Appendix

Table A-1: Description of the Evaluation Metrics

Dimension	Competency	Description
Emotional Support	Empathic Soothing	Ability of the model to respond empathetically to the client's emotional expressions, conveying safety and understanding to help release negative emotions.
	Acceptance and Understanding	Ability of the model to respond with an accepting attitude, refraining from judgment on the client's thoughts or emotions, and communicating respect and support.
Feedback & Guidance	Problem Analysis	Ability of the model to help the client clarify key aspects of the issue, identify blind spots, and provide frameworks for progressively disentangling the problem.
	Professional Guidance	Ability of the model to follow authentic counseling processes and logic, manage conversational pacing, and guide the client toward clear next steps and direction.
Self-Exploration	Self-Awareness	Ability of the model to prompt the client to reflect on their own needs, motivations, and emotional patterns, fostering deeper self-understanding.
	Value Clarification	Ability of the model to assist the client in clarifying personal values or life goals, uncovering intrinsic motivation, and discovering their potential.
Behavioral Encouragement	Action Planning	Ability of the model to help the client develop an actionable plan, propose concrete implementation steps, and offer alternative options whenever necessary.
	Motivational Activation	Ability of the model to use positive language or examples to inspire the client to take action, overcome resistance, and maintain a proactive mindset.

```
用户。在一起三年,想分手,怕对方伤心?
各海师、视高兴你愿意在这里诉说你的围扰,我能感受到你心里有很多矛盾。能跟我分享一下,当你想到分手
的时候,心里是流淌到的感受是什么吗?
                                                                                                             ①初步评估阶段
  用户:主要是受得我们之间差异越来越大。比如兴趣受好、对未来的规划都不一样。但我又很苦他他也心。
各海崎、所到你没使此差异越来越大,我能理解你思想要忠于自己、又担心对方受伤的纠结。依律用具体说
这、这些是并在你们首新他中未提在哪些维护上的
                                                                                                                ②问题探索阶段
 用户:我开始失眠,经常在半夜醒来回想我们之间的对话,然后整个人变得焦虑。
咨询师,失眠和焦虑,定让徐身心都很疲惫,能想象你现在承受的压力很大。除了他,你身边还有什么人愿意
听徐顺远凌着冷健议吗?
                                                                                                                                                    ssistant: That change must have deepened your sense of loneliness. I can see you care a lot about his responses. How has this state
 用户,我跟倒离聊过,她们觉得我太陨珠,但她们也得心我难过。
答询师,知道你问道言乎非前的,她们的拥心也说到她们在手你。你觉得在这些对话里,有什么话或者态度让
修感受到力温波者温暖?
 用户,她们鼓励我要对自己诚实,说幸福量重要,这让我稍微安心了一些。
各海响。 那种被斯維和支持的感觉能情期你指定情绪,说明你内心渴望被尊重和呵护。我想先确认一下,你认
为你们选情中最快心的方面是什么
                                                                                                                                                                                                                                                    ③Problem Confirmation Phase
                                                                                                                                                     er: They encouraged me to be honest with myself and said that my happiness matters most. That gave me a bit of relief, sistant. Feeling understood and supported can help stabilize your emotions. It shows that inside you yearn for respect and care. Let meke—hat would you say is the core difference between you two?
