

Between Ideal and Realistic Practice of Terminal Situations: An International Comparison among Physicians, Nurses, and other Caregivers

Daisuke Watanabe, Ph.D.[†], Taeko Nakashima, Ph.D.^{††}, Kanao Tsuji, M.D.^{†††}

[†]Seikei University ^{††}Institute for Health Economics and Policy ^{†††}Life Care System.

Purpose:

To improve terminal care, particularly home-based care, professionals have to require collaboration of people with various occupations. Through international comparing among three professionals, the purpose of this study was to investigate the awareness of various professionals in terminal care in order to compare with long-term care experiences, occupations, and views of life and death.

Data:

Data were drawn from a sample of 323 physicians, nurses, and caregivers from 5 countries (Japan, South Korea, Australia, Czech Republic, and Israel) in October to December 2010. To clarify the ideal terminal approach and realistic one, the questionnaire included a **fictitious case of person with dementia** who was diagnosed as pneumonia and was unable to swallow foods. Investigation centered care facilities and clinics which had experienced terminal care service, and which were chosen by convenient sampling.

Methods:

Correspondence analysis (CA) was used to show graphically associations between differences in country and ideal and realistic choice and the reasons of Mr. B's case

Logistic regression was used to determine the relationship between ideal and realistic *practices' gaps* as outcome variables and occupation, job experiences, views of life and death, and other variables (i.e. sex, age, years of education, and country) as explanatory variables.

Table1: overviews of countries of this study

	Japan	South Korea	Australia	Israel	Czech Republic
Ageing rate (65+), 2010	23.1%	11.0%	14.3%	15.4%	10.2%
LE. at birth*, 2009 male / female	M: 79.6 F: 86.4	76.8 83.8	79.3 83.9	79.7 83.5	74.2 80.5
Old age social spending**, 2007	8.8%	1.6%	4.3%	4.3%	6.9%
Length of stay***, 2008/2009	18.5	—	5.8	4.0	7.1
QOD score, 2010	4.7	3.7	7.9	—	—

* Life Expectancy at birth, ** Old age social spending: public social expenditure as a percentage of GDP
*** Average length of stay: acute care, Days

Sources:
Eiu.com, 2010, *The Quality of Death: Ranking end-of-life care across the world.*
IMF, 2011, *World Economic Outlook Database.*
OECD, 2010, *Key Tables from OECD.*
OECD, 2011, *Health Statistics.*

Fictitious Case of Mr. B.

Mr. B (80 yrs. old) lives with his wife at home. It has been 10 years since he was diagnosed with dementia (Alzheimer's disease). Although his consciousness is not impaired, he only responds to families and direct care workers with eye movements. In general, it is extremely difficult for him to communicate with others. About a half month ago, he had high fever and cough, so he went to hospital and was diagnosed with pneumonia. Currently, he is unable to swallow foods, and he takes medicine and nutrition through IV (intravenous drip). Because he cannot receive nutrition by mouth, he may need artificial nutrition (e.g. tube feeding) shortly. His wife (80 yrs. old) hopes to have him stay and spend last days at home. She also hopes to spend as long a time with him as possible. Their financial condition is stable because they own a house and receive employee's pension. Yet, her caregiving capacity is low, and there is no relative nearby. Therefore, she is very worried about her additional caregiving burden.

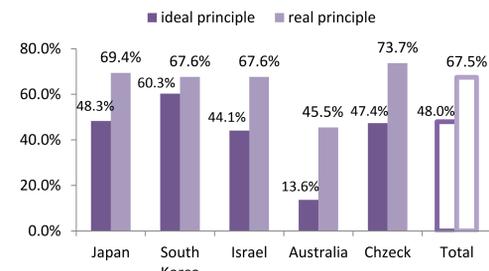


Figure 3(center): ratio of artificial nutrition as ideal and real principle of response

