



The Positive Influence of End-of-Life Care Awareness on Organ Donation Willingness among College Students

- A Case Study of Wuhan Area

Yixuan Huang^a, Tongfei Wang^b, You Li^{*}

Wuhan University of Technology, Wuhan city, Hubei Province 043000, China

^ahyxqsx1102@whut.edu.cn, ^bwtf112233@whut.edu.cn,
^{*}liyouapril@foxmail.com

Abstract. When individuals are reminded of death, they tend to engage in more positive social support behaviors. Given the negative status of social donation behaviors, this article takes college students in the Wuhan area as samples and, from the perspective of terror management theory, describes and analyzes the positive guiding role of end-of-life care awareness on organ donation among college students. The results show that end-of-life care awareness can effectively awaken college students' mortality salience significantly enhancing their willingness and consciousness of donation, and promoting them to engage in similar prosocial behaviors. This achievement can provide new ideas for promoting organ donation among the younger generation in society.

Keywords: End-of-Life Care, Terror Management Theory, Mortality Salience.

1 Introduction

Since organ transplantation began in our country, it has brought new hope to many patients. Organ donation has become crucial for its progress. Despite an increase in donation rates, it still can't meet the demand. In Wuhan, registered organ donors make up 0.2% of the population. College students, with their open-mindedness, have great potential in organ donation. Research shows that as people age, willingness to donate organs decreases^[1]. Therefore, young people are vital for the future of organ donation. We believe that increasing college students' awareness of end-of-life care may potentially encourage a deeper understanding of mortality, thus boosting organ donation willingness.

2 Approaches

When examining the intricate intersection of palliative care and Terror Management Theory (TMT) in shaping individuals' perceptions of life and death, we found that

deepening End-of-Life Care cognition significantly heightens individuals' mortality salience, prompting a deeper appreciation for life and a quest for cultural significance^[2].

TMT, proposed by Jeff Greenberg and others in 1986^[3], focuses on the psychological defense against mortality. It highlights the role of cultural worldviews and self-esteem in mitigating the fear of death (Solomon, Greenberg, & Pyszczynski, 2004) . Within the TMT framework^[4], Mortality Salience (MS) is crucial, indicating shifts in behavior and attitudes when individuals face their mortality to alleviate existential anxiety, revealing humanity's inherent fear of death and its coping strategies. Therefore, our first hypothesis suggests a positive correlation between End-of-Life Care and Mortality Salience.

In studying the psychological factors influencing organ donation willingness, Terror Management Theory is crucial. It suggests that heightened mortality salience drives individuals to seek solace by strengthening group belongingness. Florian et al. ^[5] extended this, proposing that close relationships also alleviate death anxiety. From this, we hypothesize that when college students encounter death-related topics, they reflect deeply on life's meaning and value, potentially leading to increased willingness to donate organs.

This study collected data from 155 undergraduate students in Wuhan, surpassing the required 134 valid samples determined by G*power calculations, and utilized the online platform "Wenjuanxing" to distribute the survey and minimize errors.

The survey questionnaire consisted of four parts: (1)Basic information questionnaire. (2)End-of-life care cognition survey aimed to comprehensively assess students' cognition of end-of-life care. (3)Death Anxiety Questionnaire (developed by Templer in 1970) indirectly assessed students' mortality salience. Although the questionnaire directly measured the level of death anxiety, it is an important manifestation of Mortality Salience, representing an inherent fear and concern about the inevitability of death. (4)Donation willingness survey.

3 Conclusion

3.1 Basic Sample Characteristics

A total of 155 valid questionnaires were collected. Among these, 51.61% were male and 48.38% were female. Additionally, 65.16% of the respondents were below 22 years of age, and 81.29% reported no religious affiliation.

Specific details are presented in Table 1.

Table 1. Frequency Statistics of the Sample

Characteristic	Option	Frequency	Percentage (%)	Cumulative Percentage (%)
Gender	Male	80	51.613	51.613
	Female	75	48.387	100
Age	Below 18	31	20	20
	18-22 Years	70	45.161	65.161

	Above 22 Years	54	34.839	100
Academic Year	Freshman	63	40.645	40.645
	Senior	68	43.871	84.516
	Postgraduate	15	9.677	94.194
	Doctor & above	9	5.806	100
Religious Belief	Yes	29	18.71	18.71
	No	126	81.29	100
Major	Humanities	19	12.258	12.258
	Science	34	21.935	34.194
	Engineering	10	6.452	40.645
	Education	35	22.581	63.226
	Medicine	25	16.129	79.355
	Business	22	14.194	93.548
	Other	10	6.452	100

3.2 Analyzing Willingness to Donate and Various Variables

According to the Spearman correlation analysis, the scores for Mortality Salience , End-of-Life Care, and willingness to donate exhibit a significant positive correlation. However, the correlation of other variables with the willingness to donate score is relatively low. Specific details are presented in Table 2.

