

**IFPRI Discussion Paper 01966**

October 2020

**Developing Survey-based Measures of Gendered Freedom of Movement  
for use in Studies of Agricultural Value Chains**

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## ABSTRACT

Freedom of movement is an important aspect of women's empowerment, especially in the context of rural transformation as women attempt to transition from subsistence agriculture into more remunerative roles, such as involvement in higher nodes of the agricultural value chain, which often involves marketing activities and traveling away from the home. Nevertheless, there is no agreement on how to measure freedom of movement in large-scale surveys. First, we develop a conceptual framework for studying gendered freedom of movement that considers individual and household characteristics, along with the broader social environment. We then synthesize the existing literature on factors that affect freedom of movement. Next, we review approaches for measuring freedom of movement that have been used in previous surveys. In comparing existing survey-based approaches to the conceptual framework and existing literature, we conclude that existing approaches are limited in several ways. Foremost, they primarily focus on family- and household-based barriers to freedom of movement, and do not consider the barriers present in the broader social environment. Additionally, they lack consideration for how freedom of movement may affect women's economic participation. To address the need for survey-based modules for studies that examine how freedom of movement is related to economic participation, we propose two new approaches. The first approach is an experience-based module that asks about frequency of visiting specific places, whether they were ever prevented from going to each of these places, and various limiting factors. The second approach uses vignettes designed to understand the relative strength of different social norms limiting women's freedom of movement and the strength of sanctions that would be imposed for violating these norms. Data collected with these modules have the potential to better understand limitations on women's freedom of movement and their consequences.

**Keywords:** agricultural value chains, gender, freedom of movement, women's empowerment, women's economic participation

## **ACKNOWLEDGMENTS**

This work was supported by funding from the CGIAR Research Program on Policies, Institutes, and Markets (PIM), led by the International Food Policy Research Institute, under Flagship 6 of Cross-Cutting Gender Research and Coordination; the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) [Grant number: 81239814]; and the Gender Agriculture, and Assets Project Phase Two (GAAP2) supported by the Bill & Melinda Gates Foundation (BMGF) [Grant number: INV-008977], the United States Agency for International Development (USAID) [Grant number: EEM-G-00-04-00013-00], and the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). We thank Ruth Meizen-Dick, Audrey Pereira, and Agnes Quisumbing for their feedback on earlier drafts of this work.

## 1. INTRODUCTION

Freedom of movement is widely recognized as an important dimension of women's empowerment and is specifically mentioned by Kabeer's seminal work on women's empowerment as a fundamental freedom that allows for the enactment of other strategic life choices (Kabeer, 1999). We define freedom of movement as the ability to leave home and return, at will, without suffering negative consequences. This definition draws heavily on the exposition of Farzaneh Milani (2011) in her work on Iranian women's struggle for sex desegregation. Women's freedom of movement is especially important in the context of rural transformation as women attempt to transition from subsistence agriculture into more remunerative roles in agricultural value chains in which they engage in activities such as processing goods to add value, purchasing from producers, and reselling these products (Rubin, Boonabaana, & Manfre, 2019). Women's livelihoods are disadvantaged if women are limited in where, or when, they can source and sell goods, or go to work.

Despite its importance, there remains no commonly accepted survey-based approach for measuring freedom of movement (Heckert & Fabic, 2013; Santoso et al., 2019). There is a growing demand for such approaches, especially in studies and surveys that aim to specifically examine gendered experiences in agricultural value chains. The lack of consensus on survey items for measuring freedom of movement prevents us from developing validated measures and understanding how limits on women's freedom of movement affect their economic participation and livelihoods.

Our goal in this paper is to propose theoretically informed survey content that can measure women's and men's experiences with freedom of movement and gender-based social norms that restrict freedom of movement. To do so, we first develop a conceptual framework for a gender-based understanding of freedom of movement. We apply this framework to women and men whose livelihoods are linked to agricultural value chains, but the framework can also be applied more broadly. Next, we synthesize the current literature on the factors that restrict and promote women's and men's freedom of movement. We then identify existing survey-based approaches for collecting data on freedom of

movement. Using the conceptual framework, we establish, we identify the current aspects of freedom of movement that are covered by existing survey questions, as well as the aspects that are missing. Finally, we use these lessons to propose two new survey-based approaches to collect data on how individuals experience restrictions on their freedom of movement.

### **Importance of Freedom of Movement**

Women's freedom of movement can be considered a fundamental freedom that has intrinsic value (Kabeer, 1999). It may also have additional instrumental value for the individual, such as facilitating other aspects of wellbeing for themselves, their families, or to societies as a whole, such as the benefits that come from women's full economic participation. The existing evidence focuses on the benefits that freedom of movement may afford to individual women and girls, as well as their families. We could not identify studies that address the consequences of women's freedom of movement to communities or societies.

Most evidence on the benefits of women's freedom of movement is related to how women's freedom of movement facilitates health-seeking behaviors and how girls' freedom of movement is linked to school attendance and educational attainment. Women's lack of freedom of movement limits their ability to reach healthcare facilities. For example, inability to access motorized transportation or pay for fuel has been documented as a contributor to maternal mortality in rural Gambia (Cham, Vangen, & Sundby, 2007), and evidence from both Ghana and Malawi finds that lack of transportation infrastructure is a common reason why births occur roadside, *en route* to healthcare facilities (Porter, 2011). Mothers' freedom of movement has been found to be positively associated with child nutritional status, after accounting for confounding factors, in Benin (Alaofè, Zhu, Burney, Naylor, & Douglas, 2017), as well as India (Sethuraman, Lansdown, & Sullivan, 2006). Likely hypotheses for these findings include better access to food markets and healthcare facilities (Oluoko-Odingo, 2011). For girls, evidence from Pakistan has found that often girls are unable to attend school when they live far away, but boys do not face this constraint to the same extent (Mumtaz & Salway, 2005). Moreover, perceived and actual risk of violence,

especially sexual violence, while traveling to school are common reasons for girls to miss school, particularly when they must travel alone (Hampshire, Porter, Mashiri, Maponya, & Dube, 2011).

There is considerably less evidence on whether and how freedom of movement is related to women's economic participation. These studies primarily conclude that limited freedom of movement is often harmful to women's economic prospects. This conclusion is not surprising, but it is noteworthy that available evidence does not illuminate specifics on the types of barriers to freedom of movement that are commonly experienced, and how they affect when, where, and for whom travel is limited. During the 1990s in Egypt, as the job market transformed dramatically and travel times to places of work increased for wage-earning and salaried employees, women experienced a considerable decrease in access to wage-earning and salaried employment compared to men; this finding was partially attributable to women's inability to make longer commutes as a consequence of social norms around women's freedom of movement (Assaad & Arntz, 2005). Women entrepreneurs in Nigeria, who are often more limited than men in their ability to travel on poor roads, experience limitations in their ability to access the goods and services that could help them grow their businesses (Seedhouse, Johnson, & Newbery, 2016). Women who work as agricultural extension agents are less likely than male agents to own bicycles or motorcycles, which are necessary for visiting farmers, which may be a limitation for both women agents and their clients who are more often women (Kiptot, Karuhanga, Franzel, & Nzigamasabo, 2016).