Figure 1(left upper): gap between ideal and realistic final place

Figure 2(left lower): gap between ideal and realistic principle of response

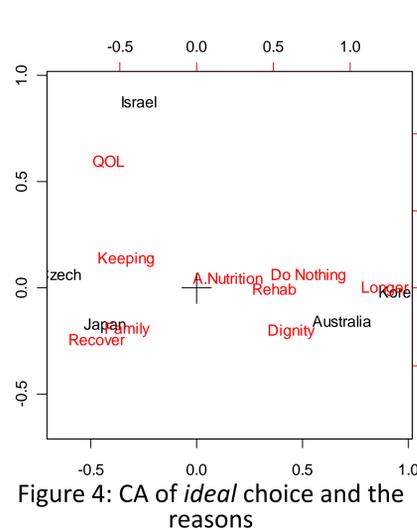


Figure 4: CA of ideal choice and the reasons

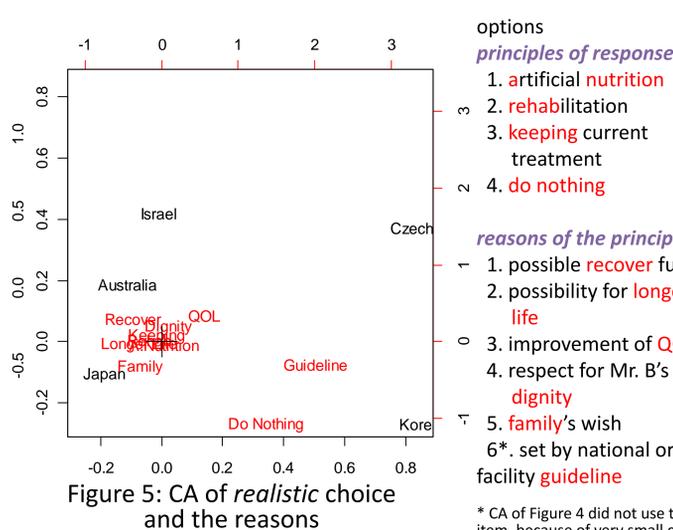


Figure 5: CA of realistic choice and the reasons

- options
principles of response
1. artificial nutrition
 2. rehabilitation
 3. keeping current treatment
 4. do nothing
- reasons of the principle
1. possible recover fully
 2. possibility for longer life
 3. improvement of QOL
 4. respect for Mr. B's dignity
 5. family's wish
 - 6*. set by national or facility guideline

* CA of Figure 4 did not use the item, because of very small case (4 case)

Results:

31.3% respondents gave different answers between ideal and realistic practices about a place to spend the patient's final days (final place), and 57.0% respondents gave different ones about a basic principle in working with the case (principle of response) (figure 1, 2). In Japan, Israel, Korea and Czech, more than 40 % respondents chose "Artificial nutrition" as ideal principle, whereas Australians who chose that were 13.6% (figure 3). As the result of CA, the positions of the points of ideal choice and the reasons of principle of response indicate that Australians were associated with respect for Mr. B's dignity, and Japanese were associated with Family's wish and possible recover fully (figure 4). The positions of the points of realistic ones indicate that countries grew in diversity.

As the result of logistic regression, the gap of final place was significant associated with country, age, experiences of home-based long-term care, patient's death experience at workplace, and one view of ideal death about cost. The gap of principle of response was significant associated with country, job, case judgments about whether the case was terminal phase or not, and one view of ideal terminal care about communication (table 2).

Implications:

Two gaps have different structures which have only one common factor, country. These various gaps may cause the communication gaps between occupations or between such views. In terminal situation, professionals require collaboration of people with various occupations. In order to make good collaboration, this implication enhances mutual understanding, and will support new policy-making for public support system for terminal care and death education.

Table 2: results of logistic regression

variable (reference)	value	gap between ideal and realistic place of final days		gap between ideal and realistic principle of response	
		OR	95% CI	OR	95% CI
country (Czech)	Japan	.208	(.038 - 1.147)	.346	(.102 - 1.172) †
	South Korea	.026	(.004 - .161) **	.205	(.052 - .815) *
	Israel	.101	(.017 - .588) *	.651	(.169 - 2.502)
	Australia	.227	(.035 - 1.451)	.576	(.135 - 2.457)
sex (female)	man	1.694	(.869 - 3.305)	1.611	(.841 - 3.085)
age		.961	(.930 - .994) †	.987	(.955 - 1.020)
years of education		1.112	(.916 - 1.351)	1.118	(.929 - 1.345)
professionals (physicians)	nurse	.657	(.195 - 2.218)	6.261	(1.822 - 21.512) **
	care worker	1.128	(.331 - 3.847)	9.136	(2.713 - 30.768) ***
years of long-term care		1.030	(.990 - 1.072)	1.002	(.960 - 1.046)
years of home-based long-term care		.950	(.900 - 1.003) †	1.002	(.943 - 1.065)
exp. ¹ of care for families	Yes	1.364	(.746 - 2.492)		
exp. of family's death	Yes	.981	(.539 - 1.785)		
exp. of patient's death at work	Yes	.551	(.310 - .981) *		
is the case in the terminal?	Yes	1.160	(.677 - 1.987)	.317	(.183 - .548) ***
f.s. ² (ideal death: death in a short time that causes no problems)		1.553	(1.127 - 2.138)	.918	(.683 - 1.234)
f.s. (ideal death: prepared death surrounded by family)		1.207	(.804 - 1.811)	.879	(.585 - 1.319)
f.s. (ideal EOL care ³ : spending as much time as possible together)		.796	(.558 - 1.136)	1.175	(.822 - 1.678)
f.s. (ideal EOL care: Short term and low cost end-of-life care)		1.130	(.807 - 1.582)	1.052	(.754 - 1.467)
f.s. (ideal EOL care: End-of-life care allowing communication)		1.194	(.843 - 1.690)	1.459	(.969 - 2.198) †
Intercept.		3.786		.159	
Model fit					
-2LL		360.314		346.734	
Nagelkerke's R square		.318		.219	
N		323		323	

† p<.10, * p<.05, ** p<.01, *** p<.001

¹ exp.: experience, ² f.s.: factor score, ³ EOL care: end of life care