Table 2. Correlation Coefficient Table

	Mean	SD	1	2.	3.	4.	5.	6.	7.	8.
1. Gender	1.484	0.501	1	0.076	-0.007	0.133	-0.064	0.05	0.062	-0.012
2. Age	2.148	0.728		1	0.778** *	0.043	0.217** *	0.042	-0.101	-0.031
3. Graduate	1.806	0.838			1	0.136	0.167**	0.054	-0.056	-0.053
4. Religious Belief	1.813	0.391				1	-0.135	0.052	-0.105	-0.084
5. Major	3.768	1.823					1	0.064	0.123	0.042

6. End- of- Life Care Score	6.316	1.892		1	0.358** *	0.543** *
7. Mor- tality Sali- ence Score	57.67 7	13.22 5			1	0.646** *
8. Do- na- tion Will- ing- ness Score	3.665	1.481				1

Note: ***, ** represent the significance levels of 1%, 5% respectively.

3.3 End-of-Life Care, Mortality Salience, and Willingness to Donate

To verify the relationship between end-of-life care awareness and mortality salience , and to confirm mortality salience as a mediator for studying end-of-life care awareness and willingness to donate organs, we used the Model 4 feature of the PROCESS macro in SPSS 27.0, employing a bias-corrected non-parametric percentile Bootstrap method for the intermediary effect test.

Table 3. Analysis of Mediation Effects (n=155)

	1. End-of-Life Care Score					2. Mortality Salience Score					3. Donation Willingness Score				
	Coeffi- cient	Error	t	P	Stand- ard	Coeffi- cient	Error	t	P	Stand- ard	Coeffi- cient	Error	t	P	Stand- ard
Constant	1.14	0.358	3.181	0.002** *	-	45.013	3.568	12.617	0.000** *	-	-0.846	0.461	-1.832	0.069*	-
1.	0.4	0.054	7.351	0.000** *	0.511	2.005	0.541	3.705	0.000** *	0.287	0.311	0.051	6.084	0.000***	0.398
2.											0.044	0.007	6.025	0.000***	0.394
R ²	0.261					0.082					0.403				
Adjusted R ²	0.256					0.07					0.392				
F	F(1, 153)=54.043, P=0.000***					F(1, 153)=13.725, P=0.000***					F(2, 152)=51.407, P=0.000***				

Note: ***, **, * represent the significance levels of 1%, 5%, 10% respectively.

According to Table 3, the results of the intermediary effect test demonstrate that the total effect of end-of-life care awareness score on willingness to donate score is 0.4, and this effect is significant.

Table 4. Mediation Effect Calculation Table (n=155)

Item	Total effect of c	a*b (95%BootCI)	Direct effect of c'	c'(p-value)
End-of-Life Care Score=>Mortality Salience Score=>Donation Willingness Score	0.4	0.048 - 0.148	0.311	0.000***

The results in Table 4 indicate that the end-of-life care awareness score has a significant positive effect on the mortality salience score ($a=2.005, p<0.001$), and simultaneously, the mortality salience score has a significant positive effect on the willingness to donate score ($b=0.044, p<0.001$). Therefore, the intermediary model established in this study demonstrates a partial mediating effect, supporting hypothesis one, namely, the positive correlation between end-of-life care awareness and Mortality Salience.

3.4 Discrepancy in Mortality Salience and Willingness to Donate

The mortality salience scores were arranged in descending order and divided into two groups: a low-score group (median = 2.5) and a high-score group (median = 5), with 75 individuals in each group. Significance and discrepancy analyses were conducted for the two independent samples. As show in table 5.

Table 5. Mann-Whitney U Test

Variable Name	Sample Size	Median	Test Statistic	P	Median Value Difference	Cohen's d Value
Donation Willingness Score	75	5	5020.5	0.000***	2.5	1.522
	75	2.5				
	150	4				
Note: ***, **, * represent the significance levels of 1%, 5%, 10% respectively.						

The Mann-Whitney U test showed a significant difference in willingness to donate scores between the two groups ($U = 5020.5, p = 0.000$). The Cohen's d value of 1.522 confirmed the substantial difference, supporting hypothesis two, indicating that mortality salience plays a positive role in donation behavior.

4 Discussion

The article, through empirical research, found that among 155 samples, end-of-life care can significantly evoke mortality salience, thereby enhancing individuals' willingness to donate. Hypothesis 1 and Hypothesis 2 are supported. As a manifestation of mortality salience, this study discovered the positive impact of end-of-life care on organ donation willingness under existing conditions.

The Dual-Process Model of Existential System Theory posits that mortality salience is an abstract operation of death, where participants receive an abstract and subtle reminder of death. This abstract death information leads individuals to process death information through abstract, absolute existential systems and tend to seek support from abstract things, such as cultural worldviews^[6]. On the other hand, death reflection belongs to a specific death reminder, where participants vividly imagine their own death scenes. This specific death information leads individuals to process it through specific, personalized existential systems and tend to seek support from concrete things, such as internal growth^[7]. Through validation, this study hopes to provide new insights for future organ donation experiments among university students.

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