emerge

EVIDENCE-BASED MEASURES OF EMPOWERMENT FOR RESEARCH ON GENDER EQUALITY

Measuring Women's Agency and Gender Norms in Family Planning
What do we know and where do we go?

September 2020

Center on Gender Equity and Health
University of California San Diego School of Medicine

Center on Gender Equity and Health • UC San Diego School of Medicine

Measuring Women's Agency and Gender Norms in Family Planning What do we know and where do we go?

A White Paper for the
Family Planning-Measurement, Learning and Evaluation (FP-MLE) Consortium India

Suggested Citation: Bhan N, Thomas E, Dixit A, Averbach S, Dey A, Rao N, Lundgren RL, Silverman J, Raj A. (2020). Measuring Women's Agency and Gender Norms in Family Planning: What do we know and where do we go? EMERGE [Evidence-based Measures of Empowerment for Research on Gender Equality. Center on Gender Equity and Health (GEH).

*Created as part of the EMERGE [**E**vidence-Based **M**easures of **E**mpowerment for **R**esearch on **G**ender **E**quality] Project. EMERGE Project Members include:*

Anita Raj, PhD (Principal Investigator)
Nandita Bhan, ScD (Co-Principal Investigator, EMERGE Family Planning Project)
Lotus McDougal, PhD
Rebecka Lundgren, PhD
Jay G. Silverman, PhD
Arnab Dey, MBA
Nabamallika Dehingia, MBA
Anvita Dixit, MA
Jennifer Yore, MPH
Namratha Rao, MPH
Meredith Pierce, MPH
Gennifer Kully, MPH
Edwin E. Thomas, BA

Acknowledgements: We are indebted to the many colleagues who generously offered us their time and critical insights that helped in shaping this paper.

Funding for this work was provided by the Bill and Melinda Gates Foundation (BMGF) (Grant number: INV-002967; Program Officer: Priya Nanda, PhD).

Executive Summary

This White Paper presents a landscape analysis of measures on women's agency and gender norms in family planning research, in order to develop insights on achievements, opportunities and gaps for priority setting and applications in family planning programs in low-and-middle-income countries (LMICs). This landscape analysis is rooted in the Can-Act-Resist framework of women's agency and gender norms developed by the Center on Gender Equity and Health that was previously validated in the field of women's economic empowerment. In this work, we extend the Can-Act-Resist conceptualization and validate its pathways based on current family planning research, with a view towards understanding synergies and gaps in approaches, methodologies and topic areas.

This landscape analysis was conducted in **three phases**. In *Phase 1*, key informant interviews were conducted with over 40 field experts in sexual and reproductive health research and programs to understand concepts of agency and norms investigated, perception of measurement strengths and gaps, and suggestions for areas and approaches for field development. Despite differences in expertise and/or disciplines, there was much agreement on the need for greater clarity on conceptual frameworks and definitions, as well as to improve measurement rigor through mixed methods formative research and psychometric testing. Field experts indicated that agency concepts in family planning were diverse in content coverage; in contrast, gender norms constructs within family planning research remained a gap. Experts also suggested that the need for context adaptation or validation of measures needed to be balanced against greater harmonization of measures through cross-national efforts.

Following this, *in Phase 2*, a scoping review of peer-reviewed published literature was conducted to examine the constructs covered by measures and identify knowledge gaps. The review was conducted using a systematic search methodology based on prior published research on women's empowerment in family planning and through insights from key informant interviews. This search was supplemented with gender measures in family planning identified through the EMERGE compendium. We used the Can-Act-Resist framework stratified by family planning domain areas of fertility, contraception, unmet need (including discontinuation), family planning service access and use, sex and sexuality and abortion to develop a Heat Map for the measure evidence landscape (Table 3). A total of 664 journal articles were identified through the review, which provided 152 unique measures (*Appendix 4: Table 5 provides the full list of measures*). Findings indicated that the largest pool of measures focused on contraceptive use, particularly in the area of attitudes and beliefs, quality of care and male support and engagement. Dimensions of agency in fertility emerged as an under-represented area, with existing measures focusing on external response to action measured via reproductive coercion. Measures on attitudes related to family planning emerged frequently in the review; in contrast, measurement of norms in family planning research requires more study inclusive of understanding the role of sanctions and power holders in family planning norms.

Finally, in *Phase 3* of the landscaping, we conducted quality appraisal of identified measures for their psychometric strength and cross-national validity. Our criteria for appraisal included examining the construct in focus, countries where the measure was tested, number of items and the response pattern and availability of psychometric data. Of the 152 measures identified, 34

measures provided psychometric data and were tested in one or more LMICs (Box 1). Further review of the measure items using a gender lens showed 10 strong/rigorous measures that could be integrated in field surveys or harmonized in cross-national studies based on study priorities. An additional 21 measures showed promise; these measures tapped clearly into a coherent construct but needed psychometric testing in an LMIC setting or cross-national validation to increase generalizability and use (Box 2).

In conclusion, this White Paper on the state of measurement of agency and norms in family planning shows the following. **Firstly**, several good measures exist that demonstrate conceptual clarity, methodological rigor in development and cross-contextual validation that can be readily used or harmonized through in-country or cross-country surveys. These measures have operationalized key agency constructs such as self-efficacy, voice, and decision-making, as well as on restrictions to agency such as reproductive coercion. These measures offer important insight into demand-side gender-focused determinants of family planning behaviors or health-seeking at the levels of the individual, couple, community or systems. **Secondly**, the field demonstrates a number of promising measures for key agency and norms constructs within under-represented family planning domains that need investments of conceptualization, adaptation and testing. In particular, we found good understanding of some agency constructs of contraception use but there is a need for deeper insight into the preferences and motivations guiding fertility, use, non-use and unmet need. Measures to study family planning norms as well as stigma regarding contraception use and abortion also need further development for family planning programming in LMICs. **Finally**, the field also shows measurement gaps in several important domains of agency and norms in family planning that have global as well as national relevance in the implementation and evaluation of family planning programs and services. These include *agency in fertility and family planning service access and use*; *resistance against fertility pressures* and *covert use*; *positive masculinity*; *bargaining and negotiation*; *sanctions and backlash*; *mistreatment and abuse*; and *abortion communication, agency and quality.*

We recommend based on this review and expert input that the family planning community of practice cannot afford to shy away from investing and engaging in complex topics around agency and gender norms that influence family planning preferences, uptake and experiences, and consequently women's health and lives, and the wellbeing of their families. We recommend the following next steps:

a) greater inclusion of meaningful and rigorous measures of agency and norms in family planning programs and survey opportunities;
b) instituting forums and conversations on measurement within the family planning community of practice; and
c) creating measurement resources for this community of practice of researchers and implementers, especially focused on prioritized areas and contexts.

These steps can feed into designing and delivering better family planning programs as well as conducting more rigorous and meaningful evaluations, thereby enhancing the quality and dignity in family planning access for women and their communities. They also provide an opportunity to improve the quality of family planning services on the ground that communities need now more than ever.

Table of Contents

Why Focus on Measuring Gender Equity – Agency and Norms - in Family Planning?

Globally, there is growing momentum towards understanding gender and social inequalities and the complex issues of power and agency that lie at the root of unequal access and uptake of sexual and reproductive health (SRH) services.[1,2] This momentum is in response to an acknowledgement across research, implementation and policy stakeholders that to achieve SRH goals and rights, we need to address gender inequalities in the policies supporting access to care, healthcare services and infrastructures, community and family practices, and the restrictive and gendered social norms that reinforce these inequalities.[3] Consequently, efforts are being made to improve gender equality in family planning (FP) and SRH programs and policies globally,[4,5] aligning with the targets of universal access to family planning (Sustainable Development Goal [SDG] 3.7) and fully informed family planning choice for all women and girls (SDG 5.6).[6]

In parallel to the SRH movement, there has been an acceleration towards SDG 5: Achieving gender equality and empowerment of all women and girls, with increasing research highlighting the role of inequalities as barriers to women's rights and development. There is a giant body of evidence connecting gender inequality and women's contraceptive practices, or lack thereof. Studies document that both early marriage and partner violence are associated with lower likelihood of contraceptive use, particularly among 0-1 parity couples.[7-9] Research shows that the desire for sons and having sons affects contraceptive practices in certain regions of the world such as South Asia, with contraception used once the desired number of sons is achieved.[10-12] The influence of these gender inequalities on family planning relate to 1) the social norms of higher and earlier fertility and 2) compromised reproductive agency of women and girls because fertility pressures from husbands, extended family, and communities can supersede women's reproductive choice. Multilevel interventions - engaging health systems, communities, and couples – that affect restrictive social norms and support women's reproductive autonomy demonstrate effectiveness in increasing family planning service uptake.[13-15] Overall, in the areas of health policy and practice, we see increased clarity and recognition of the importance of gender equity on family planning, particularly as gender equity relates to woman and girls' agency and gender equitable social norms operating at multiple levels. To that end, measurement has lagged and needs our greater attention to ensure that we are effectively measuring our impacts on these key issues.

Theoretical Foundations of Understanding Agency and Norms in Family Planning?

Understanding agency and norms in family planning, with considerations of gender and gender equity, requires a focus on *gender empowerment*. We have conceptualized gender empowerment for purposes of measurement by borrowing across social science theories, including psychology, economics, sociology, and political science. [16,17] [Please see EMERGE's Roadmap for Measuring Agency and Social Norms in Women's Economic Empowerment for the full review of theories and our measurement conceptual framework.] Based on this review, we highlight the process of empowerment, which should be viewed as non-linear and in which each step can be recognized as an outcome of empowerment as well as a process element, as follows:

- The individual or collective gains consciousness of choice beyond the social norms and expectations placed upon one due to their social placement or position
- From consciousness, they build aspiration to have this choice, a choice that is non-adherent to the social norm or expectation placed upon them. They determine actions and set goals to support their achievement of this choice, building conviction of that choice in the process of goal setting.
- They develop agency to act toward the choice - even against backlash/resistance from external forces which may control them. This agency is inclusive of their capacity to act as well as the actions and reactions they undertake to achieve their goals.
- Ideally, these actions result in their achievement of their self/collective-determined goals.

(See Appendix 1: Figure 2a for the detailed figure on the Empowerment Process conceptualized for measurement.)

Every step in this process is recognized as empowering even if the goals are not achieved. Every step in this process is influenced by the individual or collective's *internal strengths* (e.g., resilience, motivation, intragroup dynamics in the case of collectives), *external context* (e.g., community assets, opportunity structures, social solidarity; family/couple stability, wealth, value for the individual or collective; health system accessibility, quality of care, contraceptive supply), and the *social norms* surrounding them, which may influence the external context. To capture measures of agency and norms as relates to family planning, we consider the multiple levels of influence as well as the interactions between the individual and the given level-household/marriage, community, health system (e.g., agency of a women in interaction in a clinic versus with her husband, social norms related to fertility held by one's husband versus the community).

Understanding Agency in Family Planning. Our EMERGE Empowerment Measurement Framework [17] further defines agency within empowerment to guide consideration of how to measure this complex concept, in which we focus on agency as *Can-Act-Resist*:

- **Can** refers to the capacity (perceived or actual) of the individual or collective to engage in actions against or inconsistent with social norms placed upon them due to their social standing or position. **Critical consciousness** of this action is an important precursor for perceived capacity to move toward action. *In family planning, we consider "Can" to include perceived and actual self-efficacy to engage in actions that exert control over one's body and fertility, including deciding and discussing fertility and contraceptive preferences, engaging in contraception use or non-use, obtaining SRH services, and leading contraceptive decision-making in dialogue with the provider.*

- **Act** refers to giving voice or communicating one's goals, decision-making about issues affecting one's goals, or simply engaging in direct actions to achieve one's goals- with or without knowledge and input from others or those in authority. *In family planning, we consider this to include couple conversations as an action, decision-making dynamics and voicing consent on family planning goals, as noted above.*
- **Resist** refers to persisting in desired actions against negative external feedback or backlash (e.g., alienation or abuse due to using contraception or not becoming pregnant); this can be through negotiation, bargaining, and action without consent. *In family planning, in addition to negotiations, we also include a woman's refusal to accept a decision made or enforced by partner or family via covert use of contraception or covert use of abortion.*

(See Appendix 1: Figure 2b for the detailed figure on Agency conceptualized for measurement.)

Understanding Social Norms in Family Planning. Social norms are the informal rules, often unspoken and unwritten, that govern which behaviors are appropriate within a given group.[17] These may be measured based on *what a respondent thinks others do, known as descriptive norms,* or they may be *what they think others should do, known as injunctive norms.* Hierarchies of power in households and communities ensure that power holders benefit from the status quo, such that power holders often enforce compliance with social norms that maintain their position and privilege. Our EMERGE Empowerment Measurement Framework[17] further defines norms affecting the empowerment process as *Learn-Adhere-Enforce,* to help assess how norms are maintained:

- **Learn** happens throughout the life cycle as individuals observe how others behave and internalize social expectations of them. These socialization mechanisms align with categorization of norms into descriptive and injunctive norms:
    - *Descriptive*: Perceptions of what people do or what "I observe others" doing
    - *Injunctive*: Perceptions of what people do or the understanding of what "I am expected to" do or "I should do" according to others.
- **Adhere** follows learning of social norms, where the individual or collective either complies with or challenges the norm. Individuals may comply with a norm because they do not want to challenge it, or because their fear negative sanctions or seek benefit or rewards (e.g., social approval, recognized group membership) for compliance.
- **Enforce** occurs via *sanctions* (rewards or punishments) for adherence to or deviation from a social norm. Measurement of a sanction should consider its sensitivity and their strength, as felt by the affected individual. *Sensitivity* is degree to which an individual cares about the given sanction. *Strength* is the perceived level of benefit of a reward or cost of punishment given for adherence or non-adherence to a norm.