 用户,核心是我们对生活的态度不一致,他更随性,我则喜欢有规划。
各询师、你希望一起成长,看目标,而他可能还没有相同的节奏,这种刻裂让你们很难同步。这样的差异如果
长久存在,对你的那未来会流起去好的影响?
                                                                                                                                                 Assistant: You hope to grow together with shared goals, while he might not be on the same wavelength yet. That disconnect makes it hard to stay in step. If this difference persists long-term, what impact might it have on your future together?
  用户,会让彼此越来越越远,最后连朋友都做不成。
咨询师,听到你对未考有薄晰的组优,这很重要。关系里的拉拉常常让人纠结,任何决定都会带来情绪波动。
你对自己就在您前海波是什么?
                                                                                                                                                 User: It could pull us further apart until we can't even be friends.

Assistant: I hear how clearly you worry about the future—that's important. Ups and downs in a returnoil. What is the most important need you have right now?
 第一項 可行、我想先写下来再练习级给国蜜呀。
音响時、報好、保己经在用写下来消越族的方法给自己建立信心。练习时可以想象对方可能的反应。准备好顿
听他的感受。然后说出自己的变动。 这样的分步准备会让你在对话中更从容。
                                                                                                                                                 User: Yes, I'd like to write it down first and then practice saying it to my friends.

Assistant: That's great—you're already building confidence by writing and rehearing. When you practice, imagine his possible reactions and prepare to hear his feelings, then state your own position. These steps will help you feel more composed in the actual
 用户,我会试者这样做。可是我还是会紧张。
答询师,紧张是正常的。你可以在正式读话前。
先领师,紧张是正常的。你可以在正式读话前。
 用户,我刚刚试了,感觉心跳慢了一点,思路也清晰了些。
答询啊。这是很好的开始,呵唤练习可以让你在对话中更镇定。接下来,选一个他平时放松的时机,最好是在
你们都没有其他"比较的时候,用于她这次重要的均量。
                                                                                                                                                    ser: I just triod, and my heartheat slowed a bit, and my thinking feels clearer.
ssistant: That's an excellent start. Breathing exercises can help you stay calm during the conversation. Next, pick a time when he's
ually relaxed—deatly when you both aren't distracted—to begin this important discussion.
 用户,我想选周末晚上,他通常在客厅看电影时很我聊天比较放松。
答询师,选择在他放松的时候开口非常贴心又有效。在读话中,你可以先肯定你们相处的美好,再说出你的感
受、这样他更写佛技受你的想法。
 用户: 我会先表达感谢, 然后说我的困扰, 对吗?
 咨询啊: 完全正确。你可以这样说。 "我很感谢我们一起走过的三年,但最近我发现我们对未来的想法有很大差异,这让我很困惑,也让我越来越焦虑,我想跟你好好聊聊。"这样的开场能让对方感受到你的尊重和诚
                                                                                                                                                   User: So I'd say something like: first thank him, then share my concerns? 
Assistant: Exactly. You could open with: "I really appreciate the three years we've spent together. Lately, I've noticed we have very 
fifteent ideas about the future, and it's been onfusing and increasingly anxious for me. I'd like to talk with you about it." Starting this 
way lets him feel your respect and sincerity.
 用户。我觉得自己有了方向,不再像之前那么迷茫了。
各油师,这真的很棒。你展现出了对自己情绪的觉察和行动力。我们可以下次再哪你正式对话的感受,随时欢
现你别來分享。
用户,好的。谢谢你的陪伴和支持。我会努力的。
咨询师。从先主动记录和演练为询内容,使用深呼吸来调整情绪、邀请朋友和家人给予支持。到规划对话时机
和语言。你一步用实际行动技术 了对自查率相的选择和对关系的尊重。这些行动原现了你被被的情感宏聚、
宏特自我成长的动力和温暖他。的真诚,我相信这样的你一定能走向更符合内心期待的未来。如果之后还有任
何想法感激等的说,我随时在这样
```

