knowledge within an organization because they are excluded from male-dominated partnerships. It can also limit men's access to and engagement with the diverse knowledge and unique perspectives of women and people of all genders.** For example, networks and networking can be an important channel for interorganizational KM—however, women may often be excluded from informal networks, such as the persistent "old boys' network," and as a result, the information shared through such networks (Durbin, 2010). Furthermore, female managers who participated in a small study on organizational learning reported challenges to sharing information and expertise in an environment where men's knowledge was more highly valued (Martin, et al., 2018). The literature suggests that gender-related power imbalances may similarly affect interactions within communities of practice (CoPs) (Fox, 2012). A study comparing same-gender vs. mixed-gender interactions within virtual collaboration systems found that in mixed-gender groups, male participants more frequently started the sessions and kept the lead during the meeting (Glaser, Tan, and Kondoz, 2008). These findings suggest that organizational structure and culture may play an important role in interorganizational, and perhaps intraorganizational, KM (Tariq, 2018).

KEY INFORMANT INTERVIEWS

Overall, interview participants seemed unaccustomed to discussing gender and its influence on KM. Many of the responses received were superficial in that they touched on overt gender inequality rather than deeply entrenched gender bias and power differentials. In some cases, participants chose to skip questions altogether. This unawareness is likely a reflection of the lack of attention to gender and its influence on KM in the field of global health more generally. There is a clear need for awareness raising and advocacy related to this topic. The results of the KIIs are presented below according to the gender analysis domains presented in Table 3.

DIFFERING ACCESS TO AND CONTROL OVER ASSETS AND RESOURCES MAY INFLUENCE KM REACH

Responses to questions about gender differences in access to KM products were mixed; in general, participants seemed unsure. Some participants mentioned potential regional differences in access, noting that access may differ within an organization based on one's geographical position within that organization (i.e., headquarters-based staff vs. country office staff). Some respondents felt that learning opportunities were presented equally to people of all genders, while one participant questioned whether organizations considered gender parity in their recruitment for training opportunities. Respondents generally felt that access to and participation in global listservs and CoPs seems equal.

Several participants stated that in most regions, women in general do not have equal access to digital platforms, and subsequently, to the information disseminated via digital platforms. A few respondents noted that women may face particular

Key Finding: Interview responses complement literature review findings and suggest that unequal access to technology among men and women may affect access to evidence based information.

challenges in accessing online webinars or trainings/courses via Internet cafés outside of normal working hours, as women may be less comfortable traveling there in the evenings, the environment of the Internet café itself may be less welcoming to females, and women tend to have more restrictions on their time and accountabilities than men.

Participants also raised concerns about differences in household mobile phone ownership and control over access to mobile phones between men and women, particularly in the Global South, as a potential barrier to accessing information disseminated via this channel. One participant brought up the potential risk that male partners may not approve of or not support their female partners' increased access to information through mobile phone use. The participant mentioned multiple factors to consider about access to information via mobile phones, such as access to Internet or Wi-Fi, as well as financial control (such as who pays the phone bill). The participant asked whether more men or women have control over phone use based on these financial considerations. However, another participant representing a youth-focused organization stated that young men and women in all but the most rural areas largely have equal access to phones and, specifically, to social media. One civil society organization (CSO) representative spoke about how their organization uses deliberate methods, such as posing specific questions pertaining to a particular gender group, to engage certain women or men—based on the topic of interest—in virtual conversations on Twitter. While these responses were focused more on the general population of men and women, these access issues

may also be important factors to consider among key Knowledge SUCCESS audiences of health professionals.

Participants suggested that using a variety of KM approaches and communication channels may help increase reach to a broad range of audiences. One participant acknowledged that providing a diversity of approaches may keep all genders in consideration.

Opportunity: A variety of KM approaches and communication channels may help increase reach to a broad range of audiences.	*Audiences like to receive knowledge in different ways. … They value KM in different ways; diversity of approaches means that all genders are considered.* (Female, partner organization, USA)

It is important to note that while this approach may increase access, it is gender accommodating, meaning that the approach works around existing gender inequalities rather than seeking to transform them. While gender-accommodating approaches may result in short-term improvements, they do not address the root cause of the inequality, nor do they seek to change the systems that contribute to the inequality. Thus, the goal of gender integration is always to move toward gender transformative programming (IGWG, 2017b).

Access to and control over KM assets and resources for gender non-binary and gender non-conforming individuals and communities was an area either not discussed by most participants or an area of

Key Finding: Interview findings showed a gap in information about access to and control over KM assets and resources.

uncertainty for the couple of participants who did mention the current lack of consideration for gender non-binary and gender non-conforming individuals. One participant from a CSO spoke about their efforts to work with organizations supporting transgender people in a country that does not fully recognize transgender individuals. They noted that it is difficult to openly discuss trans health issues, but they are planning to make it a point of discussion at an upcoming quarterly meeting.