(See Appendix 1: Figure 2c for the detailed figure on Learn-Adhere-Enforce Social Norms Conceptualization)

It is important to recognize that despite much discussion of social norms as important for measurement, too often people confuse norms with attitudes and beliefs. Attitudes and beliefs are personally held views, whereas social norms are what one perceives others do (descriptive norm) or are supposed to/should do (injunctive norm).

Analysis of Measures of Agency and Social Norms in Family Planning

With a perspective on the importance of understanding agency and social norms in family planning, and a conceptual framework to consider the measurement of agency and social norms, we undertook an analysis inclusive of expert input and literature review to determine the current state of the field. In this analysis, we identified gaps in measurement that persist and require greater attention for development. Our landscaping exercise was conducted in three iterative phases of work:

Phase 1. Key informant interviews with field experts in the area of sexual and reproductive health research and programs to assess perspectives and experiences in measuring gender equity in family planning, with a focus on agency and social norms. These field experts were selected by citation reviews and snowball sampling.

Phase 2. A scoping review of peer-reviewed published public health and medical literature (including demography) to understand gender equity and family planning constructs, based on the concepts identified in our Phase 1 work. The purpose of the review was also to identify the quantitative measures of these constructs related to agency and social norms.

Phase 3. Quality appraisal of measures of agency and social norms in family planning, using the measure evidence base from Phase 2 work with emphasis on psychometric strength and cross-national validity. The goal of the analysis was to identify what best evidence measures exist, what promising measures are being developed but require more cross-national testing, and what constructs within the framework of agency and norms in family planning lack measures.

PHASE 1: Key Informant Interviews with Field Experts

In Phase 1, we interviewed 40 family planning experts globally in January 2020 to gain understanding of what were the major gender equity constructs and measures in use within the family planning research and implementation. Our objective was also to capture perceptions on their strengths and gaps in current measurement approaches.

We engaged research and program experts working in the area of gender equity and family planning globally and then snowball sampled additional researchers using recommendations from these experts.

Experts included members of this research team for recommendations for snowball sampling, but these internal experts were not included as participants in the interviews. We emailed all individuals (N=40, 28 female and 12 male) for participation. Of these respondents, 13 worked in academia, 17 worked in family planning programs, 8 worked in donor organization, and 2 worked in family planning policy/advocacy.

We did not conduct this work as a formal study with institutional review board approval, as no personal questions were asked, and information shared is not tracked to any individual respondent. All respondents were asked if we could share their names as experts providing input

on these concepts and for this report; all agreed to name inclusion in the report. The list of participants and their institutional affiliation at the time of interview are included in Appendix 2.

Questions for Experts. We emailed all experts a brief set of questions on gender equity and family planning, with a focus on measurement, and asked them to respond with open-ended answers. These questions were based on our research objectives and developed by our team:

1. A description of their family planning and gender equity research, specifically their experience in using, creating or adapting constructs and measures in field surveys, monitoring and evaluation, and in data analysis and policy planning.
2. If experts had focused on conceptualizing or operationalizing one or multiple constructs for measurement, to please share that with us, and what they learned from the work. If they had published measures, we requested the citations for those papers for our review.
3. About family planning and gender equity constructs that they feel are not currently being measured well or at all, and the constraints to the development of these types of measures. We probed about gaps in the field that required more focus.
4. Their recommendations for conceptual, analytical or methodological tools to strengthen measures around the gaps in the field.

Analysis and Findings. As we reviewed responses, four key themes emerged: conceptualization, gaps, need for formative research, and quality of psychometric testing. (See Table 1.) While we engaged with a diversity of experts in terms of disciplines, expertise and area of work, we found much agreement in the emphasis on the need for clear frameworks and definitions to guide our understanding of gender equity in family planning. The empowerment lens was recognized as a valuable approach to guide understanding of gender equity within family planning dynamics, but experts also recommended an ecological framework to locate measures within the multiple levels of influence over women's family planning practices such as families, community and health systems. With regard to existing definitions, concepts and measures, there was some common ground in terms of agreement and clarity of terms used to understand agency; these terms included self-efficacy, autonomy, decision-making, communication, consent, and coercion (from partner and from provider). In contrast, norms were recognized as an important gap area in measurement, with suggestions for measuring norms related to fertility, fertility preferences, son preference, progressive masculinities, and the role of men in family planning.

There was also wide consensus on the need for greater rigor in measure development, inclusive of formative qualitative research to guide the development of complex constructs we seek to measure and cognitive interviews to ensure the measures we produce are clear to our respondents. With regard to psychometric testing, while there was again agreement on the importance of this, experts also encouraged more focus on cross-national validation, clarity on adaptation processes for harmonized measures across diverse contexts, and using mixed methods approaches to ensure clarity in measurement even as measures move to scale. Cross-national collaboration and inclusion of in-country leadership for measurement development and testing was noted as an important next step to improve measurement science with more inclusivity. Overall, the findings from this work highlight the value of improving the science of measurement of agency and norms measures but including diverse methods and diverse scholars.

Table 1: Experiences and Insights on Gender Equity (GE) Measures in Family Planning from Experts (January 2020)

Conceptualization	Gaps	Need for formative research	Quality of psychometric testing
● Need to root constructs in research and programs in clear logic frameworks and definitions (e.g. informed choice, informed consent) ● Address issues around interrelated/overlapping constructs and items in measurement (e.g. decision-making vs. autonomy vs self-efficacy, attitudes & norms) ● Multi-dimensional and complex constructs need measures to capture different sources/ dimensions of the construct (e.g. reproductive coercion across family, provider or social harassment). ● Inclusion of multi-generational interactions and going beyond the partner (e.g. the influence of in-laws) ● Capturing dynamics and negotiation (e.g. decision-making dynamics and understanding whose voice counts if there is disagreement)	● Norms to capture specific value or issue (e.g. norms around son preference or having a child). ● For norms or preferences, capturing convergence and divergence will be useful ● Missing narratives like progressive masculinities ● Constructs focus on use, but neglect non-use and discontinuation. ● Need more context specific formative work as quantitative surveys don't alone cannot help in understanding some constructs ● Implementation dynamics (e.g. interpretation and surveyor discomfort) for capturing some questions (e.g. violence) need attention.	● Cross-contextual formative work especially qualitative research and cognitive interview techniques for development and adaptation ● Formative work also independently informs program development, specifically using in-depth interviews and focus group discussions. ● Formative research needs to be rigorous; often informal; measures added with some rephrasing without adaptation to context or validated by stakeholders. ● Topics needing more formative research: abortion attitudes, consent and reproductive decision-making.	● Need to prioritize testing known measures in new contexts or recognize the cultural issues in ongoing measures. ● Psychometric approaches with larger samples allowed for measure testing with cultural relevance and validation. ● Need frequent use of measure creation and adaptation as part of surveys, including cross-sectional studies and evaluation and longitudinal research. ● Need more mixed methods approaches (including anthropological, operational and formative ethnographic work) to supplement quantitative methods to understand the empowerment process. ● Qualitative analytical approaches, including of descriptive sections of quantitative questionnaires provided insight and qualitative data needs linkages to quantitative indicators. ● Action research models could be useful for specific issues in FP programs such as the role of incentives. ● Linkages with learning collaborative such as the Social Norms measurement learning collaborative and the Women's Empowerment Impact Measurement Initiative.

PHASE 2: Review of Published Gender Equity and Family Planning Measures

Phase 2 involved a scoping review of the peer-reviewed literature to identify measures of gender equity and family planning, and to understand the nature of the constructs covered by these measures. Scoping literature reviews, rather than systematic reviews, are optimal when we are in an early stage of research in a given area and want to understand the volume and nature of literature in this area to provide an overview of its focus, without having sufficient knowledge on the optimal range of search terms.[18] Scoping reviews are also important when you want to clarify key concepts and definitions and identify knowledge gaps, which is the case here.[18] Nonetheless, based on concepts clarified in our expert interviews from Phase 1, and using guidance from a prior systematic review of the literature on women's empowerment and fertility,[19] we were able to develop search terms and a methodology appropriate for this scoping review.

Methods

We conducted early scoping searches of the peer-reviewed published literature in February 2020 using electronic bibliographic databases such as Web of Science, PubMed, PsycInfo, EBSCO and EconLit. Titles and abstracts were searched on these global databases using a combination of search terms until a saturation or duplication between the three databases or irrelevance in searches was reached. The search was carried out by an advanced doctoral candidate trained in literature reviews and currently specializing in women's agency in family planning.

Based on this scoping, a search strategy was developed by a team of experts using a combination of terms, and their correlates, across the three streams of family planning, measurement and gender equity terms (norms/attitudes/beliefs, agency, quality of care, and male engagement). (*See Table 2 for details on the terms*) This systematic search of peer-reviewed published studies was conducted in July 2020 on PubMED and used search terms guided by prior published research on women's empowerment and fertility,[19] and gender equity measures in family planning.

Table 2: Search terms used for conducting the review of literature

Topic area	**Terms**
Family planning AND	family planning, fertility, family size, contraception, birth spacing, birth interval, abortion, reproductive health, unintended pregnancy, unplanned pregnancy, childbearing
Measurement AND	measure, measurement, scale, vignette, index, measuring, psychometric, validation, validity
Norms/attitudes/ beliefs OR	norms, social norms, normative attitudes, normative behaviors, gender norms
Agency OR	self-efficacy, autonomy, agency, decision-making, couple communication, spousal communication, coercion, reproductive coercion
Quality of care OR	provider, counselor, quality of care, respectful care, abuse in care, provider coercion, provider mistreatment, provider discrimination, provider bias
Male engagement	masculinity, male engagement, male involvement, male support, men's engagement, men's involvement, partner support, partner engagement, partner involvement, spousal support, spousal involvement

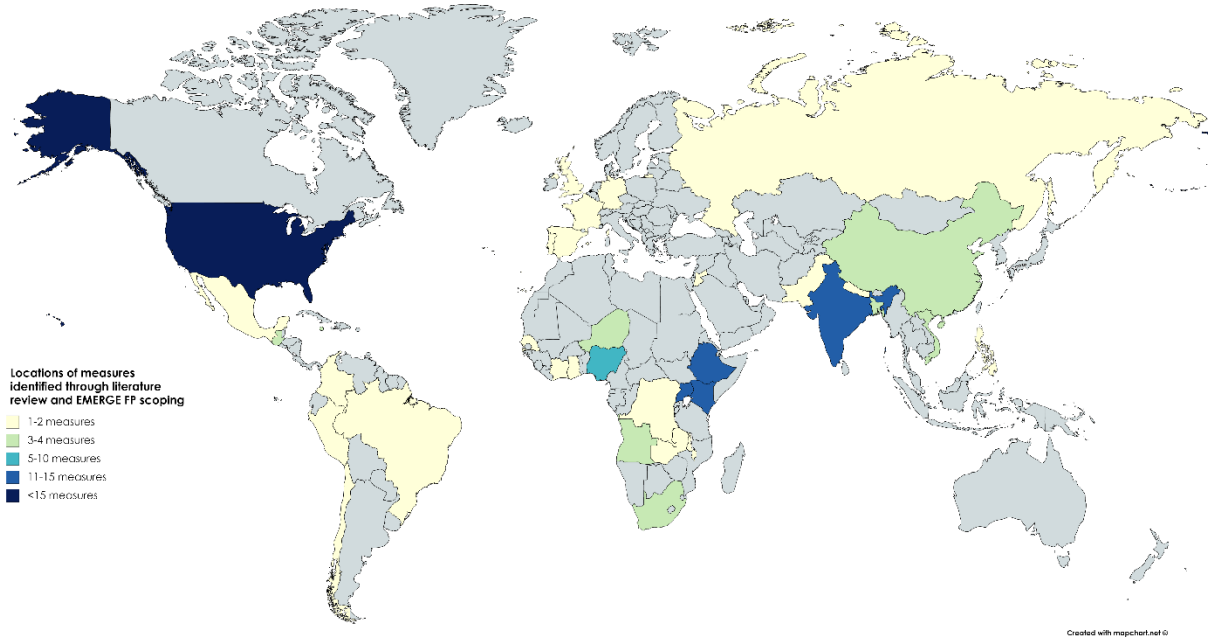
We developed four systematic searches on this electronic bibliographic database based on these terms. *(See Table 4 in Appendix 3*). While no country limits were specified, a time limit of 10 years was specified (2010-2020). Two researchers reviewed full text of quantitative studies and categorized them by construct, methodology, location and year, to ensure they included gender equity and family planning measures. We also searched the EMERGE compendium for measures on agency and norms in family planning along with including measures papers recommended by experts. All selected papers were reviewed and information on study design, measures and results were extracted for analysis.

