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Consciousness: effect of coaching process and specifics through AI usage

Abstract

The main purpose of the article is to investigate how coaching itself affects a person and evaluate it as an effective tool. The second goal is to find out what the features of coaching with use of an AI based assistant are. The problem of studying the effectiveness of coaching is indicated by the purpose of finding out, based on the results of the work in the session, to what extent the result obtained will lead the respondent to specific actions. To this end, the main measurable metrics were stress level, willingness to act, and clarity regarding the request. The study confirmed that the majority of sessions had a “positive” dynamic in at least one of the consciousness components (increase of clarity or willingness to act and decrease of stress). The key implication is that it is important to keep a coachee away from stress to create space for clarity and willingness to act.

The research results show that an AI-based tool is more effective in new requests with high importance for a client regarding willingness to act and clarity, confidential requests in terms of privacy and sensitivity regarding clarity. A coach is perceived as overall stronger in usefulness, effectiveness and stress reduction. Analyzing the results of the coach-AI-assistant interaction, the study shows that AI broadens the vision of coaches.

From the point of view of the threat of the coach-bot interaction, there is a bottleneck that emerged during the feedback process during the study. In several sessions, coaches were not able to develop an emotional connection well enough through written dialogue – due to the absence of face-to-face contact. One of the key outcomes regarding the “client-coach” interaction is the high importance of emotional contact.

Keywords: AI-assisted tool, coaching process, stress reduction, clarity increase, coaching effectiveness, confidential request, human coach-bot

Introduction

Coaching is a relatively new direction in working with human consciousness which has been showing continuous growth. According to a study by the International Coaching Federation, there were approximately 71,000 coach practitioners worldwide in 2019, an increase of 33% on the 2015 estimate. Today, coaching is used both in private practice and in the corporate sector. HR departments of companies use coaching sessions to develop employee skills: soft skills, communication, and leadership skills. The number of corporate managers using coaching skills has risen by 46% in five years. An even more significant growth in coaching services in Russia is predicted in 2020. This is caused by changing to a remote “work from home” format in many companies due to the pandemic and, as a result, the need to support employees who find it difficult to adapt to the new conditions. Disadvantages in remote work, according to Ipsos research (2020), are seen by three quarters of Russians, or 78% of respondents. Thus, every third respondent (34.5%) admitted that it is difficult for them to concentrate at home, and their work efficiency decreases. Almost the same number answered that it was difficult for them to distinguish between personal life and work (33.8%). Employees may lose contact due to the lack of daily, face-to-face teamwork, and in

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addition, interpersonal conflicts may arise, provoked by the remote work and a lack of communication. In this regard, companies, faced with a lack of employee motivation to work, are looking for effective methods and technological solutions for effective personnel management. In turn, employees are also independently seeking support. For individuals, requests are most often related to key areas of life: relationships/family, personal development, career, health, finance. Coaching fits in here as an independent working format for an employee or a private person who, with the support of a professional coach, can work out their request and start active and positive actions in one of the life spheres.

Being by origin a method of sport and clinical psychology, coaching is significantly less scientifically studied. Although the years of coaching development have demonstrated proven practical results, this area still lacks objective and unbiased measurement means for its effectiveness.

Methodology and literature review

Coaching, as a methodological approach, is a structured dialogue between a coach and a coachee in a session format, within which a person's resources are explored, a vision of a situation is created and the person's awareness of the topic of their request is manifested. The result of the session is a qualitatively new awareness of the request and the desire to start active actions for sustainable and positive changes in a sphere of life. The coach's toolkit contains deep, open-ended questions, various techniques and models, and the level of competence is confirmed by certification. The coaching approach differs from psychological counseling, mentoring, advising or any other consulting service. Coaches do not teach, or advise, but accompany and support their coachee in the process of their conscious dialogue. In this regard, it is especially important to research and confirm the effectiveness of this process and the client's effectiveness, expressed in readiness for specific actions, to better understand oneself and the qualitative changes in one's life. A review of the recent literature shows that there are very few research papers on the subject of the impact that the coaching process has on stimulating awareness and motivation of pursuing the goal, as well as the factors influencing the coachee's assessment of a session's effectiveness.

