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Priorities of a "good death" according to cancer patients, their family caregivers, physicians, and the general population: a nationwide survey

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Abstract
Purpose Understanding the concept of a "good death" is crucial to end-of-life care, but our current understanding of what constitutes a good death is insufficient. Here, we investigated the components of a good death that are important to the general population, cancer patients, their families, and physicians.
Methods We conducted a stratified nationwide cross-sectional survey of cancer patients and their families from 12 hospitals, physicians from 12 hospitals and the Korean Medical Association, and the general population, investigating their attitudes toward 10 good-death components.
Findings Three components—"not be a burden to the family," "presence of family," and "resolve unfinished business"—were considered the most important components by more than 2/3 of each of the three groups, and an additional three components—"freedom from pain," "feel that life was meaningful," and "at peace with God"—were considered important by all but the physicians group. Physicians considered "feel life was meaningful," "presence of family," and "not be a burden to family" as the core components of a good death, with "freedom from pain" as an additional component. "Treatment choices' followed, "finances in order," "mentally aware," and "die at home" were found to be the least important components among all four groups.

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Conclusion While families strongly agreed that "presence of family" and "not be a burden to family" were important to a good death, the importance of other factors differed between the groups. Health care providers should attempt to discern each patient's view of a good death.

Keywords Good death · Attitudes toward death · End-of-life · Cancer

Introduction

Even though medical developments have enabled the prolongation of life, human death is inevitable. A "good death" is increasingly recognized as an appropriate goal of medicine and is vital to palliative and end-of-life (EOL) care [1–5]. Efforts to ensure that end-of-life patients experience a good death are considered a worthy activity for physicians, family, and society as a whole [6].

The concept of a good death has been explored by various disciplines, including sociology and psychology, and in various countries, including the USA [7], Japan [4], the Netherlands [2], China [8], and Taiwan [9]. The characteristics of a good death have been described in Britain [10], the USA [11], Australia [12], and in a composite of 42 Western studies [13]. According to an Institute of Medicine report, a good death is "free from avoidable distress and suffering for patient, family, and caregivers, in general accord with the patient's and family's wishes, and reasonably consistent with clinical, cultural, and ethical standards" [9, 14].

A good death is a dynamic concept that has evolved over time, influenced by cultural values [1, 3, 11, 15, 16]. The discrepancies of perspectives among the various stakeholders involved in the care of individual patients may influence the quality of EOL care and lead to further investigation of the components of a good death [1, 14]. Only a few studies, however, have investigated the core components of a good death as viewed by patients, family members, and physicians with the same questionnaire [4, 14, 16, 17].

The aim of this study was to investigate among patients, family members, physicians, and the general population the perceived components of a good death and the relative importance of each of those components.

Methods

Design and setting

For this multi-centered cross-sectional study, we enrolled the following four groups from July through October 2016: cancer patients and family caregivers from 12 large South Korean hospitals, medical doctors from the same hospitals and the Korean Medical Association (KMA), and the general Korean population.

Participants

Patients

Oncologists at 12 hospitals (11 general hospitals and Korea's National Cancer Center) were asked to identify cancer patients at their outpatient clinics. Those who were willing to participate were eligible if they were at least 18 years old, understood the intent of the study, could communicate well with an assistant, and were able to complete the questionnaires. Those who qualified to participate were given information about the study and asked to complete a questionnaire with the help of trained research staff. A total of 6024 patients were contacted, and 1001 completed the total study process (16.6% response rate).

Family caregivers

Cancer patient caregivers from the 12 outpatient clinics were given information about the survey directly and then completed the questionnaire with the help of trained research assistants. Those who were unable to finish the questionnaire, were not comfortable communicating with an interviewer, not able to understand the study, or did not provide informed consent were excluded. Of the 5017 caregivers who were contacted, 1006 completed the survey (20.1% response rate).