Following this review, the identified studies and measures were organized and synthesized per the Can-Act-Resist and Learn-Adhere-Enforce frameworks. Measures were also classified based on the family planning domains, which was as follows: fertility, contraception (including use/non-use), unmet need (including discontinuation), access and utilization of family planning services, sexuality and sexual satisfaction, and abortion. Two coders independently coded all measures using this categorization, if coders did not agree, a team leader made the final decision. A given measure could be coded under multiple categories. To determine the areas of empowerment/equity and family planning covered by measures, we constructed a Heat Map of measures based on the above categorization. (See Table 3.)

Results

Our search yielded 664 non-duplicated papers inclusive of expert recommendations and measures on the EMERGE compendium. Review of these papers using inclusion criteria led to 152 unique measures. We mapped these measures geographically to understand the coverage of measures development across the globe. (See Figure 1.) We heat mapped papers to see coverage of measures by construct of gender equity and family planning, with darker cells indicating more measures. (See Table 3.)

Figure 1: Geographical distribution of measures of gender equity in family planning



*Note: the map does not include measures from multi-country analyses (11 measures) and 3 measures for which location information was unavailable

Table 3: Heat Map of Measures from the Published Literature on Gender Equity in Family Planning (n=152 measures)

Conceptual Domains	Constructs	Family Planning Domain					
		Fertility	Contraception	Access to & utilization of FP services	Sex	Abortion	Unmet Need (Discontinuation)
Critical Consciousness	Family Planning Knowledge & Rights	2	9	3	0	3	0
	Perceived Self-Efficacy	3	15	0	0	2	0
Can	Actual Self-Efficacy (Freedom to Choose, Act & Control Over Action/Body/Resources/Assets)	2	14	0	0	1	0
Act	Communication/Voice, including couple communication	0	8	2	0	0	0
	Do or don't do (including Decision-making, Consent)	1	7	0	0	0	0
External Response to Action	Social support/ Support from KIs/ Male support, engagement and approval	7	13	0	0	2	0
	Limiting access to information/ Pressure/mistreatment/coercion/violence	5	3	0	1	1	0
	Quality of Care -response from systems	4	12	5	0	3	0
Resist	Bargain/Negotiate	0	0	0	0	0	0
	Do or Don't Do/Refusal (including covert use)	2	4	0	0	0	0
Norms	Descriptive	1	4	0	0	1	0
	Injunctive	1	5	1	0	1	0
	Sanctions (Rewards/Punishments)	1	0	0	0	2	0
	Reference Group/Power Holders	5	5	0	0	0	0
	Attitude and Beliefs	5	25	2	7	6	0

Findings. As seen in Figure 1, measurement development and testing is occurring globally, but the United States remains over-represented in this work. Regarding the measures themselves, much of the work remains focused on contraceptive use (and non-use), particularly on attitudes and beliefs, quality of care, and support including male support and engagement. There are measures on self-efficacy, the only agency focused area that had a reasonable number of measures available. Notably, there were a number of measures under the umbrella of contraceptive use that solely focused on condom use; these measures tended to focus on decision-making control, communication, and self-efficacy, likely because of the negotiation women require when contraception is in the form of male condom use. Further, many of the condom use focused measures were developed for HIV/STI focused research and may not be as valuable for understanding condom use for purposes of contraception. A small number of measures focused on single forms of contraception that were not condoms; these tend to be newer measures focused on longer acting contraceptives, likely tied to recent efforts to encourage these more effective forms of contraception.

Another key area for measurement focus was fertility, but the measures largely focused on external response to action, including fertility pressure and reproductive coercion from husbands, families and providers, as well as support including husband support and provider support (quality of care). In contrast, measures on gender equity and abortion were less common, particularly in the area of supportive male engagement, communication and joint decision-making. Findings suggest that the current measures continue to build on assumptions of male fertility pressure and lack of male engagement in abortion, though this may not be reality.

Across almost all areas of fertility and family planning assessed in the heat map, attitudinal measures were the most common, and norms measures were less seen. These findings correspond with other research highlighting concerns that the increased focus on norms approaches in family planning programming are not being met with sufficient advancements in their measurement and over-reliance on attitudes as a proxy for norms.[20] Given growing evidence on the value of gender transformative interventions via normative change approaches for reproductive health,[14,15] we need to improve the availability of norms measures in this area.

Additional gaps persist in agency measures related to bargaining and backlash and in norms related to sanctions and power holders. These gaps may relate to the complexity and the interactional nature of these constructs. Additional gaps on family planning issues are seen in the areas of abortion and sex, and these may relate to greater stigmatization of these issues. We must be careful not to shy away from complex and sensitive topics related to gender equity and family planning, or we will stifle advancements on gender equity and family planning measurement. This is a historic concern that must end.

Overall, this review of measures demonstrates a robust body of work in the area of gender equity and family planning, particularly as it relates to agency and barriers in contraceptive use. The review also highlights the growing body of work on male engagement and support. Nonetheless, more work is needed in measurement of complex but important constructs such as norms and agency, and the interactions (e.g., bargaining, backlash and sanctions) affecting these, as well as broadening of family planning beyond contraception to include fertility, sexuality, and abortion.

PHASE 3: Quality Appraisal of Published Gender Equity and Family Planning Measures

In Phase 3, we took the measures of gender equity and family planning identified and heat mapped in Phase 2 and analyzed these to determine the level of quality of our available measures. We focused on assessing measures for their psychometric strengths and cross-national validity, with the goal of determining what best evidence measures exist, what promising measures are being developed but require more cross-national testing, and what constructs related to agency and norms in family planning lack measures.

Method. In Phase 2, we reviewed and extracted information on all 152 measures. We focused on the following aspects for extraction:

- Constructs of focus
- Countries within which the measure was tested, and if it was cross-nationally validated
- The number of items and response pattern
- The psychometric data available on the measure, including reliability and validity

Best-evidence measures were defined as those that included both reliability and validity data (55 of 152 measures) and tested in an LMIC (34 of 55 psychometrically tested measures).

A team of three PhD-level experts in the field then reviewed the best-evidence measures using a gender equity lens based on: a) coverage of a gender equity and family planning topic of importance and high interest to the field and b) brevity and clarity. Topics of high interest were those matrixed in the heat map, guided by our EMERGE measurement framework and experts tapped for Phase 1.

Findings

We found 34 high quality measures based on the criteria of availability of psychometric data and adapted or tested in LMICs (Box 1).

Box 1: Measures of Family Planning with Psychometrics in LMIC contexts (n=34)

Quality of contraceptive counseling scale[21]	Reproductive decision-making agency[22]
Gender Equitable Men (GEM) Scale Brazil, Uganda[23,24]	Reproductive coercion[25]
Indian family violence and control scale (IFVCS)[26]	Health risk behavior inventory for adolescents[27]
Stigmatizing attitudes beliefs and actions scale (SABA)[28]	Kenyan Person-Centered family planning[29]
Indian person-centered family planning[29]	Contraceptive attitude scale[30]
Adolescent sexual and reproductive health stigma scale[31]	Female condom attitude scale[32]
Contraceptive use stigma[33]	Process quality[34]
Process quality - short form[34]	Community prevalence relating to FP use[35]
Perceptions of social approval to FP [35]	Community level abortion stigma[36]
Internalized stigma towards childbearing (PLWHIV)[37]	Gender ideology scale – family planning[38]
Self-efficacy for providing safer conception counseling[37]	Provider stigma of childbearing among PLWHIV[37]
Perceived value of providing safer conception counseling[37]	Informed choice for FP[39]
Interest in providing safer conception counseling[37]	Family planning service quality[40]
Self-efficacy for using Safer Conception Methods[37]	Motivation to use Safer Conception Methods[37]
Perceived partner's willingness to use Safer FP Methods[37]	Anticipated stigma index[41]
Perceived stigma towards childbearing (PLWHIV)[37]	Quality of care in FP services[42]
Adolescents Stigmatizing Attitudes, Beliefs and Action[33]	

We examined available measures from a gender equity lens using the conceptual framework, and with information on construct in focus, psychometric testing, country of validation and an assessment of items (Box 2). These measures have been categorized as:

- **Recommended measures** that are ready for use in harmonized cross-national surveys or in-country studies (n=10)
- **Promising measures** that need in-country adaptation or cross-national psychometric testing or include items that capture gender equity aspects to prioritize (n=21)

Our review demonstrates strong or promising measures in key areas of critical consciousness regarding family planning choice, family planning agency, and family planning norms. As seen in Box 2, critical conscious measures related to family planning agency include those on awareness of family planning options and sexual and reproductive health rights. With regard to agency, the "*can*" measures assess women and girls' self-efficacy to access and use contraceptives, communicate with and affect family planning decision-making of their partner, and control and enjoy their sexual experiences. The "*act*" measures focused on communication with consideration of a balance of power and decision-making control with consideration of potential sanctions for non-adherence to expected behaviors. "*Resist*" measures were less available. While measures of covert use of contraceptives, a clear act of resistance, are available in large-scale surveys, these single item measures yield fairly low endorsement and may be inadequately sensitive to capture this complex behavior. Backlash/negative external responses that give rise to the need for resistance were identified in our measurement review, specifically in the area of reproductive coercion. The current measures of reproductive coercion focus on male partners and in-laws but could be expanded to providers and community members as well in future research. Positive external response measures were also identified; these focused on male engagement and support for family planning as well as quality person-centered choice and consent in family planning counseling. Finally, there are growing norms measures related to contraceptive use, fertility, sexual and reproductive health education for youth, and abortion in family planning that show much promise but could benefit from more cross-national and cross-population validation.

Nonetheless, a number of gaps in measurement persist, particularly for 0-1 parity women. With regard to critical consciousness, we lack measures on women and girls' beliefs related to delayed first birth, not having children, appropriate timing in marriage and age for first birth, appropriate power holders over female fertility, and male inclusion/engagement in family planning. In terms of agency measures, we lack measures of self-efficacy regarding control over fertility and engagement with family planning providers, freedom of movement to obtain family planning services, and responses to disrespect and mistreatment from husbands, family, community, and providers as relates to family planning and fertility. Relatedly, there are no standard measures of these types of disrespect and mistreatment, particularly from family planning providers, nor, in terms of positive external responses, do we see measures of social support and instrumental support for family planning access and use from peers and power holders. Finally, norms measures provide little focus on key gender equity aspects of family planning and fertility, including norms on fertility pressures and son preference, male engagement in family planning, early marriage and marital choice, and choice and consent in health care settings.

Box 2: Summary of Recommended and Promising Measures of Gender Equity in Family Planning

Constructs	Recommended and Promising Measures*
Critical consciousness	
Safety of spacing contraceptive options	**Recommended:** Unplanned pregnancy[43]
Awareness of right to contraception and SRH services before marriage and as an adolescent	**Promising:** Young Adults' Objective Knowledge Around Contraceptives[44]
Can- perceived and actual self-efficacy (capacity)	
Self-efficacy to obtain and use FP and SRH services	**Recommended:** FP self-efficacy scale[45]
Self-efficacy to control and enjoy their sexual experiences	**Recommended:** Sexual communication self-efficacy[46]
Self-efficacy to communicate with and affect partner	**Promising:** Sexual relationship power scale[47]
Act/Resist- behavior	
Communication about FP and timing and spacing of pregnancy with spouse	**Promising:** Inter-spousal communication and support[48], Balance of power[49]
FP decision-making with spouse or family, inclusive of ability to affect the decision when it contradicts with husband or family decision	**Recommended:** Reproductive decision-making autonomy[22]
Backlash/Negative External Response	
Reproductive coercion/stigmatization/ostracization	**Recommended:** Reproductive coercion[25]
Stigmatized/ostracized due to lack of pregnancy, use of FP, abortion (community)	**Recommended:** Anticipated stigma index[41]
Positive External Response	
Male engagement in FP/support for FP (household)	**Promising:** Measures on couple communication on contraception[50] and husband support among users[51]
Family/extended family support for FP- contraception, delayed fertility (household)	**Promising:** Perceived social support, partner related issues and exposure to violence[52]
Respectful care and person-centered care and availability of options (health care)	**Recommended:** Quality of Contraceptive Counseling[21], Interpersonal Quality of Family Planning[53] **Promising:** Gender ideology scale FP[38], FP service quality[40], Kenyan person centered/Indian person centered[29]
Informed consent (provider)	**Promising:** Informed choice[39], Informed consent[54]
Gender Norms and FP Norms (captured in community, family, providers)	
Norms on FP use	**Promising:** Social norms related to FP[35], Contraceptive use stigma[33]
Norms on delayed fertility	**Promising:** Infertility self-efficacy scale[55]
Norms on acceptability of abortion and abortion providers	**Recommended:** Community level abortion stigma[36] **Promising:** Individual level abortion stigma[56], Parenting and abortion norms and stigma scale[57], Abortion provider stigma scale[58], Attitudes about abortion providers[59]
Norms on access to SRH for girls, unmarried and married	**Recommended:** ARSH stigma on SRH and FP[31]

Conclusions and Recommendations for Action

Through this White Paper, we aimed to understand the landscape of measurement of women's agency and gender norms in family planning to gain insight on achievements, opportunities and gaps in gender-focused demand side determinants of family planning preferences, behaviors and use in LMICs. This insight can enable priority setting and applications for enhancing family planning programs as well as allow us to achieve the goals of gender equity and respectful care in sexual and reproductive health services. Understanding the challenges and opportunities of measurement of gender equity in family planning can allow us to design, deliver and evaluate the reach and use of family planning services for the most marginalized women and communities more effectively and meaningfully. At the same time, developing a shared understanding of most and least used constructs and measures and to develop resources for developing, testing and using these measures is an important step to amplifying family planning platforms and capacities in LMICs. In this review of the state of measurement of gender equity in family planning, we found that:

Good Measures Exist

- Overall, the field indicated a number of quantitative measures of agency and norms covering a range of constructs and aspects, at diverse states of development and testing across contexts. Our review found 152 measures of agency and norms in family planning, of which 34 measures provided psychometric validation from LMICs.
- We found the presence of a number of family planning constructs where good or promising measures exist. These include *perceived and actual self-efficacy* for contraception use, *male engagement* on contraception use, *quality of care* related to contraception, use of family planning services and abortion, *knowledge and rights* related to contraception methods other than condom use, and *attitudes and beliefs* around contraception, fertility, sex and abortion.
- At the time, quality review of the measures indicated that few are rigorously tested psychometrically or are adapted for low resource contexts or hard-to-reach populations. Despite the wide variety of constructs covered by the present literature, only a few measures demonstrated conceptual clarity, methodological rigor in development and cross-contextual validation. These measures are summarized in Boxes 1 and 2 and may be adapted for use in within-country surveys and evaluations of family planning programs or may be harmonized through cross-country surveys or data collection opportunities.
- We found several examples of strong innovative measures of agency in family planning which can be strengthened further through cross-contextual tested for their predictive value in women's fertility planning and family planning use.
  Examples include:
  - *reproductive decision-making agency* from Nepal[22] that assesses family planning decision-making as a continuum or pathway of discussion, use, method choice, and agreement on final decision.
  - *reproductive coercion*[25] tested in the USA, India and Niger that assesses pregnancy coercion and condom manipulation.

