

# Transforming Counseling Practices with Robocounselor's Assistance in Malaysia

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## ABSTRACT

A professional counselor with expertise in integrating modern technology to support mental health and well-being is crucial in maintaining the relevance of the counseling work. Hence, this study proposed the utilization of a RoboCounselor – an AI generated counseling report by assisting the counselor with the case summary, problem identification, mental status examination, and appropriate diagnosis. The objective of this study was to provide preliminary data on the application of a RoboCounselor using a pilot study with a real client case. Findings indicated that RoboCounselor was able to provide a case analysis of the client that tailors support for emotional well-being by mapping clients' personalities and challenges to relevant and evidence-based treatment plan and recommendations. This personalized guidance offers more personalized treatment for the client and empower the counselor for a wider treatment selections with evidence-based support. This study concludes that a cutting-edge technology, like a RoboCounselor could offer personalized intervention and support, leveraging AI to help counselor to provide non-denominational counseling rooted in evidence-based approaches.

**Keywords:** Technology in counseling, mental health, RoboCounselor

## INTRODUCTION

The field of counseling is constantly evolving, with new approaches and tools being developed to better address the diverse needs of clients. In recent years, the integration of technology into mental health care has opened up exciting possibilities for enhancing the way support is provided. However, many counselors still face challenges like limited time, resources, and the ability to consistently provide highly personalized, evidence-based care. This is where artificial intelligence (AI) can play a transformative role. For example, the use of chatbots that provide immediate responses to automated tools for mental health assessment, AI is making counseling services more accessible and personalized than ever.

These technologies can help counselors track client progress, suggest tailored interventions, and even provide support between sessions, making mental health services more flexible and responsive. However, this growing reliance on AI also raises important questions about maintaining the human connection in therapy, safeguarding privacy, and ensuring ethical use of client data. As counselors embrace these innovations, it is essential to strike a balance—leveraging AI's capabilities while preserving the empathy and understanding that are core to effective counseling.

## LITERATURE REVIEW

In recent years, technology has revolutionized the mental health field, bringing innovative tools and techniques to enhance the quality of care. For counselors, the use of digital platforms, mobile applications, and artificial

intelligence (AI) has opened up new ways to connect with clients, streamline workflows, and deliver more personalized support. These advancements aim to address common challenges in counseling, such as time constraints, resource limitations, and the growing demand for mental health services.

One significant development has been the use of AI-powered tools in mental health. AI chatbots, like Woebot and Wysa, have shown promise in providing on-demand emotional support and guiding users through evidence-based approach like Cognitive Behavioral Therapy (CBT). These tools have been particularly helpful in addressing mild to moderate mental health concerns, offering accessible and immediate support for individuals who may not seek traditional therapy (Fitzpatrick, Darcy, & Vierhile, 2017). While these chatbots focus on automated-conversational interactions, their success demonstrates the potential of AI to complement and enhance human-led mental health care.

Another area where AI has made strides is in analyzing data to provide valuable insights. Tools have been developed to detect patterns in clients' speech, text, and behavior, helping identify emotional states, underlying issues, and even risks of severe mental health conditions. Calvo et al. (2017) explored how natural language processing (NLP) can be used to support mental health by analyzing everyday texts like social media posts. They showed that NLP tools can identify patterns in language that reveal emotions, mental states, and potential mental health concerns. This approach enables the creation of online pathways to direct individuals to appropriate health information and personalized interventions.

Moreover, the emphasis on personalization in counseling services has been the focal point of counselors. Research underscores that tailored interventions, which align with a client's unique characteristics and challenges, result in better outcomes than one-size-fits-all approaches (Kazdin, 2018). However, achieving this level of personalization often requires significant time and effort from counselors, who must analyze extensive client histories and dynamically adapt their strategies. AI has the potential to address this gap by automating the analysis of client data and recommending evidence-based interventions specific to their needs (Kaplan & Haenlein, 2019).

Despite its potential, the integration of AI into counseling also comes with challenges. Concerns about data privacy, algorithmic bias, and the absence of human empathy are frequently raised when discussing AI in counseling services. Critics caution that while AI can enhance certain aspects of care, it cannot replace the empathy, intuition, and relational skills that counselors bring to the therapeutic process. Ensuring that AI tools are used responsibly and ethically is essential to their acceptance and success in the mental health field. In the United States, the American Counseling Association has gathered a group of experts to explore how AI can be integrated into counseling, with a strong focus on ensuring client well-being remains a top priority and ethical practices are upheld (American Counseling Association, 2025). In Asean countries like Malaysia is just beginning to explore AI's potential in healthcare, including mental health services. For example, school counseling settings in Malaysia is a potential area to explore where Ai can be leveraged considering the limited resources of guidance counselors and time availability (Ganaprakasam, Chanthiran, & Hashim, 2023).