Generally, there are two basic approaches to coaching performance measurement most authors focus on in their research. The first is based on the coachees' subjective perception of their progress during one or a range of coaching sessions. The Coaching Effectiveness Survey (Tooth et al., 2013), a tool created by the Institute of Executive Coaching and Leadership, Australia, covers some metrics the coaching clients were most satisfied with during their coaching sessions in intrapersonal and interpersonal areas and their self-efficiency. The other contributors to the client self-reflecting approach to coaching effectiveness

measurement are Grant (2014), Sonesh et al. (2015) and Theeboom and co-authors (2013) trying to identify the metrics behind coaching clients' satisfaction with the coaching process.

The second approach focuses on the structure of the coaching process and the competences of coaching professionals. The 8-component model of coaching effectiveness (Kilburg, 2001) introduces key elements of coaching effectiveness including characteristics of the coachees' problem, coach session organizational setting, structure of the coaching containment, feedback, and others. Another example of this approach is Joo's (2005) conceptual framework for successful executive coaching, combining areas such as executive coaching, training and development mentoring, 360-degree feedback, mentoring, career consulting and such. This research emphasizes the weight of coaching techniques regarding the client's progress.

Coaching by AI

Most research on AI-based coaching is dedicated to life and well-being coaching for people suffering from different diseases, where digital solutions were serving as a partner to clinicians, and the educational process was enhanced by coaching chatbots. Stephens and his collaborators (2019) successfully measured the influence of an AI-based coaching solution through the dynamics of such metrics as depression and anxiety, registered by the clients' self-reporting. Sqalli and Al-Thani (2019) investigated the use of AI-based health coaching technology for helping patients manage their chronic diseases for extended periods of time: the study accepted behavioral changes of the patients due to long-term AI-based coaching as a metric of coaching effectiveness.

According to a world-renowned coach, Clutterbuck (2018), today coaches need to embrace AI technology and integrate it with their practice. The artificial intelligence algorithms bring new ways of conducting coaching practice in a digital environment, make coaching more affordable for various layers of society, and also influence the perception of the coaching process both by the coachee and the coach.

The coach-AI partnership, according to Clutterbuck, fulfils several functions:

- it provides real-time information about what is going on in the conversation,
- it allows instant access to other sources of relevant and potentially relevant information,
- the AI can suggest questions and lines of enquiry (meaning that the coach can spend less time thinking about what to ask next),
- the coach can check his or her intuitions for confirming or disconfirming evidence,
- it creates opportunities for in-depth review of each coaching session, from the perspective of alternative approaches for the coach (for example, "You chose not to follow this clue, but how might the conversation have gone if you did?") or better wording of questions. This is a learning process for both the coach and the AI.

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The topic of interaction between a coach and an AI-based assistant is very promising but requires a significant amount of accumulated data. Despite this, today the influence of AI on coaching effectiveness seems to be underinvestigated and challenging, yet it is a relevant and acute problem for the whole professional coaching community.

Therefore, the present study (performed from June, 2020 until September, 2020) contributes to the area of research of the coaching effectiveness measurement problems, including in particular the role AI-based service could have in it.

The study's aim is to evidence the effect that the coaching process has on human consciousness by measuring 3 metrics: clarity regarding the request, willingness to act, and stress level. The authors believe these are the aspects of consciousness which define the ability of a person to act successfully. In this way, the study is also intended to explore the role an AI-based service has in the coaching process and the way it contributes to recognition of the coaching methodology, which focuses on ways to strengthen the mind. The authors used an AI-based tool called Mentorbot. The service is a bot within the Telegram messenger application, where the client can schedule a convenient time for a session with a human coach. During the session, the AI bot helps as an assistant to a human coach, offering them relevant questions from the Mentorbot dataset library in the form of tips. The AI-based bot also helps the coach draw up a report on the results of the session, analyzing the client-coach written dialogue and highlighting important words and phrases that the client or coach noted as significant. Thus, Mentorbot guides a coach to improve their dialogue during the session, using a coaching method as a basis to explore clarity and mindfulness in the client's request. Mentorbot analyzes the session dataset with NLP algorithms, and the TensorFlow, Keras, Pymorphy, FastText and LSTM architecture frameworks. A self-learning algorithm recognizes the most relevant questions and offers them at the appropriate time. The bot evaluates communication – the coachee's words, phrases, signs and emojis in the dialogue, as well as the time, speed and delay of responses in correlation with the topic of the question, drawing conclusions about insights, difficulties and the emotional state of the respondent.

