

## Case Conceptualization and Analogy

The case conceptualization (sometimes called a case formulation) (Kuyken, Padesky, and Dudley 2008) is a critical link in the development of psychotherapeutic treatment decisions (L. 2005), generally refers to the therapist's collective understanding of the client's presenting issues as viewed through a particular theoretical framework.

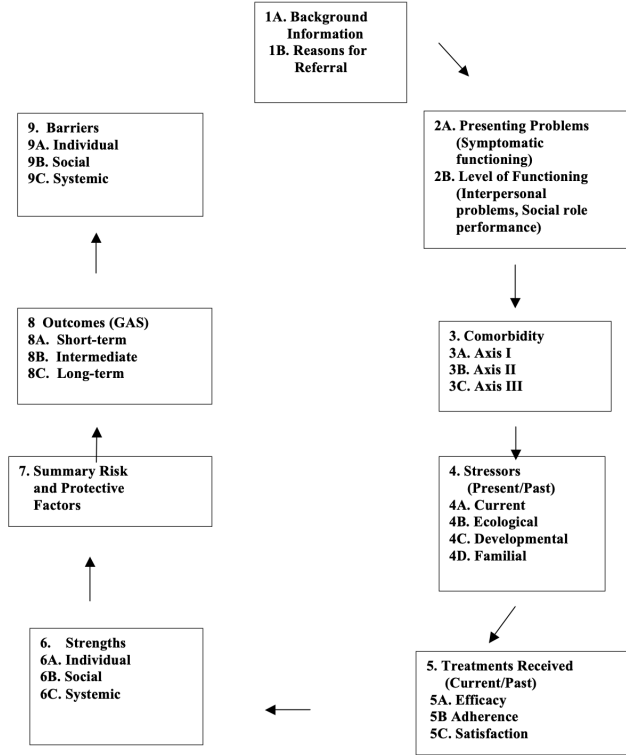


Figure 7: The framework of Meichenbaum's 9-Box Generic Case Conceptualization Model.

Steps for writing a case conceptualization are listed in Table 7.

Case Conceptualization	Expansion Steps
Clarify <i>C</i> 's problem	Get <i>C</i> 's first Q
Gather information	Annotate KG
Formulate hypotheses	Diagnosis QAs
Plan interventions	Recommends
Write down	Form <i>T</i> 's response

Table 7: The analogy is the process of case conceptualization in counseling to several sub-scenarios that help to slice and expand our original text to the multi-turn conversation. *C* and *T* refer to the client and therapist respectively.

## Examples of Question based on CCM

In addition, in order to make the counselor's questions in the dialogue dataset more in line with real scenarios, we have referred to some question templates provided in Meichenbaum's "Computer Generated Report Based on the Case

Conceptualization Model" (Meichenbaum 2014) to further assist counselors in sorting out the problems of the clients to clarify reasonable conversation goals and use appropriate helping techniques.

**BOXES 1& 2: REFERRAL SOURCES AND PRESENTING PROBLEMS** "What brings you here is ...? (distress, symptoms, present and in the past)"

"And is it particularly bad when..."

"But it tends to improve when you..."

"And how is it affecting you (in terms of relationship, work, etc)"

**BOX 3: COMORBIDITY** "In addition, you are also experiencing (struggling with)..."

"And the impact of this in terms of your day-to-day experience is..."

**BOX 4: STRESSORS** "Some of the factors (stresses) that you are currently experiencing that seem to maintain your problems are...or that seem to exacerbate (make worse) are... (Current/ecological stressors)"

"And it's not only now, but this has been going on for some time, as evident by..." (Developmental stressors)

"And it's not only something you have experienced, but your family members have also been experiencing (struggling with)..."

"And the impact on you has been..." (Familial stressors and familial psychopathology)

**BOX 5: TREATMENT RECEIVED** "For these problems the treatments that you have received were-note type, time, by whom"

"And what was most effective (worked best) was... as evident by..."

"But you had difficulty following through with the treatment as evident by..." (Obtain an adherence history)

"And some of the difficulties (barriers) in following the treatment were..."

"But you were specifically satisfied with...and would recommend or consider..."

**BOX 6: STRENGTHS** "But in spite of...you have been able to..."

"Some of the strengths (signs of resilience) that you have evidenced or that you bring to the present situation are..."

"Moreover, some of the people (resources) you can call upon (access)are..."

"And they can be helpful by doing..." (Social supports)

**BOX 7: SUMMARY OF RISK AND PROTECTIVE FACTORS** "Have I captured what you were saying?" (Summarize risk and protective factors)

"Of these different areas, where do you think we should begin?" (Collaborate and negotiate with the patient a treatment plan. Do not become a "surrogate frontal lobe" for the patient)

**BOX 8: OUTCOMES (GOAL ATTAINMENT SCALING PROCEDURES)** "Let's consider what are your expectations about the treatment. As a result of our working

together, what would you like to see change (in the short-term)?"

"How are things now in your life? How would you like them to be? How can we work together to help you achieve these short-term, intermediate and long-term goals?"

"What has worked for you in the past?"

"How can our current efforts be informed by your past experience?"

"Moreover, if you achieve your goals, what would you see changed?"

"Who else would notice these changes?"

**BOX 9: POSSIBLE BARRIERS** "Let me raise one last question, if I may. Can you envision, can you foresee, anything that might get in the way- any possible obstacles or barriers to your achieving your treatment goals?" (Consider with the patient possible individual, social and systemic barriers. Do not address the potential barriers until some hope and resources have been addressed and documented.)

"Let's consider how we can anticipate, plan for, and address these potential barriers."

"Let us review once again..." (Go back over the Case Conceptualization and have the patient put the treatment plan in his/her own words. Involve significant others in the Case Conceptualization Model and treatment plan. Solicit their input and feedback.)

Reassess with the patient the treatment plan throughout treatment. Keep track of your treatment interventions using the coded activities (2A, 3B, 5B, 4C, 6B, etc.) Maintain progress notes and share these with the patient and with other members of the treatment team.)

"And some of the services you can access are..."

## Ideal Topics for Volunteer Clients to Talk About in the Labs

**Data Source** Given privacy concerns, it is difficult to obtain real-world consultation records. Therefore, we first collected a 2.6GB knowledge base with a large number of psychologically oriented books, scales, past counselor exam papers, and other materials. Then, we analyzed public cases and in-depth descriptions from popular counseling books (KAMA 2015; Sherry, Paula, and Cynthia 2009; Hill 2009). To better fit the online context, we also selected conversations from PsyQA (Sun et al. 2021), a Chinese dataset of psychological health support with the Helping Skills Theory. To ensure the controllability of the content generated by the agent system, the topics are in the ideal topic list for the laboratory activity (see Appendix B).

After collection, we filter private information, divide long cases into several meetings manually, and ultimately collect 4,000 single texts as the origin input.

- Academic issues (e.g. studying, test anxiety, choosing a major or graduate program)
- Career; future plans
- Pets
- Problems at work
- Public-speaking anxiety
- Roommate issues
- Romantic relationships
- Feelings about technology
- Happy childhood memories
- Hobbies and extracurricular activities
- Problems with health
- Minor family issues
- Autonomy-independence struggles
- Minor relationship concerns
- High school experiences
- Financial difficulties
- Problems with physical appearance