Moreover, among women active in agricultural value chains in Bangladesh, their full participation is limited by constraints on their freedom of movement which made it difficult for them to use existing financial systems, as they cannot travel safely, much less with large sums of money (Rubin et al., 2018). As one participant noted, "Such a businessman needs to be a mobile person; women are not able to do this." (Rubin et al., 2018, pg. 30). A study of Ugandan widows, who were the primary providers for their household and by definition could not rely on husbands to travel on their behalf, used GPS trackers to examine when and where women went throughout the day (Naybor, Poon, & Casas, 2016). The study concluded that their freedom of movement was limited to brief trips, often to the same few locations, and as a result, women found it difficult to diversify their income sources and strengthen



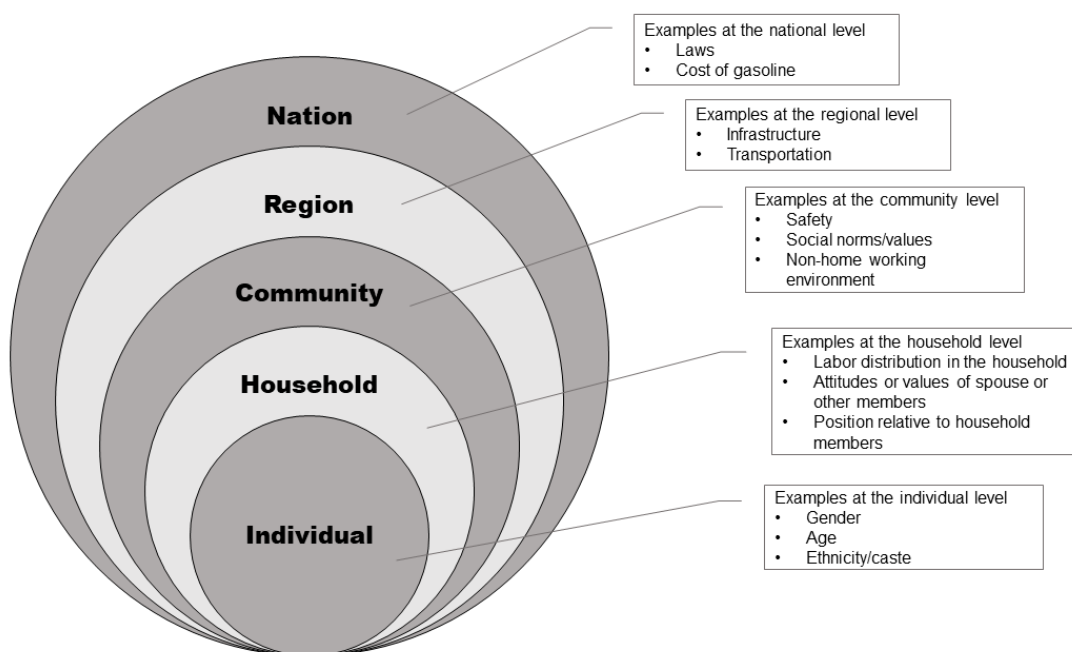
their overall livelihood strategy. Additionally, the findings revealed that although women were frequently conspicuous in public spaces, they often did not travel far, which points to important distinctions between public visibility and freedom of movement.

Restrictions on movement, however, may not always be a binding constraint on women's livelihoods, as these may depend on both the structure and social norms of the context, as well as the sector of their work. For example, in India, where there are strong seclusion norms that limit women's freedom of movement, the lack of freedom of movement does not reduce the economic outcomes of women who work in home-based garment production; although, lack of freedom of movement may still limit Indian women from taking on new opportunities within the sector or adapting as the sector changes (Kantor, 2002). It is important to note that in this study, there were also not any negative consequences for women's economic productivity among those who experienced more freedom of movement.

## 2. A CONCEPTUAL FRAMEWORK FOR STUDYING GENDERED FREEDOM OF MOVEMENT

In this section, we develop a conceptual framework on gendered freedom of movement that will help us synthesize the existing literature on how various aspects of the social-cultural environment, including structural factors, can either restrict or promote freedom of movement (Figure 1). We later use this framework to determine what aspects of freedom of movement are addressed in existing surveys and to identify areas that are not yet covered. We base the conceptual framework on ecological systems theory, which describes how individuals' experiences are embedded in multiple layers of context, ranging from the microsystem of family and peers, to communities as an aspect of the so-called exosystem, and to broader contexts in the macrosystem, such as the region or country (Bronfenbrenner, 1992). Socio-ecological models have been adapted across multiple fields; for example, they frame many approaches in public health (Golden & Earp, 2012). An important characteristic of these frameworks is that influences are bidirectional, meaning that individuals are both shaped by their environment and shape their environments.

**Figure 2.1** Ecological model for identifying gender-based restrictions on freedom of movement



Source: Authors

In the conceptual framework, we highlight the importance of different characteristics and experiences at the individual, household, community, regional, and national levels. The boundaries between these levels are often blurred; regardless of whether to classify a factor as one category or another, the framework serves to illuminate how different types of barriers to freedom of movement occur at different levels in the socio-ecological system. Notably, work environments, especially for those who are involved in agricultural value chains, may cut across multiple levels. Some activities, such as processing or production of agricultural goods, may be based in or near the home, but more remunerative engagement may involve travel throughout the community, such as to nearby markets or local financial institutions, or to more distant locations to achieve better access to markets and specific services. At the center of the model is the individual, whose experiences with freedom of movement can be shaped by individual attributes, such as gender, age, and ethnicity or caste. Expanding outward, individuals are nested within households that are composed of multiple individuals. The freedom of movement of an individual may be shaped by household-level attributes, such as their relative position in the household (e.g., household head, daughter-in-law), the distribution of labor, or the attitudes and values of other (especially more powerful) members of the household. Moving outward, community-level characteristics, such as the prevalence of crime and violence, the social norms or values held by community members, and experiences in non-home-based working environments, may affect the freedom of movement of individuals who live in those communities. At the regional and national levels, characteristics, such as infrastructure and modes of transportation, legal frameworks, and the cost of fuel can influence freedom of movement.

Another characteristic of socio-ecological models is that they are defined by cross-level interactions (i.e., how characteristics across levels combine with one another). Cross-level interactions are important for considering intersectionality, or how multiple aspects of one's experiences might combine (Cho, Crenshaw, & McCall, 2013). For example, safety and security concerns in the community may lead to different experiences of freedom of movement between men and women or between younger women and older women. Whether crime and violence limit someone's freedom of movement may also depend

on the attitudes of other members of the household or the availability of other members of the household to accompany them. Considering the example of infrastructure, in an area with poor roads, which may lead to higher transportation costs, when women have less money, the high cost of transportation becomes a more significant barrier for poor women, compared to non-poor women or men in contexts where men are more likely to have expendable cash on hand.

The current literature on freedom of movement includes both qualitative and quantitative research and addresses many of the factors laid out in the conceptual framework. In the following sections, we synthesize this literature and organize these findings according to the conceptual framework focusing primarily on the gendered aspects of limitations. We start at the center of the conceptual framework with the individual characteristics and expand outward. To a large extent, even the qualitative studies focus on the characteristics associated with freedom of movement without consideration for the mechanisms at play. Where possible, we aim to illuminate the potential mechanisms underlying the associations, but the available literature for doing so is thin.

### **Individual-level factors**

In comparing individual-level characteristics that affect freedom of movement, most studies have focused on age, marital status, and education, with some consideration of childbearing status and ethnicity. There is little direct comparison between men's and women's freedom of movement. Instead, studies use women's limited freedom of movement, compared to men, as a starting point and examine differences among women.

Many experiences with freedom of movement evolve with age and life course transitions, especially marital status and childbearing. Among Maasai women in Tanzania, older women, many of whom are also widows, report experiencing greater freedom of movement relative to younger women (Krause, James, McCarthy, & Bellemare, 2018). Similarly, in Nepal, young women bear the risk that their families will reject them (if unmarried) or that their husbands will divorce them if they moved about freely; yet, older women do not suffer the same consequences (Nepā School of Social Sciences and

Humanities, 2017). A study in Pakistan found that women aged 40-49 were six times more likely than women aged 15-19 to report that they could move about unaccompanied (Mumtaz & Salway, 2005). It may be that older women no longer suffer from assumptions that they are promiscuous or are perceived to have a lower risk of being the victim of a sexual assault when they travel. Moreover, older women may have established trust with other members of their household who grant permission for them to be mobile.

Although freedom of movement may generally expand with age, both puberty and marriage often curtail freedom of movement. Evidence from South Africa finds that there are reductions in the areas that girls visit upon reaching adolescence, possibly due to perceived risk of sexual violence as they physically mature, while boys begin traveling to more areas in adolescence (Hallman, Kenworthy, Diers, Swan, & Devnarain, 2015). A study in Ethiopia finds that young, unmarried women have greater mobility than their married counterparts, because they do not have in-laws who restrict their movement (Mulema, 2018). Similarly, when a couple leaves the extended household to start a nuclear one, women enjoy greater freedom of movement, because their in-laws no longer restrict their movement (Nepā School of Social Sciences and Humanities, 2017). Pregnancy in particular is often a time period when women avoid public spaces, because pregnancy is a conspicuous indicator of sexual activity and for this reason may elicit feelings of shame (Mumtaz & Salway, 2005).

