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AN EMPIRICAL DIFFERENCE ANALYSIS OF TAIWAN'S LONG-TERM CARE 2.0 SERVICE QUALITY

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ABSTRACT

To meet the elderly needs, it is unwise to construct the elderly aid devices or service needs from the managerial perspective but listen to their voices and customize the relevant service demands. It is also important to lead the healthy elderly to come out and do something for the society, such as volunteering work, community services, guides, etc. to enrich their retirement lives and simultaneously contribute to the society. From the empirical results of statistical analysis, it was found that there are differences on age and living conditions but no differences on population variances. Therefore, the demands of each person vary depending on the age of retired elderly and their living status. It is hoped that the government and service providers would listen to their voices, understand their demands, address their dissatisfactions, and create a comfortable and healthy environment that would allow them to live happily

Keyword: Long-Term Care (LTC), Service demand, Service Satisfaction

1. INTRODUCTION

1.1Research motivations

The aging society is one of the challenges that Taiwan society has to face in the 21st century. Its influences are comprehensive, including politics, economy, finance, culture, education and family, and the most direct challenge it has to face is family care issue. The elderly who can still live a leisure life is the goal everyone would like to pursue, but for the elderly with disabilities or suffered from long-term serious illnesses that require the family members or others to take care of their daily life will generate a great impact to families. In response to the advent of aging society, the treatments and care needs deriving from physiological declining of the aging group has continued to emerge, so are an increase in huge medical expenses. In the future, the enhancement in the proportion of prevention and health promotion, effectiveness improvement in medical institutions, and home care encouragement after the elderly have been discharged from hospital will be some of the effective strategies to solve the continuous rise in global medical spending. Such aging population phenomenon has a deep and far-reaching impact on the whole society, such as an adjustment in consumer behaviors and the health care industry, life needs for the elderly, amendments in elderly laws and regulations, etc. Amid the continuous increasing trend of elderly population, the needs to satisfy the elderly local life will become increasingly

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urgent and cannot be underestimated.
The main causes of aging society in Taiwan include aging population structure, low fertility, chronic disease types, average life extension, as well as a transformation in family structure, manpower shrinkage in family care and other situations (Tsai, & Wang, 2008). In addition to the impact on health status and quality of life, the worsening problem of aging and low fertility caused by an imbalance in population structure will also increase the burden of medical expenses, social costs and the burdens of family care, thus affecting the overall allocation of national resources (Wu, Hong & Huang, 2009). This is also a global phenomenon, and particularly significant in the developed countries. A rapid increase in elderly population has also resulted in rapid growth of elderly population index. Currently, Taiwan has become one of the fastest aging countries in the world. Another problem that worth everybody's attention is that the rapid increase in elderly population is proportional to a progress in medical technologies, improvement in health care standards and the quality of life, and increasingly rich anti-aging research results, thus helping the average lifespan of people in our country to increase year by year.

1.2 Research purposes

The study intends to make in-depth interviews with experts and scholars through a focused discussion method to understand the public needs in Long-Term Care (LTC) and further confirm the service needs of caregivers. Secondly, through the statistical software SPSS, the difference between service demand and service satisfaction is discussed. In general, the specific purposes of this study can be summarized as follows:

1. To perform in-depth interviews with experts and scholars in a focused discussion manner to confirm the user service needs and service resources.
2. Exploring the difference between population variables and service demand and service satisfaction, as a basis for LTC policy operators to adjust service quality design, and to achieve the commitment to quality assurance for the elderly.

2. LITERATUREREVIEW

2.1 Long-Term Care Act 2.0 (LTCA 2.0)

The overall goal of LTCA 2.0 is to establish a high-quality, affordable and universal LTC service system to show the community-based spirit, provide the disabled people with basic care services, enjoy old age comfortably in their familiar environment, and ease the burden of family care. Therefore, a budget of NT$20.079 billion is expected to allocate to LTCA 2.0 resources, an increase of over four times as compared with $5.126 billion in 2016. The LTC Management Center evaluates that the linking of social resources such as medical treatment, LTC life support and other social resources can be done through the community's overall care model by connecting various service systems to allow the people in need of care to be taken care of and saving the LTC resources!

LTCA 2.0 is an extension of Taiwan's LTC election political view. To prepare for Taiwan's approaching an aging society, LTCA 2.0 is proposed to improve the strategies of three projects:

1. Widen the service targets

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Besides widening the existing service target's care level, the LTCA 2.0 also covers the following targets:

- Elder above 50 with dementia, and the disabled lowland aboriginals above 55.
- Disabled people below 49, and the frail elderly above 65.

