

Stakeholders' acceptance of new technologies in telemedicine

DigHealth – Micro-credentials in digital health for Ethiopia and Somalia

Proj. Ref. Num. 101179425

Capacity Building in the field of Higher Education

Learning outcomes

At the end of this module, you will be able to:

- Identify unique stakeholders needs
- Map resistance patterns
- Codesign implementation frameworks
- Formulate value propositions
- Minimize friction in workflows
- Evaluate software usability

Unit

Why Is Stakeholder Acceptance Critical?

a) Implementation Success:

Resistance from stakeholders can hinder or delay adoption.

Acceptance ensures alignment with organizational goals.

Technologies deliver value only when they are widely and effectively used.

Adoption enhances productivity and efficiency.

b) Reducing Resistance:

Understanding concerns helps address fears of obsolescence, job loss, or complexity.

c) Fostering Innovation:

A culture of acceptance encourages experimentation and creativity.

Unit

Common Barriers to Acceptance

Fear of change or job displacement.

Lack of understanding of the technology

Mistrust in management's decision-making process

Perceived lack of value or relevance.

What might be barrier in DigHealth Project?

Unit

Key Questions to Address Early On:

What benefits does the technology bring to stakeholders?

How does it align with organizational objectives?

What support will be provided for a smooth transition?

- Healthcare system – more time for patients, clients or more paper and technology work?
- Better work schedule organization or better employee control?
- Diversity of employees in knowledge of technology – from nurse to physician, from young till older, from technology driven to opponents...

Unit

Factors Influencing Stakeholder Acceptance



Perceived Value: How the technology benefits them.



Ease of Use: Simplicity of adoption and learning.



Trust in Technology: Security and reliability.

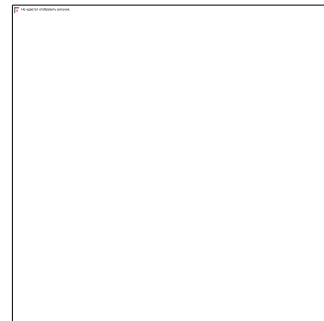


Organizational Culture: Adaptability to change.

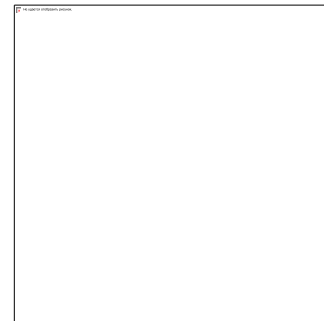


Communication: How well-informed stakeholders are

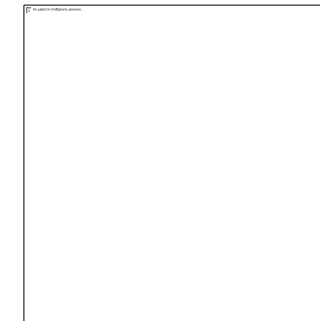
The Technology Acceptance Model (TAM)



