

ORIGINAL ARTICLE

Knowledge and Attitude of Ipoh Residents towards Using “Time Bank” in Care of the Elderly.

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Abstract

Background: Time banking is a socially based system of transaction that uses time instead of money. Members of a time bank can earn time credits by providing services, which they can later spend these credits by receiving services from others. Time banking is one way where the society can maximize its social capital and lessen the burden of the ageing population. This study aims to identify the level of knowledge and attitude towards the use of time banking in elderly care among residents of Ipoh Perak.

Method: A cross-sectional study with a sample size of 386, calculated using OpenEpi. Data were collected through an online Google Form distributed to various groups on different online platforms, as well as through self-administered questionnaires.

Results: Most of the respondents, 75.7% (n=292) were found to have poor knowledge on time banking in elderly care. However, 55.7% (n=215) of the respondents had a positive attitude towards it. Respondents without health problems had a positive attitude compared to those with health problems.

Conclusions: Overall, most of the Ipoh residents demonstrated poor knowledge on time banking in elderly care.. On the contrary, a positive attitude was observed among them. There was also a significant association between knowledge of time bank in elderly care and attitude. More programmes and campaigns on time banking are recommended to increase the knowledge of the Malaysian population on its role in elderly care.

Keywords: *Attitude, knowledge, Ipoh, sociodemographic features, time banking.*

Introduction

Malaysia is anticipated to become an ageing nation, with 15% of the population expected to be 60 years and above by 2030. The elderly population has been steadily increasing over the past 40 years, rising from 316,858 in 1970 to 1,427,340 in 2017. It was projected to increase by 7.8% in 2020; however, the actual increase was 11.1% [1]. The increase in the elderly population is partly due to rising life expectancy. However, a growing proportion of elderly individuals is also associated with an increased prevalence of poor health as older adults tend to be less healthy than younger individuals due to physical and social changes, as well as diseases commonly associated with ageing. Furthermore, elderly malnutrition is anticipated to become a significant issue, driven by alterations in dietary practices, poor dental health, and the types and quantities of food consumed [2]. According to 2000 Census, approximately 7% (94,000) of older people lived in single-member households. Those who live alone are more likely to require outside support in the event of illnesses or disabilities, are more likely to experience social isolation, and are disproportionately more likely to be poor, particularly older women [3]. Living alone, having distant family members, having fewer ties to their culture of origin, or being unable to actively take part in neighbourhood activities all contribute to the loneliness that many elderly people experience. Demoralization and depression frequently follow when this happens in conjunction with physical impairment [4].

As members of families in modern society, we have realised that we usually rely on one another in many ways, especially when it comes to offering support to our aging family members. When elderly individuals find it difficult to manage daily house chores as easily as they once did, other family members should step in to help out. Caregiving includes everything from helping the care recipient with everyday tasks and giving them direct care to navigating the complicated health care and social services systems which might include assisting in daily household tasks, self – care and mobility [5]. However, Malaysia

is known to be one of the most overworked countries in Asia Pacific ranking 4th overall with having an average of 42 hours of working hours per week, thus making it harder for them to be always available at home [6]. An overworked culture is prevalent in many Malaysian companies, leading to employee burnout, depression and disconnection from loved ones, which increases the risk of neglecting elderly parents [7]. Additionally, the high living cost in Malaysia can be one of the factors that force many adults to migrate from rural areas to urban centres for a better pay and more job opportunities [8]. Besides that, the process of ageing might impair the physical and sensory ability of the elderly to do simple chores for themselves without the help of other people [9]. We believe that time banking offers a novel approach to take care of the elderly by utilizing time credit. Hence, we would like to assess the knowledge and attitude of time banking among Ipoh residents which might help in the care of the elderly. The development and growth of time banking have frequently been an effort to address the lack of community-based care for the senior citizen. It offers a potential solution by providing accessible and affordable community-based care for the elderly. In this situation, the elderly are the primary recipients of care services offered by community volunteers in exchange for time credits. Typically, the majority of time banking beneficiaries are elderly individuals, while service providers are often from younger age groups [10]. With advancing age, the elderly have lost their capability to do the chores and attending their necessities by themselves. Therefore, the establishment of time banking will have a really huge impact and benefit the elderly to live more comfortably with the help of community members. Time banking is a system of exchanging various services for one another based on the labour theory of value, developed by various socialist thinkers. Labor-time units can be credited to a person's time bank account and redeemed for services from other time bank members. Time banking can be thought of as a type of community currency. People receive