Hypotheses of the study

The study's guiding questions were:

1. How does the coaching process affect such aspects as clarity, willingness to act and stress level?
2. How does an AI-based service for online coach support influence the coaching process and what are the implications of the findings for coaches, those coached and the wider environment?

The authors concentrated on three hypotheses:

- there is a strong measurable effect on the coaching process.
- there may be categories of requests (and coachees), where an AI-based service is more effective than a personal coach and vice-versa.
- an AI-based service helps coaches to ask effective questions.

Considering all the above, the authors designed the research, involving a focus group of 33¹ participants (men and women of different ages, occupations and positions). The research represents a combination of qualitative and quantitative methods. The basis of the experiment is a series of individual coaching sessions. Each participant had two coaching sessions, one in-person session with a human coach and one AI-assisted session by a human coach. To maintain the objectivity and comparability of the sessions' results and decrease noise, the order of the sessions varied (first AI-assisted then in-person, and vice-versa), with most of the coaches performing personal sessions and through the AI-assisted tool.

Organizationally, each session lasted 60 minutes, respondents could go through no more than one session per day and the next session no earlier than two days later. Preparation for the session included the formation of a request; respondents were asked to prepare a request for each session that did not overlap in meaning with the request in the second session. The face-to-face sessions were held with coaches in person in the same room, or in video format online, while the AI-based sessions were held exclusively in the format of written dialogue within the Mentorbot service in the Telegram messenger application. The structure of each session contained the necessary steps: contract, experience creation, steps, value, gratitude.

The result of every coach session was measured with:

- questionnaire for respondents to assess the emotional state and quality of the session (with the focus on clarity, willingness to act, stress level) at the beginning and at the end of the session (adding the effectiveness of the results), using both open and closed questions to obtain quantitative and qualitative data. The stress level was based on the respondents' self-measurement as a stress scale from 1 to 10 and a stress type: exhaustion, resistance, alarm, in the questionnaire.
- EEG during the sessions (brain activity and the dynamics of the mental state) to collect more objective evidence of brain activity during the session. The participants were asked to talk about their coaching request for two minutes, two times, five minutes before and after the coaching session. The choice of EEG headset was mainly defined by the study settings and the participant profile. Since these were mostly adult participants in the

¹ Certain answers for particular question were excluded from processing as not applicable/inappropriate. Minimum number of responses for each question or metric was 30.

study participating during a working day, the EEG set had to be (a) quick to wear, and (b) easy and comfortable to use (that is, no gel and wires could be used). We therefore chose the wireless EEG headset with the largest number of electrodes presently available – Emotive Epoc+. Emotiv Epoc+ is a 16-channel EEG headset mounted according to an International 10-20 system: AF3, AF4, F7, F8, F3, F4, FC5, FC6, T7, T8, P3, P4, P7, P8, O1, O2. Emotiv Epoc+ does not require gel, but instead uses saline hydration that provides comfort for the participants while securing high quality EEG recordings. Electrodes P3 and P4 were used as references. Sampling rate was 128 Hz. The Emotiv Epoc+ was connected to a Raspberry Pi – a small, single-board computer – by means of Bluetooth, which collected the EEG data until they were transferred to a computer for further analysis. The entire setup for each participant took less than 10 minutes and was performed by a single person. Their brain activity was registered while they were talking, in order to collect data on their stress and frustration levels. The stress level characterizes the condition of the participant's nervous system, influenced by reflecting on their life issue, which was associated with the objective of the coaching. The dynamics of the frustration level had an inverse correlation with the participant's ability to focus on the life issue being discussed with the coach. The lower the level of frustration is, the more aware and clear the person is about the objective of the coaching.

- Independent component analysis (ICA) was used to remove artifacts related to muscular movements, heart beats and oculographic noises (eye movements and blinking). The FastICA algorithm was used to detect and extract artificial components. Fast Fourier Transformation (FFT) was applied to convert data from time domain into time-frequency domain with five frequency bands: delta (0.5–4 Hz), theta (4–8 Hz), alpha (8–13 Hz), beta (13–30 Hz), and gamma (30–48 Hz).
- Separate questionnaire to compare the formats of AI-assisted and in-person sessions with each other.
- Questionnaire for coaches after each session to assess the effect of the AI tool's assistance during the session, and a final questionnaire, recapping the experience of all sessions with the AI-based tool.
- Big Five personality traits test, also known as the five-factor model (Raad & Mlačić, 2015) in order to define the personality types of the participants – it is possible that there is a correlation between the personality type of the coachees and their perception of the coaching method, which affects their progress in coaching. The participants completed the test before the first coaching session. For the purpose of this study, three of five factors

were taken into consideration: Extraversion, Conscientiousness and Neuroticism.