Physicians

The physician survey was conducted online. We sent each physician an e-mail with a recruitment packet that included an application form and instructions for participating in the study; 928 physicians participated. The response rate was about 30% when compared with the total number of contacted physicians. In the specialty of physicians, internal medicine was the most (27.2%), followed by family medicine (10%) and radiology (5.9%). In the case of status, the faculties were the most (39.5%), followed by residents and fellows.

General population

Our goal was to survey about 1000 members of the general Korean population, aged 20–70 years and distributed over 17 major cities and local districts. At each site, we conducted the study in two strata (age and sex) according to the guidelines of the 2015 Census of Korea. For final

sample selection, we used a probability-proportional-to-size technique, which is widely used and recommended for obtaining a national representative sample [18]. This method is most useful when the sample groups vary considerably in size as it assures that the probability of getting into the sample is greater for members of larger groups than for members of smaller ones [18]. The research staff of World Research, Inc., in Korea, conducted the survey using a structured questionnaire and professional interviewers; 1241 Koreans participated.

Measurement

The questionnaire asked participants (a) which of 10 components of a good death was the most important, (b) whether the society is suitable for "good death," and (c) what their sociodemographic characteristics were (sex, age, education level, employment status, religion, and income).

The factors considered most important for a good death

To obtain a list of factors related to a good death, we performed a literature review using PUBMED and other databases searching the keywords "good death." We reviewed and accepted several concepts and factors, especially those from studies investigating patients, families, and physicians [4, 14, 16, 17]. Based on that review, we constructed our list of good death factors. The participants were asked to choose which two of the following ten factors are most important for a good death: (1) presence of family, (2) not being a burden to the family, (3) resolving unfinished business, (4) feeling that life was meaningful, (5) being free of pain, (6) being at peace with God, (7) getting treatment choices, (8) having finances in order, (9) being mentally aware, and (10) dying at home.

Attitudes toward death

Based on past research conducted in Korea [19] and Taiwan [5] and a review of literature related to defining a good death, we constructed five items about attitude toward death [14]. The survey asked about attitudes toward death as follows: "What do you think about dying and death?" and included the five following items: (1) death as the ending of life, (2) death as painful, (3) death as the beginning of an afterlife, (4) being charitable at death, and (5) being remembered. Each item was rated on a 4-point Likert scale (1 = strongly agree, 2 = agree, 3 = disagree, and 4 = strongly disagree).

Scores determining whether our society is suitable for a good death

We asked participants to rate whether Korean society is suitable for a good death on a scale from 0 to 100. The exact question was "Assuming that a society where everyone lives a happy and meaningful life, is comfortable, and has beautiful experiences is 100 points, and a society where everyone is unhappy and lives meaninglessly and is suffering and miserable is zero points, how many points do you think Korean society should get?". Higher scores reflected belief in higher suitability for a good death.

Statistical analysis

First, to enhance the generalizability of the findings, we weighted observations from physicians according to age and sex distribution of the physician population using Korean Medical Association statistics [20]. We then presented the factors considered important to a good death in the four groups with numerical values and percentages, and we ranked them in numerical order.

We selected the factors that were considered important to a good death and had received more than 10% positive responses among the total population. We then constructed multiple stepwise logistic regression models to examine the associations of those factors with demographic characteristics and attitudes toward dying and death separately. From those models, we excluded demographic factors and attitudes toward dying and death that were not significantly associated with any factors considered crucial to a good death. Finally, we performed multiple, stepwise logistic regression analyses by including both demographic factors and attitudes toward dying and death that were not excluded in previous analyses.

To investigate the associations of demographic factors and core factors of a good death with scores determining whether a society is suitable for a good death (scores < 70 vs ≥ 70), we constructed multiple stepwise logistic regression models adjusted for those factors. We used SAS statistical software version 9.4 (Cary, NC) for all analyses and calculated two-sided p values.