Educational attainment is another individual factor that influences freedom of movement. Although this factor affects both men and women, women are less likely to have primary education. One study found that among the Maasai in Tanzania, less educated women are less likely to travel great distances, because they do not speak the languages spoken outside their communities and cannot count money (Krause et al., 2018). Men living in rural Pakistan perceive that one reason women seldom travel beyond their villages is because they have low literacy skills and lack the ability to navigate larger cities (Mumtaz & Salway, 2005).

## Household and family dynamics

We identified multiple household and family-level factors, which we broadly group into four themes: social or economic position of the household, household relationships, household composition, and workload expectations. Many of these exemplify the household's and family's role in enforcing the social norms that are a characteristic of the broader society or social group that it belongs to.

In many contexts the social or economic position of the household often dictates the extent to which the household is able to practice segregation of the sexes and the seclusion of women from the public eye. The most widely recognized example of the seclusion of women is purdah (also spelled pardah), which is practiced across religious groups in many parts of South and Central Asia, although many other societies also practice some form of female segregation. One might hypothesize that women from a household in a higher social position might have the education and resources required to facilitate their freedom of movement, but most studies find the opposite. Instead, households in a higher social position are the ones that can afford to maintain purdah and keep female members of the household secluded; moreover, freedom of movement among poor or lower caste women may reinforce their lower social position (Mumtaz & Salway, 2005, 2009). In poor households in Bangladesh, the demand to fulfill basic needs often overrides any desire to maintain purdah, and as a result, women leave home to participate in economic activities (Kabeer, 1990). Even in societies with weaker expectations about female seclusion, there is evidence that poorer women are often forced to be more mobile than they would like. In Nigeria, women often leave their home to work only if household men cannot generate enough income to support the household (Porter, 2008). In Ethiopia, women from poor households were more mobile compared to women from wealthier ones, because they had to leave the house to work, even when they would have preferred not to (Mulema, 2018). Given that poverty and household position often “push” women out of the home, it is difficult to determine whether more frequently going to public places is an act of agency, of necessity, or even of desperation. Some women may in fact find less mobility more empowering (Meinzen-Dick, Rubin, Elias, Mulema, & Myers, 2019; Schuler, Islam, & Rottach, 2010), or at least, as in the case of Pakistan, a welcome luxury (Mumtaz & Salway, 2005, 2009).

Evidence across numerous contexts finds that often women are expected to seek some form of permission or consent before traveling away from the home (Bagayoko, 2018; Krause et al., 2018; Kumar et al., 2017; Rubin et al., 2018). Permission may be requested from her husband or his kin if she is married, or from her own family if she still lives with her own family. In Burkina Faso, for example, women can travel to agricultural plots, the market, the homes of family, health centers, or group meeting locations, but this is usually conditional on their husband's permission (Kieran, Gray, & Gash, 2018). Women explained that asking their husband's permission is necessary to ensure that she can benefit from his help in case something happens to her while she is away (Eissler et al., 2020). However, the implications of this differ across ethnic groups with different residential patterns. The Mossi typically live near extended family, meaning that a woman will see her brother-in-law frequently and can inform him if she leaves the household. The Bwabas, however, live far from kin, and a woman may rarely see her brother-in-law, so in the absence of her husband, she will only inform the children or a co-wife before leaving.

Additionally, men in the same Burkina Faso study described it as important way to show respect and explained that a woman might not receive her husband's permission if there are no co-wives to fulfill domestic duties or if the husband believes that she might commit adultery. Women in Bangladesh reported that it was not uncommon for their husbands to object to them going to a particular place; 33% reported objections to visiting friends or relatives, 15% to a hospital/clinic/doctor, and 13% to NGO/program training, but fewer (0-8% depending on the category) reported that their husbands objections prevented them from visiting these places (Wendt et al., 2017). Certain factors in the household may also change the willingness of husbands to grant permission for their wives to go somewhere. In Tanzania, women who can convince their husband that they are trustworthy may enjoy greater freedom of movement relative to other women (Krause et al., 2018). In Bangladesh, an impact evaluation revealed that women who participated in food transfer programs experienced a decline in their freedom of movement relative to a control group, which was also confirmed by the qualitative work; one

explanation is that husbands restricted women's freedom of movement in light of women's increased control over household resources (Ahmed, Quisumbing, Nasreen, Hoddinott, & Bryan, 2009).

Households with no adult men present an interesting case for understanding control over women's freedom of movement. In Nepal, which has a high rate of male labor outmigration, mothers-in-law often hold authority in granting permission and restricting the freedom of movement of their daughters-in-law (Nepā School of Social Sciences and Humanities, 2017). Evidence from Bangladesh, however, finds that when men are absent, women are often able to travel on their own, although they might not always perceive this to be a positive outcome given social norms around female (Rubin et al., 2018).

Workloads are another aspect of household dynamics that may limit women's freedom of movement. Many forms of domestic labor and caring for children or elders are considered women's responsibility. The recurring nature of these tasks make it difficult for women to be away from the homestead for many hours, let alone days, which Meinzen-Dick et al. (2019) refer to as "time as a tether." Women in Nepal reported that when they visited their natal family for several days, husbands would become angry about needing to do the housework in her absence (Nepā School of Social Sciences and Humanities, 2017). In Ethiopia, women who worked away from the home also had to contend with long commutes, which made it difficult for them to complete their domestic tasks and increased their time burden (Mulema, 2018). Conversely, good relationships with co-wives might relieve the burden of domestic responsibilities, making it easier for women attend meetings or travel for other needs (Krause et al., 2018; Bagayoko, 2018).

### **Community, regional, and national-level factors**

Moving beyond the household level, there is notable overlap in the characteristics that may be classified as pertaining to the community, regional, or national level. Thus, rather than discuss each level separately, in this section, we address social norms, transportation and infrastructure, and safety and security



concerns, which may be characteristics of the community, regional, or national context and can affect freedom of movement.

### ***Social norms and related reputational concerns***

A significant factor limiting freedom of movement, which may also underly other barriers, are the social norms related to women's interactions with men, and the related suspicion and reputational concerns that emerge when women violate, or even test the limits of, these social norms. Such norms might be specific to the regional or national level, or they may differ among different social groups within the same community. As we detail in this section, findings across multiple contexts reveal that the social norms intended to uphold purdah, or other forms of segregation of the sexes, and women's sexual purity significantly constrain women's freedom of movement. Moreover, across these contexts, men are not subjected to similar norms.

As discussed in the previous section, the household and family are often responsible for enforcing purdah (or other ways of segregating the sexes), yet this is often done as part of fulfilling social norms that pertain to a society or a social group. Often women who are away from home, especially without the company of others, are rumored to be promiscuous or assumed to not be maintaining sexual purity. As such, women in Pakistan are discouraged from traveling outside their household to areas where they may encounter non-kin men, regardless of how geographically close they may be to their home (Mumtaz et al., 2013). They may, however, travel longer distances – alone, even – to visit the household of an extended family member as long as the route does not take them into contact with non-kin men. In some communities in Nepal, women who move about freely are suspected of wanting to elope, and men may suspect their wife will be unfaithful if she spends too much time away from home (Nepā School of Social Sciences and Humanities, 2017). Among Bedouin communities in rural Egypt, male family members often falsely accuse young women (both married and unmarried) of visiting places without permission or talking to non-kin men as a means of maintaining control of them and their freedom of movement (Lughod, 1990). To attract women workers despite such reputational concerns, garment factories in

Bangladesh provide women-only dormitories with strict supervision and lock factories and dormitories. Such arrangements encourage families to allow their daughters to go to work in the factories, often earning considerable income, but for the women themselves it often involves trading one form of restriction on movement (by families) for another (by employers).