- The prefrontal relative gamma power (its exhibition and inhibition) was measured for stress assessment. For frustration assessment, the alpha asymmetry model in the frontal cortex was used (physiological arousal in the right and left frontal cortex).
- The authors equate the level of stress with the level of physiological arousal.
- To confirm the stress indicators, skin-galvanic reaction was also measured in half of the cases as an additional marker.

Detailed analysis

The analysis of the research results shows that most sessions (89%) had a positive dynamic in at least one of the consciousness components (increase of clarity or willingness to act and decrease of stress). A minimum of a quarter of respondents had dynamics in all of them. The most visible effect was recognized in the stress indicator.

Studying *willingness to act* relates to the idea that the more a person is aware and conscious about a situation or problem, the easier it is for him or her to act. This indicator was measured through the questionnaire only. In the sample, the willingness to act increased in 35% of all cases (from 1 to 6 points on a 10-point scale). The average increase among all of the cases was 0.5 points (which means that the increasing effect outweighed the decreasing one). The average increase for those with positive dynamics was 2.5 points. Sessions with increased willingness to act occurred evenly between coach- and AI-assisted sessions (36% of sessions with 2.3 points and 33% of sessions by 2.6 points, respectively), which in turn does not reveal any dependence of the results on the format of the coaching session.

The *stress level* component was measured through both subjective assessment by the respondents and EEG. The results of the measurements differ. Stress decreased in 80% of cases by the subjective perception of the respondents and in 52% of cases by the EEG data. A detailed review of the data revealed that only half of cases (53%) declared by respondents as stress reduction were confirmed by EEG. Meanwhile, most of the EEG results (85%) were confirmed as stress decrease by the respondents. There are two outcomes that may be useful for further study: EEG data are more reliable as most of them were also confirmed by the respondents, and the possible reasons for the discrepancies between the respondents' subjective perception and the EEG measurements represent an interesting effect that needs further research.

The authors used the cases of intersection between the EEG and clients' responses to measure the effect of coaching on stress reduction. 43% (28 out of 66) demonstrated stress level reduction. As EEG dynamics doesn't evidence the amount of the effect, only the fact of its presence, the authors used the respondents'

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assessment on a 10-point scale to assess the effect of the dynamics. The stress level decrease across the whole sample was 2.7 (which again means that those who decreased their stress level experienced a stronger effect than those who increased it). In the cases with positive dynamics, the average level of stress reduction was 3.6 points.

Sessions reporting stress reduction with the AI-assisted tool amount to 45%, and with a coach, to 55%. The data also show that in cases with stress increase (by EEG), the clients felt stress reduction after sessions with the coach more often (14) than after AI-assisted sessions (9). This could evidence that personal contact could affect the perception of stress reduction due to other emotions and emotional contact with the coach. Moreover, the respondents indicated a high stress level after a session with the AI-assisted tool twice as often as after sessions with the coach. Emotional contact with the coach was confirmed by 27 respondents and by 15 respondents during sessions with the AI-assisted tool. In the feedback, the clients noted “emotional contact”, “empathy”, and “emotional involvement” as advantages of face-to-face work with the coach. The data indicate that regarding stress reduction, results are achieved through face-to-face work with a coach more often than through the AI-assisted tool.

Clarity regarding the request was also measured through both subjective assessment by the respondents and EEG. The results of the measurements do not match in full. In this way, clarity increased in 64% of cases by 3.1 points (54% from the initial measure), according to the respondents' assessment in comparison to an average increase of 1.7 points across the whole sample. EEG evidenced clarity increase in 42% of sessions by an average of 1.9 points (calculated with relative questionnaires).