2. Easy accessible of service units by the public

For the elderly who could not find ways to get help in the past, the government has introduced an innovative system this time by proposing an overall ABC long-term community-based care model. It is described as follows: Tier A is referred to as the LTC flagship store, tier B as the LTC specialty store, and tier C as the LTC corner store. Some of these stores are set within the small communities, some in the neighborhoods, and some in the counties and townships, and different levels provide different services. For example, if you want to find someone to chat, you should go to tier C LTC corner store; if you want to receive day care, you should go to tier B LTC specialty store; and if you want to receive a complete service, you should go to tier A LTC flagship store.

3. **Loosening the subsidy approval regulations**

In the past, the LTCLong-term Care Center pays the subsidies in advance before asking for the payment. Such practice often affects the service quality due to long processing time. However, under the new LTCA 2.0, the subsidy approval regulations have been loosened to allow more institutions to invest in LTC services

2.2LTCdemands of the elderly

The physical and mental conditions of the elderly are inherently different. Coupled with inadequate resources for care, the demand for services will also naturally different. Following the continuous growth of the elderly population and the reduction of family functions, the demand for care services continues to rise as the physiological differences between the elderly are still predictable, but that of mental, psychological and behavioral aspects are not predictable. So the basic needs of the elderly include: economic, living, safety, health, leisure and other aspects (Liu, 2010). Lin & Chen (2009) pointed that the service needs of the elderly include medical treatment, economics, retirement and reemployment, social participation, family care, interpersonal relationships, psychological adjustment, LTC, housing arrangements, annuity insurance, transportation, education and learning, leisure and entertainment, and other issues. Mo (2010) divided the services provided by the elderly care service into home-based, community-based, and institutional-style. The first two are for elderly people living in the community. The home-based services include the following 10 items: health care services, rehabilitation services, physical care, housework services, care visits, telephone care services, catering services, emergency rescue services, home environment improvement services, and other relevant home-based services. The community-based services include the following 15 items: health services, health care services, rehabilitation services, psychological counseling services, day care services, catering services, family care services, education services, legal services, transportation services, retirement preparation services, leisure services, provision of information, referral services, and other relevant community-based services.

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3. RESEARCH METHOD

3.1 Research step and framework

This study aims to explore the issues related to low birthrate and aging in Taiwan. Relevant literature were analyzed and sorted out to serve as a conceptual framework for the construction of LTC service needs for this study. Secondly, relevant impacts of LTC on national development, politics, culture, and the quality of population were explored to confirm the status and problems faced by LTC. The quality attributes of service needs were then established based on more than two sessions of discussions and expert consultations with LTC users (elderlies) to ensure the service attributes of the LTCA. The research framework is shown in Figure 1. The service elements are listed as follows:

1. Living subsidies
2. Health to promote physical fitness
3. Visit or telephone care services by the social welfare agencies
4. Catering delivery services
5. Emergency medical assistance
6. Transportation
7. Elderly taking meals together
8. Retirement planning
9. Employment services
10. Day Care Center services
11. Companionship of relatives
12. Financial planning
13. Hospice care