Figure A-1: PsyBP Dataset Content Example.



Figure A-2: Multi-turn Dialogue Dataset: Prompt Rewriting Based on the Optimization of the Psychological Counseling Conversation Process.

任务描述 请根据下述预定义的咨询对话阶段。对给定的对话数据集中的每段对话进行评估,判断对 话中各阶段之间的转移是否准确。自然且符合咨询逻辑。 评估指标为: **阶段转移准确率 = 正确转移阶段的对话数 / 总对话数**, 结果以百分比 Task Description
Please evaluate each segment of dialogue in the provided dialogue dataset according to the following predefined counseling conversation phases, judging whether the transition between phases is correct, natural, and consistent with counseling logic. **预定义对话阶段及其功能目标: ** Phase-transition accuracy = (Number of dialogue segments with correct phase transitions) ÷ (Total number of dialogue segments), expressed as a percentage. **阶段1: 初步评估阶段** Predefined Dialogue Phases and Their Functional Goals
Phase 1: Initial Assessment
Functional Goal: Gather basic information from the client and establish trust through friendly greeting and empathic **功能目标**: 收集患者基本信息,并通过友好问候和共情表达建立信任。 **阶段2: 问题探索阶段** Phase 2: Problem Exploration Functional Goal: Delve into detailed aspects of the client's problem, exploring background events, social support Functional Goa and coping resp **功能目标**:深入了解患者问题的详细情况,探索背景事件、社会支持及应对方式。 **阶段3: 问题确认阶段** Phase 3: Problem Clarification
Functional Goal: Synthesize and analyze information to identify the root causes of the problem and achieve a shared **功能目标**:综合分析信息,明确问题成因,与患者达成共识。 understanding with the client Phase 4: Explanation & Education Functional Goal: From a psychological perspective, explain the causes and mechanisms of the problem, express empathy, and boltest the client's confidence. **功能目标**:从心理学视角解释问题成因和机制,表达共情并增强患者信心。 Phase 5: Intervention & Strategy Implementation
Functional Goal: Propose intervention strategies, encourage the client to try different methods, and reinforce social support. · **功能目标**: 提出干预策略, 鼓励尝试不同方法, 并强化社会支持。 Phase 6: Summary & Outlook Functional Goal: Summarize the session, confirm progress, express continued support, and foster a positive outlook **阶段6: 总结与展望阶段** Evanation Requirements
Phase Transition Check:
For each dialogue segment, verify whether it transitions reasonably from one phase to the next (e.g., a smooth shift from Initial Assessment to Problem Exploration). **功能目标**: 总结会谈、确认进步、表达持续支持, 形成积极展望。 **评估要求** Flow Conformity: Judge whether the observed phase transitions match the expected counseling flow (e.g., natural progre Phase 1 to Phase 2). 1. 对每段对话,检查是否存在合理的阶段转移,即对话中从一个阶段平稳过渡到下一个 2. 判断各阶段之间的转移是否符合预期的咨询流程(例如,从初步评估阶段自然过渡到 Compute the ratio of segments with correct phase transitions to the total number of segments, then convert to a percentage (e.g., "Phase-transition accuracy: 80%"). Brief Analysis: Indicate which phase transitions are handled correctly and where transitions show issues or gaps. 4. 请给出简要说明,指出哪些阶段转移表现准确、哪些阶段转移存在问题或缺失。 **输出格式** Output Format
Phase-transition accuracy: XX%
Analysis: [Concise explanation of your findings and details] 复制遵循率百分比: XX% 分析说明: 简要描述理由和细节。

Figure A-3: Evaluation Prompt for Dialogue Process Step Adherence.

任务描述 Task Description
Please evaluate each dialogue segment in the given dataset against the following predefined counseling flow steps, judging whether the dialogue proceeds in an orderly fashion according to the prescribed consulting steps. Evaluation metric: Number of steps followed / Total number of predefined steps, expressed as a percentage - **预定义对话阶段及其功能目标: ** **阶段1:初先评估阶段** - **功能目标**: 收集患者基本信息,并通过友好问候和共情表达建立信任。 Functional Goal: Gather the patient's basic information and establish trust through friendly greetings and **阶段2: 问题探索阶段** Phase 2: Problem Exploration **功能目标**:深入了解患者问题的详细情况,探索背景事件、社会支持及应 Functional Goal: Delve deeply into the details of the patient's issue, exploring background events, social 对方式。 Phase 3: Problem Clarification **阶段3: 问题确认阶段** Functional Goal: Synthesize and analyze information to pinpoint the problem's root causes and reach a shared understanding with the patient. - **功能目标**: 综合分析信息,明确问题成因,与患者达成共识。 **阶段4:解释与教育阶段** Functional Goal: From a psychological perspective, explain the causes and mechanisms of the problem, express empathy, and bolster the patient's confidence. - **功能目标**: 从心理学视角解释问题成因和机制,表达共情并增强患者信 Phase 5: Intervention & Strategy Implementation **阶段5: 干预与策略实施阶段** Functional Goal: Propose intervention strategies, encourage the patient to try different methods, and reinforce - **功能目标**: 提出干预策略, 鼓励尝试不同方法, 并强化社会支持。 ocial support. Phase 6: Summary & Outlook **阶段6: 总结与展望阶段** Functional Goal: Summarize the session, confirm the patient's progress, express ongoing support, and foster a - **功能目标**: 总结会谈、确认进步、表达持续支持,形成积极展望。 对每段对话,检查是否涵盖了预定义的所有阶段。
 计算对话中实际遵循的步骤数与预定义步骤总数的比例,并转换为百分比(例 Calculate the ratio of actually followed steps to the total number of predefined steps and convert it to a percentage (e.g., "Adherence rate: 75%"). 如: 遵循率百分比: 75%) 3. 请给出简要说明,阐述哪些步骤得到了有效体现、哪些可能缺失或顺序不当。 Provide a brief explanation indicating which phases were effectively represented and which may be missing or Output Format Adherence rate: XX% 复制遵循率百分比: XX% Analysis Explanation: [Brief reasoning and details] 分析说明: 简要描述理由和细节