Intersection of the respondents' assessment of clarity increase and EEG measurement was noted in 25% of all cases. These sessions showed an average increase of 3.8 points (69% of the initial value). A comparison of the EEG and respondents' assessments also showed that in 84% of cases with clarity increase by EEG, it was confirmed by the respondents through the self-assessment. This is similar to what was noted for the stress level component. This supports the idea that EEG data provide a more reliable assessment: there is no assurance that the dynamics exists using subjective assessment, and the use of EEG can be more reliable. There are also open questions regarding subjective interpretation of the results which do not correspond to the EEG measurements, and the reasons for such differences. Probably, there could be more relevant indicators, providing a closer relation to the subjective perception.

The share of sessions resulting in clarity increase was equal for coach- and AI-assisted sessions (64%). But the average increase in sessions with a coach was 0.7 points higher than in the AI-assisted sessions.

For this component, the number of cases showing a difference between the EEG and questionnaire for coach- and AI-assisted sessions was the same. And

this shows that the format of a session does not have a decisive effect on the distortion of the results of clarity by subjective perception in relation to the EEG.

All of the evidence stated above shows that the coaching methodology has an effect in most cases (about 90% of the research sample) with on average positive dynamics through the sample, which means that the positive cumulative effect is greater than the negative one. Herewith, the format of a session overall didn't impact any of the indicators under review, except for the stress level, which was better with the coach than the AI-assisted tool. There were no significant differences in distribution across all sessions with a positive effect between the coach and the AI-assisted format. Both through the coach and the AI-assisted tool, progress on the metrics under study could be achieved with equal probability. Some minor difference in favor of a coach was noted regarding stress level reduction and average increase in clarity. Also, in sessions with a coach, the clients felt stress reduction which was not confirmed by EEG more often than after AI-assisted sessions. This could be a result of more intense emotions during the sessions and emotional contact with the coach. There is a connection between the parameters, but we did not find any statistical correlations because there was not enough information to draw this conclusion.

The analysis noted that willingness to act was more affected in the cases where the initial level was below average (less than 6 points on a 10-point scale). If a client is not ready to act, the probability that he or she will feel more readiness as a result of the coaching session is higher. Their average dynamics in the sample increased by 3.8 points.

The analysis also revealed a correlation between clarity and willingness to act. In sessions with initially low clarity, the willingness to act was lower than the average in the sample by 1.6 points. For these requests, the willingness to act increased by 2.6 points (against an average increase in the sample by 0.5 points). For the requests with initially high clarity, the willingness to act was 6% higher than the average in the sample. There is also a correlation in the sessions: where clarity increased, the increase of willingness to act was twice as high as the average in the sample (1.1 points against 0.5 points). This could potentially evidence that clarity regarding the request is closely connected to the willingness to act, when clarification during the sessions creates significant prerequisites for motivation for actions, when the situation becomes clearer. Besides, the coaching effect in willingness to act is potentially higher for those who have low clarity in their request.

One more correlation was noted between willingness to act, clarity and stress level. The results show that when stress increases or doesn't change (by EEG data), the willingness to act in two thirds of cases (64%) and clarity in a third (32%) remained the same or reduced.

Altogether, the stress level was reduced according to the subjective feeling of the respondents in sessions with an increase of willingness to act (100%) or clarity

(96% by EEG or 85% by questionnaire, 45% of which had a significant reduction of stress by 4 or more points).

Thus, a subjective feeling of stress reduction appears along with a better understanding of the situation and an increased willingness to act. This could be important for the coaching process: the coach must be aware of raising the client's stress level. It is important to keep a coachee away from stress to create space for clarity and willingness to act. This could be an important implication to move toward the goal.

One of the key focuses of the coaching methodology is to create more clarity and expand consciousness, and the study proves the rationality of this focus, i.e. it generates useful results for clients. To be effective, coaching has to work with clarity, in which the willingness to act is higher and the stress level is lower. Another way to work is to reduce the stress level and raise clarity and willingness to act. Besides, working with willingness to act could be a way to reduce stress. The data show that it is easier to raise willingness to act for requests that have less significance for clients (in sessions with an increase of willingness to act, 71% had requests with low importance for the clients). This can be used to improve the effectiveness of the coaching approach via the selection of tools and session strategy.

Comparison of the results with the types of personality indicated that clients with a high level of conscientiousness achieve better results. Their average dynamics regarding willingness to act and clarity is similar to others, but the stress reduction is higher.