CULTURAL NORMS AND BELIEFS MAY AFFECT PARTICIPATION IN IN-PERSON KM EVENTS

Many participants felt that gender norms and stereotypes affect participation during trainings and meetings. For example, assumptions that females are quiet, polite, or more reserved may suppress their willingness to share their ideas or take a leadership role during in-person meetings. One government participant and one large coordinating mechanism participant noted that women tend to be more serious and passionate, whereas men make jokes about certain topics or situations in meetings. Some participants suggested that this may be more likely in situations where groups consist of more men than women. For example, one participant said:

> *In contexts where there are more males than females in staff, this may affect a female's willingness to speak up.* (Female, partner organization, USA)

Another participant suggested that discussions and decision making within groups that primarily consist of men differ from mostly female spaces where there is often more discussion and deeper analysis before coming to a decision:

> *When I engage on a particular activity where a majority of participants are men, there is less discussion and decisions are made based on who is the lead. When I work with mostly women, there is more discussion and deeper analyses to coming to a decision, which is useful but takes longer. It is a different style.* (Male, large coordinating mechanism, USA)

A few participants noted that men may not only be more likely to speak up but that others in the room may also be more likely to listen to men than to women. Participants noted that FP/RH organizations, particularly in Western (or Global North) contexts, tend to have more female staff. One participant noted that because of the heavily female-leaning spaces, men's voices may actually have more weight in a room.

> *Sometimes there is a dynamic … When a man speaks up, people listen. … Being a man brings a certain power in a lot of the social constructs in the work space.* (Female, donor organization, USA)

Another participant said that culturally, men often feel more comfortable speaking out:

> *Men often feel free to share their thoughts; often women do not, so their tacit knowledge and experience does not come out as clearly as men's.* (Female, partner organization, USA)

Key Finding: Gender norms, stereotypes, and roles affect engagement and participation in trainings and meetings.

Others observed that it is difficult to be an active participant in training opportunities where gender discrimination is overt. Another participant commented on how participants in various KM spaces cannot actively participate if people feel uncomfortable or face gender discrimination:

> *You can't be an active participant in something where you feel uncomfortable or discriminated against based on gender.* (Female, large coordinating mechanism, Switzerland)

Participants were not certain as to how cultural gender norms took form in online KM spaces, such as webinars, WhatsApp groups, or virtual CoPs. A couple of participants' experiences suggest that men may share more than women in WhatsApp groups, but most participants mentioned that they noticed minimal differences between men's and women's willingness to share or contribute in virtual KM spaces. Participants stated that above all, safety, comfort, and respect are key to ensuring equal engagement in KM activities for all genders. One participant stated that creating an environment where people feel safe allows for people to share openly.

Two key suggestions for how to ensure a safe and respectful environment arose from the interviews. First, multiple participants highlighted the importance of good facilitation in managing gender disparities among training or workshop attendees. One participant remarked how good facilitation can make a difference in ensuring women and men are engaged equally, even in contexts where there are clear power imbalances. The participant went on to note that the development of the meeting agenda and use of small groups also matters for equitable engagement, alongside other participation methods that allow for anonymity when needed:

> *I don't think enough could be said about good facilitation techniques. What does that mean in a room where women and men are not viewed equally? How do you develop your small groups? How do you develop your agenda? … Are there other methods where you can get people to participate and allow for anonymity?* (Female, partner organization, USA)

Secondly, participants advocated for the development and implementation of policies related to code of conduct for trainings, CoPs, and technical working groups. The code of conduct would include safety from sexual harassment for all participants and should be reviewed with the entire group before the meeting begins.

Opportunity: Codes of conduct, terms of engagement, and gender aware meeting facilitators can create a safe and respectful environment for in person and online KM platforms

SOCIAL AND HOUSEHOLD ROLES, RESPONSIBILITIES, AND TIME USE CAN INFLUENCE HOW WOMEN ENGAGE WITH KM PLATFORMS

Many participants identified that gender roles, responsibilities, and time use may make it more difficult for women to access training opportunities outside of normal working hours. For example, one participant explained that their team encourages staff to take online courses—such as the Global Health eLearning (GHeL) courses (developed by USAID's Bureau for Global Health and managed by the Knowledge SUCCESS project)—as training opportunities. However, working on those courses after hours requires extra time. That participant suspected that even if there is an attempt at equity in the home regarding chores, professional women still may end up with less time after hours—making it more difficult for women to access the information offered via online courses.

> *We have encouraged staff to use* [GHeL]*, but bandwidth is an issue for online courses. Time is definitely an issue. I suspect that it's a bigger issue for women. I suspect that when women go home, even if there is an attempt at equity in the home in terms of chores, professional women have less time.* (Female, partner organization, USA)

Another participant highlighted how these same gender roles, responsibilities, and time use expectations can limit women's ability to attend in-person professional development activities.