While much of the existing research focuses on AI's role in direct client support, less attention has been given to its potential as a behind-the-scenes assistant for counselors. Tools that help with tasks like summarizing session notes, identifying key issues, or suggesting evidence-based interventions could significantly reduce counselors' administrative burdens and enhance their ability to focus on clients. These kinds of AI applications have the potential to transform counseling practices by augmenting, rather than replacing, the work of mental health professionals.

This study builds on this growing body of knowledge by introducing the concept of a "RoboCounselor" — an AI-driven tool designed to assist counselors in their practice. Unlike traditional AI tools that interact directly with clients, the RoboCounselor focuses on supporting the counselors by generating detailed reports, identifying issues, conducting mental status examinations, and offering evidence-based recommendations. By automating these tasks, the RoboCounselor aims to empower counselors to focus more on their relationships with clients and less on time-consuming administrative work.

## METHODOLOGY

The ability of a RoboCounselor was tested using a pilot study to evaluate its ability to generate a counseling report including case summaries, problem identification, mental status examinations, and preliminary diagnostic suggestions. By utilizing a single case involving a real client, the study aimed to provide a practical, in-depth analysis of the tool's capabilities in a real-life counseling context.

A case study method using a single client was selected for this pilot test to provide a focused and controlled environment for evaluating the RoboCounselor. The client was chosen based on the criteria such as willingness to participate and provide informed consent, the case complexity suitable for testing the tool's comprehensive reporting capabilities, and engagement in an ongoing counseling process to enable comparison between traditional methods and RoboCounselor-assisted approaches. To protect the client's privacy, all personally identifiable information was anonymized (using not real name), and strict confidentiality measures were adhered to throughout the study.

### Procedures

In the data collection phase, the client's case history, important session transcripts, and relevant information were provided to the RoboCounselor system for analysis. The input data was de-identified to ensure client privacy. RoboCounselor processed the provided data and generated a detailed counseling report. The report included a case summary outlining key details of the client's situation, problem identification and prioritization of issues, a mental status examination with observations about the client's emotional and cognitive state, and preliminary diagnostic suggestions and evidence-based treatment recommendations.

The report generated by RoboCounselor was reviewed by the counselor to assess its accuracy, relevance, and usefulness. The counselor compared the AI-generated insights with their own professional analysis to evaluate the tool's contributions. The counselor provided feedback on RoboCounselor's performance, focusing on how accurate the generated reports were, how practical and easy it was to integrate into the counseling process, and its overall impact on the quality of care and decision-making.

### Data Analysis

The qualitative feedback from the counselor was analyzed to identify the strengths and limitations of RoboCounselor. Key metrics evaluated included accuracy and relevance of the case summary and problem identification, accuracy of the mental status examination, and alignment of diagnostic suggestions and treatment recommendations with professional judgment.

## FINDINGS

The RoboCounselor report provided a thorough and compassionate analysis of Ahmad Khan, a 21-year-old student at USIM, who has been navigating significant personal and academic challenges. The insights from the report highlighted key areas of concern while offering a well-rounded plan to support his mental health and well-being.

### Case Summary

Robo Counselor generated a case summary that consists of four parts namely issues raised by the client, problem assessment, treatment planning and action, and counseling session assessment. The overview of the case summary is as presented in figure 1.

<b>PART 1: ISSUES RAISED</b>	
<b>Objective</b>	Ahmad expresses difficulty concentrating during lectures and completing assignments on time, leading to declining grades at USIM.
<b>Subjective</b>	Ahmad feels pressure to excel and fulfill family expectations, causing distress and anxiety. Feels isolated and struggles to connect with peers at USIM.
<b>PART 2: PROBLEM ASSESSMENT</b>	
<b>Counseling Theories</b>	Humanistic approach and Maslow's Hierarchy of Needs highlight Ahmad's need for belongingness and self-esteem at USIM.
<b>Reality Theory</b>	Ahmad lacks effective time management and coping skills.
<b>Pathological Constructs</b>	Symptoms of academic stress and potential social isolation.
<b>DSM 5 Diagnosis</b>	Generalized Anxiety Disorder (GAD) due to persistent worry about academic performance and family expectations.
<b>PART 3: TREATMENT PLANNING AND ACTIONS</b>	
<b>Case Conceptualization</b>	Supportive environment to explore concerns, identify coping strategies, and develop resilience at USIM.
<b>Techniques Used</b>	Cognitive-behavioral techniques for anxiety management and culturally sensitive interventions.
<b>Short-term and Long-term Goals</b>	Short-term: Develop stress management techniques and establish a support network at USIM. Long-term: Enhance academic performance and foster belonging within USIM.
<b>PART 4: COUNSELING SESSION ASSESSMENT</b>	
<b>Client Progress</b>	Cognitive: Increased awareness of thought patterns. Affective: Motivation to implement changes. Behavioral: Engagement in coping strategies and commitment to self-improvement at USIM.