The authors also aim to get an understanding of the factors influencing the coachees' perception of a session's effectiveness. To do this, the respondents were asked to assess the usefulness of the sessions.

The clients assessed 89% of all sessions as useful. Among these sessions, the most recognized effect was stress reduction in 85% of cases (by questionnaire) on average by 3.6 points, the second was clarity, which increased in 69% of sessions (by questionnaire) on average by 3.1 points, and the third, willingness to act, which increased in 37% of sessions on average by 3.2 points.

However, those who raised their willingness to act by 2 times more than the average assessed the session as very useful (answers "very useful" and "most useful"). This evidences that significant growth in the willingness to act is recognized as an extremely useful result of a coaching session. In sessions with stress reduction and increase in clarity 2 times higher than the sample average, the proportion of sessions rated as extremely useful was 65%. This may indicate that obvious change in the willingness to act is recognized as the most noticeable result, which is and perceived to be beneficial.

If there is no obvious connection of the format of the session with the overall result, are there any factors that could influence the effect of the format? The study used such characteristics of requests as the importance for the client, confidentiality, novelty and emotionality.

The newer the request is, the more effect it may have in terms of clarity. The analysis shows that new requests (several weeks) had an increase of clarity of 3 points on average, while for old requests (over a year) it was 1 point.

Clients preferred to address new requests to the AI-assisted tool and older ones to the coach: 7 out of 33 sessions with the AI-assisted tool were related to requests aged "several weeks", and 2 with the coaches. The service based on artificial intelligence may be interesting to clients for processing requests with a high degree of novelty. At the same time, the clarity of the new request for the client did not affect the choice of the session format.

Requests aged over several months (moderate level of novelty) were distributed between the coach- and AI-assisted sessions without significant differences. 71% of such sessions showed an increase of clarity. But sessions with a coach demonstrated an increase of willingness to act and clarity more often than sessions with the AI-assisted tool. Thus, clarity increased in sessions with a coach in 77% of cases by 4 points (with the AI-assisted tool, in 63% of case by 2.5 points) with an increase of willingness to act in 40% cases with a coach (and in 14% of cases with the AI-assisted tool).

Despite the fact that the willingness to act had an approximately equal distribution of sessions with increased value between the coach and the AI-assisted tool (with the coach having a slight advantage – 36% vs 33%), in sessions with requests which were important for the clients, a higher percentage of the AI-assisted sessions had increased value (17% with an average increase of 0.4 points), than sessions with a coach (12% with an average increase of 0.1 points). In the feedback, the respondents noted that they received a "problem solving algorithm", or an "action plan" from the Mentorbot. Probably, due to a specific result expressed in an action plan, it was easier for the respondent to understand particular actions and be ready to start. The data of the sample showed that important requests were better processed through the AI-assisted tool regarding the willingness to act.

The same dynamics was noted for important requests regarding clarity. Sessions with a coach had an increase in clarity in 58% of important requests and a decrease in 16%. Sessions with the AI-assisted tool had a higher percentage of increase – 65%, and a lower percentage of decrease – 9%. This indicates better results of the AI-assisted tool for important requests regarding clarity as well. The same pattern of results relates to confidential requests regarding clarity. The AI-assisted tool had more sessions with increased clarity than the coach (12 vs 10) and fewer sessions with decreased clarity (0 vs 4).

At the same time, the clients assessed the results of the sessions with the requests important for them as useful in 38 cases out of 42. Out of them, sessions performed by a coach were assessed as useful 95% of the time (58% of them "most useful"), by the AI-assisted tool – 87% of the time (43% of them "most useful"). Moreover, of all of the respondents who had important

requests, 22 showed a preferred format, with 16 being in favor of a coach and 6 in favor of a mentor bot. Likewise, the respondents with confidential requests, comparing two sessions as more effective, made a choice in favor of a coach 14 times, in favor of Mentorbot – 7. Herewith, the same respondents redistributed, assessing the comfort of a session: 11 preferred a coach and 12 – Mentorbot. Confidentiality was assessed as high with both a coach and Mentorbot. But such a metric as willingness to delve into the request was higher for Mentorbot (94% vs 83%). We hypothesize that there is a difference between the perception of information safety (confidentiality), privacy, and frankness. The client can feel safe about information being kept confidential, but not ready to be open and frank enough personally with a coach. Probably, these sessions involved sensitive subjects of requests.