Developed by Davis in 1989



How users come to accept technology

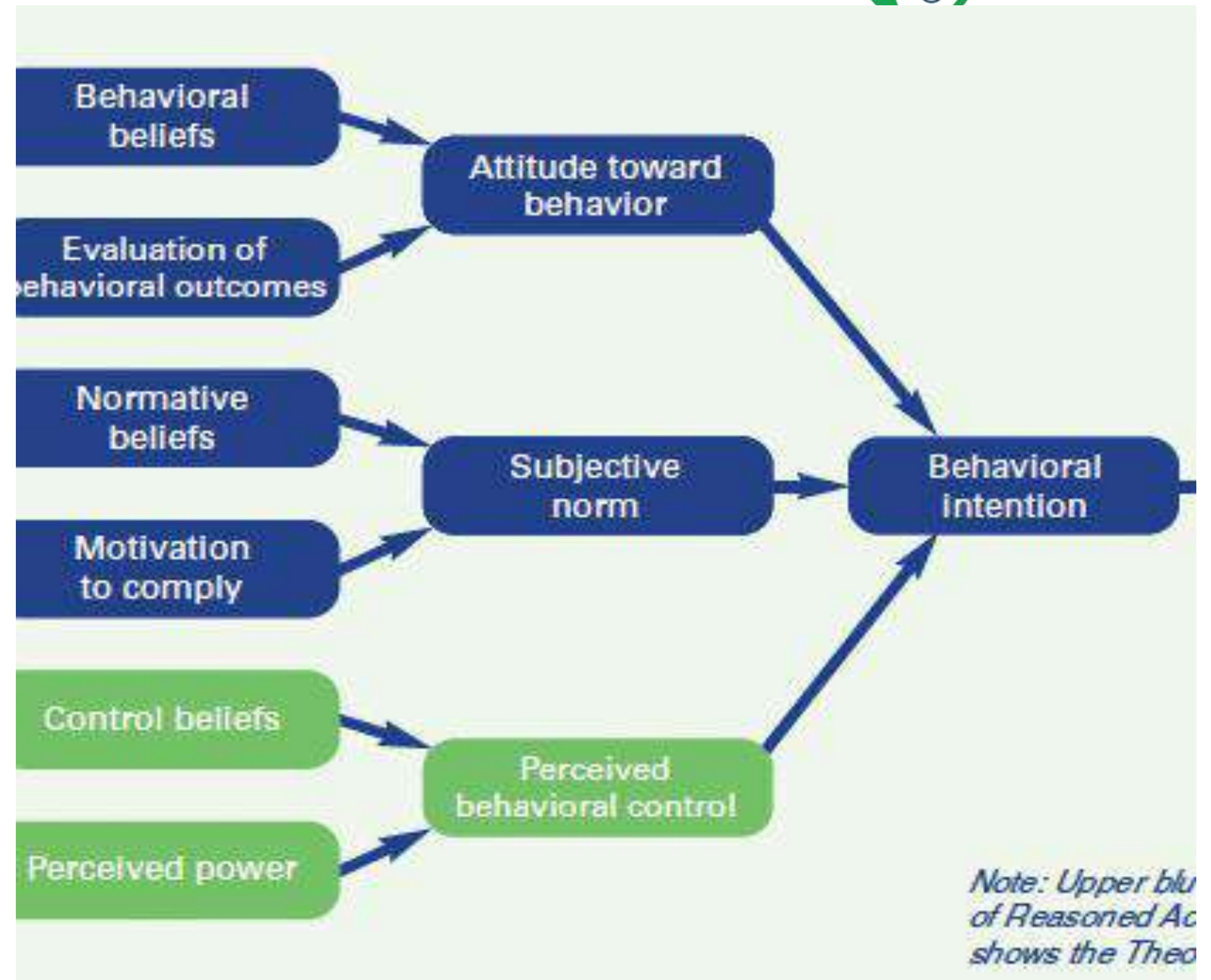


Based on Theory of reasoned Action by Ajzen and Fishbein (TRA) that explain the relationship between attitudes and behaviors within human action.

The theory of reasoned action “traces the causal links from beliefs, through attitudes and intentions, to actual behavior” and is used to explain “behavior that is largely under a person’s volitional control” (Ajzen, 1985).