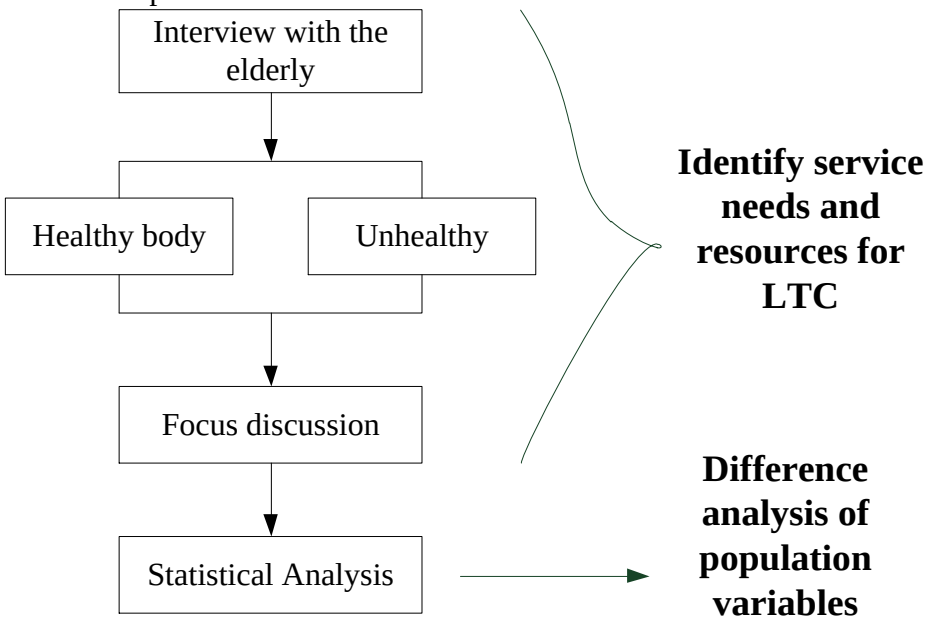

Figure 1Research framework

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4. EMPIRICAL ANALYSIS

4.1Questionnaires distributed and collected

The questionnaires were distributed to the "Metropolitan areas" and “Rural areas" from January to May 2018. Out of 300 questionnaires distributed to the "Metropolitan areas," 250 copies were collected with a recovery rate of 83.3%, 49 copied were deemed invalid and 201 copies deemed valid. Out of 200 questionnaires distributed to the "Rural areas," 189 copies were collected with a recovery rate of 94.5%, 42 copies were deemed invalid and 147 copies deemed valid.

4.2Descriptive statistics of sample population

The questionnaire recovery results showed that 130 (64.68%) respondents were accounted for by females in the "Metropolitan areas," 184 (91.54%) of them are married, 60 of them aged 65-70 (29.85%), 79 (39.30%) of them live in residential institutions, 58 (28.86%) of them have a university education background, and 60 (29.85%) of them were military men, government employees and teachers before retirement. Meanwhile, in the "Rural areas," 108 (73.47%) respondents were taken up by women, 146 (99.32%) of them are married, 72 (48.98%) of them aged 65-70, 99 (67.35%) of them live with their children/couples, 63 of them have a high school education background, and 56 (42.86%) of them were engaged in the manufacturing industry before retirement. (See Table 1)

Table 1Descriptive statistics of sample population

Items	Demographic factors	Metropolitan areas		Rural areas	
		No	Percent	No	Percent
Gender	Male	71	35.32%	39	26.53%
	Female	130	64.68%	108	73.47%
Marriage status	Unmarried (Divorce)	17	8.46%	1	0.68%
	Married	184	91.54%	146	99.32%
Age	Below 65	36	17.91%	46	31.29%
	65-70	60	29.85%	72	48.98%
	71-75	35	17.41%	17	11.56%
	76-80	55	27.36%	11	7.48%
	Above 80	15	7.46%	1	0.68%
Living status	Live with children/couples	73	36.32%	99	67.35%
	Living with relatives	35	17.41%	39	26.53%
	Living residential institutions	79	39.30%	0	0
	Living alone	14	6.97%	9	6.12%
Education degree	Illiterate	12	5.97%	0	0
	Elementary school	41	20.40%	23	15.65%
	Junior higher school	35	17.41%	8	5.44%
	Higher school	54	26.87%	52	35.37%

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	College/University	58	28.86%	63	42.86%
	Above Master	1	0.50%	1	0.68%
Occupation of before retirement	Office holder	60	29.85%	37	25.17%
	Service industry	42	20.90%	22	14.97%
	Industry	34	16.92%	56	38.10%
	High-tech industry	8	3.98%	6	4.08%
	Agriculture industry	5	2.49%	0	0
	House-hold	42	20.90%	26	17.69%
	Freedom	10	5%	0	0

4.3Statistical test analysis

4.3.1T test

1.Gender t-test analysis

In this study, gender differences were assumed to have an impact on service demands and service satisfaction. As shown in Table 2, P>0.05 does not reach the significant level, indicating that there are no differences in gender on service demands and service satisfaction.

Table 2Gender t-test analysis

Variable	Gender	NO	ME	S.D.	t	P
Service demand	Male	71	3.60	0.55	1.02	0.31
	Female	130	3.52	0.57		
Service satisfaction	Male	71	3.39	0.54	-0.32	0.75
	Female	130	3.41	0.47		

2.Marriage status t-test analysis

In this study, marriage status differences were assumed to have an impact on service demands and service satisfaction. As shown in Table 3, P>0.05 does not reach the significant level, indicating that there are no differences in marriage status on service demands and service satisfaction.