Results

A total of 4176 individuals—1001 cancer patients and 1006 family caregivers from the 12 hospitals, and 928 physicians from the 12 hospitals and the KMA (the three stakeholder groups), and 1241 members of the general Korean population—participated in this study. Table 1 shows the socio-demographic characteristics of the respondents. There were more female respondents in all groups

Table 1 Sociodemographic characteristics of the 4176 participants in a survey

Characteristic		General population $n = 1241$ No. (%)	Cancer patients $n = 1001$ No. (%)	Family caregivers $n = 1006$ No. (%)	Physicians $(n = 928)$ No. (%)
Sex	Male	612 (49.3)	390 (39.0)	324 (32.2)	565 (60.9)
	Female	629 (50.7)	610 (60.9)	682 (67.8)	363 (39.2)
Age (years)	< 40	460 (37.1)	123 (12.3)	292 (29.05)	612 (66.0)
	40–49	260 (20.95)	211 (21.1)	304 (30.25)	222 (23.9)
	≥ 50	521 (41.98)	667 (66.6)	409 (40.7)	94 (10.1)
Education	Middle school or less	179 (14.4)	205 (20.5)	75 (7.5)	0 (0)
	High school	493 (39.7)	433 (43.3)	401 (39.9)	0 (0)
	College or higher	569 (45.9)	363 (36.3)	530 (52.7)	928 (100)
Employed	No	473 (38.1)	737 (74.1)	569 (56.6)	0 (0)
	Yes	768 (61.9)	257 (25.9)	437 (43.4)	928 (100)
Religion	No	727 (58.6)	462 (46.2)	494 (49.1)	386 (42.0)
	Yes	514 (41.4)	539 (53.8)	512 (50.9)	540 (58.7)
Monthly income, in 1000 Korean won	< 2000	133 (10.7)	260 (26.0)	117 (11.6)	0 (0)
	2000–2999	183 (14.7)	196 (19.6)	183 (18.2)	0 (0)
	3000–3999	357 (28.8)	217 (21.7)	260 (25.8)	0 (0)
	≥4000	568 (45.8)	328 (32.8)	446 (44.3)	928 (100)
Health Insurance	National Health Insurance	1215 (97.9)	948 (94.6)	981 (97.5)	928 (100)
	Medicaid	26 (2.1)	53 (5.3)	25 (2.5)	0 (0)

except for the physicians group, and the average age of respondents was 46.

Rank of factors considered important to a good death

Among the 10 items involved in a good death, "presence of family" was selected as the most important (24.7%, $n = 1029$), followed by "not a burden to family," "resolve unfinished business," "feel life was meaningful," "freedom from pain," and "at peace with God" (Table 2). Three components in particular—not being a burden to family, presence of family, and resolve unfinished business—were considered the most important components by more than 2/3 of those in the three stakeholder groups, and an additional three components—freedom from pain, feel life was meaningful, and at peace with

Table 2 Ranking in importance of the components of a good death by the four participating groups

Component	Total[a] $(n = 4176)$	General population[b] $(n = 1241)$	Cancer patients[b] $(n = 1001)$	Family caregivers[b] $(n = 1006)$	Physicians[b] $(n = 928)$
Presence of family	1029 (24.7)	21.9 (2)	24.5 (2)	25.9 (1)	27.1 (2)
Not be a burden to family	931 (22.3)	22.4 (1)	27.7 (1)	25.5 (2)	12.9 (3)
Resolve unfinished business	738 (17.7)	19.7 (3)	18.8 (3)	20.8 (3)	10.3 (5)
Feel life was meaningful	574 (13.8)	12.1 (5)	7.9 (5)	8.7 (5)	27.8 (1)
Freedom from pain	430 (10.3)	13.5 (4)	11.9 (4)	9.5 (4)	5.0 (6)
At peace with God	257 (6.2)	4.3 (6)	4.8 (6)	5.4 (6)	11.0 (4)
Treatment choices	67 (1.6)	1.2 (9)	1.5 (7)	1.2 (8)	2.7 (7)
Finances in order	54 (1.3)	2.4 (7)	0.7 (10)	0.9 (9)	0.8 (9)
Mentally aware	50 (1.2)	0.4 (10)	1.1 (9)	1.3 (7)	2.2 (8)
Die at home	47 (1.1)	2.0 (8)	1.2 (8)	0.9 (9)	0.1 (10)

[a] Values are presented as n (%) for total counts

[b] Values are presented as % (rank) for participant group

God—were considered important components by two of the three stakeholder groups, but not by physicians (Table 2).