Promising Measures Need Strengthening

- Our review showed a number of promising measures for agency and norms constructs conceptualized or under development that need to be strengthened through formative work, psychometric testing and context specific adaptation.
- In particular, family planning norms emerged as a promising area in which measurement investments are needed. These measures need to capture elements beyond use of contraception, to include norms around fertility and fertility pressures, norms specific to low parity women and stigma related to contraception, method choice and abortion. Understanding these norms can add value to our understanding of both the demand and uptake of family planning services in the field.
- Our analysis of domains and constructs most- and least-used also showed that while we understand agency in contraception use better, we urgently need to focus measurement innovations on preferences and motivations guiding use, fertility, non-use or unmet need including discontinuation.
- Lack of gender equity measures in the area of unmet need may be due to the complexity of existing unmet need measures, which require a series of 15 survey items plus contraceptive calendar data for variable construction.[60] Unmet need may also not be a simple concept to take and measure agency and norms around as the gender equity variables in this area appear to be linked to agency and norm related barriers to contraceptive use, on both the demand and supply sides.[61]
- Understanding broader gender equity determinants underlying fertility pressure such as son preference, pressures for early fertility and the role of women's economic participation may be important determinants with insights for contraceptive use, decision dynamics, method switching and discontinuation of family planning.
- We found several examples of promising measures which need further adaptation for use in LMICs, key examples of which are:
  - *contraception use and abortion stigma scale* from Kenya[33]
  - *family planning norms scale* in Democratic Republic of Congo[35].

Nonetheless, Some Gaps in Measurement Persist

- Despite these positive developments and achievements of the field, we do note important measurement gaps on critical domains of agency and norms, which act as important barriers to our understanding of women's family planning needs, choices and use. Investments in these areas can have implications for what programs are delivered and how they may be catered to the specific needs of vulnerable women in low resource communities.
- **Fertility, sex and access to family planning services are under-focused in the growing measurement work of our field.** We found few measures on *male support* and *coercion/pressure* related to fertility, and on individual *attitudes* related to sex. Measures remain over focused on family planning knowledge, attitudes, communication, and use, but too often with no gender equity consideration at all.
- **Several *agency* constructs, particularly those related to fertility pressures, negotiation, and backlash, are missing in the current research.** More specifically, these include:
  - Agency in relation to fertility
  - Agency in access and utilization to family planning services
  - Resistance against fertility pressures and covert use

- Positive masculinity and role of men in family planning
- Bargaining and negotiation measures across family planning domains
- Support of men and other stakeholders in accessing family planning services
- Sanctions, backlash and role of power holders in family planning
- Mistreatment and pressure in family planning services
- Self-efficacy and norms related to contraceptive methods other than condoms or by method type
- Abortion communication, agency and quality of care

- **It was evident in the review that understanding *norms* remains a gap in the family planning measurement landscape.** While we found a number of measures of attitudes, as proxy for norms, these were unable to capture wider community sentiments enforced on women and men and guiding their choices through influence or sanctions by power holders. Innovations are needed to understand descriptive and injunctive norms, which may be motivators or barriers to women's agency and choice in family planning and expressions of that agency to partners or family members. Norms measures on sex, fertility and family planning service access were under-represented in the evidence base and these may hold the key to understanding what may be important to young women as well as young couples for fertility planning. Investing in research to understand stigma around contraception and abortion may also have value across LMICs like India where this work is still growing.

We recommend the following strategies to foster a shared conceptual understanding of gender equity and improve empirical measurement of key constructs related to agency and norms in family planning research and programs:

1. In surveys, programs or evaluations on family planning, building greater conceptual clarity on an agency or norm construct of interest, and how or why it relates to the family planning issue being investigated
2. Linking constructs and measures being used in a survey or program back to a theory, discipline, logic model/conceptual framework, context and purpose, and describing this conceptual framework in publications to facilitate learnings for other research scholars or implementers interested in the construct or measure
3. Conducting formative research on constructs (as feasible) using a mix of methodologies including ethnographic approaches to strengthen conceptual clarity and validity of the measure
4. Testing psychometrics while creating or adapting measures in the pilot or survey stages and reporting psychometric data and challenges in reports or published studies. Further guidance on measurement conceptualization and creation are available in the EMERGE reports.[62,63]

We suggest the following three next steps:

1. Cross-national and in-country surveys provide opportunities for measure adaptation and testing at scale. Integration of identified constructs and strong and promising measures within these surveys, where feasible, can be low-hanging fruit for the field as a whole and provide opportunities to test convergent and divergent relationships of a measure to a wide cross-section of outcomes.

2. Instituting forums and enabling regular conversations between academics and survey implementers regionally or globally can improve methodological rigor and conceptual grounding of measures and help in fast-tracking innovations into large-scale surveys.
3. Creating resources to share methodologies, measures and experiences in family planning monitoring and evaluation and for harmonized measures can add value and efficiency for survey developers and family planning implementers.

Appendices

Appendix 1: Conceptualizing Gender Equity and Agency in Family Planning

Figure 1a: Conceptualization of the Empowerment Process and locating Agency[17]

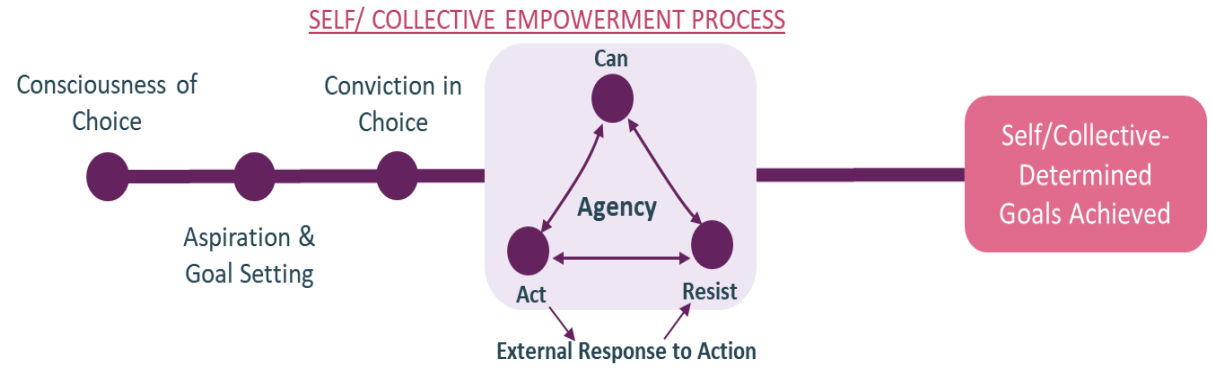


Figure 1b: Description of the Can-Act-Resist Agency Conceptualization[17]

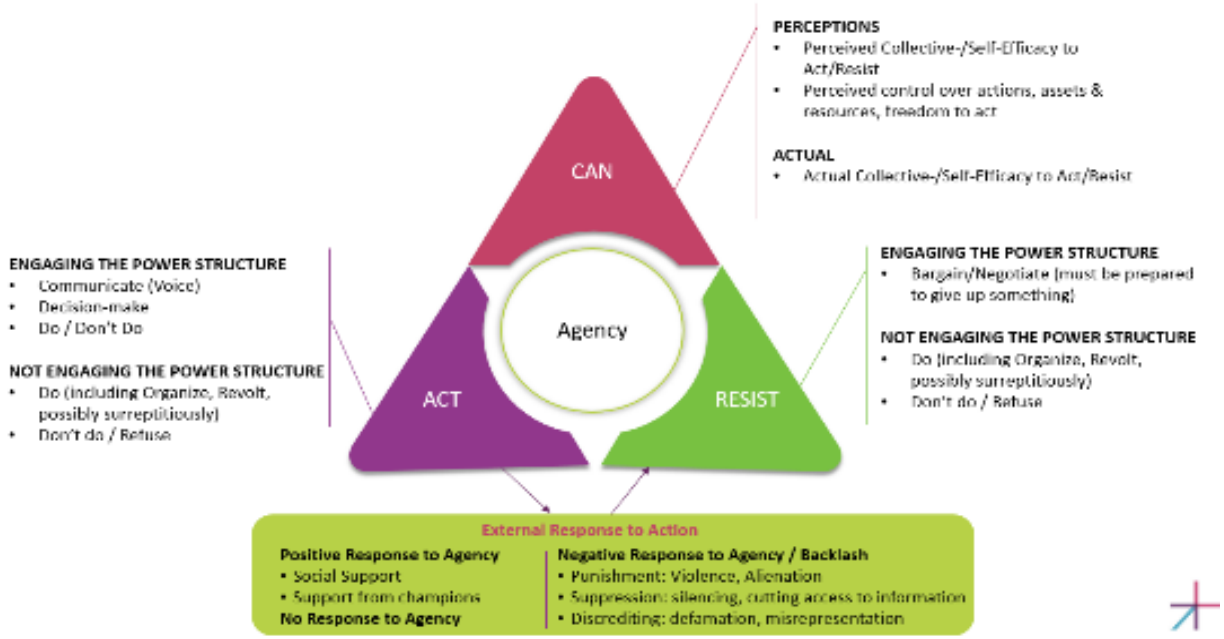
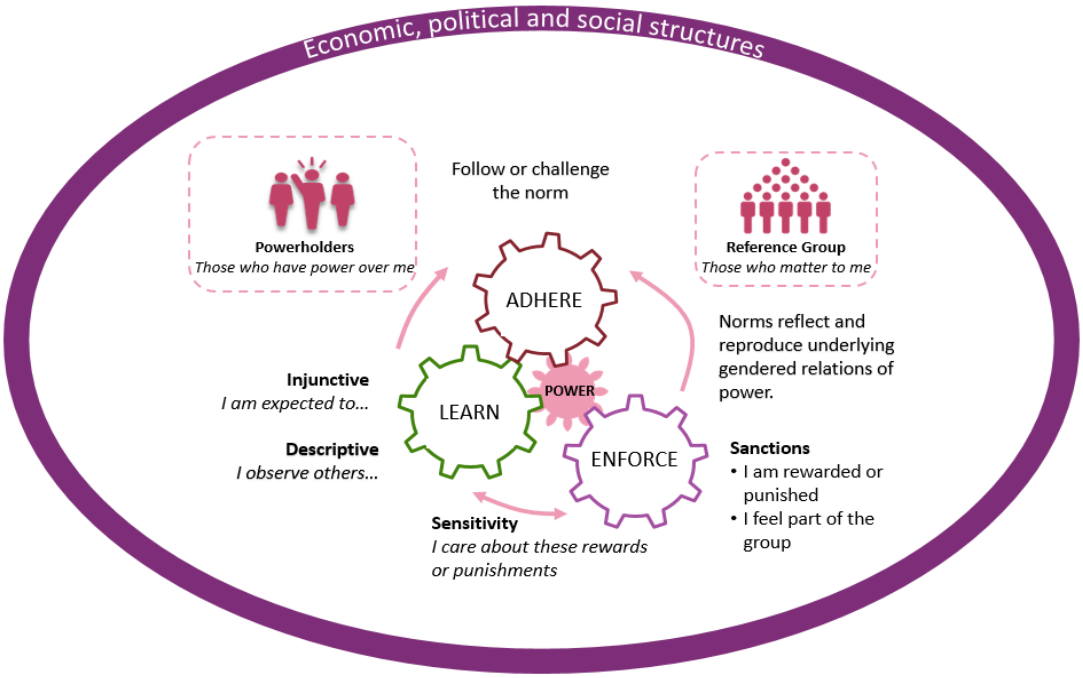


Figure 1c: Description of the Learn-Adhere-Enforce Social Norms Conceptualization[17]



Appendix 2: Family Planning and SRH Experts who responded to Resource Person Outreach on Gender Equity Measures in Family Planning