While there is not the same degree of female seclusion in most societies in Africa South of the Sahara, there are still persistent social norms that aim to maintain control over women's sexuality and fertility or force them into roles as caregivers, and these norms limit women's freedom of movement. Among predominantly Christian communities in rural southern Ghana, men equated women's mobility with promiscuity and failure to fulfill domestic duties, and as a consequence for traveling without permission, or for too long, husbands often reprimand their spouses, both verbally and by destroying their property (Porter, 2011). A study from Ethiopia found that highly mobile women are perceived to be social deviants or disobedient (Mulema, 2018). And, a study in Malawi found that spending the night away from home was often perceived negatively, because it alluded to the behaviors that one could undertake when away from the supervision of household members (Myers et. al, in preparation). Similarly, in peri-urban parts of Nairobi, Kenya, women who travel in early morning hours, even for livelihood-related activities are perceived as potentially promiscuous (Heckert et al., in preparation). There were also common perceptions that women who were away from their homes, even for shorter periods, were neglecting caregiving activities and husbands often expressed a preference that their own wife conduct these responsibilities, rather than, for example, nearby extended family members, which further limits women's freedom of movement.

### ***Transportation and Infrastructure***

The availability and quality of transportation infrastructure and services affect both men's and women's freedom of movement. The negative effect of poor infrastructure and costly or inadequate services, however, is often magnified for women. This occurs through three primary avenues: women may have less money available to pay fares; women are limited by ideas about "gender appropriate" transportation;

and women are less likely to control their own means of transportation. For example, in Ghana, transportation fares on unpaved routes are frequently double those of paved ones, and women have more difficulty covering these costs (Porter, 2011). Similarly, the cost of transportation and women's limited income prevents women from using transportation in Bangladesh (Rubin et al., 2018).

Moreover, some forms of transportation are not considered appropriate for women. In rural Bangladesh, men may travel on top of trucks to transport agricultural goods and can use motorbikes or public buses, but such behaviors would be inappropriate for women (Rubin, 2018; Rubin et al., 2018). In evidence from Uganda from several decades ago, riding a bicycle was considered a masculine behavior and unacceptable for women (Malmberg-Calvo, 1994). Although many of these ideas persist, more recently Uganda and other African countries have seen an expansion in the availability of motorbike taxi services throughout rural areas. Typically, these are business owned by men, and most clients are men; young women are increasingly using these services, but continue to face barriers, such as who they select as a driver and the time of day that they can travel (Porter, 2011). The use of motorized vehicles, including cars and motorcycle taxis may have the added benefit of shorter transportation times and reducing time poverty (Kes & Swaminathan, 2006; Naybor et al., 2016).

### ***Safety and security***

Safety and security concerns can include both natural threats, as well as human threats. As with transportation and infrastructure, safety and security concerns affect both men and women, but can have a larger effect on women's freedom of movement. Seasonal rains may make roads impassable, leaving individuals stranded or requiring them to take lengthier or more expensive routes or limiting their ability to travel altogether when safety and security concerns are layered upon impassable roads. In many settings, threats may come from wild animals, especially when walking, although those who are able to afford to pay for transportation can avoid these threats (Porter, 2011). Conflict-affected areas may also experience a unique set of restrictions on freedom of movement.

Sexual violence, sexual harassment, and the threat of both these experiences also limit freedom of movement, especially among women. Poor women in Pakistan, who often leave home alone to work in farming, fear their susceptibility to sexual violence at the hands of the landowning men who employ them (Mumtaz & Salway, 2009). In the same context, women health workers were harassed and followed by men while they were working (Mumtaz et al., 2013). Women traders in Rwanda and the Democratic Republic of the Congo have reported experiencing sexual harassment and/or sexual violence while crossing the border between the two countries (Roshan, 2013). Experiences of this nature commonly extend to school girls, who are often at risk of sexual violence when traveling to and from school, or who may be kept out of school to avoid such risk (Ombati & Ombati, 2012; Porter, 2011). The risk of sexual violence and sexual harassment often encourages women to avoid public spaces and the associated risk of humiliation. As such, in Bangladesh, often women avoid going to the market alone and prefer to send a male household member on their behalf (Schuler et al., 2010).

### **Women's strategies for overcoming barriers to freedom of movement**

Despite the barriers to freedom of movement that women experience, the literature also highlights the strategies that women employ for overcoming these barriers. Often this is accomplished by strengthening and taking advantage of social relationships. Women who are regular passengers on the same routes in Ghana often build relationships with drivers so that they can negotiate when to pay their fares (Porter, 2011). In contexts where women often prefer not to travel alone, such as Pakistan, they often circumnavigate obtaining permission from their spouse or parents-in-law by seeking the company of sisters-in-law or own kin (Mumtaz & Salway, 2005). And, women health workers often strategically work in pairs to maintain the acceptability of their work (Mumtaz et al., 2013). However, such a strategy may reduce their productivity compared to a scenario where they can visit houses on her own. Similarly, schoolgirls in sub-Saharan Africa seek the company and safety of travel companions to facilitate their freedom of movement as it pertains to traveling to school, such that a having a travel companion is often the only way to attend school (Porter et al., 2011).

Women have also gained freedom of movement over time. Women in Burkina Faso note that they are far more mobile than their mothers' generation and attribute this to being more educated than in previous generations and the ability to participate in savings groups, as well as other women's groups, which has allowed them to share ideas and become open to ideas around women's rights (Kieran et al., 2018). Women in Ethiopia also attribute women's increased freedom of movement in recent years to increased access to education and awareness of their rights via government and NGO programming (Mulema, 2018).

### **Policy and programmatic strategies for overcoming barriers to freedom of movement**

Some interventions have specifically aimed to, or had the consequence, of enhancing women's freedom of movement. While some approaches employ a gender-accommodative approach, which aims to make change within existing gender norms, other use a gender transformative approach, which aims to change underlying social norms related to gender. Gender-accommodative approaches related to freedom of movement often aim to increase access to and use of public transportation. In a study of the implementation of an agricultural training from in Malawi, women expressed that covering transportation costs would have made it easier for them to participate (Ragasa et al., 2020). Moreover, when an intervention in Pakistan provide transportation funds, actually given funds to pay for public transportation, women's freedom of movement increased (Cheema, Khwaja, Naseer, & Shapiro, 2020). As a different type of accommodative approach, in urban settings, there is growing interest in implementing women-only public transportation systems to enhance women's freedom of movement by reducing the likelihood they will encounter sexual harassment while in transit (Dunckel-Graglia, 2013, 2016).

Gender transformative approaches to enhancing freedom of movement are scarce. One example, an intervention that mandated women's participation in community development councils in Afghanistan evaluated via a randomized-control trial, found that women in the treatment communities were more likely to leave their homes without a chaperon compared to women in the control group (Beath, Christia,

& Enikolopov, 2013). An intervention in Bangladesh, that aimed to create employment opportunities along the dairy value chain found that in treatment households, a larger proportion of spouses jointly decided (in comparison to men being the sole decision makers) whether women could move throughout their communities relative to control households (Quisumbing, Roy, Njuki, Tanvin, & Waithanji, 2013). Conversely, other projects in Bangladesh find that upon securing more valuable livestock women opt to restrict their movement and work exclusively within the homestead, because they are no longer under the financial pressure to participate in labor force activities that take them away from home (Roy, Ara, Das, & Quisumbing, 2015).

### 3. REVIEW OF SURVEY METHODS FOR MEASURING FREEDOM OF MOVEMENT

To identify survey-based approaches for measuring freedom of movement, we searched Google Scholar using the criteria [[mobility OR “freedom of movement”] AND [gender OR women] AND measure] and limited our findings to publications from 2000 to 2019 (when the review was conducted). This approach yielded studies that used freedom of movement as either a dependent or independent variable and supporting documentation for publicly and non-publicly available datasets. Additionally, we reviewed content cataloged in the EMERGE database<sup>1</sup>, which aims to consolidate measures of empowerment and gender equality. Backward citation searches were used to identify the original source of the survey content when possible. To be included in the current review, the studies and survey modules needed to have the intent of measuring freedom of movement as an aspect of women’s empowerment (or an equivalent concept with different terminology) using a household survey. For example, indicators based on national laws were not included. We limit what we report to the earliest citation of specific survey items and do not report all publications that draw on the same data sources or surveys that replicate content from earlier surveys.

