



AMETHIST

AMETHIST@Penn:
Achieving Maternal
Equity and
Transforming
Health through
Implementation
Science and
Training

RESOURCE

MEASURING ACCEPTABILITY IN A MATERNAL HEALTH EQUITY CONTEXT

Acceptability is the perception that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory.

Proctor and colleagues (2011) articulated acceptability as one of the core eight implementation outcomes.

Conceptual Clarification

- Defining acceptability is not a straightforward matter.
- Definitions within the healthcare literature vary considerably highlighting the ambiguity of the concept.
- Definitional terms may include ‘treatment acceptability’ and ‘social acceptability’. In other words, acceptability may be considered from an individual perspective, but also a collectively shared judgment about the nature of an intervention.

KEY COMPONENTS OF ACCEPTABILITY

Attitude: How much people like or dislike the intervention ([Johnston et al., 2002](#)).

Burden: Perceived effort or challenges in participating in or implementing the intervention.

Ethicality: Alignment of the intervention with personal and societal norms and values ([Weiner et al., 2017](#)).

Intervention Coherence: Understanding of the intervention and its purpose.

Opportunity Costs: Benefits or values participants feel they are sacrificing by engaging with the intervention ([Dixon et al., 2016](#)).

Perceived Effectiveness: Belief that the intervention will achieve its intended outcomes ([Brouwers et al., 2004](#)).

Self-Efficacy: Confidence in one's ability to engage with or deliver the intervention successfully ([Bucyibaruta et al., 2023](#)).

ACCEPTABLE ACCORDING TO WHO?

Some researchers examine acceptability from the provider and community partner perspective, while others examine acceptability from the patient perspective.

Provider, implementer, community partner perspective

Acceptability factors to consider

- **Clinical efficacy**
- **Appropriateness in addressing the clinical problem**
- **Patient understanding**
- **Training and comfort level**
- **Workload**

Examples

- How well the treatment works based on medical evidence and patient outcomes
- Whether the patient comprehends the treatment process, goals, and instructions, which can affect compliance
- Whether providers feel adequately trained or comfortable administering or recommending the treatment
- The impact of administering the treatment on the provider's time and clinical workload

Patient perspective

Acceptability factors to consider

- **Perceived benefits and efficacy**
- **Comfort and convenience**
- **Side effects**
- **Autonomy and control**
- **Emotional response**
- **Trust in providers**
- **Accessibility and affordability**

Examples

- How effective patients believe the treatment is in improving their condition or quality of life
- Whether the treatment is easy to follow, pain-free, or fits well into the patient's lifestyle
- How well patients tolerate adverse effects and how these influence their willingness to continue the treatment
- Whether the treatment provokes anxiety, fear, or reassurance
- Whether the treatment is easy to access (location, time, availability) and whether it is affordable or covered by insurance



MATERNAL HEALTH EQUITY EXAMPLE FOR INCORPORATING ACCEPTABILITY

A community health center in an urban area with a large population of Black pregnant people is rolling out an intervention encouraging the use of low-dose aspirin to prevent preeclampsia. These communities have disproportionately higher rates of preeclampsia and maternal mortality.

The health center is offering free consultations where healthcare providers explain the benefits of daily low-dose aspirin starting at 12 weeks of pregnancy.

The intervention includes educational materials, a prescription, and monthly follow-ups. The program is designed to ensure women understand the importance of taking aspirin to reduce preeclampsia risks.

Measuring Acceptability

Using the example above, we detail ways to measure acceptability for the preeclampsia intervention both qualitatively and quantitatively using validated measures and theories, models, and frameworks.

Qualitative Tools for Acceptability

The qualitative tools listed below can be used in the context of a larger qualitative study, for an interview guide, or as standalone research questions.

Theory, framework, model, or instrument	Sample Question	
	For provider, implementer, or community partner	For patient
<p>Reasoned Action Approach (Fishbein & Azjen, 2010)</p> <p>Elicit salient attitudinal, normative, and control/efficacy beliefs. Pfender & Bleakley (2023) provide a table of measure stems necessary for eliciting salient beliefs pertaining to a behavior of interest (see Table 2).</p> <p><i>Methods</i> Interview, focus groups, open-ended survey</p>	<p><i>Attitudinal question:</i></p> <p>What are some of the good things that can happen if you encourage your patients to use low-dose aspirin daily starting at 12 weeks of pregnancy to reduce preeclampsia risk? (e.g., behavior is risky or safe, harmful or beneficial, effective or ineffective)</p>	<p><i>Control/barrier question:</i></p> <p>What are some of the things that would make it difficult to take low-dose aspirin daily starting at 12 weeks of pregnancy?</p>
<p>Consolidated Framework for Implementation Research (CFIR)</p> <p>Use this to understand factors influencing the acceptability of interventions in maternal health, including individual characteristics, intervention features, and the outer setting.</p> <p><i>Methods:</i> Interview, focus groups, open-ended survey</p>	<p><i>Relative advantage question:</i></p> <p>How do you perceive the relative advantage of incorporating low-dose aspirin into routine care for Black pregnant individuals compared to other preventive strategies for preeclampsia?</p>	<p><i>Intervention characteristics question:</i></p> <p>How do you feel about the low-dose aspirin program for preventing preeclampsia? What aspects of the program, such as the information provided, the prescription process, or daily use, make it easier or harder for you to participate?</p>
<p>Theoretical Framework of Acceptability (TFA) (Sekhon et al., 2017)</p> <p>Defines acceptability in healthcare interventions as a multi-faceted construct comprising seven components (i.e., burden, affective attitude).</p> <p><i>Methods:</i> Interview, focus groups, open-ended survey</p>	<p><i>Burden question:</i></p> <p>What do you perceive as the burden associated with implementing low-dose aspirin use among your patients?</p>	<p><i>Affective attitude question:</i></p> <p>How do you feel about this intervention?</p>



Diffusion of Innovations Theory

(Rogers, 1962)

Could support understanding how early adopters perceive the acceptability of an intervention compared to those more hesitant, focusing on factors like relative advantage, complexity, and compatibility with existing systems. For example, [Zhang et al. \(2015\)](#) use this theory to examine acceptance of e-health innovations.