S.No.	Name	Institution
1	Dr AA Jayachandran	Track20
2	Ms Alisha Graves	University of California, Berkeley
3	Prof Anastasia Gage	Tulane University School of Public Health and Tropical Medicine
4	Dr Anindita Dasgupta	Social Intervention Group, Columbia University School of Social Work
5	Dr Arupendra Mozumdar	Population Council, India
6	Dr Avni Amin	World Health Organization
7	Dr Bimla Upadhyay	Ipas Development Foundation
8	Ms Celia Karp	Johns Hopkins Bloomberg School of Public Health
9	Prof Christine Dehlendorf	Bixby Center for Global Reproductive Health, University of California San Francisco
10	Ms Elisabeth Rottach	The Palladium Group
11	Prof Ilene Speizer	University of North Carolina at Chapel Hill, Gillings School of Global Public Health
12	Prof Jay Silverman	University of California San Diego, School of Medicine
13	Dr Joan Marie Kraft	United States Agency for International Development
14	Dr Kalpana Apte	Family Planning Association of India
15	Prof Kelli Stidham Hall	Rollins School of Public Health, Emory University
16	Prof Kelsey Holt	Bixby Center for Global Reproductive Health, University of California San Francisco
17	Dr Laura Hinson	International Center for Research on Women
18	Dr Leela Varkey	Centre for Catalyzing Change, India
19	Dr Leena Sushant	Breakthrough India
20	Ms Leena Uppal	MAMTA Health Institute for Mother and Child
21	Prof Michele R Decker	Bloomberg School of Public Health, Johns Hopkins University
22	Prof Nadia Diamond-Smith	University of California San Francisco
23	Dr Nicola Jones	Overseas Development Institute
24	Ms Pranita Achyut	International Center for Research on Women
25	Ms Ravneet Chugh	Parivar Seva Sanstha
26	Prof Rebecka Inga Lundgren	University of California San Diego
27	Dr Riznawaty Aryanty	UNFPA Indonesia
28	Ms Sandra Jordan	Independent Consultant
29	Dr Sarah Bradley	Abt Associates
30	Ms Shailja Mehta	Dasra India
31	Dr Shajy K Isac	India Health Action Trust
32	Ms Shannon Wood	Johns Hopkins Bloomberg School of Public Health
33	Dr Sunil Mehra	MAMTA Health Institute for Mother and Child
34	Dr Sunita Kishor	The DHS Program, ICF International
35	Dr Tanmay Mahapatra	CARE India
36	Dr V K Tiwari	National Institute of Health & Family Welfare
37	Dr Venkatraman Chandra-Mouli	Department of Sexual and Reproductive Health and Research, WHO
38	Mr Vijay Paulraj	USAID
39	Dr Vikas Choudhry	Sambodhi Research and Communications Pvt Ltd.
40	Dr Vivek Sharma	Population Services International

Appendix 3: Search methodology followed on PubMED for review of peer-reviewed studies

Table 4: List of search terms used as per category and feedback incorporated

Search Category	Search terms	Hits	Adapted per feedback
FP terms AND Measurement terms AND gender social norms/attitudes/beliefs terms	("family planning"[Title/Abstract] OR fertility[Title/Abstract] OR "family size"[Title/Abstract] OR contraception[Title/Abstract] OR "birth spacing"[Title/Abstract] OR "birth interval"[Title/Abstract] OR abortion[Title/Abstract] OR "reproductive health"[Title/Abstract] OR "unintended pregnancy"[Title/Abstract] OR "unplanned pregnancy"[Title/Abstract] OR childbearing[Title/Abstract]) AND (measurement[Title/Abstract] OR scale[Title/Abstract] OR index[Title/Abstract] OR measuring[Title/Abstract] OR psychometric[Title/Abstract] OR validation[Title/Abstract] OR validity[Title/Abstract] OR vignette[Title/Abstract]) AND (norms[Title/Abstract] OR "social norms"[Title/Abstract] OR "normative attitudes"[Title/Abstract] OR "normative behaviors"[Title/Abstract] OR "gender norms"[Title/Abstract])	77	Removed ideal family size and retained family size only; removed partuition; edited the term birth interval to singular; retained vignette
FP terms AND Measurement terms AND agency terms	("family planning"[Title/Abstract] OR fertility[Title/Abstract] OR "family size"[Title/Abstract] OR contraception[Title/Abstract] OR "birth spacing"[Title/Abstract] OR "birth interval"[Title/Abstract] OR abortion[Title/Abstract] OR "reproductive health"[Title/Abstract] OR "unintended pregnancy"[Title/Abstract] OR "unplanned pregnancy"[Title/Abstract] OR childbearing[Title/Abstract]) AND (measurement[Title/Abstract] OR scale[Title/Abstract] OR index[Title/Abstract] OR measuring[Title/Abstract] OR psychometric[Title/Abstract] OR validation[Title/Abstract] OR validity[Title/Abstract] OR vignette[Title/Abstract]) AND ("self-efficacy"[Title/Abstract] OR autonomy[Title/Abstract] OR agency[Title/Abstract] OR "decision-making"[Title/Abstract] OR "couple communication"[Title/Abstract] OR "spousal communication"[Title/Abstract] OR "reproductive coercion"[Title/Abstract] OR coercion[Title/Abstract])	328	Used spousal and couple communication instead of communication
FP terms AND Measurement terms AND QoC terms	("family planning"[Title/Abstract] OR fertility[Title/Abstract] OR "family size"[Title/Abstract] OR contraception[Title/Abstract] OR "birth spacing"[Title/Abstract] OR "birth interval"[Title/Abstract] OR abortion[Title/Abstract] OR "reproductive health"[Title/Abstract] OR "unintended pregnancy"[Title/Abstract] OR "unplanned pregnancy"[Title/Abstract] OR childbearing[Title/Abstract]) AND (measurement[Title/Abstract] OR scale[Title/Abstract] OR index[Title/Abstract] OR	215	Abuse in care and provider coercion did not yield any results; removed healthcare as it was picking up all health care; retained just provider with

	measuring[Title/Abstract] OR psychometric[Title/Abstract] OR validation[Title/Abstract] OR validity[Title/Abstract] OR vignette[Title/Abstract]) AND ("provider"[Title/Abstract] OR "counselor"[Title/Abstract] OR "quality of care"[Title/Abstract] OR "respectful care"[Title/Abstract] OR "provider mistreatment"[Title/Abstract] OR "provider discrimination"[Title/Abstract] OR "provider bias"[Title/Abstract])		abuse; along with provider mistreatment, provider discrimination and provider bias
FP terms AND Measurement terms AND male engagement terms	("family planning"[Title/Abstract] OR fertility[Title/Abstract] OR "family size"[Title/Abstract] OR contraception[Title/Abstract] OR "birth spacing"[Title/Abstract] OR "birth interval"[Title/Abstract] OR abortion[Title/Abstract] OR "reproductive health"[Title/Abstract] OR "unintended pregnancy"[Title/Abstract] OR "unplanned pregnancy"[Title/Abstract] OR childbearing[Title/Abstract]) AND (measurement[Title/Abstract] OR scale[Title/Abstract] OR index[Title/Abstract] OR measuring[Title/Abstract] OR psychometric[Title/Abstract] OR validation[Title/Abstract] OR validity[Title/Abstract] OR vignette[Title/Abstract]) AND (masculinity[Title/Abstract] OR "male engagement"[Title/Abstract] OR "male involvement"[Title/Abstract] OR "male support"[Title/Abstract] OR "men's engagement"[Title/Abstract] OR "men's involvement"[Title/Abstract] OR "partner support"[Title/Abstract] OR "partner engagement"[Title/Abstract] OR "partner involvement"[Title/Abstract] OR "spousal support"[Title/Abstract] OR "spousal involvement"[Title/Abstract])	42	Removed the terms male and men by themselves as a number of irrelevant papers came up; kept in men's involvement rather than men; added support, engagement and involvement for men, male, partner and spouse.

Appendix 4: Gender Equity and Family Planning Measures, by Empowerment Concept, Family Planning Construct, and Characteristics (N=152 measures)

Table 5 presents the full list of measures of gender equity or gender equity dimensions in family planning collated through the review of literature and expert outreach in this White Paper. These measures are synthesized by agency and norms constructs and stratified by:

- measure was tested or adapted in one (or more):
  - low- and-middle-income country (LMIC) (shaded dark)
  - high income country (shaded light) or
  - measure from a multi-national survey (shaded blank).
- availability of psychometric data:
  - both reliability and validity (shaded dark)
  - reliability only (shaded light)
  - or no data (textured shading)
- number of items in the measure
- level of measurement or operation of the measure (self, male/couple, community, provider/systems)

Table 5: Full list of gender equity measures in family planning in the White Paper (n=152)

Concept	Constructs	Measures	LMIC[1]	Psychometric Data[2]	# of items	Level of measurement
Critical Consciousness	FP Knowledge & Rights	DHS8: Exposure to Family Planning Resources[64]			1	Self
		Men's attitudes about FP and vasectomy[48]			6	Male/couple
		Pros, cons and self-efficacy for IUD[65]			11	Male/couple
		Family Planning Belief Index[66]			4	Male/couple
		Knowledge of Abortion Legislation[67]			3	Provider/systems
		Women's empowerment in four domains: economic, educational, social, and contraceptive[68]			10	Male/couple
		Men's contraceptive knowledge, use and decision making[69]			12	Male/couple
		Young Adults' Objective Knowledge Around Contraceptives[44]			23	Self
		Wife's autonomy (decisions on household needs, purchases and visits to relatives)[70]			3	Male/couple
		DHS8: Use of Family Planning Resources[64]			7	Provider/systems
		Provider General and Inpatient-Specific Barriers to Initiating a Contraceptive Method[71]			12	Provider/systems
		Decisional conflict scale for abortion[72]			16	Male/couple
Can	Perceived Self-Efficacy	Women's Empowerment in Rural Bangladesh Measure[73]			21	Male/couple
		Attitudes towards family planning self-efficacy[74]			8	Male/couple, community
		Wife's autonomy (decisions on household needs, purchases and visits to relatives)[70]			3	Male/couple
		Subjective norm regarding condom use[75]			4	Male/couple, family, community
		Sexual Relationship Power Scale[47]			23	Male/couple
		Self-efficacy to discuss and use FP[76]			4	Male/couple
		NFHS4: Fertility Preferences[64]			1	Self
		Perceived control[77]			6	Family, Community
		Agency (decision-making, mobility, self-efficacy)[78]			19	Male/couple
		Self-efficacy only for using condoms in the next 12 months[79]			4	Self
		DHS8: Sexual and contraceptive autonomy in marriage[64]			3	Male/couple
		Self–efficacy regarding condom use[75]			17	Male/couple
		Contraceptive self-efficacy scale[80]			8	Male/couple

		Contraceptive Use Ideation[81]			25	Male/couple, Community, Provider/systems
		Quality of Contraceptive Counseling Scale[21]			22	Provider/systems
		Interpersonal Quality of Family Planning (IQFP) scale[53]			11	Provider/systems
		Self-efficacy for using Safer Conception Methods[37]			7	Male/couple,
		Motivation to use Safer Conception Methods[37]			6	Male/couple
		Community Support and Condom Self-Efficacy Subscale in the Brief Social Capital for Youth Sexual and Reproductive Health Scale[82]			16	Male/couple, Community
		Self-efficacy for Providing Safer Conception Counseling[37]			8	Provider/systems
		Individual-level abortion stigma[83]			16	Male/couple
		Individual-level abortion stigma scale[84]			20	Male/couple
		Sexual autonomy[85]			3	Male/couple
		Contraceptive self-efficacy[86]			18	Male/couple
	Actual Self-Efficacy (Choose, Act & Control Over Action /Body/Resources)	UCLA Multidimensional Condom Attitudes Scale[87]			29	Male/couple, community
		DHS8: Fertility Preferences of Born Children[64]			4	Self
		Reproductive Autonomy Scale (RAS)[88]			14	Male/couple
		Condom Use Self-Efficacy Measure[89]			15	Male/couple
		Condom Use Self-Efficacy Scale (CUSES)[90]			28	Male/couple
		IHDS2: Fertility Preferences[91]			10	Male/couple
		Health Risk Behavior Inventory for Chinese Adolescents[27]			50	Self
		DHS 8: Fertility Preferences for Future[64]			5	Self, Male/couple
		Family Planning Self-Efficacy Scale[45]			18	Male/couple, family
		DHS8: Use of Contraception[64]			8	Male/couple Provider/systems
		Household Decision Making Power Index[92]			9	Male/couple
		Women's Participation in Household Decision-Making[76]			15	Male/Couple, Family
		Unplanned pregnancy[43]			6	Male/couple
		Balance of Power[49]			7	Male/couple
		Decision-maker for contraceptive use[50]			1	Male/couple
		Indian Family Violence and Control Scale (IFVCS)[26]			63	Male/couple, Family
		Women's Empowerment in four domains: economic, educational, social, and contraceptive[68]			10	Male/couple
		Sexual competency (autonomy, safety and satisfaction)[93]			3	Male/couple
		Decision difficulty in decision-making on abortion[94]			12	Self, Community
		Sexual communication self-efficacy scale[46]			20	Male/couple
Act	Communication/Voice (individual /couples)	Women's autonomy (participation in decision making, attitudes toward wife beating, and whether getting permission to seek medical care was a big problem)[95]			3	Male/couple
		Gender and Family Planning Equity (GAFPE) Scale[96]			20	Male/couple, Community
		Reproductive decision-making Agency[22]			4	Male/couple, family
		Unplanned pregnancy[43]			6	Male/couple
		Spousal agreement on fertility preference[97]			4	Male/couple
		Balance of Power[49]			7	Male/couple
		Couple's communication on contraception[50]			3	Male/couple
		Husband wife discussion on FP[98]			1	Male/couple
		Interspousal communication[76]			5	Male/couple, family
		Spousal contraceptive communication[70]			4	Male/couple
		Husband involvement[51]			3	Male/couple
		Spousal communication[99]			1	Male/couple
		Condom Use Self-Efficacy Measure[89]			15	Male/couple
		Condom Use Self-Efficacy Scale (CUSES)[90]			28	Male/couple
		Kenyan Person-Centered Family Planning Scale[29]			20	Provider/systems
		Indian Person-Centered Family Planning Scale[29]			22	Provider/systems
		DHS8: Use of Contraception[64]			8	Male/couple, Provider/systems
		Self-efficacy to discuss and use FP[76]			4	Male/couple
		Interspousal communication and spousal support[48]			2	Male/couple, Provider/systems
		Men's contraceptive knowledge, use and decision making[69]			12	Male/couple