Factors considered important to a good death by demographic characteristics

Table 3 shows the association between demographic characteristics and choice of factors important to a good death. Educational level was associated with five of the factors, caregiver experience with none.

Factors considered important to a good death by attitude toward death

Table 4 shows the associations between five attitudes toward dying and death and the factors of a good death. "Not be a burden to family" and "resolve unfinished business" were associated with the attitude that death was the ending of life. "Feel life was meaningful" was significantly associated with the negative attitude that death was painful and to be feared. The attitude of being remembered was not associated with any core factors.

Table 3 Factors considered important to a good death by demographic characteristics

	Presence of family			Not be a burden to family			Resolve unfinished business	
	Negative	Positive	p value[b]	Negative	Positive	p value[b]	Negative	Positive
Sex								
Male	1546 (76.0)	488 (24.0)	N.S.	1582 (77.8)	451 (22.2)	N.S.	1715 (84.3)	319 (15.7)
Female	1600 (74.7)	542 (25.3)		1662 (77.6)	479 (22.4)		1724 (80.5)	418 (19.5)
Age (years)								
< 50	1630 (71.9)	636 (28.1)	< 0.001	1831 (80.8)	435 (19.2)	0.005	1923 (84.9)	343 (15.1)
≧ 50	1517 (79.4)	393 (20.6)		1414 (74.1)	495 (25.9)		1515 (79.3)	395 (20.7)
Education								
Middle school or less	376 (81.9)	83 (18.1)	0.028	339 (73.9)	120 (26.1)	0.003	346 (75.4)	113 (24.6)
High school	1028 (77.5)	299 (22.5)		978 (73.7)	349 (26.3)		1047 (78.9)	280 (21.1)
College or higher	1651 (72.5)	626 (27.5)		1839 (80.8)	438 (19.2)		1952 (85.8)	325 (14.3)
Religion								
No	1498 (73.4)	543 (26.6)	0.004	1584 (77.6)	457 (22.4)	N.S.	1650 (80.8)	391 (19.2)
Yes	1647 (77.2)	487 (22.8)		1660 (77.8)	474 (22.2)		1789 (83.8)	345 (16.2)
Monthly income, in 1000 Korean won								
< 3000	817 (76.2)	255 (23.8)	N.S.	803 (74.9)	269 (25.1)	N.S.	853 (79.6)	219 (20.4)
≧3000	2303 (75.1)	764 (24.9)		2412 (78.7)	655 (21.4)		2552 (83.2)	515 (16.8)
Health insurance								
National Health Insurance	3017 (75.1)	998 (24.9)	N.S.	3131 (78.0)	884 (22.0)	0.047	3306 (82.4)	709 (17.7)
Medicaid	80 (76.9)	24 (23.1)		70 (67.3)	34 (32.7)		87 (83.7)	17 (16.4)
Comorbidity								
No	2242 (75.1)	742 (24.9)	N.S.	2367 (79.3)	617 (20.7)	0.024	2459 (82.4)	524 (17.6)
Yes	905 (75.9)	288 (24.1)		878 (73.7)	314 (26.4)		979 (82.1)	213 (17.9)
Caregiver experience								
No	1624 (76.9)	289 (23.1)	N.S.	1626 (77.0)	487 (23.0)	N.S.	1723 (81.5)	390 (18.5)
Yes	1523 (73.8)	540 (26.2)		1619 (78.5)	444 (21.5)		1716 (83.2)	347 (16.8)