Key Finding: Gendered home and social responsibilities may limit engagement with certain KM platforms (e.g., webinars and conferences).

From previous experience working with lab scientists in Nigeria, when there was any kind of face-to-face [professional development or happy hour], women who were married or had kids could not participate. (Female, partner organization, USA)

However, one participant from a government office in the Global South stated that the women who attend her meetings are of a "working class," so their spouses understand that meetings are part of their work and do not stop the women from attending the meetings.

Some participants suggested that it is important to consider gender when scheduling KM events such as webinars. One participant recommended that organizations hosting webinars be cognizant of times globally and consider family obligations. Their

Opportunity: Extending the time period that knowledge resources are available may increase access to resources for people of any gender.

organization records webinars so that people can access them on their own time. They also keep comment boxes open for a day or two after a webinar is aired, for people who want to send in questions later:

We have to do webinars that are cognizant of times for people who are with families. … We record things so that people can access that on their own time. … We keep comment boxes open (for a day or two) so people who want to send in questions later can do so within a reasonable time frame. (Female, donor organization, USA)

As with the suggestion to vary KM dissemination methods, or to engage a talented facilitator, this suggestion is also accommodating of existing gender norms.

Key Finding: Gender roles and responsibilities may be reflected or reinforced through participants' interactions via in person KM platforms.

Participants also noted that gender roles, responsibilities, and time use may be reflected or reinforced within technical working groups, trainings, or other in-person knowledge-sharing platforms. For example, women may be more likely to be assigned the role of note taker—a historically feminized role in the workplace. In addition, women may be more likely to take on additional unpaid tasks such as sharing notes or even taking on leadership roles. One participant observed that women tend to take on leadership of informal working groups more frequently than men:

Informal working groups tend to be led by women. Who is doing extra labor? The women seem to be making the connections for folks for staying up-to-date with latest information. (Female, partner organization, USA)

Another participant said they read recently that women tend to volunteer for unpaid requests:

I've read quite a bit lately that women tend to volunteer for "unpaid" requests; while men sit back and let women do it. This could apply to things like moderating a CoP. (Female, partner organization, USA)

These gender differences regarding unpaid work may result from the current imbalance in opportunities for leadership in the field of global health generally; unpaid opportunities may be the only opportunities women have to try to showcase their leadership skills and advance their careers. This reality is likely to yield an unfair burden on women in KM settings.

Interview responses indicate that gender may also impact knowledge production. Participants suggested that the producers of knowledge products that are shared are often more likely men than women—unless there is an explicit

> **Key Finding:** Interview responses complement literature review findings and suggest that there are gender differences in the production of knowledge products.

focus on gender balance, as one participant noted within their organization. This is in line with the literature review findings about authorship of publications. Participants also noted a lack of gender diversity among scientific and technical conference presenters—with a bias toward male presenters. One participant gave an example of a satellite session they were putting together for a conference that initially had only male speakers. That team had to consciously consider which female presenters they could invite:

> *This is an example of a real-life situation. We were putting together a satellite session at the International AIDS Conference in Mexico City, and as we were putting together the agenda and potential speakers, I noticed that the speakers were all men. We had to go out of the way to think about female presenters. … People were receptive to the feedback when I brought in that gender lens.* (Female, partner organization, USA)

> **Opportunity:** Intentionally seeking out, and consistently highlighting, diverse perspectives from a wide variety of sources can change knowledge production norms.

The team was receptive to the participant's feedback when they brought in a gender lens to the panel composition. **Some participants noted a need for the field of KM to promote gender diversity in publishing.** One participant suggested intentionally "overemphasizing" knowledge products produced by people of underrepresented gender groups. This response highlights the need to intentionally seek out, and consistently highlight, diverse perspectives from a wide variety of sources until it becomes the norm.

Interview responses indicated a lack of gender diversity among participants during in-person meetings. However, one CSO participant and one government participant spoke of how they often do not have influence over who attends their meetings; instead, organizations will send representatives of their own choosing. The CSO participant said that on some occasions, they can request that a female representative attend the meeting, based on the topic of the meeting.

A few participants noticed that the designers of various digital knowledge sharing or storage platforms are often men from technology companies that are contracted to do the work. This difference in occupational roles reflects the well-documented gender inequality in the technology workforce. One participant suggested that their online KM platform needed to be designed by women, because the team of women understood how women would use and navigate the platform better than a male-dominated consulting company.

> **Key Finding:** The creators of digital KM platforms are often men, potentially leading to the development of platforms that may not be responsive to the needs of users of all genders.