		Perceived partner's willingness to use Safer Conception Methods[37]			5	Male/couple
		Sexual communication self-efficacy scale[46]			20	Male/couple
	Do or don't do (including Decision-making, Consent)	DHS8: Sexual and contraceptive attitudes in marriage[64]			2	Male/couple
		Sexual Assertiveness Scale[100]			18	Male/couple
		Decision-maker for contraceptive use[50]			1	Male/couple
		Attitudes Towards Sexual IPV: Wife Can Refuse Sex[101]			7	Male/couple
		DHS8: Fertility Preferences of Born Children[64]			5	Self
		Family Planning Self-Efficacy Scale[45]			18	Male/couple, Family
		Self-efficacy for IUD initiation and continuation[102]			8	Male/couple
		Sexual competency (autonomy, safety and satisfaction)[93]			3	Male/couple
		Informed choice for FP[39]			25	Provider/systems
External Response to Action	Support from KIs/ Male support, engagement and approval	Adapted GEM Scale[103]			22	Male/couple
		Men's role in reproductive decision making[104]			4	Male/couple
		Male attitudes towards FP[105]			2	Male/couple
		Male Self-efficacy for general contraception[102]			5	Male/couple
		Husband's support among users[51]			8	Male/couple
		Partner encouragement to use FP[80]			1	Male/couple
		Self-efficacy for IUD initiation and continuation[102]			8	Male/couple
		Interspousal communication and spousal support[48]			2	Male/couple, Provider/systems
		Self-efficacy to convince wife and decisional balance[106]			24	Male/couple
		Pregnancy intention[107]			3	Male/couple
		Spousal agreement on fertility preference[97]			4	Male/couple
		Contraceptive self-efficacy scale[80]			8	Male/couple
		Self-efficacy for using Safer Conception Methods[37]			7	Male/couple,
		Motivation to use Safer Conception Methods[37]			6	Male/couple
		Perceived partner's willingness to use Safer Conception Methods[37]			5	Male/couple
		Male partner involvement index[108]			6	Male/couple
		Perceived Social Support, Partner-related Issues and Exposure to Violence[52]			9	Male/couple, Family
		Heard a religious leader speak in favor of family planning[109]			1	Male/couple, Community
		Fertility Problem Inventory[110]			46	Male/couple, Community
		Decisional conflict scale for abortion[72]			16	Male/couple
		Contraceptive self-efficacy[86]			18	Male/couple
		Parenting norms and stigma scale[57]			20	Family
	Pressure/mistreatment/ coercion/ violence	Reproductive Coercion[25]			6	Male/couple, Family
		Macho Scale[111]			13	Male/couple
		Gender Equitable Men (GEM) Scale - Brazil[23]			35	Male/couple
		Reproductive Coercion (Miller questions)[112]			14	Male/couple
		Reproductive Coercion (adapted Miller & Moore)[113]			12	Male/couple
		Indian Family Violence and Control Scale (IFVCS)[26]			63	Male/couple, Family
		Reproductive Coercion Scale[114]			9	Male/couple
		Reproductive Coercion Scale - Short Form[114]			5	Male/couple
		Stigmatizing attitudes, beliefs, and actions scale (SABA)[28]			18	Community
		Women's autonomy (participation in decision making, attitudes toward wife beating, and whether getting permission to seek medical care was a big problem)[95]			3	Male/couple
		Reproductive Autonomy Scale (RAS)[88]			14	Male/couple
		Sexual Relationship Power Scale (SRPS)[47]			23	Male/couple
		Perceived Social Support, Partner-related Issues and Exposure to Violence[52]			9	Male/couple, Family
		Sexual autonomy[85]			3	Male/couple
	Quality of Care	Kenyan Person-Centered Family Planning Scale[29]			20	Provider/systems
		Indian Person-Centered Family Planning Scale[29]			22	Provider/systems
		IHDS-2: Quality of Care[91]			2	Provider/systems
		DHS8: Use of Family Planning Resources[64]			7	Provider/systems
		Quality of Care in FP Services[42]			8	Provider/systems
		Quality of Contraceptive Counseling Scale[21]			22	Provider/systems

		Interpersonal Quality of Family Planning (IQFP) scale[53]			11	Provider/systems
		Process quality[34]			22	Provider/systems
		Process quality - Short Form[34]			10	Provider/systems
		Provider General and Inpatient-Specific Barriers to Initiating a Contraceptive Method[71]			12	Provider/systems
		Family Planning Service Quality[40]			29	Provider/systems
		Reproductive counseling obstacle scale[115]			20	Provider/systems
		Attitudes About Abortion-Providing Physicians Scale (AAAPPS)[59]			20	Provider/systems, Community
		Abortion Provider Stigma Scale[58]			15	Provider/systems, Community
		Receipt of method-choice[116]			4	Provider/systems
		Provider Stigma of Childbearing Among PLWHIV[37]			5	Provider/systems
		Interest in Providing Safer Conception Counseling[37]			9	Provider/systems
		Perceived Value of Providing Safer Conception Counseling[37]			6	Provider/systems
		Self-efficacy for Providing Safer Conception Counseling[37]			8	Provider/systems
		Informed Consent in the context of sterilization[54]			3	Provider/systems
		Gender Ideology Scale - Family Planning[38]			15	Provider/systems
		Interpersonal Quality of Abortion Care[117]			9	Provider/systems
		Four Habits Coding Scheme[118]			22	Provider/systems
		Informed choice for FP[39]			25	Provider/systems
		Anticipated Stigma Index[41]			14	Male/couple, Community
Resist	Bargain/ Negotiate	-----	---	---	---	
	Do or Don't Do/Refusal (including covert use)	Contraceptive Attitude Scale[30]			32	Self, Male/couple
		DHS: Covert Use[119]			3	Male/couple
		Reproductive Coercion (Miller questions)[112]			14	Male/couple
		Reproductive Coercion (adapted Miller & Moore)[113]			12	Male/couple
		Sexual Assertiveness Scale[100]			18	Male/couple
		Contraceptive self-efficacy scale[80]			8	Male/couple
Norms	Descriptive	Descriptive norm regarding having sex and using condoms[79]			3	Community
		Descriptive norms (knew any friend who ever used a condom)[120]			1	Community
		Adolescent Sexual and Reproductive Health Stigma Scale[31]			20	Family, Community
		Social norms related to Family Planning – items related to community Prevalence relating to FP use[35]			2	Community
		Stigmatizing attitudes, beliefs, and actions scale (SABA)[28]			18	Community
		Perceived community stigma towards childbearing among PLWHIV[37]			3	Community
	Injunctive	Injunctive norm regarding having sex and using condoms[79]			4	Male/couple, family
		Subjective norms[77]			6	Family, community
		Family Planning Approval Index[66]			5	Male/couple
		Social norms related to Family Planning – items related to Perceptions of social approval on FP[35]			7	
		Injunctive norms/attitude (worried about what people in my community would say about me if they found out I needed condoms)[120]			1	Community
		Internalized Stigma Towards Childbearing Among PLWHIV[37]			4	Community
		Attitudes About Abortion-Providing Physicians Scale (AAAPPS)[59]			20	Provider/systems, Community
		Anticipated Stigma Index[41]			14	Male/couple, Community
	Sanctions	Macho Scale[111]			13	Male/couple
		Adolescents Stigmatizing Attitudes, Beliefs and Action[33]			18	Community
	Reference Group/Power Holders	Reproductive Coercion[25]			6	Male/couple family
		Gender and fertility norms at individual and community level[121]			3	Community
		Subjective norm regarding condom use[75]			4	Male/couple, Family, Community
		Perceived partner approval of FP[80]			1	Male/couple
		Heard a religious leader speak in favor of family planning[109]			1	Male/couple, Community
	Attitude and Beliefs	Perceived barrier to FP[122]			4	Provider/systems, Community

		DHS8: Sexual and contraceptive attitudes in marriage[64]			2	Male/couple
		Attitudes Towards Sexual IPV: Wife Can Refuse Sex (Men Reporting)[101]			7	Male/couple
		UCLA Multidimensional Condom Attitudes Scale[87]			29	Male/couple, Community
		Belief in Women's Health Rights Subscale[76]	NA		2	Provider/systems, Male/couple
		Belief in Women's Right to Refuse Sex Scale[123]	NA		3	Male/couple
		Gender Norms Around Women's Right to Refuse Sex[124]			9	Male/couple
		Female condom attitude scale[32]			14	Self
		Condom Use Responsibility Scale[125]			3	Male/couple
		Gender and Family Planning Equity (GAFPE) Scale[96]			20	Male/couple, Community
		Women's Empowerment in Rural Bangladesh Measure[73]			21	Male/couple
		Adapted GEM Scale[103]			22	Male/couple
		IHDS-2: Health Beliefs around Contraception and Reproductive Health[91]			2	Self
		Support for Traditional Gender Roles (Male Dominance) Scale[76]			7	Male/couple
		Knowledge, attitude and practice of contraception[126]			11	Male/couple
		Attitudes towards family planning self-efficacy[74]			8	Male/couple, Community
		Men's role in reproductive decision making[104]			4	Male/couple
		Male attitudes towards FP[105]			2	Male/couple
		Decisional balance scale items (IUD and contraception)[102]			26	Male/couple
		Contraceptive Attitude Scale[30]			32	Self, Male/couple
		Attitudes towards couples' family planning decisions[74]			9	Male/couple
		Gender Equitable Men – Inequitable[127]			24	Male/couple
		Gender Equitable Men (GEM) Scale – Brazil[23]			35	Male/couple
		Belief in Women's Right to Refuse Sex Scale	NA		3	Male/couple
		Attitude towards contraception[77]			6	Male/couple
		Attitude towards condom use[75]			10	Self
		Male Role Norms Inventory[128]	NA		58	Male/couple
		Family planning attitudes[129]			7	Male/couple
		Contraceptive use stigma[33]			7	Male/couple
		Attitude towards contraception use in marriage[130]			1	Self
		Men's attitudes about FP and vasectomy[48]			6	Male/couple
		Pros, cons and self-efficacy for IUD[65]			11	Male/couple
		Family Planning Belief Index[66]			4	Male/couple
		Index of perceived benefit[122]			4	Provider/systems
		Equitable Attitudes within Relationships Scale[49]			16	Male/couple
		Gender Relations Scale[49]			23	Male/couple
		Gender Equitable Men (GEM) Scale - Uganda[24]			18	Male/couple
		Individual-level abortion stigma[83]			16	Male/couple
		Gender Ideology Scale - Family Planning[38]			15	Provider/systems
		Fertility Problem Inventory[110]			46	Male/couple, Community
		Individual-level abortion stigma scale[84]			20	Male/couple
		Community-level abortion stigma[36]			33	Community
		Infertility self-efficacy scale[55]			16	Self
		Decision difficulty in decision-making on abortion[94]			12	Self, Community
		Abortion norms and stigma scale[57]			21	Community
		Parenting norms and stigma scale[57]			20	Family