	Resolve unfinished business	Feel life was meaningful			Freedom from pain		
	p value[b]	Negative	Positive	p value[b]	Negative	Positive	p value[b]
Sex							
Male	0.018	1712 (84.2)	322 (15.8)	N.S.	1835 (90.3)	198 (9.7)	N.S.
Female		1889 (88.2)	252 (11.8)		1910 (89.2)	232 (10.8)	
Age (years)							
< 50	0.009	1896 (83.7)	370 (16.3)	N.S.	2042 (90.1)	224 (9.9)	N.S.
≧ 50		1706 (89.3)	204 (10.7)		1705 (89.3)	205 (10.8)	
Education							
Middle school or less	0.008	421 (91.7)	38 (8.3)	< 0.001	393 (85.6)	66 (14.4)	0.001
High school		1217 (91.7)	110 (8.3)		1161 (87.5)	166 (12.5)	
College or higher		1868 (82.0)	409 (18.0)		2094 (92.0)	183 (8.0)	
Religion							
No	0.012	1778 (87.1)	263 (12.9)	N.S.	1797 (88.1)	244 (11.9)	0.001
Yes		1823 (85.4)	311 (14.6)		1948 (91.3)	186 (8.7)	
Monthly income, in 1000 Korean won							
< 3000	0.0257	982 (91.6)	90 (8.4)	< 0.001	929 (86.7)	143 (13.3)	0.031

Table 3 (continued)

	Resolve unfinished business	Feel life was meaningful			Freedom from pain		
	p value[b]	Negative	Positive	p value[b]	Negative	Positive	p value[b]
≥3000		2586 (84.3)	481 (15.7)		2781 (90.7)	286 (9.3)	
Health insurance							
National Health Insurance	N.S.	3456 (86.1)	559 (13.9)	N.S.	3609 (89.9)	406 (10.1)	N.S.
Medicaid		93 (89.4)	11 (10.6)		94 (90.4)	10 (9.6)	
Comorbidity							
No	N.S.	2520 (84.5)	464 (15.6)	0.001	2690 (90.2)	294 (9.9)	N.S.
Yes		1082 (90.8)	110 (9.2)		1057 (88.6)	136 (11.4)	
Caregiver experience							
No	N.S.	1828 (86.5)	285 (13.5)	N.S.	1871 (88.6)	242 (11.4)	N.S.
Yes		1774 (86.0)	289 (14.0)		1875 (90.9)	188 (9.1)	

[a] Multiple logistic regression models were run for each factor considered important to a good death and achieved more than 10% of positive response among total population (models with < 10% positive responses are not shown)

[b] p values were estimated using stepwise selection

N.S. not significant in multivariable analysis

Multivariate logistic regression models for factors considered important to a good death by sociodemographic factors and attitudes toward dying and death

By integrating two previous models, we performed stepwise multivariate logistic regression analyses for factors considered important to a good death by sociodemographic factors and by attitude toward dying and death (Table 5). "Presence of family" was inversely associated with age ≥ 50 years and presence of religion but positively associated with higher educational status. Age ≥ 50 years, lower educational status, comorbidity, positive attitude toward death as the end-of-life, and negative attitude toward death as painful were associated with "not be a burden to family." The third factor, "resolve unfinished business," was positively associated with female sex, older age, attitude that death was the ending of life, attitude that death was painful, and the belief in an afterlife but negatively associated with the attitude that the dying should forgive those who have offended or hurt them.

Correlates of demographic and core factors of a good death and scores determining whether Korean society is suitable for good death

Among the 4176 eligible patients, the mean score was 58.28 and the median was 60 in judging society's suitability for good death. Five percent of participants scored the suitability as 20, 25% as 50, 75% as 70, and 95% as 85. A total of 2680 (64.18%) respondents rated society as suitable for good death at > 70, and others scored suitability at < 70.

We constructed a multiple stepwise logistic regression model predicting scores that determined whether a society is

suitable for good death. Poor capability of preparation for good death (score < 70) was significantly associated with younger age, lower income level, the presence of comorbidity, caregiver experience, and negative attitude for an essential factor for a good death, such as "freedom from pain" (Table 6).