Figure A-4: Evaluation Prompt for Dialogue Stage Transition Accuracy.

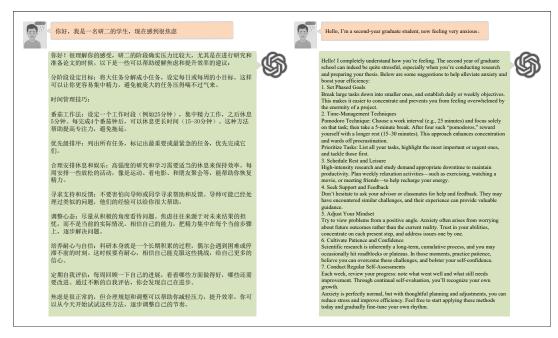


Figure A-5: ChatGPT Dialogue Example.

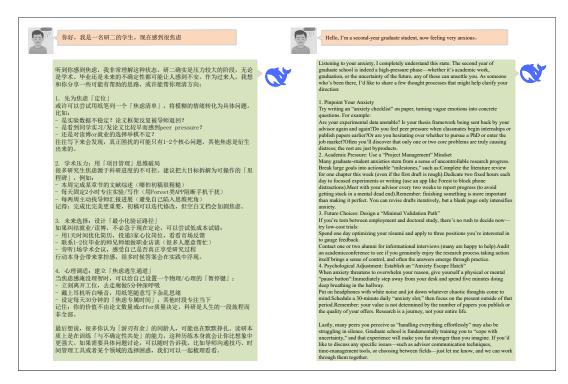


Figure A-6: DeepSeek Dialogue Example.



Figure A-7: Qwen2.5-7B Dialogue Example.



Figure A-8: MeChat Dialogue Example.



Figure A-9: MindChat Dialogue Example.



你好,我是一名研二的学生,现在感到很焦虑。Hello, I'm a second-year graduate student, now feeling very anxious.

你好,感谢你前来咨询。能告诉我你焦虑的原因吗?Hello, thank you for coming. Could you tell me what's causing your anxiety?





马上就要中期答辩了,但是我现在还是没有一个理想的实验结果。My midterm defense is coming up soon, but I still don't have any satisfactory experimental results.

听起来你为实验结果感到担忧。中期答辩是一个重要的环节,它能反映你的研究进展。我们可以一起探讨一下如何应对这种情况。It sounds like you're worried about your experimental results. The midterm defense is an important milestone—it reflects the progress of your research. Let's explore together how you might handle this situation.





好的。Okay.

首先,我们可以从你的研究计划开始。你能告诉我你的研究计划吗?First, we can start with your research plan. Can you tell me what your research plan is?





问题就出在这,我的导师到现在都没有给我一个合理的研究计划。That's exactly the problem—my advisor still hasn't given me a reasonable research plan.

了解你的困扰。在这种情况下,我们可以尝试寻找一些资源,以便你更好地了解你所研究的主题。同时,我们可以探讨一些可能的实验方法,以期达到一个理想的实验结果。你同意吗?I understand your difficulty. In this case, we can try to seek out some resources so you can gain a better understanding of your topic. At the same time, we can discuss possible experimental approaches in hopes of achieving an ideal result. Does that sound good to you?



