Investigating the Use of Conversational Agents as Accountable Buddies to Support Health and Lifestyle Change

ADAPT — Engaging Content Engaging People

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Literature Review on Conversational Agents for Chronic Conditions and Well-being

PubMed - 796

Scopus - 1478

ACM Digital Library - 440

IEEE Xplore - 437

Selected - 80

Inclusion Criteria

- Reported intervention impact and/or participants' experiences with the conversational agent (CA);
- Described theoretical basis, choice of the intervention components and CA development process;
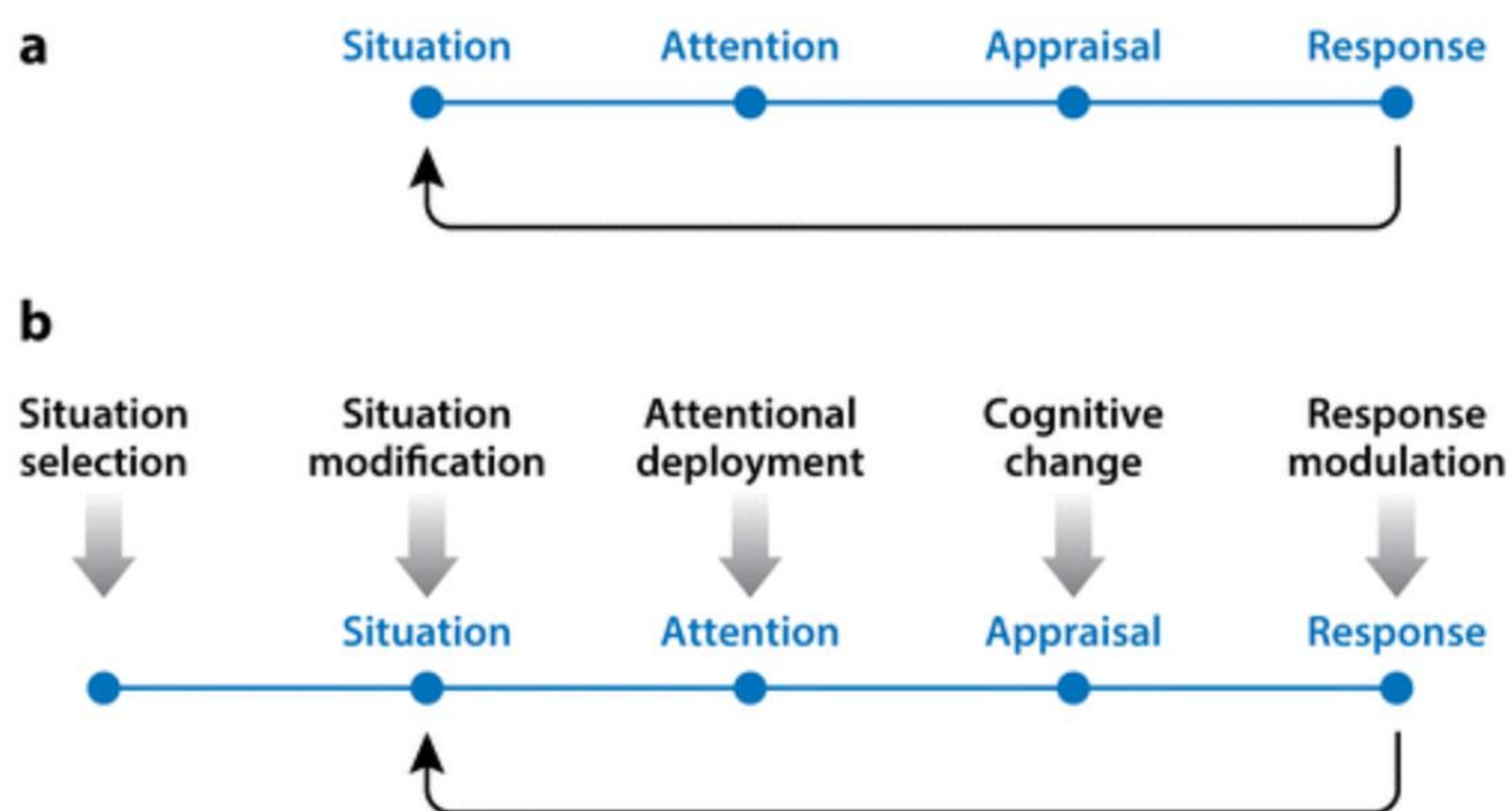- System tested on target user groups;

Results

- People may anticipate feeling negative emotions in future situations, e.g., visiting doctor or doing exercise, which can stop them from taking actions;
- People may feel ashamed or embarrassed to seek medical attention, particularly for issues that are considered socially stigmatized;
- Personal medical data for people with chronic conditions are not simply objective facts, it can provoke negative emotions.

Conclusion

Understanding and addressing emotional barriers is an important step towards facilitating early access to health services and improving well-being.

Future Plans

1. Investigate motivation strategies and impact of motivational support from buddy using chat log data from the NIH-funded MOV'D (Move Often eVery Day) intervention based at Stanford University that tests the effectiveness of "exercise snacks" on improving productivity, mood, exercise habits and well-being. Participants were paired with an individual within the group to be their motivational buddy.

2. Using insights from MOV'D chat log data and a user study, I plan to build a prototype CA.
   User study to understand what an Accountable Buddy CA should look like, what functions it should have
   Evaluate prototype CA with a diary study where participants will keep a log of their thoughts and experiences.

3. Incorporate emotion regulation, an ability to effectively manage and respond to an emotional experience (see Figure 1).
   For instance, on reappraisal, an example of cognitive change, that involves change of the meaning of an event to reduce the negative emotions person may feel.

Emotion Regulation

Sheppes G, et al. 2015.
Annu. Rev. Clin. Psychol. 11:379–405

Figure 1 Emotion and emotion regulation. (*a*) The modal model of emotion in its traditional linear format, with a feedback arrow indicating that an emotional response may change the situation that elicited the emotion. (*b*) The process model of emotion regulation was derived by identifying each of the major points in the modal model at which the emotion-generative process might be altered. Figure adapted with permission from **Gross (2014a)**.

What do you think we should look at?

Let us know below:

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