

Qualitative Data Analysis Using Artificial Intelligence

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How it all began...

- In the fall of 2023, the American Evaluation Association advertised a course on qualitative analysis using ChatGPT.
- I became curious as to the possibilities of using AI as a tool for textual analysis.
- However, given the difficulty of paying for the course, I decided to explore this internally within ISSP.
- An opportunity arose: a Master's thesis.

General Purpose

- To explore the utility of AI in qualitative data analysis.
- Setting: Master of Public Health Thesis:
“Exploring the Relationship of Heavy Metal and Rock Music on the Quality of Life of Lebanese Young Adults aged between 18-35 years old. An Experiential Perspective: A Qualitative Analysis”

PROCEDURE

- 25 original interviews were intended (men and women aged 18-30)
- However, the scarcity of respondents in that age group led to an increase in the age range (18-35)
- 11 total interviews
- Conducted either in person or online
- Each interview was transcribed

Generation of Results

- Each interview was transcribed verbatim.
- Next, three interviews were randomly selected and coded by the student and me.
- Results of both coders were then examined for cross-validation of the coding process.

USE OF AI

- ChatGPT, Claude AI, and Perplexity were selected in order to examine the collected data.
- The three coded interviews were entered into each of the AI assistants mentioned above.
- The prompt used requested the identification of codes and sub-codes, as well as the identification of quotes.
- Human analyses constituted the gold standard against which all three applications were compared.

Results

- Chat GPT showed the least amount of complexity in its analyses. It provided generic answers and lacked complexity in the themes generated. Moreover, the generated quotes were also generic and did not reflect respondents' experiences with much depth.
- Claude AI performed better. It still lacked complexity in generating themes and quotes.
- Perplexity performed the best. It provided an analysis similar to human analyses and provided quotes that were insightful and deep.

Some Study Results

- Respondents were attracted to the musicians' ability, their sense of rebellion, the powerful emotions they portrayed, and the significant lyrics.
- Listeners reported effects of listening to the music that included heightened feelings, emotional release, a relaxing effect, and an increase in focus and creativity.
- The music also promoted emotional expression, helped people cope with challenges, improved wellbeing, helped people establish their identities, and fostered a strong feeling of community.
- One negative outcome reported by respondents was the need to deal with misconceptions from uninformed groups that the music was satanic and encouraged violence.
- Overall, the results show these genres' significant influence on listeners' emotional processing, personal development, and active community participation.



What Next?

- The experience described opened the door to the potential of what AI can do in terms of assisting with qualitative data analysis.
- It is not clear what the outcome of such a comparison would be in June 2025.
- While the prompt used was relatively straightforward, developing prompts that could explore different approaches to qualitative research could be of use.



Final Thoughts

- What is a good strategy to explore the use of AI tools in qualitative research?
 - What are the tools that are better suited for research?
 - How do we set standards for using such tools?
 - Where do we cross the line between innovation and imitation?
- What are the risks of using such data with AI?
 - Sentient AI?
 - Skynet or HAL?
 - Confidentiality issues
 - Data confidentiality?
 - User confidentiality?