LAWS, POLICIES, REGULATIONS, AND INSTITUTIONAL PRACTICES MAY DIRECTLY AFFECT THE GENDERED KNOWLEDGE BEING PRODUCED, SHARED, ACCESSED, AND USED

Despite the fact that laws, policies, regulations, and institutional practices were an explicit component of the KII guide, only two interview participants were able to identify any association between these, KM, and gender. One government representative noted that the country's abortion laws and marriage and divorce bills affect gender-based violence initiatives, and ultimately the level of KM around gender-based violence. Another participant noted that in countries where homosexuality is illegal, staff realize that they must be careful how they talk about gender-related topics. They must use discretion while working in governmental structures to ensure sustainable solutions.

> *Legally, there are certain things that we don't talk about. Because I work in Nigeria and Uganda and because I work with local government counterparts, we recognize that they might not be able to talk about certain things.* (Female, partner organization, USA)

> **Key Finding:** Little information was gleaned about how laws, policies, regulations, and institutional practices intersect with gender to affect how knowledge is produced, shared, accessed, and used.

KM operates through multiple systems. These systems include both organizational and external policies and practices that can be either implied (such as a cultural practice) or explicit (such as a written rule). Policies and practices within organizations may serve as both facilitators and barriers of KM. Externally, KM occurs within the context of policies and practices in one's community, town, city, state, and nation, which can also be both facilitators and barriers of KM. Gender interacts with the implied and explicit policies and practices in a multitude of ways at each level of the KM socioecological environment. How the interaction of gender with laws, policies, regulations, and institutional practices may affect KM activities and outcomes is largely unknown. Given the nascency of the field of study exploring the intersection of gender and KM, more research to understand the implications of gender inequality on the field of KM is likely necessary before the system-level factors that drive them can be well understood.

PATTERNS OF POWER AND DECISION MAKING IN KM ARE MALE-DOMINATED

The workforce in global public health, and particularly the field of global FP/RH, is female-dominated; yet, there are more men at the highest levels of leadership within organizations and government positions than women. This reality was mentioned across several interviews, and interview participants suggested that this unequal power dynamic may influence how knowledge is used and shared. For instance, one participant explained:

> *There tend to be underlying power dynamics. Supervisors that are of a particular gender vs. staff adds to the power dynamics. If there is a reaction from senior-level leadership [who are of a particular gender], that could determine how people use that information.* (Female, partner organization, USA)

Key Finding: Interview responses complement literature review findings and suggest that positions of KM leadership are less likely to be filled by women and that unequal power dynamics in the global health workforce are likely to affect how knowledge is used and shared.

Another participant spoke about their experience in Pakistan, where the organization was very male-dominated. That team made an effort to ensure the women on the team had the same level of knowledge as the men, despite the hierarchy. The participant went on to say that knowledge often stays among small groups of people in hierarchical contexts and does not filter down well. The team in Pakistan had men at the top of the hierarchy, so there was a difference in access to information within the team and across genders.

> *When I did some work in Pakistan, the environment there was very male-dominated. The team made an effort to make sure women on the team had the same level of knowledge, though. It is also very hierarchal there. Knowledge stays among a small group of people, and it doesn't filter down well in this hierarchal context. Often, men were at the top of the hierarchy, so not everyone on the team had the same access to information.* (Female, partner organization, USA)

Another participant spoke of their team of technical assistants, who were all women, saying that they did not feel heard at times by their male team leader, a technical lead from another organization, when it came to decisions for the project.

One participant stated that the opinions of people in traditional leadership roles are readily valued, but that people at all levels have valuable knowledge to share. The participant noted that those people often come with privilege and advantage to get to those positions in the first place.

> *We tend to value the opinions of people in traditional leadership, people with director or VP [vice president] in their titles – people often with privilege and advantage to get to that position in the first place. But people at all levels have incredibly valuable knowledge to share. Going back to our definition, the traditional mindset is the information sharing is downstream, and we need to get away from that mindset. In doing so, we might find more equitable sharing.* (Female, partner organization, USA)

Another participant noted that even if women are in higher positions, they may still have to assert themselves in some contexts for their knowledge to be valued:

If women were in the higher positions, in some contexts their knowledge would be valued, but in other contexts, women have to assert themselves. (Female, partner organization, USA)

A third interview participant highlighted the nuances of this unequal power dynamic by noting that not only is knowledge produced by men often more valued than knowledge produced by women, but that the type of experience that is typically male-dominated is often more valued than the type of experience that is traditionally female-dominated. The participant mused:

We tend to value the knowledge more of people with more peer reviewed publications, but is that more valuable than the knowledge a midwife has with 30 years of practice? (Female, partner organization, USA)

According to many interviewees, a focus on gender equality in KM seems to be missing. One participant noted that millions of dollars are spent on FP/RH research and monitoring and evaluation (M&E) globally, and a lot of that knowledge is lost if it is not managed and presented well. Participants suggested a need to ensure gender equality in hiring practices for KM staff and to recognize and value gender equality at the institutional level.

