

Maximizing Long-Term Care Resident Satisfaction Using the Kano Model

Presenter: Carly Haring, MS3
Mentor: Dan Rath, MD

University of South Dakota Sanford School of Medicine Scholarship
Pathways Program

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I have no financial relationships or conflicts of interest to disclose.

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The Kano Model

The Kano Model is a framework for prioritizing features to maximize satisfaction by categorizing survey responses into the following categories:

- **Must-Have:** fundamental expectations, that if unmet will diminish satisfaction
- **Performance:** proportionally improves satisfaction when present/absent
- **Attractive:** provides additional value, but absence does not decrease satisfaction
- **Indifferent:** no effect
- **Reverse:** presence of feature/service decreases satisfaction

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Introduction

- Increasing demand for long-term care centers
- Understanding resident values is essential to delivering high quality care and enhancing quality of life
- Study from 2021 by performed at a VA long-term care center inspired this project (Inman, K. & Bushen, O)
- 11 domains of quality of life: comfort, functional competence, autonomy, dignity, privacy, individuality, meaningful activity, relationships, enjoyment, security, and spiritual well-being (Kane et al., 2003)

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Project Goal & Purpose

Provide a long-term care administration with insight on how to prioritize features and services to maximize resident satisfaction by exploring residents' values through questions across 11 quality-of-life domains and analyzing the responses using the Kano Model.

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Methods

Participants

- Voluntary participation offered to all long-term care residents at a South Dakota long-term care center
- Post-acute, rehab, and hospice residents not included
- 27 residents were excluded due to the following reasons: ill at time of project, unable to hear interviewer, unable to communicate with interviewer, declined to participate
- N=33 residents

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Methods

Survey

- 11 Features/Services were assessed in 3 ways:
 - (a) How would you feel if you had this feature/service?
 - (b) How would you feel if you did NOT have this feature/service?
 - (c) How important is it for you to have this feature/service on a 1-10 scale?
- Multiple choice response to (a) and (b):
 - I like it (enjoy it)
 - It's a basic necessity; I expect it that way
 - I am neutral
 - I dislike it, but I can live with it that way (can tolerate it)
 - I dislike it, and I can't accept it

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Methods

Kano Analysis

- (a) How would you feel if you had this feature/service?
(b) How would you feel if you did NOT have this feature/service?

- Answers from part (a) and (b) are used to categorize the responses into their appropriate category using the chart below

		Feature Absent				
		Like it	Expect it	Neutral	Live with	Can't accept
Feature Present	Like it	Q	A	A	A	P
	Expect it	R	Q	I	I	M
	Neutral	R	I	I	I	M
	Live with	R	I	I	Q	M
	Can't accept	R	R	R	R	Q

M = Must-Have
P = Performance
A = Attractive
I = Indifferent
R = Reverse
Q = Questionable

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(Zacarias, n.d.)

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Methods

Kano Analysis – Prioritization of Features

- Categories: Must-Have > Performance > Attractive > Indifferent
- How to prioritize items that end up in the same category
 - Importance rankings from part (c) of survey
 - “How important is it for you to have this feature/service on a 1-10 scale?”

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Results

Survey Item	Must	Perf.	Attr.	Indiff.	Quest.	Rev.	Primary Category
Enjoying Food	5	8	13	7	0	0	Attractive
Staff Taking Interest	6	5	11	9	0	2	Attractive
Security of Possessions	15	9	3	5	1	0	Must-Have
Permission to Leave	11	9	9	4	0	0	Must-Have
Sleep Schedule	13	6	8	6	0	0	Must-Have
Help When Needed	20	5	5	3	0	0	Must-Have
Shared Decision Making	14	8	5	6	0	0	Must-Have
Room Temperature	12	13	5	3	0	0	Performance
Religious Activities	8	12	7	5	1	0	Performance
Organized Activities	5	9	9	9	1	0	Performance
Private Phone Call	7	7	7	12	0	0	Indifferent

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Results

Order of Priority for
Maximum Satisfaction

- | | | |
|----------------------------|--------------------------------------|---------------------------|
| 1. Help When Needed | 4. Shared Decision Making | 8. Organized Activities |
| 2. Security of Possessions | 5. Choosing their own Sleep schedule | 9. Enjoying Food |
| 3. Permission to Leave | 6. Room Temperature | 10. Staff Taking Interest |
| | 7. Religious Activities | 11. Private Phone Call |

Must-Have	Performance	Attractive	Indifferent
Help When Needed (9.21)	Room Temperature (9.18)	Enjoying Food (7.79)	Private Phone Call (6.61)
Security of Possessions (8.70)	Religious Activities (8.48)	Staff Taking Interest (6.45)	
Permission to Leave (8.42)	Organized Activities (7.15)		
Shared Decision Making (8.15)			
Sleep Schedule (7.52)			

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Conclusions

- Provides administrators with resident-oriented and data-driven guidance to improve resident satisfaction
- The results are only valid for the population that participated, so they are not necessarily generalizable to other long-term care centers
- Repeating the project regularly would help provide the most accurate data
- Consider including surrogates to complete the survey for those who were excluded due to communication barriers
- Future projects could evaluate the effectiveness of how the above features/services are being implemented
- The discrete analysis method of the Kano Model categorizes features into distinct groups, which may oversimplify the preferences of long-term care residents and overlook variations in individual perceptions.

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Conclusions

How does this compare to the 2021 study that inspired this project?

- Hard to compare for the following reasons:
 - Surveys were not identical
 - Different demographics: predominantly men vs women, veteran's affairs vs faith-based health system
 - During vs after Covid-19 pandemic
- Of Note:
 - Both showed receiving help when needed as Must-Have and ranked highest importance
 - Making a private phone call was a performance item and ranked 2nd most important in the 2021 study, while it was indifferent and ranked least important in the current project

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Thank You



Carly Haring, MS3
 USD Sanford School of Medicine
Carly.Haring@coyotes.usd.edu

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