Discussion

Although physicians often avoid EOL discussions because they do not want to remove a patient's hope, patients and families fear a bad death more than death itself, and they hope for "a good death." Furthermore, preparation for death does not preclude hope [11].

This study had several unique findings. Three components—"presence of family," "not be a burden to family," and "resolve unfinished business"—were endorsed as the most important core components of a good death by three groups (general population, patients, and their family members) but not by physicians (60.3%). Physicians, in contrast, considered "presence of family" (27.1%) and "not be a burden to family" (12.9%) as core components. These findings are not in line with the US finding that "freedom from pain" was overwhelmingly endorsed as the most frequent component of a good death [17]. The difference might reflect the role of the family in the different countries. Individualism is more highly valued In Western societies than in Asia [3]. Asian cultures, including the Korean, might tend to emphasize family cohesiveness [15].

Many patients suffer from severe pain at the end-of-life. "Freedom from pain" was the first or second most

Table 4 Factors considered important to a good death by attitude toward death[a]

	Presence of family			Not be a burden to family			Resolve unfinished business			Feel life was meaningful			Freedom from pain		
	Negative	Positive	p value[b]	Negative	Positive	p value[b]	Negative	Positive	p value[b]	Negative	Positive	p value[b]	Negative	Positive	p value[b]
Life ends with death															
Negative	881 (76.9)	264 (23.1)	N.S.	931 (81.3)	214 (18.7)	0.001	982 (85.8)	163 (14.2)	0.001	976 (85.3)	169 (14.7)	N.S.	1029 (89.8)	116 (10.2)	N.S.
Positive	2266 (74.8)	765 (25.3)		2315 (76.4)	717 (23.6)		2457 (81.0)	575 (19.0)		2625 (86.6)	405 (13.4)		2718 (89.7)	313 (10.3)	
Death is painful and to be feared															
Negative	1398 (75.1)	463 (24.9)	N.S.	1430 (76.9)	431 (23.2)	N.S.	1578 (84.8)	282 (15.2)	0.009	1573 (84.6)	287 (15.4)	0.007	1720 (92.4)	141 (7.6)	<0.001
Positive	1749 (75.5)	567 (24.5)		1815 (78.4)	500 (21.6)		1860 (44.5)	455 (19.7)		2029 (87.6)	287 (12.4)		2026 (87.5)	289 (12.5)	
Life continues after death															
Negative	1437 (73.2)	526 (26.8)	0.003	1491 (76.0)	471 (24.0)	N.S.	1635 (83.3)	328 (16.7)	0.012	1680 (85.6)	283 (14.4)	N.S.	1775 (90.5)	187 (9.6)	N.S.
Positive	1710 (77.2)	504 (22.8)		1754 (79.2)	460 (20.8)		1804 (81.5)	410 (18.5)		1922 (86.8)	291 (13.2)		1971 (89.1)	242 (11.0)	
People should prepare to forgive															
Negative	312 (78.6)	85 (21.5)	N.S.	304 (76.6)	93 (23.4)	N.S.	302 (76.1)	95 (23.9)	<0.001	365 (91.8)	33 (8.2)	0.001	342 (86.1)	55 (13.9)	<0.001
Positive	2834 (75.0)	944 (25.0)		2941 (77.8)	838 (22.2)		3136 (83.0)	642 (17.0)		3237 (85.7)	541 (14.3)		3404 (90.1)	374 (9.9)	
People should be remembered															
Negative	266.8 (75.6)	86 (24.4)	N.S.	282 (80.2)	69 (19.8)	N.S.	290 (82.6)	61 (17.7)	N.S.	317 (90.2)	35 (9.8)	N.S.	293 (83.3)	59 (16.7)	N.S.
Positive	2881 (75.3)	944 (24.7)		2963 (77.5)	861 (22.5)		3148 (82.3)	676 (17.7)		3285 (85.9)	540 (14.1)		3453 (90.3)	371 (9.7)	

[a] Multiple logistic regression models were run for each factor considered important to a good death and achieved > 10% positive response in the total population (factors receiving < 10% positive responses are not shown)