Key Finding: Interview responses complement literature review findings to suggest that a focus on the intersection of gender and KM has been missing from the field.

OTHER

A few other notable themes emerged from the interviews. First, some participants felt that, despite the challenges faced in global family planning, this field may be particularly attuned to gender issues as compared to other development sectors. Secondly, **several participants noted the importance that the intersection of other identities (e.g., age, citizenship, language of preference, geographical location, position within an organization, and/or cultural identity) and international power dynamics play in the effectiveness of KM.**

Key Finding: Levels of gender related KM barriers vary depending on the other identities a person may hold (e.g., race, age, class, citizenship, geographical location, language of preference, position within an organization, and/or cultural identity).

For example, some participants noted that older professionals may have more difficulty with technology, while younger professionals may have fewer opportunities to attend in-person events. A few participants suggested that **young women and women based in country offices may have to work even harder for their voices to be heard than men in the same position or than women who are older or located in headquarter offices**. Still others (CSO, government, donors) stated the importance of striking a balance between KM efforts focused on women with those that also shed light on male engagement. The participants expressed a slight concern that their **efforts toward women's empowerment in KM will go to waste if men are not engaged**. Finally, several participants noted a need for an increased focus on gender in KM M&E indicators.

SUMMARY AND CONCLUSIONS

1. **Despite the limited literature available examining gender and its influence on KM, the results of this analysis suggest that gender has an important influence on the production of, and access to, FP/RH-related KM products and events.**

   There is a clear gap in the KM literature regarding gender and its influence on KM. However, results from the literature review and our KIIs show that gender has an important and powerful influence on the production of, and access to, FP/RH-related KM products and events. Our results suggest that gender may affect access to specific KM resources. This may be particularly true in LMICs, where women do not have equal access to the Internet, and subsequently to web-based KM tools, including those that could be used by Knowledge SUCCESS, such as e-learning platforms, listservs, and social media. Furthermore, research demonstrates that when women do have access to web-based KM tools, gender may affect use patterns and interactions. Participants reported that designers of online platforms tend to be male, reflecting the well-documented gender inequality in the technology workforce. This results in the development of KM platforms that may not be responsive to the needs of users of all genders. These inequities have important implications for KM, as they affect access to evidence-based information.

2. **The findings from the literature review demonstrate well-documented gender disparities in knowledge production.**

   Existing literature suggests that men and women may have unequal opportunities to share their work through conferences, peer-reviewed publications, and other fora. Results from the KIIs complement this finding and suggest that gender-related power differentials may also influence the value placed on knowledge produced by men vs. knowledge produced by women. It is critical to examine the power and politics of knowledge production in relation to KM and research utilization. If global health knowledge products are primarily produced by men, then KM and research utilization efforts are often promoting the uptake of this dominant knowledge, neglecting the experiential knowledge and perspectives of women, as well as the unique interpretive lens that female authors bring that may be less often shared through traditional KM channels.

3. **Our analysis suggests that gender-related power imbalances, as well as gender norms and stereotypes about men's and women's behavior, may affect interactions within CoPs.**

   Gender roles, responsibilities, and norms related to time use may be reflected or reinforced within technical working groups, trainings, or other in-person knowledge sharing platforms. For example, women may be more likely than men to take on unpaid roles within such communities. This reality is likely to yield an unfair burden on women in KM settings. Gender roles, responsibilities, and norms within homes and communities may also affect women's ability to access training opportunities and participate in KM events outside of working hours.

4. **Several KII participants provided suggestions for how to ensure that KM efforts are more gender aware.**

Participants recommended the use of multiple KM approaches to ensure that efforts reach a wide variety of audiences and consider the needs of all genders. Participants also advocated for increased efforts to ensure a safe and respectful environment for in-person and online CoPs and technical working groups. Proposed approaches included using a well-trained facilitator and establishing a code of conduct for all members. Other participants advised that gender norms and roles should be considered when scheduling KM events, and a few participants suggested that concerted efforts be made to promote gender diversity in publishing.

5. **Little information was gleaned from the literature review or interviews about the association between organizational and external laws, policies, regulations and institutional practices, their association with gender, and their impact on KM.**

   KM operates through multiple systems. These systems include both organizational and external policies and practices that can be either implied (such as a cultural practice) or explicit (such as a written rule). Policies and practices within organizations may serve as both facilitators and barriers of KM. More research to understand the implications of gender inequality on KM is likely necessary before the systems-level factors that drive them can be well understood.

6. **To date, a focus on the intersection of gender and its influence on KM appears to be missing from the field.**

   According to many interviewees, a focus on promoting gender equality in KM seems to be missing. The omission of a gender lens in KM is detrimental to the field, as it both limits the range of knowledge available, as well as who is able to access existing knowledge. Both the literature and interviewees placed a heavy focus on the inequities faced by women in KM, but few were able to comment on how those inequities affect men, gender non-binary, and gender non-conforming people. The lack of available information on the intersection of gender and KM, particularly as related to men, gender non-binary, and gender non-conforming people, is a key and important finding of this analysis. At the root of this challenge are the lack of gender equality and the unequal power dynamics in the field of global health.