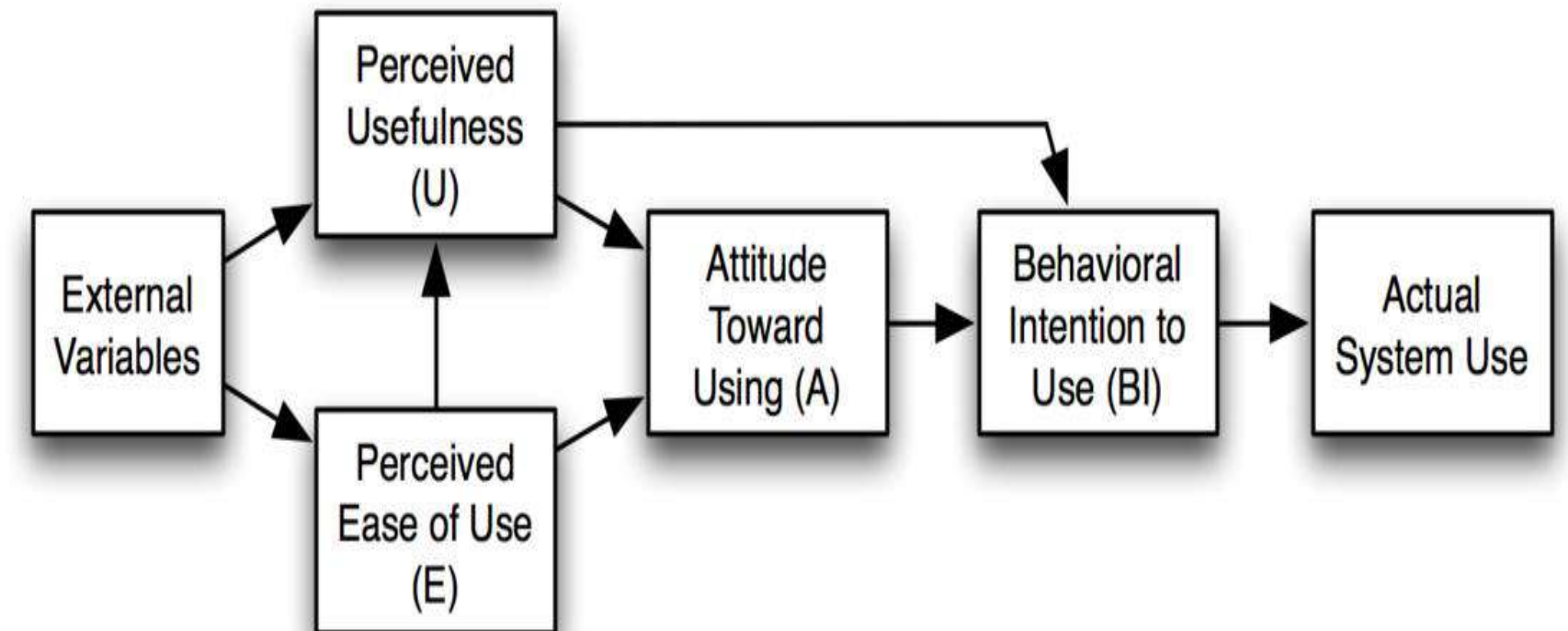
TRA

What is an underling mechanism of behavior



TAM

- **Perceived Usefulness:** Belief the technology enhances performance.
- **Perceived Ease of Use:** Belief the technology is user-friendly.
- **Behavioral Intention:** Willingness to use the technology.
- **Actual Use:** Implementation in practice.



Key Components of TAM



- **Perceived Usefulness (PU):**
 - The degree to which a person believes that using the technology will improve their performance.
 - Example: Employees adopting a new CRM system because it enhances customer interaction efficiency.
- **Perceived Ease of Use (PEOU):**
 - The extent to which the user believes the technology is easy to learn and operate.
 - Example: A simple, intuitive interface that requires minimal training.
- **Behavioral Intention (BI):**
 - The likelihood of a stakeholder deciding to use the technology based on their perceptions of usefulness and ease of use.
 - Example: An employee actively exploring features of a new software tool.
- **Actual Use (AU):**
 - The practical implementation and sustained use of the technology after adoption.

How TAM Applies to Stakeholder Acceptance

- Stakeholders are more likely to accept technology if they see tangible benefits and find it user-friendly.
- Organizations must address both **usefulness** and **ease of use** in their technology adoption strategies.

Examples of TAM in Practice:

- A company implementing a new project management tool:
 - Highlight how it saves time
 - Offer a user friendly interface with tutorials
- Result: Increased intention and consistent usage by employees

Advantages of TAM in Planning:

- Helps predict adoption rate
- Guides in identifying barriers to acceptance.
- Provides a structured framework to measure success.

Strategies to Foster Acceptance

1. Early Engagement:

1. Involve stakeholders from the start.
2. Gather input and address concerns.

2. Clear Communication:

1. Explain benefits and address fears.
2. Regular updates during the process.

3. Training and Support:

1. Provide hands-on training.
2. Offer continuous support systems.

4. Pilot Programs:

1. Test the technology in smaller groups.
2. Collect feedback for improvements.

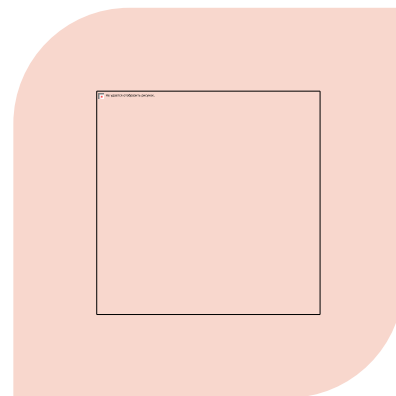
Challenges and Solutions

- **Challenge:** Resistance to change.
 - **Solution:** Highlight personal and professional benefits.
- **Challenge:** Lack of technical skills.
 - **Solution:** Comprehensive training programs.
- **Challenge:** Misaligned expectations.
 - **Solution:** Transparent communication and realistic timelines.