REFERENCES

1. Gupta GR, Oomman N, Grown C, et al. Gender equality and gender norms: framing the opportunities for health. *The Lancet* 2019; **393**(10190): 2550-62.
2. Hay K, McDougal L, Percival V, et al. Disrupting gender norms in health systems: making the case for change. *The Lancet* 2019.
3. Starrs AM, Ezeh AC, Barker G, et al. Accelerate progress—sexual and reproductive health and rights for all: report of the Guttmacher–Lancet Commission. *The Lancet* 2018; **391**(10140): 2642-92.
4. Kraft JM, Wilkins KG, Morales GJ, Widyono M, Middlestadt SE. An evidence review of gender-integrated interventions in reproductive and maternal-child health. *Journal of health communication* 2014; **19**(sup1): 122-41.
5. Mandal M, Muralidharan A, Pappa S. A review of measures of women's empowerment and related gender constructs in family planning and maternal health program evaluations in low-and middle-income countries. *BMC pregnancy and childbirth* 2017; **17**(2): 342.
6. UN. Sustainable Development Goals (SDG) 5: Achieve gender equality and empower all women and girls. *Weblink: [Accessed May 15, 2020: https://sustainabledevelopmentunorg/sdg5]* 2016.
7. Maxwell L, Devries K, Zionts D, Alhusen JL, Campbell J. Estimating the effect of intimate partner violence on women's use of contraception: a systematic review and meta-analysis. *PLoS One* 2015; **10**(2): e0118234.
8. McClendon KA, McDougal L, Ayyaluru S, et al. Intersections of girl child marriage and family planning beliefs and use: qualitative findings from Ethiopia and India. *Cult Health Sex* 2018; **20**(7): 799-814.
9. Clark CJ, Spencer RA, Khalaf IA, et al. The influence of family violence and child marriage on unmet need for family planning in Jordan. *J Fam Plann Reprod Health Care* 2017; **43**(2): 105-12.
10. Raj A, Vilms RJ, McDougal L, Silverman JG. Association between having no sons and using no contraception among a nationally representative sample of young wives in Nepal. *Int J Gynaecol Obstet* 2013; **121**(2): 162-5.
11. Kastor A, Chatterjee S. IMPACT OF SEX COMPOSITION OF LIVING CHILDREN AND COUPLES' AGREEMENT ON SUBSEQUENT FERTILITY IN INDIA. *J Biosoc Sci* 2018; **50**(5): 666-82.
12. Channon MD. Son Preference and Family Limitation in Pakistan: A Parity- and Contraceptive Method-Specific Analysis. *Int Perspect Sex Reprod Health* 2017; **43**(3): 99-110.
13. Sarkar A, Chandra-Mouli V, Jain K, Behera J, Mishra SK, Mehra S. Community based reproductive health interventions for young married couples in resource-constrained settings: a systematic review. *BMC Public Health* 2015; **15**: 1037.
14. Heymann J, Levy JK, Bose B, et al. Improving health with programmatic, legal, and policy approaches to reduce gender inequality and change restrictive gender norms. *Lancet* 2019; **393**(10190): 2522-34.
15. Hay K, McDougal L, Percival V, et al. Disrupting gender norms in health systems: making the case for change. *Lancet* 2019; **393**(10190): 2535-49.

16. Raj A ML, Trivedi A. EMERGE Project Report: Theoretical and Definitional Basis for Identification of Measures of Gender Equality and Empowerment. . *Center on Gender Equity and Health (GEH), University of California, San Diego School of Medicine* 2017.; **San Diego, CA. [March, 2017].**
17. GEH. A Roadmap for Measuring Agency and Social Norms in Women's Economic Empowerment. . Retrieved from: [https://emerge.ucsd.edu/wp-content/uploads/2020/06/agency-and-social-norms-roadmap.pdf] Center on Gender Equity and Health. , 2020.
18. Munn Z, Peters MDJ, Stern C, Tufanaru C, McArthur A, Aromataris E. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology* 2018; **18**(1): 143.
19. Upadhyay UD, Gipson JD, Withers M, et al. Women's empowerment and fertility: a review of the literature. *Soc Sci Med* 2014; **115**: 111-20.
20. Costenbader E, Lenzi R, Hershow RB, Ashburn K, McCarraher DR. Measurement of Social Norms Affecting Modern Contraceptive Use: A Literature Review. *Stud Fam Plann* 2017; **48**(4): 377-89.
21. Holt K, Zavala I, Quintero X, Hessler D, Langer A. Development and Validation of the Client-Reported Quality of Contraceptive Counseling Scale to Measure Quality and Fulfillment of Rights in Family Planning Programs. *Studies in family planning* 2019; **50**(2): 137-58.
22. Hinson L, Edmeades J, Murithi L, Puri M. Developing and testing measures of reproductive decision-making agency in Nepal. *SSM-population health* 2019; **9**: 100473.
23. Pulerwitz J, Barker G. Measuring attitudes toward gender norms among young men in Brazil: development and psychometric evaluation of the GEM scale. *Men and Masculinities* 2008; **10**(3): 322-38.
24. Vu L, Pulerwitz J, Burnett-Zieman B, Banura C, Okal J, Yam E. Inequitable gender norms from early adolescence to young adulthood in Uganda: Tool validation and differences across age groups. *Journal of adolescent health* 2017; **60**(2): S15-S21.
25. Silverman JG, Challa S, Boyce SC, Averbach S, Raj A. Associations of reproductive coercion and intimate partner violence with overt and covert family planning use among married adolescent girls in Niger. *EClinicalMedicine* 2020; **22**: 100359.
26. Kalokhe AS, Stephenson R, Kelley ME, et al. The development and validation of the Indian family violence and control scale. *PLoS One* 2016; **11**(1): e0148120.
27. Wang M, Yi J, Cai L, et al. Development and psychometric properties of the health-risk behavior inventory for Chinese adolescents. *BMC medical research methodology* 2012; **12**(1): 94.
28. Shellenberg KM, Hessini L, Levandowski BA. Developing a scale to measure stigmatizing attitudes and beliefs about women who have abortions: results from Ghana and Zambia. *Women & health* 2014; **54**(7): 599-616.
29. Sudhinaraset M, Afulani PA, Diamond-Smith N, Golub G, Srivastava A. Development of a Person-Centered Family Planning Scale in India and Kenya. *Studies in Family Planning* 2018; **49**(3): 237-58.
30. Nosheen I, Jami H. Translation, Adaptation, and Validation of Contraceptive Attitude Scale. *Pakistan Journal of Psychological Research* 2013; **28**(2).

31. Hall KS, Manu A, Morhe E, et al. Development and validation of a scale to measure adolescent sexual and reproductive health stigma: results from young women in Ghana. *The Journal of Sex Research* 2018; **55**(1): 60-72.
32. Pablo V-M, Eduardo RC, Alejandro S-RD, Mayra G-L, Claudia P-D. Spanish validation of female condom attitude scale and female condom use in Colombian young women. *BMC women's health* 2019; **19**(1): 128.
33. Makenzius M, McKinney G, Oguttu M, Romild U. Stigma related to contraceptive use and abortion in Kenya: scale development and validation. *Reproductive Health* 2019; **16**(1): 136.
34. Jain A, Aruldas K, Mozumdar A, Tobey E, Acharya R. Validation of two quality of care measures: results from a longitudinal study of reversible contraceptive users in India. *Studies in family planning* 2019; **50**(2): 179-93.
35. Costenbader E, Zissette S, Martinez A, et al. Getting to intent: Are social norms influencing intentions to use modern contraception in the DRC? *PloS one* 2019; **14**(7): e0219617.
36. Sorhaindo AM, Karver TS, Karver JG, Garcia SG. Constructing a validated scale to measure community-level abortion stigma in Mexico. *Contraception* 2016; **93**(5): 421-31.
37. Woldetsadik MA, Goggin K, Staggs VS, et al. Safer conception methods and counseling: psychometric evaluation of new measures of attitudes and beliefs among HIV clients and providers. *AIDS and behavior* 2016; **20**(6): 1370-81.
38. Yang X, Li S, Feldman MW. Development and validation of a gender ideology scale for family planning services in rural China. *PloS one* 2013; **8**(4): e59919.
39. Valdés PR, Alarcon AM, Munoz SR. Evaluation of Informed Choice for contraceptive methods among women attending a family planning program: conceptual development; a case study in Chile. *Journal of clinical epidemiology* 2013; **66**(3): 302-7.
40. Tumlinson K, Pence BW, Curtis SL, Marshall SW, Speizer IS. Quality of care and contraceptive use in urban Kenya. *International perspectives on sexual and reproductive health* 2015; **41**(2): 69.
41. Jain A, Ismail H, Tobey E, Erulkar A. Stigma as a barrier to family planning use among married youth in Ethiopia. *Journal of biosocial science* 2019; **51**(4): 505-19.
42. Mensch B, Arends-Kuenning M, Jain A. The impact of the quality of family planning services on contraceptive use in Peru. *Studies in family Planning* 1996: 59-75.
43. Barrett G, Smith SC, Wellings K. Conceptualisation, development, and evaluation of a measure of unplanned pregnancy. *Journal of Epidemiology & Community Health* 2004; **58**(5): 426-33.
44. Frost JJ, Lindberg LD, Finer LB. Young adults' contraceptive knowledge, norms and attitudes: associations with risk of unintended pregnancy. *Perspectives on Sexual and Reproductive Health* 2012; **44**(2): 107-16.
45. Richardson E, Allison KR, Gesink D, Berry A. Barriers to accessing and using contraception in highland Guatemala: the development of a family planning self-efficacy scale. *Open Access Journal of Contraception* 2016; **7**: 77.
46. Quinn-Nilas C, Milhausen RR, Breuer R, et al. Validation of the sexual communication self-efficacy scale. *Health Education & Behavior* 2016; **43**(2): 165-71.

47. Pulerwitz J, Gortmaker SL, DeJong W. Measuring sexual relationship power in HIV/STD research. *Sex roles* 2000; **42**(7-8): 637-60.
48. Clark J, Yount KM, Rochat R. Men's involvement in family planning in rural Bangladesh. *Journal of biosocial science* 2008; **40**(6): 815.
49. Stephenson R, Bartel D, Rubardt M. Constructs of power and equity and their association with contraceptive use among men and women in rural Ethiopia and Kenya. *Global public health* 2012; **7**(6): 618-34.
50. Cox S, Posner SF, Sangi-Haghpeykar H. Who's responsible? Correlates of partner involvement in contraceptive decision making. *Women's health issues* 2010; **20**(4): 254-9.
51. Chekole MK, Kahsay ZH, Medhanyie AA, Gebreslassie MA, Bezabh AM. Husbands' involvement in family planning use and its associated factors in pastoralist communities of Afar, Ethiopia. *Reproductive health* 2019; **16**(1): 33.
52. Bernard O, Gibson RC, McCaw-Binns A, et al. Antenatal depressive symptoms in Jamaica associated with limited perceived partner and other social support: a cross-sectional study. *PloS one* 2018; **13**(3): e0194338.
53. Dehlendorf C, Henderson JT, Vittinghoff E, Steinauer J, Hessler D. Development of a patient-reported measure of the interpersonal quality of family planning care. *Contraception* 2018; **97**(1): 34-40.
54. Jadhav A, Vala-Haynes E. Informed choice and female sterilization in South Asia and Latin America. *Journal of biosocial science* 2018; **50**(6): 823-39.
55. Cousineau TM, Green TC, Corsini EA, Barnard T, Seibring AR, Domar AD. Development and validation of the Infertility Self-Efficacy scale. *Fertility and sterility* 2006; **85**(6): 1684-96.
56. Cockrill K, Upadhyay UD, Turan J, Greene Foster D. The stigma of having an abortion: development of a scale and characteristics of women experiencing abortion stigma. *Perspectives on Sexual and Reproductive Health* 2013; **45**(2): 79-88.
57. Rice WS, Turan B, Stringer KL, et al. Norms and stigma regarding pregnancy decisions during an unintended pregnancy: Development and predictors of scales among young women in the US South. *PloS one* 2017; **12**(3): e0174210.
58. Martin LA, Debbink M, Hassinger J, Youatt E, Eagen-Torkko M, Harris LH. Measuring stigma among abortion providers: Assessing the abortion provider stigma survey instrument. *Women & Health* 2014; **54**(7): 641-61.
59. Martin LA, Seewald M, Johnson TR, Harris LH. Trusted Colleagues or Incompetent Hacks? Development of the Attitudes About Abortion-Providing Physicians Scale. *Women's Health Issues* 2020; **30**(1): 16-24.
60. Bradley SE, Croft TN, Fishel Joy D. & Westoff Charles F. . Revising Unmet Need for Family Planning. Calverton, Maryland, USA: ICF International, 2012.
61. Sedgh G, Ashford LS, Hussain R. Unmet need for contraception in developing countries: examining women's reasons for not using a method. *New York: Guttmacher Institute* 2016; **2**: 2015-6.
62. Bhan N JR, McDougal L & Raj A. . EMERGE Measurement Guidelines Report 1: What is Measurement and How Do We Quantitatively Measure Gender Equality and Empowerment? San Diego, CA. December 2017.: Center on Gender Equity and Health (GEH), University of California, San Diego School of Medicine, 2017.