Methods: Interview, focus groups, open-ended survey

Complexity

How easy or difficult has it been for you to integrate the recommendation of low-dose aspirin for preeclampsia prevention into your routine care for Black pregnant patients?

Relative advantage

What advantages do you see in taking low-dose aspirin during your pregnancy?

Quantitative Tools for Acceptability

Likert Scales: Used in surveys to measure partners' agreement with statements related to the acceptability constructs (e.g., "I believe this intervention will help prevent maternal health complications").

Validated Instruments: Use pre-existing, validated measure, like the AIM and TFA (see below).

[Acceptability of Intervention Measure \(AIM\)](#) and adapt them for the maternal health context. Example scale items below (answers ranging from 1-5, where a higher score represents more liking, effort, agreement, etc.)

- (Insert intervention) **meets my approval.**
- (Insert intervention) **is appealing to me.**
- **I like this** (insert intervention).
- **I welcome** (insert intervention).

[The Theoretical Framework of Acceptability \(TFA\)](#). Example items below (answers ranging from 1-5, where a higher score represents more liking, effort, agreement, etc.)

- **Affective attitude** (i.e., Do you like or dislike the intervention?)
- **Burden** (i.e., How much effort did it take to engage with the intervention?)
- **Ethicality** (i.e., did you feel about engaging with the intervention)
- **Opportunity costs** (i.e., Engaging in the intervention interfered with my other priorities)
- **General acceptability** (i.e., How acceptable was the intervention for you?)

The [implementation outcome repository](#) contains a compilation of over 40 acceptability measures, including data on validity, reliability, and usability.

Mixed-Methods Tools for Acceptability

There are several ways in which mixed methods can be employed to measure acceptability. For example, [Hamm et al. \(2023\)](#) used mixed methods to evaluate clinician acceptability during an implementation of a standardized labor induction protocol. The project involved:

- Distributing the validated, 4-question AIM to labor and delivery clinicians 6 months post-implementation at 2 sites
- Dividing participants by total score into groups: the top ("high" acceptability) and bottom ("low" acceptability)
- Interviewing participants in each group to understand acceptability



Comparing Acceptability Across Groups and Interventions

Comparing by Groups: Acceptability can be measured using either quantitative or qualitative tools and compared across different groups, such as trial arms or pre- and post-implementation periods. This allows for an understanding of how acceptability may vary based on different stages of intervention or group assignment.

Comparing Interventions: Acceptability measures can also be used to compare between two interventions or between an intervention and standard care. This provides valuable insight into whether one approach is more acceptable to participants than another, informing decisions on which intervention might be most effective for broader implementation.

Temporal Variations of Acceptability Measures

Prospective acceptability: Perceptions of an intervention before implementation.

Concurrent acceptability: Perceptions or experiences during the implementation process.

Retrospective acceptability: Reflections on the intervention after implementation.

Consideration of Cultural and Contextual Factors

Recognize that **cultural relevance** and **context-specific challenges** can impact the acceptability of maternal health interventions. Tailor measurements to reflect the unique cultural, socio-economic, and geographical factors of the population being studied.

For example, language accessibility, trust in healthcare systems, and community involvement are particularly important when working with underrepresented populations.

Application of Findings to Improve Implementation

- Once the acceptability of a maternal health intervention is measured, it should inform adaptive implementation strategies to increase both uptake and sustainability.
- In addition to evaluating the intervention itself, researchers may also need to assess the acceptability of the messages that communicate and disseminate the intervention to patients.
- This may involve co-creating messages with communities or adapting the messaging and delivery format based on feedback from key partners to enhance acceptability.
- The following example builds upon the previous aspirin intervention example provided in the research method section.

EXAMPLE: Researchers can use iterative concept testing to refine health messages in real-time by conducting a series of focus groups to improve their acceptability.

- These focus groups might include patients, healthcare providers, and community partners, allowing for diverse insights. As participants respond to the messaging, the health communication team can revise the language, tone, or content to better meet the audience's needs.
- For instance, if a message about the importance of low-dose aspirin for preeclampsia prevention is unclear or culturally irrelevant, it could be reframed between focus group sessions to resonate more effectively with the target audience.
- After revisions, new focus groups can be held to reassess the acceptability of the updated messages before they are disseminated more widely.
- This process not only ensures the messages are culturally sensitive and easily understood but also increases the likelihood of driving behavior change.
- By involving key partners throughout, this approach ensures that the final messages are well-received and more effectively implemented in real-world settings.

Other Workshops and Videos on Acceptability in Implementation Science

AMETHIST@Penn June 2024 monthly seminar contains an overview of implementation outcome measures, including acceptability.

<https://www.youtube.com/watch?v=IjctMaWFdCs>