Considering the fact that the respondents felt the usefulness of the coaching through a significant increase of the willingness to act and the fact that the AI-assisted tool was more effective for important requests regarding the willingness to act based on the sample, but overall, sessions with a coach were perceived as more useful for important requests, there should be some other factors that the respondents saw as useful except for the willingness to act. The data indicate that the results of the AI-assisted tool for important requests regarding the willingness to act and clarity, and confidential requests regarding clarity are better than the coaches' results.

Summarizing, there were certain types of requests which were better processed through the AI-assisted tool – requests with high importance for a client regarding willingness to act and clarity, confidential requests in terms of privacy, and sensitivity regarding clarity. Coach was overall stronger in perception of usefulness, effectiveness and stress reduction.

Influence of AI-based service on coaching process

The authors intended to study how the AI-based service for online coach support influenced the coaching process; what the implications for coaches were. Specific questionnaires were developed in order to obtain data on the coaches' experiences with the Mentorbot. The coaches completed the questionnaires after each session as their experience could vary from session to session.

The results of the research show that the coaches used AI-assisted tool's suggestions in all sessions. All coaches were satisfied with the tool at 6 and more points on a 10-point scale. In 94% of sessions, the suggestions were assessed as extremely helpful (over 7 points on a 10-point scale). In 81% of sessions, the suggestions were useful in the key moments of the sessions. In 26 sessions out of 33, the coaches confirmed that Mentorbot's support broadened their vision, and in 32 sessions, they changed the course of the session based on its suggestions. The average value of usage of the bot's suggestions was 25%.

In 64% of the sessions, the coaches assessed the value of the AI-assisted tool with the words "support" and "coach-partner". In 21 sessions, this support was in the form of options for questions. The key values were indicated as:

- Support – AI-assistant helped ask questions through suggestions for each question,
- Research on the request – with deep, quality and timely examples of questions,
- Session dynamics / Speed – convenient functionality of ready-for-use templates, which saved the coach typing time and increased the dynamics of the session.

Conclusions

The authors explored the average effect of the coaching approach with focus group progress on a scale from 1 to 10 in their clarity, willingness to act and stress level, which organized the ability to move toward the goal. The study confirmed that the majority of sessions had a "positive" dynamic in at least one of the consciousness components (increase of clarity or willingness to act and decrease of stress). On average, the whole sample had "positive" dynamics for each indicator, which means that the positive cumulative effect was greater than the negative one. For all sessions assessed as useful by clients, stress reduction had the most recognized effect, the second one was clarity and the third one – willingness to act.

The research also revealed a correlation among willingness to act, clarity and stress level. The results show that when stress increases or does not change, the willingness to act in two thirds of cases and clarity in a third remain the same or are reduced, and vice versa. The key implication is that it is important to keep a coachee away from stress to create space for clarity and willingness to act. To be effective, coaching has to work with clarity, in which the willingness to act is higher and the stress level is lower. Another way to work is to reduce the stress level and raise clarity and willingness to act. Besides this, working with willingness to act alone could be a way to reduce stress.

While exploring the influence of the coaching process on certain aspects of consciousness, the authors of this research intended to deepen the understanding of the interaction between AI and participants of the coaching process, identifying patterns, advantages and better implications of purely in-person and AI-assisted approaches.

The AI-assisted tool better processes relatively new requests, requests with high importance for the client regarding willingness to act and clarity, and confidential requests in terms of privacy and sensitivity regarding clarity. A coach is overall stronger in perception of usefulness, effectiveness, and stress reduction.

The study of the interaction of a coach with Mentorbot shows the percentage of sessions, where the AI bot generates questions that improve the effectiveness of the dialogue. In 94% of sessions, the suggestions were assessed as very helpful, and in 81%

of sessions, the suggestions were useful in the key moments of the sessions. The AI-assistant broadens the vision of coaches. The key values were indicated as: support, values research in the request, and session dynamics/speed.

The obtained results allow us to argue the overall effectiveness of the coaching process to work with consciousness, and the usefulness of AI-assisted tools to provide coaching services in certain areas without loss of quality, resulting in opportunities to spread the practice to regions with insufficient qualified resources and make coaching more affordable, including a decrease of costs, etc. The study also provides significant research capacity to continue exploring coaching as a methodology of working with consciousness, and multiplication of its effectiveness.

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