

Reflection from college students after a designed interactive speech of advance care planning: A qualitative study with theme analysis by large language model

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Introduction

- In Jan 2019, Taiwan officially approved the Patient Autonomy Law (PAL) which allows all citizens in Taiwan to make advance decisions (AD) for 5 critical conditions. According to the law, all citizens wishing to make an AD must go through official advanced care planning (ACP) performed by certified healthcare professionals (HCP). However, the public awareness is relatively low especially for college students.
- The objective of the study is to evaluate the reflection from college students after a designed interactive speech of advance care planning.
- This is a qualitative study with theme analysis assisted by large language model and traditional thematic analysis.

Methods

- We designed a two-hour interactive speech of advance care planning especially for college students.
- The program was promoted by website and all university in Taiwan could apply for the speech as long as there are more than 100 participants per speech.
- The speech was then provided for free by Dr. Wei-Min Chu, who is a palliative care physician and also a certified ACP healthcare professional.
- After speech, each students was given a “reflection card” and told to leave words of reflection after the speech.
- We used both traditional thematic analysis as well as ChatGPT (ChatGPT 4o, OpenAI, Announcement of GPT-4o: May 13, 2024) for theme analysis of all collected reflection cards.



Figure 1. Promotion banner of the speech open to university students in 2017-2018



Figure 2. Twenty speeches were given to 20 universities in Taiwan during 2017-2018