   Gender inequity across the field of global health influences institutional practices and patterns of power and decision making among health professionals and within organizations. This is reflected in the power and politics of knowledge production, differential access to KM products, and how health professionals of all genders participate in knowledge-sharing events and CoPs. Therefore, we must consider the role that gender plays in the distribution of power and reflect upon and recognize the implications for successful global KM efforts.

The influence of gender on the production of and access to FP/RH knowledge management products and activities requires Knowledge SUCCESS to address the gender inequities presented in this analysis. Underlying the challenges are the lack of gender equity and unequal power dynamics within the field of global health overall. Knowledge SUCCESS commits to eliminating those inequities within this project. Opportunities exist to harness gender-integrated strategies through all project activities and products over the next five years. We must continue to consider the role that gender plays at each step of the KM cycle to reach sustainable family planning and reproductive health outcomes.

REFERENCES

Antonio, A., and D. Tuffley. 2014. "The Gender Digital Divide in Developing Countries." *Future Internet.* 6(4):673–687.

Balas, E.A. 1998. "From Appropriate Care to Evidence-based Medicine." *Pediatr Ann* 27:581–4.

Barry, M., Z. Talib, A. Jowell, K. Thompson, C. Moyer, H. Larson, K. Burke, and Steering Committee of the Women Leaders in Global Health Conference. 2017. "A New Vision for Global Health Leadership." *Lancet* 390(10112):2536–2537.

Bogolyubov, P., A. Artemiev, J. de Lanca, J. Gopal, and B. Simeonova. 2014. "Variations in Preferences for the Use of Social Networks; Demographic Analysis of Posted Content." *Proceedings of the 15th European Conference on Knowledge Management.*

Boyes, B. "Improving Gender Equality in Knowledge Management." *RealKM* (blog). March 8, 2018.

Clow, B. 2012. "Concepts Modules." In Clow, B., J. Bernier, M. Haworth-Brockman, A. Pederson, and Y. Hanson. *SGBA e-Learning Resource: Rising to the Challenge*. http://sgba-resource.ca/en.

Cuadrado-García, M., M. Ruiz-Molina, and J.D. Montoro-Pons. 2010. "Are There Gender Differences in e-Learning Use and Assessment? Evidence from an Interuniversity Online Project in Europe." *Procedia Social and Behavioral Sciences* (2):367–371.

Dhatt, R., S. Theobald, S. Buzuzi, B. Ros, S. Vong, K. Muraya, S. Molyneux, K. Hawkins, C. González-Beiras, K. Ronsin, D. Lichtenstein, K. Wilkins, K. Thompson, K. Davis, C. Jackson. 2017. "The Role of Women's Leadership and Gender Equity in Leadership and Health System Strengthening." *Global Health, Epidemiology and Genomics*. 2:e8.

Durbin, S. "Creating Knowledge through Networks: A Gender Perspective." 2010. *Gender, Work & Organization* 18(1):90–112.

Dustin, H., and T. Mark. 2006. "The Gendered Blogsphere: Examining Inequality Using Network and Feminist Theory." *Journalism & Mass Communication Quarterly* 83(2):247–264.

Fatehkia, M., R. Kashyap, and I. Weber. 2018. "Using Facebook Ad Data to Track the Global Digital Gender Gap." *World Development* 107:189–209.

FHI 360. 2012. *Gender Integration Framework*. Durham, NC, USA: FHI 360. https://www.fhi360.org/sites/default/files/media/documents/FHI%20360_Gender%20Integration%20Framework_3.8%20%2528no%20photos%2529.pdf.

Fox, M.J. 2012. "Communities of Practice, Gender and Social Tagging." *Advances in Knowledge Organization*. 13:352–358.

Garcia, D., Y. Mitike Kassa, A. Cuevas, M. Cebrian, E. Moro, I. Rahwan, and R. Cuevas. 2018. "Analyzing Gender Inequality through Large-Scale Facebook Advertising Data." *Proceedings of the National Academy of Sciences of the United States of America* 115(27):6958–6963.

Gill, K., K. Brooks, J. McDougall, P. Patel, and A. Kes. 2010. *Bridging the Gender Divide. How Technology Can Advance Women Economically.* Washington, D.C., USA: International Center for Research on Women (ICRW).

Glaser, C., A. Tan, and A. Kondoz. 2008. "Talk-in Interaction Reflects Usability of Virtual Collaboration Systems," in *Proceedings of the Third IASTED International Conference Human Computer Interaction*, 291–296. Innsbruck, Austria, March 17–19, 2008.