Table3Marriage status t-test analysis

Variable	Marriage status	NO	ME	S.D.	t	P
Service demand	Unmarried (Divorce)	17	3.53	0.53	-0.16	0.87
	Married	184	3.55	0.56		
Service satisfaction	Unmarried (Divorce)	17	3.23	0.43	-1.57	0.12
	Married	184	3.42	0.50		

4.3.2One-way ANOVA

1. ANOVA test on age

In this study, age differences were assumed to have an impact on service demands and service satisfaction. One-way ANOVA was used for hypothesis verification. As shown in Table 4, there is a significant difference in age on service demand ($F=3.53$, $p<0.05$). After conducting a

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Scheffe's post-mortem comparison, it was found that the demand level of 71-75 years old is higher than 65; and there is a significant difference in age on service satisfaction (F=3.745, p<0.05). After conducting a Scheffe's posteriori comparison, it was found that the service satisfaction of 76-80 years old elderly is higher than 65 years old.Therefore, the study's hypothesis is supported by the above narrative analysis.

Table4ANOVAtest on age

Variable	Age	ME	S.D.	F	P	Scheffe
Service demand	(1) Below 65	3.27	0.69	3.53	0.01*	3>1
	(2) 65-70	3.61	3.61			
	(3) 71-75	3.73	3.73			
	(4) 76-80	3.57	0.48			
	(5) Above 80	3.48	0.46			
Service satisfaction	(1) Below 65	3.31	0.46	3.745	0.01*	4>1
	(2) 65-70	3.38	0.52			
	(3) 71-75	3.58	0.47			
	(4) 76-80	3.70	0.41			
	(5) Above 80	3.58	0.41			

*P<0.05

2. ANOVA test on living status

In this study, ANOVA test on living status differences were assumed to have an impact on service demands and service satisfaction. One-way ANOVA was used for hypothesis verification. As shown in Table 5, the results show that living status does not reach the significant differences in service demands. But, there is a significant difference in living status on service satisfaction (F=5.44, p<0.05). After conducting a Scheffe's post-mortem comparison, it was found that the satisfaction level of living residential institutions is higher than living alone. Therefore, the study's hypothesis is part supported by the above narrative analysis.

Table5ANOVAtest on living status

Variable	Living status	ME	S.D.	F	P	Scheffe
Service demand	(1) Live with children/couples	3.54	0.62	0.12	0.95	
	(2) Living with relatives	3.52	0.64			
	(3) Living residential institutions	3.56	0.43			
	(4) Living alone	3.61	0.72			
Service satisfaction	(1) Live with children/couples	3.42	0.47	5.44	0.001*	3>4
	(2) Living with relatives	3.39	0.47			

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	(3) Living residential institutions	3.68	0.40			
	(4) Living alone	3.21	0.67			

*P<0.05

3. ANOVA test on education level

In this study, education level differences were assumed to have an impact on service demands and service satisfaction. One-way ANOVA was adopted for hypothesis verification. From Table 6, the results show that education level does not reach the significant differences in service demands and service satisfaction. Therefore, the research hypothesis is not supported by the above narrative analysis.

Table6ANOVAtest on education level

Variable	Education degree	ME	S.D.	F	P
Service demand	(1) Illiterate	3.36	0.36	1.65	0.15
	(2) Elementary school	3.59	0.41		
	(3) Junior higher school	3.54	0.62		
	(4) Higher school	3.44	0.58		
	(5) College/University	3.68	0.60		
Service satisfaction	(1) Illiterate	3.55	0.55	2.03	0.08
	(2) Elementary school	3.61	0.42		
	(3) Junior higher school	3.49	0.55		
	(4) Higher school	3.43	0.46		
	(5) College/University	3.52	0.52		

*P<0.05

4. ANOVA test on occupation of before retirement

In this study, occupations of before retirement differences were assumed to have an impact on service demands and service satisfaction. One-way ANOVA was adopted for hypothesis verification. From Table 7, the results show that occupation of before retirement does not reach the significant differences in service demands and service satisfaction. Therefore, the research hypothesis is not supported by the above on narrative analysis.