labor-time credits in a time-banking environment when they provide a service to another time-bank member (and the member receiving the service is debited an equal amount). Regardless of the service provided, every hour of time is generally valued the same. In theory, any service can be traded for another. However, services traded frequently revolve around simple, low-market-value tasks such as elderly care, social work, and home repair. However, labour-time credits are not accepted outside the time bank's membership, and do not function as a form of money in the broader economic sense. Time banking is part of an international movement aimed at changing the conventional, asymmetrical social service delivery models into social networks where members offer and receive services that are valued equally. There is some proof that time banks improve health, and they have been shown to increase social capital. The concept, originated by Edgar Cahn in 1980, was designed to make social service recipients into “coproducers” of the services they receive, by also providing services that others need [11].

Ipoh City is Malaysia's third largest city in the country with a current population of over 857,00 people. In 2015, 16.7% out of 739,700 people in Ipoh City were more than 60 years of age (World Health Organisation). Nationally, the percentage of Malaysia's population aged 65 and over increased from 7.0% in 2021 to 7.3% in 2022. Malaysia has become an ageing society based on the United Nations definition (Department of Statistics Malaysia). This statistic shows that the population of the older people increases every year. Generally, elderly individuals may have weak physical strength and are often no longer able to perform tasks involving physical strength. Moreover, half of the elderly people in Perak live alone, unaccompanied by family members [12]. Time banking has proven to be useful and beneficial in strengthening the community in terms of social interaction, exchanging physical services, humanity and understanding different cultures [13]. Hence, we would like to assess the knowledge and attitude of time banking among

Ipoh residents, as it offers a practical solution elderly care.

Materials and methods

A cross-sectional study was conducted utilizing an online Google Form from 15th May 2023 until 9th June 2023 among the population of Ipoh. According to DOSM, the current population in Ipoh is 923,003. The sample size was calculated using OpenEpi version 3.01 based on one proportion sample. The sample size needed for 95% confidence level was 386. Convenience sampling was used to collect the data from 386 Ipoh residents. The inclusion criteria required participants to be Ipoh residents aged 18 and above who provided consent to participate. The questionnaire was pre-tested on 30 individuals meeting the same inclusion criteria and was found to be clearly understood by all participants during the pretest. The knowledge section of the questionnaire consisted of eight questions, with respondents required to answer either “Yes I know” or No, I do not know”. The attitude section also included eight questions, with respondents selecting from “Strongly disagree”, “Disagree”, “Neutral”, “Agree” and “Strongly Agree”. Statistical Package for the Social Sciences (SPSS) build 1.0. 0.1275 was used to analyse the data. All categorical data were expressed as frequencies. In the assessment for knowledge on time banking, score “1” was given for “Yes I know” and score “0” for “No, I do not know”. The maximum score for knowledge on time banking was 8 and the minimum was 0. A score of ≤ 2 was considered indicative of poor knowledge, a score between 3 and 5 as moderate knowledge, and a score of 6 and above as good knowledge. For the assessment of attitude towards time banking, a Likert scale was used. “Strongly disagree”, “Disagree”, “Neutral”, “Agree” and “Strongly Agree” were as scored 1, 2, 3, 4, and 5 respectively. The maximum score for attitude was 40 and the minimum was 8. Based on the mean of the total responses, scores between 8 and 18 were classified as poor attitude, scores between 19 and

29 as moderate attitude, and scores between 30-40 as good attitude. Chi-Square test and Fisher's exact test were used to analyse the association between sociodemographic factors (such as age, gender, level of education, ethnicity, household status, employment status, and marital status) and respondents' knowledge and attitude towards time banking. P-values of less than 0.05 were considered statistically significant.