[b] p values were estimated by stepwise selection

N.S. not significant in multivariable analysis

Table 5 Factors considered important to a good death by sociodemographic factors and attitudes toward dying and death[a]

	Presence of family		Not be a burden to family		Resolve unfinished business		Feel life was meaningful		Freedom from pain	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sex										
Male					1(Ref)					
Female	N.S.		N.S.		1.23	1.03, 1.46	N.S.		N.S.	
Age (years)										
< 50	1(Ref)		1(Ref)							
≥50	0.71	0.60, 0.83	1.27	1.07, 1.50	1.28	1.07, 1.53	N.S.		N.S.	
Education										
High school or less	1(Ref)		1(Ref)		1(Ref)		1(Ref)		1(Ref)	
College or higher	1.21	1.03, 1.42	0.75	0.63, 0.88	0.71	0.59, 0.86	2.07	1.66, 2.58	0.7	0.56, 0.88
Religion										
No	1(Ref)				1(Ref)				1(Ref)	
Yes	0.81	0.70, 0.93	N.S.		0.82	0.69, 0.97	N.S.		0.72	0.59, 0.89
Monthly income, 1000 Korean won										
< 3000							1(Ref)		1(Ref)	
≥ 3000	N.S.		N.S.		N.S.		1.36	1.05, 1.77	0.75	0.59, 0.95
Health insurance										
National Health Insurance										
Medicaid	N.S.		N.S.		N.S.		N.S.		N.S.	
Comorbidity										
No			1(Ref)				1(Ref)			
Yes	N.S.		1.22	1.03, 1.44			0.66	0.52, 0.83	N.S.	
Life ends with death										
Negative			1(Ref)		1(Ref)					
Positive	N.S.		1.38	1.15, 1.65	1.32	1.08, 1.62	N.S.		N.S.	
Death is painful and to be feared										
Negative			1(Ref)		1(Ref)				1(Ref)	
Positive	N.S.		0.79	0.68, 0.92	1.2	1.01, 1.43	N.S.		1.68	1.34, 2.09
Life continues after death										
Negative					1(Ref)					
Positive	N.S.		N.S.		1.28	1.08, 1.53	N.S.		N.S.	
People should prepare to forgive										
Negative					1(Ref)		1(Ref)			
Positive	N.S.		N.S.		0.63	0.49, 0.81	1.87	1.26, 2.76	N.S.	

[a] Multiple logistic regression models were run for each factor considered important to a good death that received > 10% of positive response among the total population (the models receiving < 10% of a positive response are not shown). Each stepwise-selected multiple logistic regression model was identified with significance level of 0.05

N.S. not significant in multivariable analysis

frequently cited core component of a good death in earlier studies in the USA [17] and Japan [4] but the fifth in our study, being less important especially among physicians, even as Korean clinicians have become more willing to prescribe opioids for cancer pain [21, 22]. The finding may follow from the fact that the 2005 cancer pain management guidelines, in which Korean national health insurance allowed opioid prescriptions, was disseminated.

The greatest discrepancy in frequency of components among the stakeholder groups was for "feel life was meaningful." In contrast to previous reports that the physicians' perspective of a good death was more biomedical than that of patients, families, and the general population [11], physicians in this study most frequently endorsed "feel life was meaningful" (27.8%) as the core component of a good death. For the other groups, "feel life was meaningful" came fifth as