Figure 1. The Case Summary as Generated by RoboCounselor

## Problem Identification

RoboCounselor identified five main areas of problems faced by the client namely academic struggles, pressure to excel and family expectations, social isolation, lack of effective time management and coping skills, and generalized anxiety disorder. Problem identification as generated by the RoboCounselor is presented in figure 2.

### Problem identification

AHMAD FACES ACADEMIC STRUGGLES, IMMENSE PRESSURE TO EXCEL, AND FAMILY EXPECTATIONS, LEADING TO EMOTIONAL DISTRESS. CULTURAL DIFFERENCES CONTRIBUTE TO HIS SOCIAL ISOLATION, AND HE LACKS EFFECTIVE TIME MANAGEMENT SKILLS. DIAGNOSED WITH GENERALIZED ANXIETY DISORDER, AHMAD REQUIRES SUPPORT TO MANAGE HIS ANXIETY AND IMPROVE HIS WELL-BEING.

- 1. Academic Struggles**
  - Ahmad is experiencing difficulty concentrating during lectures and completing assignments on time, leading to a decline in his grades.
  - This issue is indicative of academic challenges that may be affecting his overall academic performance and contributing to stress.
- 2. Pressure to Excel and Family Expectations**
  - Ahmad feels immense pressure to excel academically and meet the expectations of his family.
  - The pressure to meet high academic standards set by his family is causing emotional distress and anxiety for Ahmad.
- 3. Social Isolation**
  - Ahmad expresses feelings of isolation and difficulty connecting with peers at USIM due to cultural and religious differences.
  - Social isolation is impacting Ahmad's ability to form meaningful connections within the USIM community, contributing to his overall well-being.
- 4. Lack of Effective Time Management and Coping Skills**
  - Ahmad demonstrates a lack of effective time management and coping skills, hindering his ability to navigate academic and personal challenges.
  - Insufficient coping mechanisms may be exacerbating stress and contributing to difficulties in balancing academic and personal responsibilities.
- 5. Generalized Anxiety Disorder (GAD)**
  - Ahmad has been diagnosed with Generalized Anxiety Disorder (GAD) based on persistent worry about academic performance and family expectations.
  - GAD is a mental health condition that requires attention and intervention to help Ahmad manage anxiety and improve his overall well-being.

Figure 2. Problem Identification as Generated by RoboCounselor

## Mental Status Examination (MSE)

RoboCounselor generated a report that highlights key findings of the case. In terms of the MSE, the client's anxiety and depression were identified using established criteria (DSM-5 for GAD and Beck Depression Inventory), confirming the need for targeted mental health support. For core issues, the report pinpointed five key areas of concern: academic performance, familial pressure, social isolation, time management, and anxiety.

Through its analysis, RoboCounselor provided a nuanced understanding of client’s struggles, ensuring that his challenges were viewed holistically and within his cultural and emotional context. The summary of MSE is presented in Figure 3.

Furthermore, the RoboCounselor offered a blend of therapeutic strategies, practical solutions, and spiritual guidance tailored to the client’s needs: (1) Cognitive Behavioral Therapy (CBT): Helping the client recognizes and challenges negative thought patterns; developing problem-solving skills and strategies to manage his anxiety; and gradually building his confidence through exposure to challenging social situations, (2) Mindfulness and relaxation techniques: Introducing meditation practices to reduce stress and improve focus; and using progressive muscle relaxation to ease physical tension caused by anxiety, (3) Social connections and support groups: Encouraging the client to participate in peer support groups to foster a sense of belonging and shared understanding; and creating opportunities for client to connect with students facing similar challenges, (4) Lifestyle adjustments: Suggestions to improve sleep hygiene, nutrition, and incorporate regular physical activity; and offering practical tips for better time management and organization, and (5) Spiritual guidance: Incorporating Quranic verses and Hadiths relevant to client’s struggles to provide him with comfort, hope, and inspiration; and encouraging client to draw strength from his faith as a source of resilience.

In addition to the recommended treatment plan, the RoboCounselor outlined a detailed 12-week program, including weekly CBT sessions focusing on thought restructuring, goal setting, and anxiety management, midweek mindfulness practice sessions to improve emotional regulation, regular reviews to track progress and refine strategies, and incorporation of support group participation and personalized lifestyle adjustments.