Results

The demographic characteristics of the participants are shown in Table 1. The majority of the participants were adults between 18-44 years old (60.6%), predominantly Malay (70.5%), with slightly more female (56.2%) than male, almost equal single (47.1%) and married participants (48.2%) and the highest percentage of the participants had College/University educational background (79.9%). Regarding the health status of respondents (Table 2), most of the participants (88.8%) did not have chronic health problems requiring constant assistance from others, while only 22% required help with household chores. In terms of knowledge about time banking, the majority (75.7%) had poor knowledge, while 55.7% had a positive attitude toward time banking. We tested for possible association between the participants' knowledge and the attitude toward time banking with selected sociodemographic variables, as well as the health status (Table 3). The results showed that knowledge was significantly associated with the participants' race (p value = 0.007) and chronic health problems (p value < 0.001). Attitude of the participants on time bank was significantly associated with marital status (p value = 0.008), education level (p value < 0.001), and employment status (p value = 0.017). Finally, we tested the association between knowledge and attitudes of the participants on time bank. We found that there was a significant association between them (p value = 0.012) (Table 4)

Discussion

Regarding the level of knowledge about "time banking" in elderly care among Ipoh community, the majority of the respondents demonstrated poor level of knowledge of "time bank". A preliminary study by Normi Sham Awang Abu Bakar et al. (2024) found that 51% of participants were aware of the time banking concept, while 86% expressed willingness to participate in a time banking project [14]. However, their study included non-Malaysian participants, and it was observed that 80% of those aware of time banking were non-Malaysians. Both their research and our study highlight that time banking remains poorly understood or recognized among Malaysian nationals. This underscores that time banking is still not widely known in Malaysia, despite its long-standing development and implementation in other countries. In fact, most respondents in our study had never heard of time banking. Time banking has the potential to shape the future of care services in relation to senior citizens in Malaysia, particularly as the country's population continues to age. Time bank can give more emphasis to the formal and informal care of elderly by providing a comprehensive community-based care. It also promotes thoughts on what it means to age meaningfully and how the current economic climate affects the provision of services for the aged [10]. Thus, it is important to educate the community about the benefits of time banking especially in elderly care and gain their trust so that they will be always willing to participate in this concept.

In terms of attitude towards "time banking" in elderly care among Ipoh residents, more than half of them showed positive attitude towards "time bank" and its role in improving the elderly care. There is a common belief among population that, time bank can contribute to positive value in a community in terms of physical, social and economic aspects [15]. The high number of respondents with positive attitude in this study suggests that time banking could gain significant support and volunteers if implemented in

Malaysia. Similarly, Normi Sham Awang Abu Bakar et al. (2024) demonstrated that 80% of their respondents found that time banking is an appealing concept [14]. This percentage is significantly higher compared to 55.7% of respondents in this study with positive attitude toward time banking. However, more efforts are needed to increase awareness and understanding of the concept. This will help people appreciate its benefits, particularly in the context of elderly care. It would be worth to mention that few of the respondents had neutral and negative attitude towards time banking possibly, due to lack of information. Likewise, lack of information about time bank may affect the level of participation because it is a new form of service exchange that many individuals may not know about it [16]. In addition, cultural beliefs may also be one of the factors that respondents did not agree to implement time banking in Malaysia. Common awareness about the time bank system does not exist in nations where, alternative or complementary economic systems exist and perform traditionally well. People tend to be wary of fraud, associate time banks with a sect, or just fail to see any benefits if the dubiously positive rhetoric about them is included. Breaking prejudices takes a long time [17].

Overall, the Ipoh community exhibits a poor level of knowledge and portrayed good attitude towards “time bank” in elderly care. Further research is needed to explore knowledge and attitude toward time banking across diverse communities in Malaysia. Only then can we assess whether this concept can be successfully implemented and gain the necessary community support to enhance elderly care services in the country.

Limitations

There were few limitations. The first one is time constraint which only six weeks to conduct and complete the research which includes proposal preparation, data collection, data cleaning, data analysis, and report writing. In addition to that,

our sample needed a high number of respondents that include different age groups which was young adults, middle-aged and elderly, which took a long time to collect the data especially the elderly because they need to understand and comprehend the questions given in the questionnaire.