We identified 12 unique examples of survey-based approaches that had been used to measure freedom of movement (Table 3.1). We evaluated the content of each of these according to their geographic use; whether they had been administered to men, women, or both; and the barriers that the survey items interrogated. For the different types of barriers, we identified five themes: permission seeking and decision-making, the need to be accompanied (vs. going alone)<sup>2</sup>, differentiating between different places and activities, the frequency of going places (including ever in a given time period), and perceptions of safety.

Of the 12 modules, four were used in multi-country studies: the two Demographic and Health Survey (DHS) modules, project-level Women’s Empowerment in Agriculture Index (pro-WEAI), and the Oxfam Women’s Empowerment Index. Five had been developed for surveys in South Asian countries

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<sup>1</sup> <http://emerge.ucsd.edu/>

<sup>2</sup> When questions were framed either in the context of being accompanied or alone, but did not ask about differences between the two, we did not classify these items as addressing the accompanied vs. alone theme.

(Bangladesh, India, and Pakistan); two had been developed for surveys in the Middle East and North Africa (Oman and Egypt); and one was part of a study in urban Kenya. Only one was administered to both men and women (pro-WEAI). The remaining examples had only been administered to women, although many could, hypothetically, be administered to men, especially the questions on perceptions of safety and frequency of having gone to specific places. When survey modules are only administered to women, it is impossible to differentiate between gender-based constraints on freedom of movement for women and men and other factors that might apply to both, such as safety.

Most of the survey modules either address household-level barriers, such as permission of a spouse, or are ambiguous about what the potential barriers are by only asking whether respondents are able to go to specific places. The most common approach was to ask about different locations in conjunction with either the need to seek permission to go to each place or the difference between being accompanied or going alone. By asking about permission seeking, the emphasis is on the barriers that women encounter in the context of their families and households. By differentiating between going alone or in the company of others, these approaches fail to consider that recruiting someone to accompany them to their desired location may be an act of agency. The Oxfam Women's Empowerment Index was unique in that it was the only survey to address feelings of safety, or any other barriers at the community level or beyond. In summary, existing survey modules do not fully consider the barriers to freedom of movement that individuals might experience within and outside their communities. These constraints might be particularly important for women aiming to engage in economic activities that require them to spend more time in the public domain.

Of the modules that included questions to differentiate between different places or activities (all but two), the places and activities focused on healthcare and caring for children (e.g., clinics and schools); markets and shops with the motivation to purchase goods; and the homes of relatives and friends. The previous DHS Women's Status module asked about community meeting places and places of worship. Notably, none of the places or activities focused on women's economic activity, such as places of work or financial institutions. The lack of focus on places or scenarios that are important for women's economic



activity, again, limits the ability to study the relationship between freedom of movement and women's participation or productivity in a range of livelihoods activities.

The locational questions implicitly include variation in conformity with social norms and values. Going to a religious site or service, or taking a child to health care are likely to be most in keeping with norms of what a "good" woman or mother would do. Seeking own health care is more self-centered, and may be viewed with suspicion that the woman is seeking reproductive health services without permission. The acceptability of pursuing economic opportunities is likely to vary. For example, "market mamas" are widely respected in West Africa, whereas women participating in markets is more limited in many other places.

The overall conclusion from this review of survey-based methods is twofold. First, previously used approaches are limited by their lack of focus on women's economic participation, whether based in agricultural production, entrepreneurship, or wage or salaried labor. Second, previously used approaches primarily focus on the household-based barriers to freedom of movement and do not consider the barriers that occur in the wider social environment and beyond, with a few notable exceptions, such as the Oxfam Women's Empowerment Index's focus on safety.

**Table 3.1** Description of survey modules used to measure freedom of movement

| Citation & survey name if available  | Questions   | Geographic use      | Asked of men, women, or both | Survey Item Asks About...                          |                                     |                              |  |                     |
|--|---|---------------------|------------------------------|--|-------------------------------------|------------------------------|--|---------------------|
|  |   |                     |                              | Permission seeking or decision taking <sup>1</sup> | Being accompanied (vs. going alone) | Different places or activity | Frequency (including ever in a period of time) | Safety <sup>2</sup> |
| Bloom, Wypij, & Gupta, 2001  | <p>†Women's ability to leave the house without the company of another adult to:</p> <ul style="list-style-type: none"> <li>Go to the market</li> <li>Take a child to the doctor</li> <li>Go to a doctor for her own healthcare</li> </ul> <p>[Response: Yes, No]</p> <p>Women's ability to visit natal kin when they wished.</p> <p>[Response: Yes, No]</p>   | India: north, urban | Women                        | --   | --                                  | ✓                            | --   | --                  |
| Demographic and Health Surveys, Model Women's Questionnaire, 2008  | <p>Who usually makes decisions about visits to your family or relatives?</p> <p>[Responses: Respondent, husband/partner, respondents and husband/partner jointly, someone else, other]</p>  | Multi-country       | Women                        | ✓  | --                                  | --                           | --   | --                  |
| <p>Measure Demographic and Health Surveys, Women's Status Module, 2003</p> <p>DHS Phase 5 and earlier only</p> | <p>Are you usually permitted to go to the following places on your own, only if someone accompanies you, or not at all?</p> <ul style="list-style-type: none"> <li>To the local market to buy <u>things</u>?</li> <li>To a local health center or doctor?</li> <li>To the community center or other nearby meeting place?</li> <li>To homes of friends in the neighborhood?</li> <li>To a nearby shrine/mosque/temple/church?</li> <li>Just outside your house or compound? (only Phase 4 and earlier)</li> </ul> <p>[Responses: Alone, Not alone, Never]</p> | Multi-country       | Women                        | --   | ✓                                   | ✓                            | --   | --                  |
| Desai et al., 2010   | <p>Please tell us whether you have to ask permission of your husband or a senior family member to go...</p>   | India               | Women                        | ✓  | ✓                                   | ✓                            | ✓  | --                  |

| Citation & survey name if available | Questions  | Geographic use | Asked of men, women, or both | Survey Item Asks About...                          |                                     |                              |  |                     |
|-------------------------------------|--|----------------|------------------------------|--|-------------------------------------|------------------------------|--|---------------------|
|                                     |  |                |                              | Permission seeking or decision taking <sup>1</sup> | Being accompanied (vs. going alone) | Different places or activity | Frequency (including ever in a period of time) | Safety <sup>2</sup> |
| India Human Development Survey      | <ul style="list-style-type: none"> <li>To the local health center?</li> <li>To the home of relatives or friends [in the village / neighborhood]</li> <li>To the kirana shop?</li> <li>To travel a short distance by train or bus?</li> </ul> <p>[Responses: Yes, No, Must inform]</p> <p>If yes: Whom do you ask for permission?</p> <p>[Responses (all that apply): Husband, Senior male, Senior female, others]</p> <p>Can you go alone? (Whether you [Responses: Yes, No]</p> <p>Beside your current residence and your native place, in the past five years, have you been to:</p> <ul style="list-style-type: none"> <li>A metro city [other than the metro city you live in]</li> <li>A town / city (for rural)?</li> <li>A village (for urban)?</li> <li>Another state?</li> <li>Abroad?</li> </ul> <p>[Responses: Yes, No]</p> |                |                              |  |                                     |                              |  |                     |