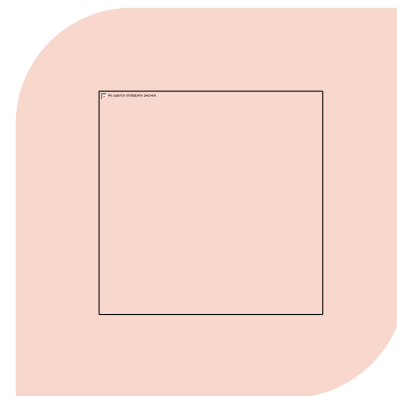
Case study - A leading healthcare network integrated an **AI-based diagnostic system** to improve patient outcomes

- Primary focus areas:
- Faster and more accurate disease diagnosis.
- Predictive analytics for patient risk assessment.
- Enhanced efficiency in administrative tasks.

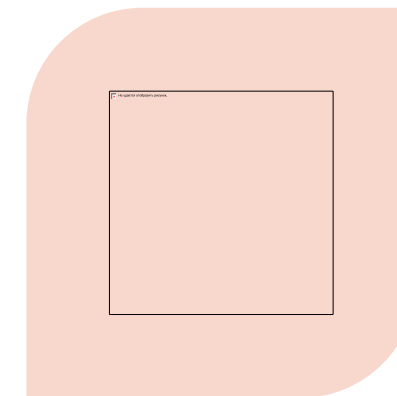
Challenges Faced:



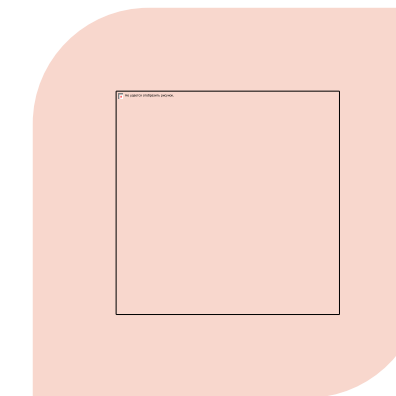
SKEPTICISM AMONG CLINICIANS:
CONCERNS ABOUT AI REPLACING
HUMAN EXPERTISE.



TECHNICAL COMPLEXITY: FEAR
THAT THE SYSTEM MIGHT BE TOO
COMPLEX FOR DAILY USE.



ETHICAL AND LEGAL ISSUES:
CONCERNS ABOUT DATA PRIVACY
AND ALGORITHM BIASES.



HIGH INITIAL COSTS: BUDGET
CONCERNS FOR IMPLEMENTING
AND SCALING AI SOLUTIONS.

Strategies implemented

1. Stakeholder Engagement:

- Organized regular meetings with clinicians, IT staff, and management to align goals.
- Involved healthcare professionals in system design and testing.

2. Training and Awareness:

- Provided training sessions on how AI works and its limitations.
- Shared real-world success stories of AI applications in healthcare.

Pilot Testing:

- Introduced AI in radiology for image analysis (e.g., detecting tumors in X-rays and MRIs).
- Limited initial deployment to monitor performance and gather feedback.

Focus on Augmentation, Not Replacement:

- Emphasized that AI assists rather than replaces medical decision-making.

Robust Data Governance:

- Implemented strict data privacy protocols and regular audits to ensure compliance.

Outcomes achieved

Improved Diagnosis:

Reduced diagnostic errors by 30% in radiology.

AI enabled early detection of diseases like cancer and heart conditions.

Faster Processing:

Cut down the time to analyze medical images by 50%.

Higher Stakeholder Confidence:

Clinicians reported improved trust in AI after hands-on experience.

Cost Efficiency:

Optimized hospital resources, reducing administrative workloads by automating patient record management.

Scalable Adoption:

Expanded AI use to pathology and patient risk monitoring.



Summing up

1

AI thrives when it complements human knowledge

Stakeholders' acceptance is the cornerstone of successful technology adoption.

2

Ongoing training for stakeholders

The adoption process depends on understanding and addressing stakeholder concerns, motivations, and needs.

3

Effective communication and confidence

Strategies like effective communication, robust training, and early engagement build trust and confidence.

4

Mitigating Risks

Proactively addresses resistance and minimizes disruptions.



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Thank you!

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