

## A Review on Speech-Based Conversational Agent Coach (CAC) has the Potential to Provide a Coaching Program

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### Abstract

Life coaching may help you achieve your goals, improve your quality of life, and improve your psychological well-being. In two investigations, we investigated the ability of a speech-based conversational agent coach (CAC) to offer a coaching programme for goal accomplishment. In both the pilot and main studies, participants demonstrated a substantial rise in personal growth initiative (PGI) after completing the programme. The primary study's participants also reported a substantial improvement in life satisfaction (SLS) and a significant decrease in negative affect. Both studies evaluated the application's usability, satisfaction with the coaching programme, and adoption intention positively. The findings indicate that working on goal accomplishment with the CAC had a favourable influence on the participants' psychological well-being. The study offers an experimentally verified strategy to automated coaching interventions and emphasises the potential of conversational bots for providing life coaching.

**Keywords:** Psychological; Speech therapy; Quality of life; Polyneuropathy; Life coaching

### Introduction

Life work is a goal-oriented strategy in which a tutor helps students enhance their life expertise and achieve their personal and professional goals. Past research has revealed that labour improves psychological well-being, quality of life, goal achievement, and resilience. Conversational agents are systems that communicate with users in their native language, either written or spoken. Speech-based informal agents communicate with people by interpreting human speech and using synthetic sounds [1]. Voice assistants are a type of speech-based informal agent that runs on purpose-built speakers, cellphones, and alternative devices. It is estimated that about half of the adult population in the United States utilises them. They provide additional possibilities, which are occasionally built by third-party developers, to enhance their core functionality by interacting via speech with services, apps, and devices that are all linked via cloud services [2]. Yet, because to their rapid expansion, low cost, capacity to understand and reply using language, and perception as engaging and natural, voice assistants and speech-based informal agents in general provide a high potential for a wide range of yet unknown uses [3]. However, they often do so in the capacity of a trainer, tutor, adviser, or recommender, rather than as an informal agent who takes on the role of a life coach and offers a comprehensive work programme backed by approaches from the domain of work [4]. Moreover, the lack of a specific understanding of what makes a nurse e-coaching system and how it differs from different sorts of methods has already been emphasised. The coach's function is not to demonstrate students, provide ideas, or advice buyers, as is the case with other techniques such as tutoring, mentoring, or consulting [5]. The primary purpose of work is to assist the coaches in generating well-designed goals and a good action plan, to encourage ideas and action, and to ensure that the goals are consistent with the coacher's key life values and interests. The programme is intended towards adults who are not clinically ill. The CAC is inspired by the Positive Technology foundations, which support the development of emerging technologies to improve people's quality of life and well-being [6]. Conversational agents are systems that interact with users using natural language, whether written or spoken. To connect with people, speech-based conversational bots employ natural language processing to comprehend human speech and synthetic voices. Voice assistants (e.g., Siri or Google Assistant), which operate on purpose-built

speakers, cellphones, and other devices, are a widely extended type of speech-based conversational agents. They are believed to be used by about half of the adult population in the United States. The method of asking questions is often structured around an informal model that allows progress towards defining Associate in nursing agenda, determining what to focus on, setting key goals, generating options, resolving barriers, and taking action [7]. Work voice communication is frequently supplemented with additional activities and strategies. Many coaches do preliminary assessments to get a general sense of where the client is in life at the time in order to aid them determine which areas of their life require a lot of improvement. Values define what is most important to a person and may operate as a driving force in an individual's objectives and behaviours. Yet, values are deeply embedded ideas that individuals don't appear to be consciously aware of [8]. While various variants of the technique description exist, one often used version is that sensible stands for Specified, Measurable, Achievable, Realistic, and Time-based. Particularly, particular refers to the fact that the objective specifies precisely what the person must do [9]. Measurable suggests that the aim includes certain accountable characteristics and indications, making it possible to determine if the goal is being met. The term realisable refers to the fact that the individual has the ability to achieve the objective and does not need to rely on anybody else. Realistic suggests that the individual will realistically attain their objective, and time-based refers to the fact that the person must consider a time-frame, pertaining to when the outcomes are obtained. Participants were guided by the CAC as they chose the domain of life in which they intended to figure, discovered their essential values for that specific area, designed a goal that fulfilled

