

A Mixed Methods Study on Illness and Medication Perceptions and Adherence to Oral Anticancer Agents among Patients with Gastrointestinal Tract Cancer

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Introduction

- Oral anticancer agents (OAA) gained popularity in the past two decades and become the first-line treatment for Gastrointestinal (GI) tract cancer.
- Patients with GI tract cancer reported suboptimal adherence to OAA, reducing the therapeutic benefit and increasing mortality risk.
- The Common-Sense Model of Self-Regulation (**Figure 1**) emphasizes that patients' perception of illness and medication determines their medication adherence, which has not been applied in managing adherence among patients with GI tract cancer.
- The purpose of this study is to explore how these perceptions concurrently influence adherence among this population.

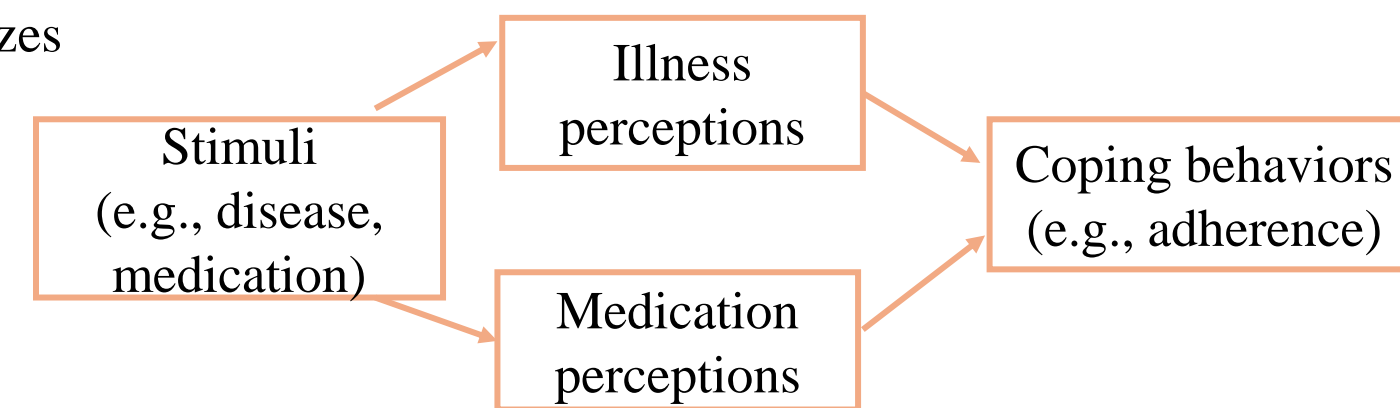


Figure 1 Common-Sense Model of Self-Regulation applied in this study

Methods

- **Study design:** A convergent mixed methods study design (**Figure 2**), which combines the advantages of both quantitative and qualitative approaches.
- **Settings:** Four tertiary hospitals in three provinces (e.g., Yunnan, Guangxi, and Shandong provinces) of Mainland China.
- **Participants**
 - **Inclusion criteria:** Adult patients with GI tract cancer who received at least one OAA treatment cycle and were willing to participate.
 - **Exclusion criteria:** who were critically or terminally ill, had been diagnosed with mental problems or were participating in drug clinical trials.
- **Data collection**