Figure A-10: CPsyCounX Dialogue Example.



你好,我是一名研二的学生,现在感到很焦虑。Hello, I'm a second-year graduate student, now feeling very anxious.

你好,很高兴你能来这里分享你的感受。请问是什么事情让你感到焦虑呢? Hello, I'm glad you're here sharing how you feel. May I ask what's causing your anxiety?





我担心不能通过答辩。I'm worried I won't pass my defense.

这种担心是很常见的,尤其是在面对重要事件的时候。能具体告诉我你担心不能通过答辩的原因吗? That kind of concern is very common, especially when facing something important. Could you tell me specifically why you're worried about not passing?





我目前还没有一个理想的实验结果,可能达不到通过答辩的标准。At the moment I still don't have any ideal experimental results, so I may not meet the standards to pass.

看来你对自己实验的结果有很高的期待。你能分享一下你的实验遇到了哪些困难吗? It sounds like you have very high expectations for your experiment's outcome. Can you share what difficulties you've encountered?





主要是我的导师,直到现在也没有给我一个清晰的研究方案,导致前期做了很多无用功,现在就算有 清晰的路线了也做不完实验了。It's mainly my advisor—he still hasn't given me a clear research plan, so I did a lot of work that turned out to be useless. Even now, with a clearer roadmap, I can't finish all the experiments in time.

听起来你感到了很大的挫败感,而且这种挫败感来自于你和导师之间的沟通问题。这种情况对你来 说一定很不容易吧? I hear how frustrated you feel, and it seems that frustration stems from communication issues with your advisor. That must be really tough for you.





我觉得得有一个清晰的研究方案。I feel like I need a clear research plan.

那么,你认为你可以做些什么来制定这样一个方案呢? So, what do you think you could do to develop such a plan?





看论文啥的,但是没啥用啊,最终还是得按照导师的方法去做。I read papers and so on, but it doesn't help much—I still end up following whatever method my advisor tells



很棒,你愿意尝试新的方法,这表明你已经准备好向前迈进了。在接下来的几天里,你可以尝试记 录下自己每天的放松时间,并注意观察这对你的情绪有何影响。That's a great sign that you're open to trying new approaches—it shows you're ready to move forward. Over the next few days, you might try logging when you take breaks or relaxation time each day, and observe how that influences your mood





好的,我明白了。Okay, I understand.

很好,记得,改变不是一夜之间就能发生的,所以请给自己一些时间去适应新的习惯。我们可以在下 次会议时讨论这个练习的结果,看看是否需要做出调整。如何? Excellent. Remember, change doesn't happen overnight, so give yourself some time to adjust to these new habits. At our next meeting, we can review how this exercise went and see if any adjustments are needed. How does that sound?





可以,谢谢你的帮助。Sure, thank you for your help.

太好了,那么我们就这样约定了。在我们下次见面之前,如果你有任何问题或需要支持,随时都可 以联系我。Wonderful. It's settled, then. Before our next session, if you have any questions or need support, feel free to contact me anytime.



Figure A-11: PsyDTLLM Dialogue Example.

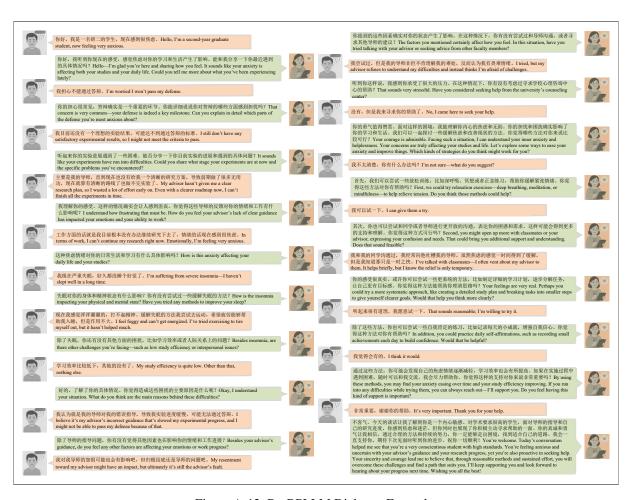


Figure A-12: PsyBPLLM Dialogue Example.