| Citation & survey name if available  | Questions  | Geographic use | Asked of men, women, or both | Survey Item Asks About...                          |                                     |                              |  |                     |
|--|--|----------------|------------------------------|--|-------------------------------------|------------------------------|--|---------------------|
|  |  |                |                              | Permission seeking or decision taking <sup>1</sup> | Being accompanied (vs. going alone) | Different places or activity | Frequency (including ever in a period of time) | Safety <sup>2</sup> |
| Fotso, Ezeh, & Essendi, 2009<br><br>Nairobi Urban Health and Demographic Surveillance System | <p>If you are ill and need to see a doctor, do you first have to ask someone's permission?<br/>[Response: Yes, No]</p> <p>Are you usually allowed to go to the following places on your own:</p> <ul style="list-style-type: none"> <li>• Just outside your house or compound</li> <li>• Local market to buy things</li> <li>• Local health center or doctor</li> <li>• In the neighborhood for recreation</li> <li>• Home of relatives or friends in the neighborhood</li> </ul> <p>[Response: Yes, No]</p> | Kenya: urban   | Women                        | ✓  | --                                  | ✓                            | --   | --                  |
| Lombardini, Bowman, & Garwood, 2017<br><br>Oxfam Women's Empowerment Index                   | <p>I feel safe to walk <u>alone</u> in my village<br/>[Response: 4-point Likert scale of agree/disagree]</p>   | Multi-country  | Women                        | --   | --                                  | --                           | --   | ✓                   |
| Mahmud, Shah, & Becker, 2012   | <p>†Whether she had gone to each of the following in the last year:</p> <ul style="list-style-type: none"> <li>• A meeting or gathering within the village</li> <li>• Her father's home</li> <li>• Relatives' or friends' homes outside the village</li> <li>• Shops for marketing or shopping for clothes or other necessary things</li> <li>• Hospital/health center or clinic</li> </ul> <p>For those she had visited, whether she asked permission to go there.</p>                                      | Bangladesh     | Women                        | ✓  | --                                  | ✓                            | ✓  | --                  |

| Citation & survey name if available  | Questions  | Geographic use | Asked of men, women, or both | Survey Item Asks About...                          |                                     |                              |  |                     |
|--|--|----------------|------------------------------|--|-------------------------------------|------------------------------|--|---------------------|
|  |  |                |                              | Permission seeking or decision taking <sup>1</sup> | Being accompanied (vs. going alone) | Different places or activity | Frequency (including ever in a period of time) | Safety <sup>2</sup> |
| Malapit et al., 2019<br><br>Project-level Women's Empowerment in Agriculture Index   | How <u>frequently</u> do you go to:<br><ul style="list-style-type: none"> <li>An urban center</li> <li>The market</li> <li><u>To visit</u> family or relatives</li> <li><u>To visit</u> a friend or neighbor's house</li> <li>Hospital a public <u>gathering</u> / community <u>meeting</u> / <u>training</u> for NGO or programs?</li> </ul> [Response: Every day, Every week at least once, Every two weeks at least once, Every month at least once, Less than once a month, Never] | Multi-country  | Both                         | --   | --                                  | ✓                            | ✓  | --                  |
| Mumtaz & Salway, 2005<br><br>Pakistan Fertility and Family Planning Survey (1996-97) | In the last four weeks have you been outside this village/ neighborhood for any purpose <u>in the company of another adult</u> ?<br><br>In the last four weeks have you been outside this village/ neighborhood for any purpose <u>without the company of any adult</u> ?<br><br>If you needed to go to a health clinic or hospital, <u>could you go by yourself or would you need to be accompanied by someone else</u> ?<br>[Response: Yes, No]                                      | Pakistan       | Women                        | --   | ✓                                   | ✓                            | ✓  | --                  |
| Rahman & Rao, 2004   | Do you have to ask your husband or a senior family member for permission to go to:<br><ul style="list-style-type: none"> <li>Any place outside your house or compound?</li> <li>The home of relatives of friends in the village?</li> <li>The local health center?</li> <li>The local market?</li> </ul> [Responses: yes, no]<br>Can you travel alone to:<br><ul style="list-style-type: none"> <li>Same as above</li> </ul> [Responses: yes, no]                                      | India          | Women                        | ✓  | ✓                                   | ✓                            | --   | --                  |

| Citation & survey name if available  | Questions  | Geographic use | Asked of men, women, or both | Survey Item Asks About...                          |                                     |                              |  |                     |
|--|--|----------------|------------------------------|--|-------------------------------------|------------------------------|--|---------------------|
|  |  |                |                              | Permission seeking or decision taking <sup>1</sup> | Being accompanied (vs. going alone) | Different places or activity | Frequency (including ever in a period of time) | Safety <sup>2</sup> |
| Al Riyami, Afifi, & Mabry, 2004<br><br>National Health Survey, 2000 Oman                 | <p><u>Does your husband allow you to go alone or accompanied</u> by your children to...?</p> <ul style="list-style-type: none"> <li>• Shopping</li> <li>• Hospital/health center</li> <li>• Children's schools</li> <li>• Visit relatives</li> <li>• Visit friends</li> <li>• Go for a walk</li> </ul> <p>[Responses: not reported, likely Alone, Accompanied, Not at all]</p> | Oman           | Women                        | --   | ✓                                   | ✓                            | --   | --                  |
| Yount, VanderEnde, Dodell, & Cheong, 2016<br><br>2006 Egyptian Labor Market Panel Survey | <p>†If you want to go to any of the following places, can you go:</p> <ul style="list-style-type: none"> <li>• Going to the doctor/health unit for treatment</li> <li>• Taking children to the health unit-doctor</li> <li>• The house of relatives-friends-neighbors</li> </ul> <p>[Responses: Cannot go alone/ Need permission/ Just inform them/ Without permission]</p>    | Egypt          | Women                        | ✓  | --                                  | ✓                            | --   | --                  |

Source: Authors' review of the literature

†Original wording of survey question could not be identified provided, even via back citation.

#### **4. PROPOSED SURVEY-BASED METHODS FOR MEASURING FREEDOM OF MOVEMENT**

In the previous sections we concluded that freedom of movement measures should address the constraints experienced at different levels of the social environment and not just be limited to the constraints experienced at the household and family-level. We also concluded that current survey modules are unable to meet the needs of studies that aim to understand gendered constraints on freedom of movement in relation to agricultural value chains, or participation in other economic activities, for four principle reasons. They have primarily interviewed only women, not men; do not adequately address issues related to economic participation; primarily address barriers experienced in household and family life, not in the broader social environment; and ignore the range of ways that women practice agency by using items that assume going alone is more empowering than going in the company of others.

We, therefore, propose two approaches that can be used to measure freedom of movement in large multi-topic surveys. Each is designed to be used with both men and women. The first approach focuses on experiences with freedom of movement and improves on previous survey-based approaches by considering a range of barriers that may be present across the social environment and asking about locations that are important for economic activities, such as where one might conduct business, participate in training activities, or access financial institutions.

The second approach uses a vignette-based approach and is designed to look at social norms as potential barriers to freedom of movement. Social norms are a strong limitation on women's freedom of movement in many contexts and are not addressed in existing surveys, nor would they be picked up in the experience-based module we propose. This approach must be carefully adapted for the context and can be especially useful for diagnosing barriers and measuring the impact of gender transformative projects (i.e., projects that aim to change underlying social norms). Both approaches are further elaborated in the following sections.

## **Survey module for measuring experiences with freedom of movement**

In the proposed module, we include a series of questions that ask about the experiences of visiting key places that are important for involvement in agricultural value chains (Table 4.1). The questions refer to a local market, another village or neighborhood, a bank or financial institution, the office of a local official, a place to do agricultural work, a place to work for someone else, a place to buy or sell goods or services for a business, a place where a group meeting is held, a place where a training is held, a multi-day training, and a social event.

For each place we ask about the frequency of having gone to each of these places during the past 12 months, whether the respondent was ever prevented from going there in the past 12 months, and what prevented the respondent from going there. When asked about what prevented the respondent from going to a specific place, potential responses include natural causes (e.g., bad weather, illness), resource-related constraints (e.g., availability and cost of transportation, lacking appropriate dress), people-related constraints (e.g., the objection of family members) and safety concerns. We also explicitly ask whether a spouse or partner ever objected or discouraged them from going there in the past 12 months, and whether the objections ultimately prevented the respondent from going to the place.