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the rational criteria for goal making, and put the objective into action [10,11]. The experimenters did not meddle in the work technique in any way, and the participants had total freedom to choose which aim they wanted to figure out and accomplish. The participants then chose one of the real ideas that had been given and rewrote it in accordance with the overall work process for goal setting (e.g., write the thought in positive, not in negative). The subsequent aim was unbroken because the possible goal that the participants were reaching to work on throughout the returning sessions [12]. At the end of the session, the participants stated how devoted they were to attaining their objective. Exercise may be a beneficial therapeutic in a variety of clinical diseases characterised by weakness and deconditioning. A scientific evaluation of exercise studies for people with various types of polyneuropathy (including GBS) concluded that exercise marginally increases muscular strength. Despite the fact that some experimental studies primarily or entirely involving participants with GBS have reported improvements in function, fatigue, and muscle strength following supervised sport or prescribed unsupervised exercises and aerobic activities, 22, 23, twenty four the absence of an irregular management cluster makes it impossible to determine how much of the improvements were due to exercise [13-16].

## Discussion

This paper presents a conversational agent coach who can give a basic coaching programme for goal attainment based on coaching strategies. We investigated its efficacy in the pilot and main studies, with a total of 34 individuals completing the whole programme. According to the findings of the two studies, the application was able to successfully provide the coaching programme to participants, engage them in their goals, and contribute to their achievement. Although not all of the variables in both experiments showed statistical significance, the individuals involved consistently reported an increase in positive general impressions, life satisfaction, and positive emotions, as well as a consistent decrease in negative emotions, which supports our hypotheses that the coaching programme contributed to overall well-being, life satisfaction, and personal growth. In addition, in response to our research questions about usability, adoption intention, and programme satisfaction, participants from both studies reported a high (pilot) and medium-high (main study) level of satisfaction with the coaching programme, as well as a high (pilot) and medium-high (main study) interest in adopting the application in real life. The application's usability was graded well in both evaluations. In recent years, consumers have had access to a growing variety of smartphone applications designed to improve mental health. Nevertheless, these applications are not necessarily supported by empirical data demonstrating their usefulness, and they do not always employ robust evidence-based approaches, which might be detrimental to the end-user. The study's findings are also positive in terms of the possibilities of deploying conversational bots to increase well-being, which might help to universalize access to proven tools for goal attainment and psychological well-being enhancement. While conversational agents' ability to contribute to well-being enhancement is currently limited, especially when compared to a human coach or therapist, they may provide a number of advantages. There has historically been a reluctance to seek professional aid to improve psychological well-being, which is largely explained by fear of stigmatization and being judged, as well as the higher expenses of seeing a professional. Conversational agents may be devoid of the stigma that has historically been associated with seeking professional psychological assistance. Users may regard these agents as incapable of judging them since they are machines rather than humans, and hence find it easier to divulge personal information

with them than with a human coach.

## Conclusion

Sadly, there is very little high-quality evidence about the effects of exercise in people with GBS. There is frequently no consistent routine for exercise among GBS patients with incapacity and activity limits, and the few alleged recommendations and exercise models do not appear to be standardised. One randomised controlled trial compared high-intensity supervised multidisciplinary care with physiotherapist-prescribed strengthening, endurance, and gait to low-intensity supervised multidisciplinary care. The influence of exercise couldn't be isolated because participants also received comments from an activity expert, a man of science, and a speech professional. Yet, the reduction in incapacity caused by the higher degree of multimodal treatment has led several clinicians observation guidelines to recommend an activity programme as a component of rehabilitation.

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## Conflict of Interest

Author declares no conflict of interest.

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