Table 6 Factors related to scores for a society being suitable for a good death

	Score < 70 (ref: ≥ 70)	
	aOR[a]	95% CI
Sex		
Male		
Female	N.S.	
Age (year)		
≧ 50	1(Ref)	
< 50	1.19	1.02, 1.38
Education		
High school or less	1(Ref)	
College or higher	1.85	1.59, 2.16
Religion		
No		
Yes	N.S.	
Monthly income, in 1000 Korean won		
≧ 3000	1(Ref)	
< 3000	1.38	1.17, 1.64
Health insurance		
National Health Insurance		
Medicaid	N.S.	
Comorbidity		
No	1(Ref)	
Yes	1.4	1.19, 1.64
Caregiver experience		
No	1(Ref)	
Yes	1.97	1.71, 2.26
Presence of family		
Positive		
Negative	N.S.	
Not be a burden to family		
Positive		
Negative	N.S.	
Resolve unfinished business		
Positive		
Negative	N.S.	
Feel life was meaningful		
Positive		
Negative	N.S.	
Freedom from pain		
Positive	1(Ref)	
Negative	1.51	1.22, 1.87
At peace with God		
Positive		
Negative	N.S.	

[a] $p < 0.05$, stepwise-selected multiple logistic regression

N.S. not significant in multivariable analysis

a component of a good death. These findings stand in contrast to previous studies where "feel life was meaningful" was considered a less important component of a good death among various groups in the USA [17], Japan [15], the Netherlands [2], and China [8]. Another notable discrepancy is that "not be a burden to family," which was not important to physicians, was critical to patients and their families.

"Die at home" was found to be the least important component among all four groups, but studies suggest that too often patients die in hospitals in contrast to their wish to die at home [1, 2, 16] and to the hospice ideology that a home or "home-like" death promotes a good death [2]. Perhaps that is because families prefer a more skilled medical environment, or patients may want to save family members the burden of care at home even though they want their loved ones present [2].

Our finding that "resolve business" was more often considered to be important among female, older, lower-educated respondents without religious beliefs are in contrast to the results that "feel life was meaningful" was more often considered to be important among male, higher-educated, high-income respondents without comorbidity. Further studies designed to reveal the associations of characteristics and factors important to a good death are needed [5, 14].

Another interesting finding was that attitudes toward dying and death—"life ends with death," "death is painful," "life continues after death," and "people should prepare to forgive"—were associated with participants' opinions of the components of good death. Those findings suggest that intervention in the attitudes toward dying and death, such as reducing fear and referring patients to chaplains, could help lead to represent an important factor toward a good death [5, 14].

This study confirms that the concept of a good death varies with different stakeholders, cultures, and geography [3, 6, 13, 15] and is also individualized and related to personal perspectives, values, and experiences [9, 17]. These findings add evidence that attitudes toward what constitutes a good death vary among groups. Since the variation could make the achievement of a good death more elusive, it demands special attention [1, 12]. As in our findings, there is an extensive diversity of attitudes toward death, and there is a clear difference in attitude toward health care providers among different groups. Therefore, health care providers should receive more training to provide good death and practice to explore the relative importance of these components for each dying patient. Also, considering the various factors that could affect good death, health care providers need to adopt a more individualized view on dying patients through adequate communication and tailor the circumstances for each patient with a good death as the goal [7, 9, 14–16, 23].

This study has several limitations. First, although we administered nationwide questionnaires to four groups that included 4107 individuals, patients and family caregivers were recruited from 12 general hospitals, so generalization of the

findings should be made cautiously. To overcome this sampling limitation, however, we collected data from the general population with broad age, educational, and socioeconomic ranges and compared their attitudes. In the case of patients, we investigated the cancer patients at the oncologists' outpatient clinics in order to examine cancer patients who had thought about death sufficiently. A second limitation is that we conducted this study in Korea, and it therefore may not be generalizable to other cultures. Third, we limited the choice of components of a good death to 10, excluding other important components such as "unawareness of death" and "use of all available treatment." The nine components we did select, however, came from a Western study [17], enabling us to compare cultures. It included "not be a burden to family," which was selected as the most important component of good death in a Korean nationwide study done in 2004 [19]. Finally, we did not evaluate the power of this study. However, designing this study, we considered the characteristics of cross-sectional survey.

Compliance with ethical standards

All procedures in this study were performed in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or with comparable ethical standards. All participants provided written informed consent except for the general population, and the study was approved by the institutional review board of each hospital (IRB number: E-1612-102-815).

Conflicts of interest   The authors declare that they have no conflicts of interest.

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