This module draws on some characteristics from the modules we reviewed. It solicits responses on multiple places or activities (albeit ones that focus on economic activities) and asks about frequency. The proposed module also considers safety concerns as a potential barrier, which was previously only addressed by the Oxfam Index. It also provides some innovations. Instead of specifically asking about permission seeking, which may be done as a courtesy or to maintain positive relationships within the household, we ask specifically about whether a spouse or a family member objected as a reason for not going to each specific place. The proposed module intentionally does not distinguish between going somewhere alone and going accompanied, because of the evidence that many women prefer to go in the company of another person for safety reasons and because convincing someone to accompany her is often an act of agency and can also contribute to strengthening existing relationships. Additionally, it considers a range of potential barriers that may be found in the social environment, outside the family or household.



There are some limitations of this module. First, it is considerably longer than previous modules, but once pilot data are collected, it will likely be possible to use data and field experiences to reduce the length. Additionally, it may be difficult for respondents to both identify and articulate the factors that prevented them from going to a certain place, possibly leading to inaccurate or incomplete responses.

Nevertheless, it offers some distinct advantages. First, these data will be valuable descriptively to better understand the types of barriers encountered when trying to access or travel to a range of locations, particularly those necessary for complete participation in agricultural value chains. Additionally, once data are collected using the proposed module in several contexts, it will be possible to use psychometric methods to develop indicators from the module. We expect that places (i.e., those listed in the left-hand column) will be grouped, possibly according to the type of activity or the degree of barriers experienced trying to go to the places. The barriers can also be grouped, possibly according to the types (e.g., resource- or people-based) or the contextual level where they are experienced. The final two columns with questions on whether the spouse<sup>3</sup> objected to the respondent going somewhere and whether the objections prevented the respondent from going (Questions 04 and 05) can be combined to form an ordinal indicator of the degree to which the spouse limits freedom of movement. Finally, the conclusions about who has limited freedom of movement according to the barriers and spouse's objections questions will be compared to who has limited freedom of movement according to the frequency question (Question 01) to determine if the larger data collection burden leads to different conclusions.

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<sup>3</sup> In some contexts, users may want to consider replacing “spouse” with “spouse’s family members.”

**Table 4.1** Proposed survey module on experiences and barriers related to freedom of movement

| Next, I am going to ask you some questions about going to different places in your community. |  | During the past 12 months, how often did you generally go to [PLACE]?<br><br><b>USE CODE FOR G.01</b> | In the last 12 months, were you ever prevented from going to [PLACE] when you wanted to? | What prevented you from going to [PLACE]?<br><br><b>USE CODE FOR G.03. LIST ALL CODES APPLICABLE.</b><br><br><b>DO NOT READ RESPONSE OPTIONS ALOUD. LISTEN TO RESPONDENT AND SELECT APPROPRIATE CODE.</b> | During the past 12 months, has your spouse/partner objected or discouraged you from going to [PLACE]? | Do these objections prevent you from going to [PLACE]? |
|---|--|---|--|---|---|--|
| PLACE   |  | 01  | 02   | 03  | 04  | 05   |
| <b>A</b>  | The closest market to either buy or sell goods   |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE B</b>  | YES.....1<br>NO.....2                                  |
| <b>B</b>  | Another village or neighborhood  |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE C</b>  | YES.....1<br>NO.....2                                  |
| <b>C</b>  | A bank or other formal financial institution   |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE D</b>  | YES.....1<br>NO.....2                                  |
| <b>D</b>  | The office of a local official   |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE E</b>  | YES.....1<br>NO.....2                                  |
| <b>E</b>  | A field where you do agricultural work, a fishery/fishpond, a hive, or an orchard where your produce items for home consumption or sale  |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE F</b>  | YES.....1<br>NO.....2                                  |
| <b>F</b>  | A place where you do work for someone else   |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE G</b>  | YES.....1<br>NO.....2                                  |
| <b>G</b>  | A place where you sell or buy goods or services for your business  |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE H</b>  | YES.....1<br>NO.....2                                  |
| <b>H</b>  | <i>READ DESCRIPTION ONLY ONCE:</i><br><i>Many people may participate in groups, such as a savings group, credit group, a cooperative, or another community group.</i><br><br>A place where a group meeting is held |   | YES.....1<br>NO.....2 → <b>04</b>  |   | YES.....1<br>NO.....2 → <b>PLACE I</b>  | YES.....1<br>NO.....2                                  |

|          |  |  |                                    |  |   |                       |
|----------|--|--|------------------------------------|--|---|-----------------------|
| <b>I</b> | <p><i>READ DESCRIPTION ONLY ONCE:</i></p> <p><i>You may attend an agricultural training, a business training, a school, or another activity where you go to learn skills that can help you improve your livelihood.</i></p> <p>A place where you can receive such a training or learn skills that can help you improve your livelihood</p> |  | YES.....1<br>NO.....2→ <b>04</b>   |  | YES.....1<br>NO.....2→ <b>PLACE J</b>   | YES.....1<br>NO.....2 |
| <b>J</b> | A training for multiple days in which you would need to spend the night away from home   |  | YES.....1<br>NO.....2→ <b>04</b>   |  | YES.....1<br>NO.....2→ <b>PLACE K</b>   | YES.....1<br>NO.....2 |
| <b>K</b> | A social activity in the community where people might gather to visit friends or family  |  | YES.....1<br>NO.....2→ <b>→ 04</b> |  | YES.....1<br>NO.....2→ <b>MODULE G7</b> | YES.....1<br>NO.....2 |

| Code for 01 |                             |
|-------------|-----------------------------|
| 1           | EVERYDAY                    |
| 2           | EVERY WEEK AT LEAST ONCE    |
| 3           | EVERY 2 WEEKS AT LEAST ONCE |
| 4           | EVERY MONTH AT LEAST ONCE   |
| 5           | LESS THAN ONCE A MONTH      |
| 6           | NEVER                       |
| 98          | NOT APPLICABLE              |

| Code for 03 |   |
|-------------|---|
| 1           | TRANSPORTATION TOO EXPENSIVE  |
| 2           | RESPONDENT DID NOT HAVE THE PROPER DRESS/CREDENTIALS                    |
| 3           | NOT ENOUGH TIME   |
| 4           | BAD WEATHER   |
| 5           | RESPONDENT THOUGHT IT WAS UNSAFE TO TRAVEL THERE                        |
| 6           | RESPONDENT THOUGHT IT WAS UNSAFE TO BE AT THE DESTINATION               |
| 7           | OTHERS TOLD RESPONDENT IT WAS UNSAFE TO TRAVEL TO THERE                 |
| 8           | OTHERS TOLD RESPONDENT IT WAS UNSAFE TO TRAVEL TO BE AT THE DESTINATION |
| 9           | FORBIDDEN TO GO BY SPOUSE/PARTNER                                       |
| 10          | FORBIDDEN TO GO BY THE FAMILY OF MY SPOUSE/PARTNER                      |
| 11          | FORBIDDEN TO GO BY OWN FAMILY MEMBER                                    |
| 12          | FORBIDDEN TO GO BY AN AUTHORITY   |
| 13          | SOCIETAL NORM   |
| 14          | SICKNESS OR ACCIDENT  |
| 97          | OTHER, SPECIFY:<br>_____  |

## **Measuring Social Norms on Freedom of Movement**

Often, interventions, especially gender transformative ones, aim to address specific, gender-based barriers to freedom of movement. As opposed to measuring experiences of freedom of movement, this second module that we propose is designed to identify which norms limit women's freedom of movement in a particular context. Our proposed module draws on a vignette-based approach used to examine the consequences of bridewealth payment and non-payment in Ghana (Horne, Dodoo, & Dodoo, 2013). It is designed to compare the relative strength of social norms as binding factors that limit women's freedom of movement. A benefit of using vignettes is that is often easier for respondents to relate to specific stories about others than respond to hypothetical scenarios about their own lives. There is also less courtesy or social desirability bias in this type of approach.