We faced challenges to achieve the required number of respondents using only online Google Forms. To overcome this issue, our group went to a few locations, like parks and malls, to conduct the questionnaires face-to-face. Additionally, there are limited journals and studies on time banking in Malaysia, making it difficult to find relevant references for our research topic.

Conclusion

Time banking may serve as one of the methods to maximise social capital within the communities, helping to ease the load posed by the ageing population. The growth of time banking aims to assist lonely and disadvantaged elderly individuals who may lack access to basic care or consistent medical consultations from family and friends. It is clear that people are still lacking on the knowledge regarding time banking, despite that time banking has been implemented 50 years ago in other countries. However, majority of the respondents shows a positive attitude which indicate that most respondents view time banking as a good initiative in helping the elderly. Given these findings, we believe that time banking can be gradually introduced to the community to raise awareness and understanding. This will pave the way for its potential implementation in Malaysia, offering a valuable approach to supporting elderly care and assisting those in need.

Conflict of interest

The authors declared that no conflict of interest may arise from the research publication.

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Ethics

Ethical approval was granted by the UniKL Medical Research Ethics Committee, under reference number UniKLRCMP/MREC/2022-2023/MBBSYR4-SRP-285

Authors' contribution

All the authors contributed to the conceptualization of research, methodology, proposal submission, results analysis, drafting & editing of report, and preparation of the manuscript.

Table 1. Sociodemographic characteristics of the participants

Variables	Frequency (n)	Percentage (%)
Age Group (years old)		
– Young Adults (18-44)	234	60.6
– Middle Adult (45-59)	81	20.9
– Elderly (60 and above)	71	18.5
Gender		
– Male	169	43.78
– Female	217	56.22
Race		
– Malay	272	70.47
– Chinese	54	13.99
– Indian	50	12.95
– Others	10	2.59
Marital status		
– Single	182	47.1
– Married	186	48.2
– Divorced/widowed	18	4.7
Household Status		
– Living Alone	33	8.55
– Living with Family	278	72.02
– Living with Friends	75	19.43
Education Level		
– No Formal Education/Primary	3	0.9
– Secondary School	74	19.2
– College/University	309	79.9
Employment Status		
– Unemployed	227	58.8
– Employed	159	41.2

Table 2. Health Status of respondents / Need for Assistance (N=386)

Variables	Frequency	Percentage
Chronic health problem requiring constant assistance from others		
– Yes	43	11.14
– No	343	88.86
Usually need someone to help you in household chores		
– Yes	85	22.02
– No	301	77.98
Person who usually does household chores in your house		
– Yourself	216	55.96
– Family member	141	36.53
– Paid assistance (e.g. maid)	23	5.96
– Friends	6	1.55

Table 3. Association between Knowledge and Attitude on time bank with few selected sociodemographic characteristics.

	Knowledge					Attitude				
	Good	Moderate	Poor	X ²	p-value	Positive	Neutral	Negative	X ²	p-value
Total N=386 (%)	54 (14.0)	40 (10.4)	292 (75.7)			215 (55.7)	154 (39.9)	17 (4.4)		
Race										
Malay	30	30	212	17.7	0.007 Fisher					
Chinese	6	7	41							
Indian	14	2	34							
Others	4	1	5							
Marital Status										
Single						118	60	4	17.5	0.008 Fisher
Married						87	86	13		
Divorced /widowed						10	8	0		
Education level										
No formal education/ Primary school						0	3	0	24.7	<0.001 Fisher
Secondary school						25	46	3		
College/ University						190	105	14		
Employment										
Non Employed						116	100	10	24.6	0.017
Employed						99	54	7		
Chronic health problems	14	122	207	27.1	<0.001					
Yes	3	32	8							
No										

Table 4. Association between level of Knowledge on “time bank” in care of the elderly and Attitude.

		Knowledge level			chi square value	p value
		Poor	Moderate	Good		
Attitude	Negative	11	3	3	12.790	0.012
	Neutral	131	10	13		
	Positive	150	27	38		

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