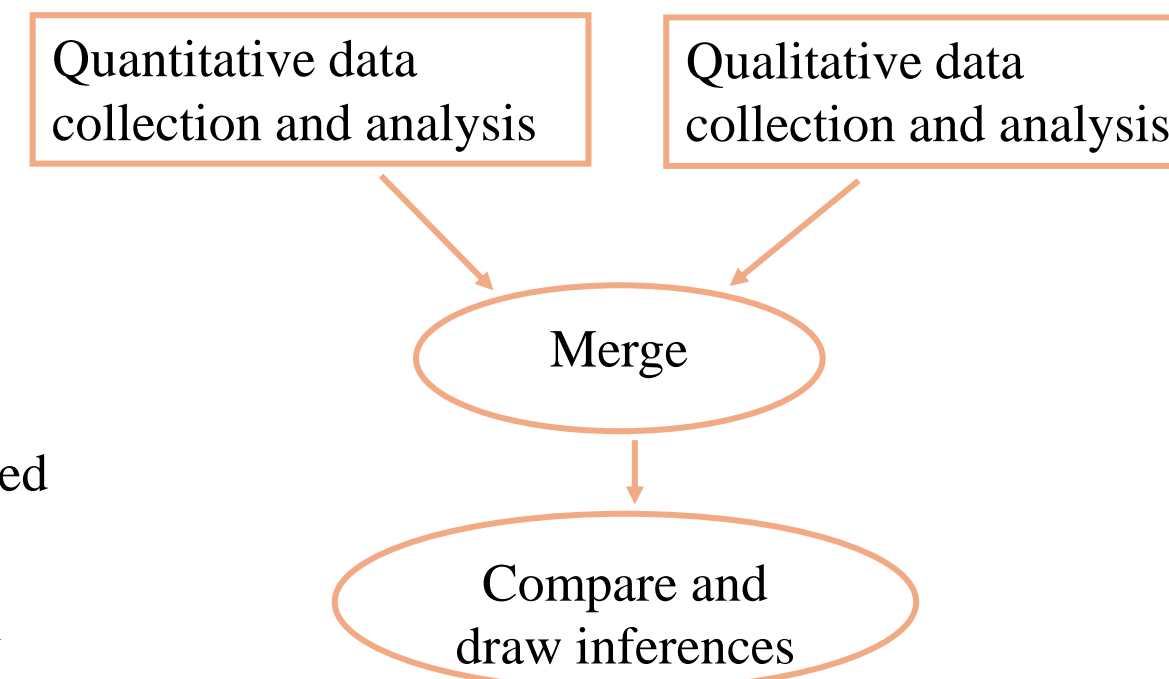


Figure 2 The convergent mixed methods study design in this study

Quantitative part

- A convenient sample of 253 patients completed
- Illness perception: Brief Illness Perception Questionnaire
 - Medication perceptions:
 - ✓ Medication belief: Belief about Medicines Questionnaire, measured necessity and concern of taking OAA
 - ✓ Medication Self-efficacy: Self-efficacy for Appropriate Medication Use Scale
 - Adherence: Morisky 4-item Medication Adherence Scale, answer "No" to four items were regarded as good adherence

Qualitative part

- A purposive sample of 37 participants involved
- Recruited from a pool of quantitative survey participants
 - Follow the principle of maximum information variation on variables of education, marital status, Eastern Cooperative Oncology Group performance status, cycles of taking OAA, insurance, and residence
 - Individual semi-structured interviews
 - Face-to-face or phone call methods
 - Audiotaped, verbatim transcribed

Data analyze

- Quantitative data: correlation and mediation analyses
- Qualitative data: content analyses
- The integration of quantitative and qualitative data: Side-by-side comparisons and joint displays

- **Ethical approval** SBRE-22-0809 from the Chinese University of Hong Kong

Results

- **Good adherence** (adherence score = 4): 58.9% (149 out of 253 participants)

	Quantitative findings (n=253)	Qualitative findings (n=37)
Relationship with adherence	<ul style="list-style-type: none"> ➤ Illness perceptions <ul style="list-style-type: none"> • Higher illness perceptions were associated with lower medication self-efficacy, higher medication concern, and lower adherence to OAA ➤ Medication perceptions <ul style="list-style-type: none"> • Higher medication self-efficacy was associated with higher adherence, whereas medication belief (e.g., necessity and concern) was not associated with adherence to OAA ➤ Illness and medication perceptions <ul style="list-style-type: none"> • Illness perceptions influence adherence via significant direct effects and indirect effects on medication self-efficacy (Figure 3), the indirect effects explained 26.63% of the total effect. 	<ul style="list-style-type: none"> ➤ Illness perceptions <ul style="list-style-type: none"> • Acknowledging that cancer is incurable with oncoming death, patients had a strong desire to live longer • Lacking medical knowledge, patients lay a priority to follow healthcare providers' prescriptions (e.g., OAA) to extend their lifespan. ➤ Medication perceptions <ul style="list-style-type: none"> • Considering OAA was effective, tolerable, and accessible, patients highlight their active role in taking OAA • Suffered barriers (e.g., adverse effects, large size and unpleasant smell of OAA, polypharmacy, and forgetfulness) and emotional resistance to take OAA, patients rationalized their nonadherent behaviors.
Mixed methods findings	<ul style="list-style-type: none"> ➤ Patients play an active role in adherence, their perception of GI tract cancer and OAA concurrently influence adherence to OAA ➤ Illness perceptions influence adherence via its negative effect on medication self-efficacy. ➤ Patients did not evaluate OAA in necessity and concerned dimensions, medication belief was not associated with adherence to OAA 	

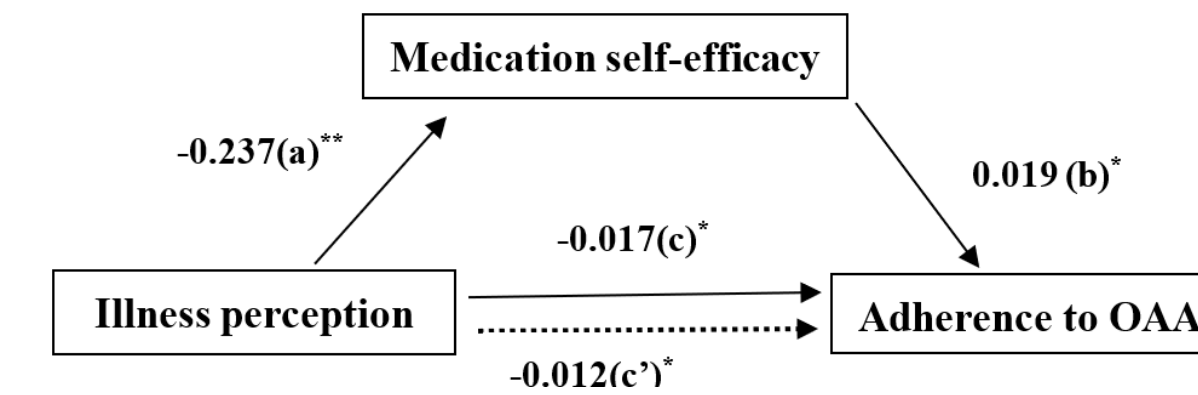


Figure 3 The mediation model in this study

Conclusions and Implications

- Patients with GI tract cancer reported suboptimal adherence to OAA and rationalized the nonadherent behaviors, which informs the routine practice to help patients understand the mechanism and importance of continuously taking OAA.
- Illness perceptions negatively influence adherence via direct effect and indirect effects on medication self-efficacy, which imply healthcare providers strengthen patients' positive illness perceptions and empower techniques to overcome barriers to adherence.

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Disclosures

- None

References



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