For illustrative purposes, we base this vignette on a context where we conducted extensive formative research for another study and identified women's limited freedom of movement as a barrier to being able to source milk in all the same ways that men can. We found that women's freedom of movement was limited by the demands of household labor owing to their roles as mothers and wives and reputational and safety concerns that developed from being away from home at certain hours and spending time along with a male non-relative (e.g., a motorcycle taxi driver) (Galiè, Njiru, Heckert, Myers, & Alonso, in preparation; Heckert et al in preparation). This in-depth qualitative research helped us develop the necessary contextual knowledge to develop specific hypotheses about the social norms limiting women's freedom of movement and construct realistic vignettes. Developing specific vignettes for other contexts would require similar in-depth contextual knowledge on the specific types of social norms that might be binding constraints on women's freedom of movement. For example, the vignettes we present include the daily use of public transportation. In some contexts that might not be a realistic scenario.

In our proposed module all respondents are presented with a story that includes a dilemma. In our case, Immaculate is a milk vendor who believes that to increase the lucrativeness of her business, she

needs to be able to travel to where the milk is sourced instead of going through an intermediate trader. Respondents are then randomly assigned to different scenarios where the character's response to the situation is a different social norm violation. In the first scenario, she sources milk by taking a bus to the dairy and leaves her children to prepare themselves for school alone, which she believes that they are old enough to do. Thus, she is not directly spending time alone with another man, but she is unsupervised and away at pre-dawn hours, which could be unsafe, and she does not fulfill the expectation of directly supervising her children, even though she believes that they are old enough to get themselves ready for school. In the second scenario, she again takes a bus and also recruits her niece to ensure the children can get ready for school. Thus, compared to the first scenario she ensures that her children are well cared for, even if she does not do it herself. In the third scenario, instead of taking a bus, she takes a motorcycle driven by her nephew and again allows her children to get themselves ready for school. Compared to the other two scenarios, she is in the company of a male relative for the duration of her time away but leaves the children without direct supervision. In the fourth scenario, she goes by motorcycle with a male taxi driver who is not well known to her and again she leaves her children to prepare themselves for school. Compared to the first and third scenario, she is spending the entire journey alone with a male non-relative and does not fulfill the expectation of directly supervising her children.

Following hearing one of the randomly assigned scenarios, respondents are asked about their judgement of how the solution was addressed: do they think that the solution was a good one and how do they think that other community members will react to hearing about what she did? These responses can be compared across the four scenarios to understand which social norm violation was perceived as most egregious.

Then, in the next section of the questionnaire, the story escalates. Immaculate's husband who works the night shift as a security guard finds out that she has been sourcing milk from the distant dairy and forbids her to continue doing so. Respondents are then asked whether the husband was justified in forbidding her from sourcing milk. Finally, the story escalates again. Immaculate continued sourcing milk despite her husband's protest. Her husband finds out, becomes angry, and punishes her. Respondents are

asked whether the husband was justified in punishing her. The responses to the questions following each escalation can be analyzed to gauge how egregious Immaculate's violation of the social norm was.

In this approach, the random assignment to one of four response scenarios allows the researcher to test the relative strength of the different social norms and the relative strength of the sanction for violating the norms in aggregate, although it does not allow comparability at the individual level. Further guidance on statistical approaches for these analyses can draw on approaches to analyze data from so-called "list experiments" (Rosenfield, Imai, & Shapiro, 2016).

**Table 4.2** Proposed vignettes for measuring context-specific social norms on freedom of movement

|  |   |  |   |
|--|---|--|---|
| All respondents are told the following story:  |   |  |   |
| Immaculate sells milk from a shop near her home. She and her husband Rodger have three children. Her husband works the night shift as a watchman. Immaculate's income from her milk business is also an important part of the family income. Immaculate determines that if she is to make more profit from her sales, she needs to be able to purchase it at a lower price. She asks around and determines that the best place to source milk is at a dairy located well outside the city and that she needs to go before dawn each morning. To purchase milk at a lower price, Immaculate decides to..... |   |  |   |
| Respondent is randomly assigned to one of the following survey conditions:   |   |  |   |
| Source milk herself by taking a bus to the dairy. She thinks that the children are old enough to get themselves ready for school and don't need their mother's help.   | Source milk herself by taking a bus to the dairy. Meanwhile her niece agrees to help get the children off to school each morning. The children make it to school clean and well fed each morning under the care of her niece. | Hire her nephew who has a motorbike to take her to the dairy each morning. She prefers not to send him alone, because he doesn't know much about the milk business. She thinks that the children are old enough to get themselves ready for school and don't need their mother's help. | Hire a man that she doesn't know well but lives nearby to take her to the dairy each morning. She prefers not to send him alone, because he doesn't know much about the milk business. She thinks that the children are old enough to get themselves ready for school and don't need their mother's help. |
| Judgement of how solution was addressed  |   |  |   |
| Question: Do you think Immaculate's decision was a good one?<br>Likert: Very good.....Not very good  |   |  |   |
| Question: How do you think people in Immaculate's community would react when they find out that she is going to the dairy on her own each morning?   |   |  |   |
| Story escalates:   |   |  |   |
| After one week of Immaculate sourcing milk from the dairy, Rodger heard some neighbors talking negatively about Immaculate's early morning trips to the dairy. Rodger told Immaculate to stop sourcing milk from the dairy.  |   |  |   |
| Question: Was Rodger justified in tell Immaculate to stop sourcing milk from the diary?<br>Likert: Very justified.....Not justified  |   |  |   |
| Story escalates further:   |   |  |   |
| Immaculate disagreed with Rodger, because sourcing milk from the diary had increased her profits. She continued to source milk from the dairy, because she could go and return before Rodger returned from his watchman job. One day, upon his return from work and learned that Immaculate had gone to the dairy, Rodger decided to punish Immaculate.  |   |  |   |
| Question: Was Rodger justified to punish Immaculate for going to the dairy?<br>Likert: Very justified.....Not justified  |   |  |   |

Source: Authors

## 5. CONCLUSION

Our objective in this paper is to propose theoretically informed survey modules that can be used to collect data on women's freedom of movement. To this end, the conceptual framework we develop, which is derived from ecological systems theory (Bronfenbrenner, 1992), provides a basis for framing gendered barriers to women's freedom of movement. Along with drawing attention to the range of potential determinants of freedom of movement and being useful for the generation of hypothesis about how these experiences may differ for women of different characteristics, we used the conceptual framework to reflect on existing survey modules that aim to measure freedom of movement and identify the content that improved measures could optimally include.

In reviewing existing survey modules, we identified specific shortcomings. First, most of the survey modules focused only on the barriers than women face at the household level, such as gaining permission from her husband or an in-law or how household decisions about her freedom of movement are made. An exception is that some surveys ask about perceptions of safety, which considers conditions that may be present in the community or larger environment. Second, asking whether a woman can go accompanied or alone, which was another common approach, fails to consider that seeking companionship for going out might be a way in which women express agency and navigate their environments to gain freedom of movement. Finally, existing modules have little to no focus on women's economic participation. Some ask about women going to the market to make purchases, but this is typically an extension of her role in household, as opposed to an aspect of economic participation.

Based on this information, we designed two new approaches that can be integrated into multi-topic surveys. The first approach is an experience-based module that asks about frequency of visiting specific places, whether they were ever prevented from going to each of these places, the specific types of barriers they faced when trying to go these places, whether the spouse objected, and whether the spouse's objections prevented them from going. The specific places include those that are important for economic activity, such as where one might conduct business, participate in training activities, or access financial



institutions. The barriers also consider a range of barriers that may be present at various levels of the social environment. The second approach uses vignettes that are designed to understand the relative strength of different social norms limiting women's freedom of movement and the strength of sanctions that would be imposed for violating these norms. We propose a set of vignettes that are informed by qualitative research in a specific context. Although the overall approach can be used widely, we suggest that the specific stories be revised and undergo cognitive interviewing so that they are applicable to specific contexts. This module will be especially useful in understanding the success of gender transformative approaches. Data collected with these modules have the potential to better understand that limitations on women's freedom of movement and their consequences. In future work, we will aim to collect data using these approaches. The availability of these data has the potential to help us better understand the range of barriers on freedom of movement that experienced across contexts, test research questions related to how women's freedom of movement is linked to a broad range of outcomes (economic and otherwise), and monitor changes in women's freedom of movement over time.

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