63. Jose R BNRA. EMERGE Measurement Guidelines Report 2: How to Create Scientifically Valid Social and Behavioral Measures on Gender Equality and Empowerment. . San Diego, CA. December 2017.: Center on Gender Equity and Health (GEH), University of California, San Diego School of Medicine, 2017.
64. DHS. Demographic and Health Surveys Model Questionnaire Phase 7: Woman's Questionnaire. . Retrieved from https://dhsprogram.com/What-We-Do/Survey-Types/DHS-Questionnaires.cfm; 2017.
65. Ha BTT, Jayasuriya R, Owen N. Increasing male involvement in family planning decision making: trial of a social-cognitive intervention in rural Vietnam. *Health Education Research* 2005; **20**(5): 548-56.
66. Wegs C, Creanga AA, Galavotti C, Wamalwa E. Community dialogue to shift social norms and enable family planning: an evaluation of the family planning results initiative in Kenya. *PloS one* 2016; **11**(4): e0153907.
67. Morroni C, Myer L, Tibazarwa K. Knowledge of the abortion legislation among South African women: a cross-sectional study. *Reproductive Health* 2006; **3**(1): 7.
68. Poelker KE, Gibbons JL. Guatemalan women achieve ideal family size: Empowerment through education and decision-making. *Health care for women international* 2018; **39**(2): 170-85.
69. Dougherty A, Kayongo A, Deans S, et al. Knowledge and use of family planning among men in rural Uganda. *BMC public health* 2018; **18**(1): 1294.
70. Shakya HB, Dasgupta A, Ghule M, et al. Spousal discordance on reports of contraceptive communication, contraceptive use, and ideal family size in rural India: a cross-sectional study. *BMC women's health* 2018; **18**(1): 147.
71. Goldstein RL, Carlson JL, Halpern-Felsher B. Contraception for adolescents and young adults in the inpatient setting: the providers' perspective. *Hospital pediatrics* 2018; **8**(4): 194-9.
72. Ralph LJ, Foster DG, Kimport K, Turok D, Roberts SC. Measuring decisional certainty among women seeking abortion. *Contraception* 2017; **95**(3): 269-78.
73. Mahmud S, Shah NM, Becker S. Measurement of women's empowerment in rural Bangladesh. *World development* 2012; **40**(3): 610-9.
74. Okigbo CC, Speizer IS, Domino ME, Curtis SL, Halpern CT, Fotso JC. Gender norms and modern contraceptive use in urban Nigeria: a multilevel longitudinal study. *BMC women's health* 2018; **18**(1): 178.
75. Heeren GA, Jemmott III JB, Mandeya A, Tyler JC. Theory–based predictors of condom use among university students in the United States and South Africa. *AIDS Education & Prevention* 2007; **19**(1): 1-12.
76. CARE. Women's Empowerment – Multidimensional Evaluation of Agency, Social Capital & Relations (WE-MEASR): A tool to measure women's empowerment in sexual, reproductive and maternal health programs. . Atlanta, GA. USA., 2014.
77. Mayaki F, Kouabenan DR. Social norms in promoting family planning: a study in Niger. *South African Journal of Psychology* 2015; **45**(2): 249-59.
78. Banerjee SK, Andersen KL, Warvadekar J, Aich P, Rawat A, Upadhyay B. How prepared are young, rural women in India to address their sexual and reproductive health needs? A cross-sectional assessment of youth in Jharkhand. *Reproductive health* 2015; **12**(1): 97.

79. Zhang J, Jemmott III JB. Unintentional exposure to online sexual content and sexual behavior intentions among college students in China. *Asia Pacific Journal of Public Health* 2015; **27**(5): 561-71.
80. Prata N, Bell S, Fraser A, Carvalho A, Neves I, Nieto-Andrade B. Partner support for family planning and modern contraceptive use in Luanda, Angola. *African journal of reproductive health* 2017; **21**(2): 35-48.
81. Babalola S, Kusemiju B, Calhoun L, Corroon M, Ajao B. Factors associated with contraceptive ideation among urban men in Nigeria. *International Journal of Gynecology & Obstetrics* 2015; **130**: E42-E6.
82. Córdova D, Coleman-Minahan K, Bull S, Borrayo EA. Development of the brief social capital for youth sexual and reproductive health scale: exploratory and confirmatory factor analysis. *Youth & society* 2019; **51**(4): 570-87.
83. Oginni A, Ahmadu SK, Okwesa N, Adejo I, Shekerau H. Correlates of individual-level abortion stigma among women seeking elective abortion in Nigeria. *International Journal of Women's Health* 2018; **10**: 361.
84. Hanschmidt F, Nagl M, Klingner J, Stepan H, Kersting A. Abortion after diagnosis of fetal anomaly: Psychometric properties of a German version of the individual level abortion stigma scale. *Plos one* 2018; **13**(6): e0197986.
85. Viswan SP, Ravindran TS, Kandala N-B, Petzold MG, Fonn S. Sexual autonomy and contraceptive use among women in Nigeria: findings from the Demographic and Health Survey data. *International journal of women's health* 2017; **9**: 581.
86. Levinson RA. Contraceptive self-efficacy: A perspective on teenage girls' contraceptive behavior. *Journal of sex research* 1986; **22**(3): 347-69.
87. Helweg-Larsen M, Collins BE. The UCLA multidimensional condom attitudes scale: documenting the complex determinants of condom use in college students. *Health Psychology* 1994; **13**(3): 224.
88. Upadhyay UD, Dworkin SL, Weitz TA, Foster DG. Development and validation of a reproductive autonomy scale. *Studies in family planning* 2014; **45**(1): 19-41.
89. McCabe BE, Schaefer Solle N, Gattamorta K, et al. Development and psychometric evaluation of a condom use self-efficacy measure in Spanish and English. *HIV clinical trials* 2016; **17**(5): 212-7.
90. Brafford LJ, Beck KH. Development and validation of a condom self-efficacy scale for college students. *Journal of American College Health* 1991; **39**(5): 219-25.
91. IHDS. India Human Development Survey (IHDS)-2. Education and Health Questionnaire Retrieved from: [https://www.ihds.umd.edu/sites/ihds.umd.edu/files/ihds2ehq.pdf.]; 2011.
92. Ashraf N, Karlan D, Yin W. Female empowerment: Impact of a commitment savings product in the Philippines. *World development* 2010; **38**(3): 333-44.
93. Folch C, Zohrabyan L, Vagaitseva N, Casabona J, Toskin I. Measurement of sexual health outcomes among people who inject drugs: pilot study in Catalonia, Spain and Barnaul, Russia. *BMC public health* 2018; **18**(1): 187.
94. van Ditzhuijzen J, Brauer M, Boeije H, van Nijnatten CH. Dimensions of decision difficulty in women's decision-making about abortion: A mixed methods longitudinal study. *PloS one* 2019; **14**(2): e0212611.

95. Wado YD. Women's autonomy and reproductive health-care-seeking behavior in Ethiopia. *Women & health* 2018; **58**(7): 729-43.
96. Schuler SR, Nanda G, RAMÃREZ LF, Chen M. Interactive workshops to promote gender equity and family planning in rural communities of Guatemala: results of a community randomized study. *Journal of biosocial science* 2015; **47**(5): 667.
97. Tilahun T, Coene G, Temmerman M, Degomme O. Spousal discordance on fertility preference and its effect on contraceptive practice among married couples in Jimma zone, Ethiopia. *Reproductive health* 2014; **11**(1): 27.
98. Kamal SM, Islam MA. Interspousal communication on family planning and its effect on contraceptive adoption in Bangladesh. *Asia Pacific Journal of Public Health* 2012; **24**(3): 506-21.
99. El-Khoury M, Thornton R, Chatterji M, Kamhawi S, Sloane P, Halassa M. Counseling women and couples on family planning: a randomized study in Jordan. *Studies in family planning* 2016; **47**(3): 222-38.
100. Morokoff PJ, Quina K, Harlow LL, et al. Sexual Assertiveness Scale (SAS) for women: Development and validation. *Journal of personality and social psychology* 1997; **73**(4): 790.
101. Hossain M, Zimmerman C, Kiss L, et al. Working with men to prevent intimate partner violence in a conflict-affected setting: a pilot cluster randomized controlled trial in rural Côte d'Ivoire. *BMC public health* 2014; **14**(1): 339.
102. Ha BTT, Jayasuriya R, Owen N. Male involvement in family planning in rural Vietnam: an application of the Transtheoretical Model. *Health education research* 2003; **18**(2): 171-80.
103. Ghanotakis E, Hoke T, Wilcher R, et al. Evaluation of a male engagement intervention to transform gender norms and improve family planning and HIV service uptake in Kabale, Uganda. *Global public health* 2017; **12**(10): 1297-314.
104. Ijadunola MY, Abiona TC, Ijadunola KT, Afolabi OT, Esimai OA, OlaOlorun FM. Male involvement in family planning decision making in Ile-Ife, Osun State, Nigeria. *African journal of reproductive health* 2010; **14**(4).
105. Onono M, Guzé MA, Grossman D, et al. Integrating family planning and HIV services in western Kenya: the impact on HIV-infected patients' knowledge of family planning and male attitudes toward family planning. *AIDS care* 2015; **27**(6): 743-52.
106. Berhane A, Biadgilign S, Berhane A, Memiah P. Male involvement in family planning program in northern Ethiopia: an application of the Transtheoretical model. *Patient Education and Counseling* 2015; **98**(4): 469-75.
107. Kågesten A, Bajos N, Bohet A, Moreau C. Male experiences of unintended pregnancy: characteristics and prevalence. *Human Reproduction* 2015; **30**(1): 186-96.
108. Juma S, Nyambati V, Karama M, Githuku J, Gura Z. Male partner involvement in efforts to eliminate mother-to-child transmission of HIV in Kisumu County, Western Kenya, 2015. *The Pan African medical journal* 2017; **28**(Suppl 1).
109. Okigbo CC, Speizer IS, Corroon M, Gueye A. Exposure to family planning messages and modern contraceptive use among men in urban Kenya, Nigeria, and Senegal: a cross-sectional study. *Reproductive health* 2015; **12**(1): 63.
110. Martins MV, Peterson B, Almeida V, Mesquita-Guimarães J, Costa M. Dyadic dynamics of perceived social support in couples facing infertility. *Human Reproduction* 2014; **29**(1): 83-9.

111. Anderson P. Measuring masculinity in an Afro-Caribbean context. *Social and Economic Studies* 2012: 49-93.
112. Clark LE, Allen RH, Goyal V, Raker C, Gottlieb AS. Reproductive coercion and co-occurring intimate partner violence in obstetrics and gynecology patients. *American journal of obstetrics and gynecology* 2014; **210**(1): 42. e1-. e8.
113. Katz J, Poleshuck EL, Beach B, Olin R. Reproductive coercion by male sexual partners: Associations with partner violence and college women's sexual health. *Journal of interpersonal violence* 2017; **32**(21): 3301-20.
114. McCauley HL, Silverman JG, Jones KA, et al. Psychometric properties and refinement of the reproductive coercion scale. *Contraception* 2017; **95**(3): 292-8.
115. Bell MM, Newhill CE. Psychometrics of an original measure of barriers to providing family planning information: Implications for social service providers. *Social work in health care* 2017; **56**(6): 556-72.
116. Mozumdar A, Gautam V, Gautam A, et al. Choice of contraceptive methods in public and private facilities in rural India. *BMC health services research* 2019; **19**(1): 421.
117. Donnelly KZ, Dehlendorf C, Reed R, Agusti D, Thompson R. Adapting the Interpersonal Quality in Family Planning care scale to assess patient perspectives on abortion care. *Journal of patient-reported outcomes* 2019; **3**(1): 3.
118. Dehlendorf C, Henderson JT, Vittinghoff E, et al. Association of the quality of interpersonal care during family planning counseling with contraceptive use. *American journal of obstetrics and gynecology* 2016; **215**(1): 78. e1-. e9.
119. Choiriyyah I, Becker S. Measuring Women's Covert Use of Modern Contraception in Cross-Sectional Surveys. *Studies in family planning* 2018; **49**(2): 143-57.
120. Jain A, Tobey E, Ismail H, Erulkar A. Condom use at last sex by young men in Ethiopia: the effect of descriptive and injunctive norms. *Reproductive health* 2018; **15**(1): 164.
121. Goldenberg T, Stephenson R. Applying a deviance framework to understand modern contraceptive use in sub-Saharan Africa. *Plos one* 2019; **14**(5): e0216381.
122. Paek H-J, Lee B, Salmon CT, Witte K. The contextual effects of gender norms, communication, and social capital on family planning behaviors in Uganda: a multilevel approach. *Health Education & Behavior* 2008; **35**(4): 461-77.
123. Kuhlmann A, Gullo S, Galavotti C, Grant C, Cavatore M, Posnock S. Women's and Health Workers' Voices in Open, Inclusive Communities and Effective Spaces (VOICES): Measuring Governance Outcomes in Reproductive and Maternal Health Programmes. *Development Policy Review* 2017; **35**.
124. Gupta J, Falb KL, Lehmann H, et al. Gender norms and economic empowerment intervention to reduce intimate partner violence against women in rural Côte d'Ivoire: a randomized controlled pilot study. *BMC international health and human rights* 2013; **13**(1): 46.
125. Williams M, Bowen A, Ross M, Timpson S, Pallonen U, Amos C. An investigation of a personal norm of condom-use responsibility among African American crack cocaine smokers. *AIDS care* 2008; **20**(2): 218-27.
126. Ozumba B, Obi S, Ijioma N. Knowledge, attitude and practice of modern contraception among single women in a rural and urban community in Southeast Nigeria. *Journal of Obstetrics and Gynaecology* 2005; **25**(3): 292-5.

127. Walcott MM, Ehiri J, Kempf MC, et al. Gender norms and family planning practices among men in Western Jamaica. *American journal of men's health* 2015; **9**(4): 307-16.
128. Levant RF, Hirsch LS, Celentano E, Cozza TM. The male role: An investigation of contemporary norms. *Journal of Mental Health Counseling* 1992.
129. Lundgren RI, Gribble JN, Greene ME, Emrick GE, De Monroy M. Cultivating men's interest in family planning in rural El Salvador. *Studies in family planning* 2005; **36**(3): 173-88.
130. Raj A, Ghule M, Battala M, et al. Brief report: parent–adolescent child concordance in social norms related to gender equity in marriage–findings from rural India. *Journal of adolescence* 2014; **37**(7): 1181-4.