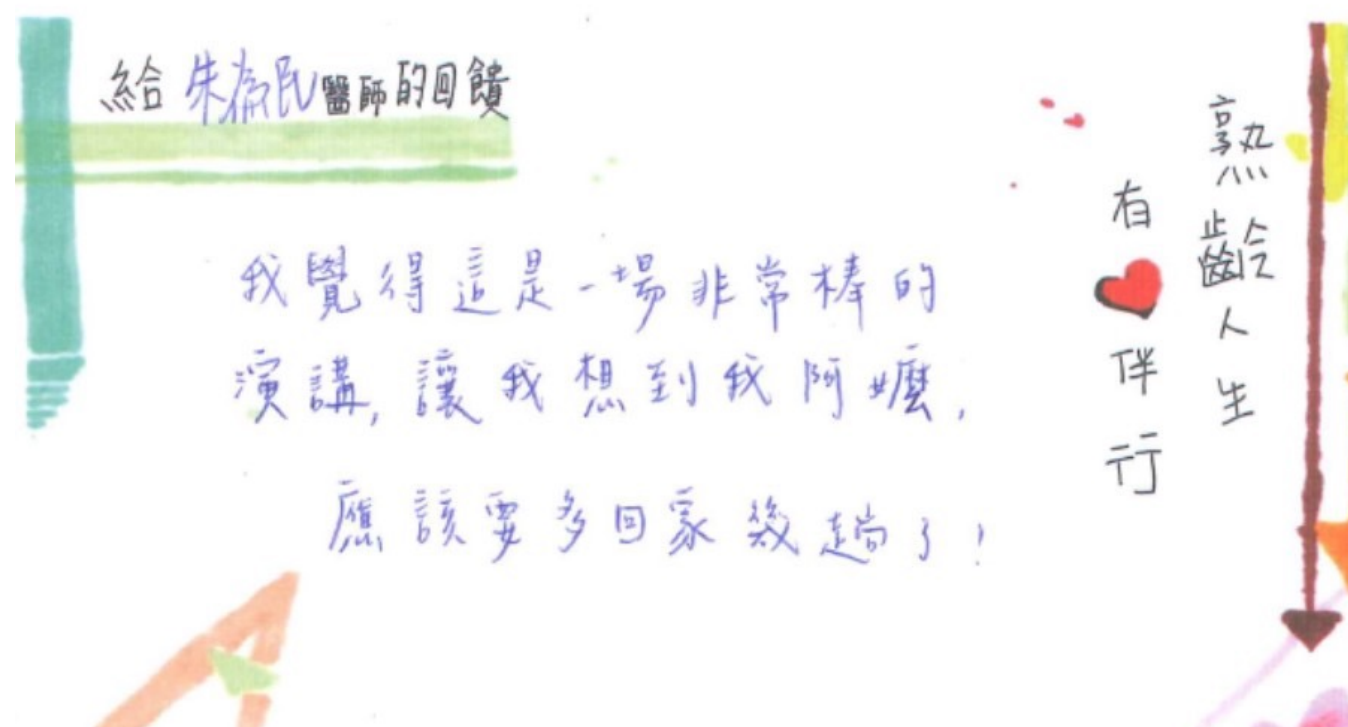


Figure 3. Each students was given a “reflection card” and told to leave words of reflection after the speech.

Results

- In 2017-2018, 20 universities in Taiwan applied for the speech.
- A total of 1,761 reflection cards were collected after the speech.
- The theme analysis by ChatGPT of the students' reflections on the speech about advance care planning initially revealed several common themes across five identified topics, including **Gratitude and Appreciation, Advance Care Planning Awareness, Emotional Reflections and Personal Growth, Acknowledgment of Healthcare Professionals and Expressions of Love and Regret.**
- Further traditional thematic analysis revealed seven identified topics, including **Boundaries and Distance of Death, Experience and Process of Decision-Making, Gazing at Others' Experiences from Illness, Aging, to Death, Dialogue Between Life and Death, Facing the Uncertainty of Death: The Dilemma of Medical Decision-Making Within Family Relationships, Reflections on the End of Life, The Timing of Life Conversations Initiation.**

Conclusions

- The results of our study showed that a designed interactive speech of advance care planning could be an informative and motivative tool for college student to promote public awareness of advance care planning.
- Large language model approach is useful for initial theme analysis.
- However, traditional thematic analysis reflected more details of feedback in depth. Further study is warranted to improve the analysis by large language model.

Boundaries and Distance of Death	"We all know the impermanence of death, but at my current age (I'm 19) or my parents' age (50), we still feel that death is far away from us."
Experience and Process of Decision-Making	"A few years ago, I also experienced the passing of my grandfather. Some of my family members regretted it because my grandfather had already been ill for some time. Back then, we respected my grandmother's decision to have him stay in a nearby hospital for easier care, instead of sending him to a larger, more distant hospital for better treatment. After listening to your lecture, I started to wonder, was that decision really the right one?"
Gazing at Others' Experiences from Illness, Aging, to Death	"A few months ago, my grandmother passed away due to illness. At that time, I saw her with tubes all over her body, unable to walk, and entirely dependent on others. Because the illness dragged on for so long, the family's patience was also worn out. We all spoke less and less with my grandmother, and eventually, she stopped wanting to talk as well. I believe that if we had discussed this matter in advance, we might have been able to make the best decision for her, and the family's relationships wouldn't have deteriorated, leaving us with regret."
Dialogue Between Life and Death	"I remember one year during the Qingming Festival, my family went to sweep the graves. Afterward, my parents took me to a cemetery and pointed to a specific spot, telling us that this would be their future home. Hearing that at the moment really frightened me."
Facing the Uncertainty of Death: The Dilemma of Medical Decision-Making Within Family Relationships	"Ten years ago, my grandfather fell from the roof and was in a coma for five days, with many of his organs damaged. Later, we prayed to the gods, and he was saved. But today, ten years later, he suffers from dementia, depression, and limited mobility. I often wonder, is this really better for him?"
Reflections on the End of Life	"Love for family isn't just expressed while we're alive; even at the moment of departure and after we are gone, we must continue to leave that love behind, ensuring our family isn't burdened, and allowing them to carry on with the love I have for them as they live a wonderful life."
The Timing of Life Conversations Initiation	"Don't wait until the last moment to express gratitude, apologize, show love, or say goodbye. Every day, every moment, don't hesitate to tell others. It's not just about life, aging, illness, and death; we never know when an accident may occur. Treat each separation as if it were the last moment."

Figure 4. Results of qualitative analysis of 1,761 reflection cards with traditional thematic analysis assisted by large language model

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