Global Health 50/50. 2019. *The Global Health 50/50 Report.* London, UK: University College London Centre for Gender and Global Health.

Holeman, L., D. Stuart-Fox, and C. E. Hauser. 2018. "The Gender Gap in Science: How Long Until Women are Equally Represented?" *PLoS Biology* 16(4):e2004956.

Interagency Gender Working Group (IGWG). 2017a. *The Gender Integration Continuum: Training Session. User's Guide.* https://www.igwg.org/wp-content/uploads/2017/12/17-418-GenderContTraining-2017-12-12-1633_FINAL.pdf.

———. 2017b. *The Gender Integration Continuum Training Session User's Guide.* https://www.igwg.org/wp-content/uploads/2017/12/17-418-GenderContTraining-2017-12-12-1633_FINAL.pdf.

———. n.d. "Developing a Shared Vocabulary." https://www.igwg.org/training/developing-a-shared-vocabulary/.

Khoo, C.S.G. 2014. Issues in Information Behaviour on Social Media. *LIBRES* 24(2):75–96.

Martin, L.M., G. Lord, and I. Warren-Smith. 2018. "Unseen and Unheard? Women Managers and Organizational Learning." *The Learning Organization* 25(1):40–50.

Narayanaswamy, L. 2017. *Gender, Power and Knowledge for Development.* New York, NY: Routledge.

Queupil, J.P., and A.L. Munoz-Garcia. 2019. "The Role of Women Scholars in the Chilean Collaborative Educational Research: A Social Network Analysis." *Higher Education* 78(1):115–131.

Radloff, J., and N. Primo. 2002. "Net Gains for Women in Africa." *Development* 45(4):41–48.

Ravelo, J.L. 2019. "In the Era of #AidToo, Global Health Is Short on Sexual Harassment Policies." *Devex.* https://www.devex.com/news/in-the-era-of-aidtoo-global-health-is-short-on-sexual-harassment-policies-94417.

Rowntree O. 2019. *The Mobile Gender Gap Report 2019.* London, UK: GSMA.

Shannon, G. M. Jansen, K. Williams, C. Cáceres, A. Motta, A. Odhiambo, a. Eleveld, and J. Mannell. 2019. "Gender equality in science, medicine, and global health: where are we at and why does it matter?" *Lancet.* 393(10171):560–569.

Statistics New Zealand. 2014. *Gender Identity: Developing a Statistical Standard.* Fleur Mulligan. www.stats.govt.nz.

Sullivan, T., R.J. Limaye, V. Mitchell, M. D'Adamo, and Z. Baquet. 2015."Leveraging the Power of Knowledge Management to Transform Global Health and Development." *Global Health Science and Practice* 3(2):150–162.

Talib, Z., K.S. Burke, and M. Barry. 2017. "Women Leaders in Global Health." *Lancet Global Health* 5(6):e565–e566.

Tariq, M. 2018. "A Gender and Leadership Perspective on Knowledge-Sharing," in *The Palgrave Handbook of Knowledge Management,* 305–320.

Tunnecliff, J., D. Ilic, P. Morgan, J. Keating, J.E. Gaida, L. Clearihan, S. Sadasivan, D. Davies, S. Ganesh, P. Mohanty, J. Weiner, J. Reynolds, and S. Maloney. 2015. "The Acceptability Among Health Researchers and Clinicians of Social Media to Translate Research Evidence to Clinical Practice: Mixed-Methods Survey and Interview Study." *Journal of Medical Internet Research* 17(5):e119.

UN Women. n.d. *Women and the Sustainable Development Goals (SDGs).* http://www.unwomen.org/en/news/in-focus/women-and-the-sdgs.

USAID. 2017. *Automated Directive System 205 – Integrating Gender Equality and Female Empowerment in USAID's Program Cycle.* https://www.usaid.gov/ads/policy/200/205.

———. 2012. *Gender Equality and Female Empowerment Policy.* https://www.usaid.gov/sites/default/files/documents/1865/GenderEqualityPolicy_0.pdfWHO. Health Systems: Equity. N.D. Available from: https://www.who.int/healthsystems/topics/equity/en/.

APPENDIX: KNOWLEDGE SUCCESS KEY INFORMANT INTERVIEW GUIDE 2019

Interviewee Name:

Date:

Organization:

Knowledge SUCCESS Audience Group (Partners, Donor, Large Coordinating Mechanism, TWG, KP Implementer, Private Sector, Government, CSO, Women outside of those groups):

Interviewers Name:

Opening Prompt: Our team is working on a gender analysis that will inform our gender strategy for the new Knowledge SUCCESS (Strengthening Use, Capacity, Collaboration, Exchange, Synthesis, and Sharing) Program. We are conducting interviews to better understand the gender-related opportunities and barriers in knowledge access, creation, sharing, and use, specifically for family planning (FP)/reproductive health (RH), as well as best practices, to strengthen gender equity throughout our project. Please respond to the questions with your own organization in mind. We are defining knowledge management as "a systematic process of collecting knowledge and connecting people to it so they can act effectively and efficiently" (Building Better Programs: A Step-By-Step Guide to Using Knowledge Management in Global Health, 2017) and knowledge as "the capacity to act effectively" (K4Health, 2018). Some examples of knowledge management platforms or activities include communities of practice, working groups, technical committees, listservs, professional associations, trainings, websites, social media accounts, etc. Some examples of knowledge products include research papers, policy briefs, medical guidelines, or a how-to guide.