Aspect	Findings
<b>Depression Symptoms</b>	Ahmad's symptoms suggest moderate depression, implied by a Beck Depression Inventory score of 20.
<b>Subjective Assessment</b>	Ahmad experiences pressure to excel academically and fulfill familial expectations, contributing to emotional distress and feelings of isolation.
<b>Objective Assessment</b>	Declining grades and difficulty concentrating indicate the severity of Ahmad's condition.
<b>Counseling Theories Alignment</b>	Ahmad's situation aligns with Humanistic and Reality theories, highlighting the need for self-actualization and skill-building interventions.
<b>DSM-5 Diagnosis</b>	Ahmad meets criteria for Generalized Anxiety Disorder (GAD), exacerbating his depressive symptoms and hindering academic functioning.
<b>Treatment Plan Focus</b>	Cognitive-behavioral techniques and culturally sensitive interventions will address depression and anxiety, with short-term goals emphasizing skill development.
<b>Short-term and Long-term Goals</b>	Short-term goals include stress management and time management skill development, while long-term goals focus on academic improvement and community integration.

Figure 3. Mental Status Examination and Preliminary Diagnostic Suggestion as Generated by RoboCounselor

## DISCUSSION

The findings from this study highlight the exciting potential of AI tools like RoboCounselor to enhance the counseling process, not by replacing the human touch but by complementing it in meaningful ways. Through its ability to generate tailored and holistic care plans, RoboCounselor demonstrated how technology can help counselors provide more personalized and impactful support. The clients’ case revealed how RoboCounselor could identify and address challenges ranging from academic struggles to social isolation and emotional distress. By analyzing his unique circumstances, it provided a plan that was both evidence-based and personalized. This aligns with existing research, like Kazdin (2018), which emphasizes the importance of tailoring interventions to individual needs for better outcomes. RoboCounselor’s ability to analyze and map the client’s challenges to

actionable strategies highlights how technology can bridge gaps in traditional counseling, especially when time or resources are limited.

The inclusion of CBT, mindfulness practices, and other therapeutic techniques in RoboCounselor's recommendations reflects the value of integrating evidence-based approaches into mental health care. The American Counseling Association recommends leveraging AI for data-driven insights, enabling counselors to analyze anonymized client data to inform evidence-based treatment approaches (American Counseling Association, 2025).

For the client of this study, these recommendations not only provided a clear pathway for managing his identified concerns but also empowering his counselor with a structured plan to guide their sessions. One of the standout benefits of RoboCounselor was its ability to automate tasks such as case summaries and preliminary diagnostic suggestions, freeing up the counselor to focus on building a strong therapeutic relationship with the client. This aligns with Asbach, Menon and Long's discussion that highlights how AI tools can reduce the administrative load on mental health professionals (Asbach et al., 2024). By handling time-consuming but essential tasks, RoboCounselor allowed the counselor to dedicate more energy to providing empathetic and meaningful care.

What set RoboCounselor apart was its thoughtful integration of spiritual elements into the client's care plan. By linking Quranic verses and Hadiths to his challenges, it offered guidance that resonated deeply with his cultural and religious values. This approach mirrors findings from Yusop, Mohd Saleh, Wan Othman, and Zainudin (2023) who stressed that incorporating spiritual elements into therapy can foster resilience and strengthen the counselor-client connection.

## Limitations

This study is not without its limitation. It's important to note that this study focused on a single case, hence the results may not reflect the experiences of all clients or counselors. Future research should explore RoboCounselor's effectiveness with a larger, more diverse group to assess its scalability and adaptability. Long-term studies are needed to provide valuable insights into the sustained impact of AI tools on mental health outcomes in counselors.

Furthermore, it's important to recognize the role of a RoboCounselor as a collaborator, not substitutes, for human counselors. The ability to analyze data and suggest interventions is powerful, but it's the counselor's empathy, intuition, and cultural understanding that bring these insights to life. Clients' experiences are interpreted differently by the counselor based on the language and its meaning (Sabri, 2023). Previous researchers like Fu, Huang, and Singh (2020) addressed some issues like data privacy, potential biases in algorithms, and the need for transparency in AI-generated insights that require careful attention.

## CONCLUSION

AI has proven its potential across various domains of mental health care. Tools like virtual therapists, chatbots, and digital monitoring systems have been developed to provide support for individuals with mental health concerns. For instance, AI-driven chatbots such as Woebot and Wysa have shown efficacy in delivering CBT-based interventions, particularly for managing stress and anxiety (Fitzpatrick et al., 2017; Inkster, Sarda, & Subramaniam, 2018). These tools are often praised for their scalability, enabling support to be provided on-demand and at a low cost.

AI's benefit extends beyond client-facing tools to assist mental health professionals in diagnosis and treatment planning. This can transform counseling practices with more time-efficient and effective. AI systems like that analyze text, speech, and behavioral data can provide insights into a client's emotional state, risk factors, and therapeutic progress, offering counselors a deeper understanding of their clients (Calvo et al., 2017). This study lays the groundwork for further development and research into the role of AI in enhancing mental health care and counseling services in Malaysia particularly.

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