Table7 ANOVA test on occupation of before retirement

Variable	Occupation of before retirement	ME	S.D.	F	P
Service demand	(1) Office holder	3.66	0.62	1.79	0.10
	(2) Service industry	3.57	0.56		
	(3) Industry	3.35	0.64		
	(4) High-tech industry	3.78	0.55		
	(5) Agriculture industry	3.17	3.14		
	(6) House-hold	3.61	0.43		
	(7) Freedom	3.46	0.41		
Service	(1) Office holder	3.43	0.58	0.55	0.77
	(2) Service industry	3.54	0.47		

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satisfaction	(3)	Industry	3.49	0.54		
	(4)	High-tech industry	3.59	0.48		
	(5)	Agriculture industry	3.35	0.34		
	(6)	House-hold	3.58	0.37		
	(7)	Freedom	3.35	0.43		

*P<0.05

4.4Management implications

The empirical analysis shows that the elderly in the metropolitan areas are dissatisfied with financial planning and hospice care. As Taiwan's metropolitan areas are rich in resources and have good economic capabilities, and the government agencies have also budgeted sufficient funds to take care of these elderly, so the elderly in the metropolitan areas are more mindful on financial planning after retirement. Whereas, the elderly in the rural areas are dissatisfied with: (1) Insufficient living allowances, and (5) Emergency medical care services due to inadequate medical resources in the rural areas and young people are mostly working in the metropolitan areas. So whenever they feel unwell, they will encounter the problems of medical treatment.

From the empirical results of statistical analysis, it was found that there are differences on age and living conditions but no differences on population variances. Therefore, the demands of each person vary depending on the age of retired elderly and their living status. It is hoped that the government and service providers would listen to their voices, understand their demands, address their dissatisfactions, and create a comfortable and healthy environment that would allow them to live happily

5. CONCLUSIONSANDRESEARCHLIMIT

5.1 Conclusions

The advancement of medical science and technology has extended the average life of the national citizens, and changes in social structure and values, as well as the declining birthrate phenomenon have accelerated the advent of an aged society. To meet the elderly needs, it is unwise to construct the elderly aid devices or service needs from the managerial perspective but listen to their voices and customize the relevant service demands. It is also important to lead the healthy elderly to come out and do something for the society, such as volunteering work, community services, guides, etc. to enrich their retirement lives and simultaneously contribute to the society. As for the elderly who are in poor health and suffered from the illnesses of dementia, disability, etc., they can be provided with medical care to reduce their pains, allowing all the elderly to receive proper care. The government is responsible for allocating the resources appropriately and using them in the right places

5.2Research limit

The rapid population aging has made the burden of elderly care in the elderly population relatively heavy. Following an extension of the average life expectancy of the elderly, their demand for care services has also become more intensive. Advances in medical technology have led to the control of many diseases, but they still unable to fully restore the original state of

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health, thus increasing the number of elderly with physical and mental disabilities. With the continuous growth of the elderly population and the decline of family functions, the demand for care services has continued to rise and need to rely on foreign workers to handle these jobs. Therefore, it is imperative to strengthen professional training for foreign workers. There are significant differences in physical and mental health for the elderly who need care, and the non-uniformity of care resources has also created a high variance in care needs. So the healthy elderly who can move in the community or institutions freely were chosen as the objects by this study and those with physical and mental disabilities were ruled out from the scope.

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REFERENCES

1. Liao, W.C., Chiu, L.A. & Yueh, H.P. (2012). A study of rural elderly's health information needs and seeking behavior. *Journal of Library and Information Studies*, 10(1), 155-204.
2. Lin, Y.G. & Chen, P.W. (2009).The application of community consultation model in the service of the elderly, *Counseling Quarterly*. 45(2), 49-60.
3. Liu, Y.H., (2010). Older clinical psychology lecture (I). *Consultation and Counseling*, 289, 56-60.
4. Ministry of Health and Welfare, Taiwan, (2016). Long Term Care Plan for Ten Years 2.0 Report.
5. Mo, L.L. (2010). Community Service Program for Promoting Seniors' Psychology and Social Adjustment. 2010Cross-Strait Academic Seminar on Social Welfare, Early Population and Elderly Care Services, Nanjing: Nanjing University.
6. Tsai, S.F. & Wang, X.H., (2008). The development of policies related to Long-Term Care services in Taiwan, *The Journal of Nursing*, 55(4), 24-29.
7. Wu, X.Q., Hong, Y.N., & Huang, J.Z., (2009). Health care under the impact of aging and less child.*Community Development Journal*, 125, 75-90.