When we ask about gender in this interview, we are referring to gender identity—which may be male, female, gender non-conforming, or non-binary.

[If people ask what gender non-conforming or non-binary means, you can give the following definitions: "People who are gender non-binary may identify as either having an overlap of, or indefinite lines between, gender identity; having two or more genders (being bigender, trigender, or pangender); having no gender (being agender, nongendered, genderless, gender-free or neutrois); moving between genders or having a fluctuating gender identity (genderfluid); or being third gender or other-gendered, a category which includes those who do not place a name to their gender." (FHI 360 GESI Framework 2.0, 2018).]

1. Please briefly describe your role in your organization.

2. Describe what you think knowledge management looks like in your organization?
   a. What types of knowledge management activities or platforms does your organization use?
   b. What types of knowledge management products does your organization use, create, and/or share? (Examples of knowledge management resources include journal articles, scientific databases, libraries, and communities or networks of experts.)

Access to and Control over Assets and Resources

3. Thinking about some of the knowledge management resources you listed, how does access to those resources differ by gender?
    a. How does access differ depending on the specific type of resource, for example, journal articles vs. communities of practice?

4. What helps facilitate the way you or your team use knowledge and information? What are barriers to the way you or your team uses knowledge and information? How do those facilitators and barriers differ by gender, if at all? (If asked to specify 'knowledge', we are asking about both tacit and explicit knowledge.)

5. What helps facilitate the way you or your team share knowledge and information? What are barriers to the way you or your team share knowledge and information? How do those facilitators and barriers differ by gender, if at all? (If asked to specify 'knowledge', we are asking about both tacit and explicit knowledge. We are also interested how the team shares internally within organization and externally outside of the organization).

6. What kinds of trainings, meetings, seminars, or other knowledge sharing events do people have to improve their FP/RH knowledge and skills? How do opportunities to participate in those events differ by gender?

7. What kinds of technologies do people have access to for obtaining, sharing, and using FP/RH information? How does it differ by gender?

8. What are the risks to people when engaging in KM, particularly in a digital space (ex. Social media)? How does this differ by gender?

EXTRA QUESTION: What kinds of formal and informal communication networks for sharing FP/RH information do people have access to as part of the work your organization does? How does access differ by gender

Gender Roles, Responsibilities, and Time Use

9. What types of skills do people need in order to implement KM successfully? How do these needs differ by gender? Examples of skills for successful KM include organizing or leading working groups or workshops, writing papers or research briefs, and searching through databases.

10. How do people's home responsibilities affect their participation in KM (e.g., if a KM event were to be held "after hours")? How does this differ by gender?

11. Are opportunities to contribute to the development of knowledge management products equal by gender? Please explain. (For example, are men and women represented equally as authors of peer reviewed manuscripts, or technical briefs?)

Cultural Norms and Beliefs

12. How do gender stereotypes and gender roles influence the types of KM activities that a person is responsible for?
    a. Different KM activities include assessing information needs, curating knowledge, facilitating meetings and other types of knowledge sharing events, etc.)
    b. Examples of stereotypes include women talking more in meetings or men wanting shorter documents

13. How do gender norms impact **how** people of different genders engage in different aspects of KM?
    a. For example, women may be expected not to argue in meeting, which could affect how they engage in a KM platform like a TWG when there is evidence being debated

Laws, Policies, Regulations and Institutional Practices

14. Does your institution have formal policies that relate to accessing, using, or producing knowledge? An example of a formal policy might include primary authorship only being available for people with a PhD. How do those policies differ for men and women differently? For example, if more women than men have PhDs, then more women may be primary authors.

15. Does your institution have informal practices or organizational norms that relate to accessing, using, or producing knowledge? An example of an informal institutional practice or organizational norm might be that only women within the organization are asked to lead certain technical working groups. How do these informal practices or organizational norms impact people across the gender continuum differently, if at all?

Patterns of Power and Decision-Making

16. How does decision-making within KM coordination mechanisms differ by gender?
    a. Who makes the decisions around the KM activities and products your team uses or shares? How does gender influence the decisions that are made around knowledge sharing, use, creation, or access?

17. What types of leadership roles related to knowledge management are available within your organization? How do they differ by gender?