DEFINITION AND ATTRIBUTES OF OCCUPATIONAL BALANCE FOLLOWING RETIREMENT

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Abstract

After retirement, the activities and roles of retirees change as their previously dominant activity and productivity is no longer a part of their routine. This transition can affect each retiree differently, and the risk of non-communicable diseases among retirees becomes more apparent due to lifestyle changes. Achieving occupational balance is crucial for successful ageing, life satisfaction, and subjective well-being in healthcare settings. However, occupational balance is defined and described differently across diverse populations. This study conducted a two-round Delphi study among 18 occupational therapy experts to identify the definition and attributes of occupational balance following retirement in Malaysia. The first round involved open-ended interviews exploring the definition and attributes of occupational balance, followed by a second round using close-ended questions to achieve experts' consensus. The study concluded that occupational balance is defined as an optimal engagement in meaningful and desired occupations, including self-care, productivity, and relaxing activities, according to the retirees' routines and contexts. The attributes were divided into four main groups, and 16 out of 21 statements achieved more than 80 per cent agreement among Malaysian OT experts. The study pioneers fundamental occupational therapy research central to Malaysian perspectives and contributes to healthcare research by exploring possible constructs associated with occupational balance following retirement. Future studies are necessary to explore the influence of each attribute on occupational balance.

Keywords: Ageing, Occupational Balance, Quality of Life, Retirement

Introduction

Retirement marks a significant life event for individuals as they withdraw physically and mentally from the workforce at a specific age (1). In Malaysia, the minimum retirement age for the private sector was 60 years old and above, while the minimum retirement age for the government sector varied according to each individual's year of appointment, ranging from 55 to 60 years old (2). Nevertheless, proper preparation is necessary to ensure a smooth transition into retirement, and authorities are responsible for providing retirees with better care and facilities (3). With advances in medical care, hygiene, and food supply, Malaysia has witnessed an increase in life expectancy, leading to an ageing population where the median age is skewed towards older generations (4). As of 2022, Malaysia's population aged 60 years and above had achieved 3.6 million, making up 11.1% of Malaysia's population. However, it is estimated that Malaysia's ageing population will reach 38.6 million in the next 30 years, making it crucial to understand and research this group (4). Studying issues and challenges faced during retirement is essential as it can significantly impact an individual's well-being and society.

Studies have shown that retirement can have long-term detrimental effects on cognition, except for those who retire on an early retirement scheme (5). Additionally,

retirement can lead to a more rapid cognitive decline, especially in those who retire for a more extended period (6). Retirement can also increase loneliness, elevating depressive symptoms in individuals who lack structured routines (7). Furthermore, retirement can affect an individual's personality, with sudden increases in openness and agreeableness during early retirement, followed by a decline for the next five years (8). Inactive retirees may also develop sedentary behaviours, sleep difficulties, poor health, or mental issues (9). However, some studies have reported increased health behaviour among retirees, such as a drop in smoking habits and increased physical exercise engagement, although the latter is temporary (10-12). In conclusion, retirement can significantly impact retirees' health and well-being.

According to Jonsson et al. (13), retirees tend to engage in undemanding and unproductive activities like watching television and relaxation, leading to an imbalance in daily activities. This new temporal structure in occupation and a slower daily life rhythm may result in a loss of motivation to balance daily activities, causing stress for retirees (14). However, achieving occupational balance is crucial for retirees' health and well-being, as it helps them to balance engagement and deprivation in activities (14). Cha (15) found that age, gender, education level, caring needs, income, and living environment significantly affect life satisfaction in retirees with occupational balance. Understanding these factors can help retirees achieve balance and enhance their overall well-being.

In Malaysia, despite an increase in the activity level among retirees (16), they remain among the most inactive population (17, 18), with almost half engaging in physical activities less than twice per week (19). Furthermore, retirement often leads to a significant decrease in leisure, social, and productive engagement (20, 21). This trend is concerning given the high risk of non-communicable diseases (NCDs) among Malaysian retirees, including undiagnosed hypertension, poor diabetic control, overweight, obesity, and hypercholesterolemia (22-26). Additionally, over half of the retirees reported mild cognitive impairment and a higher likelihood of anxiety disorders (27-29). Despite these health concerns, retirees exhibit better health-seeking behaviour than other populations (30), presenting an opportunity for healthcare providers to empower them to engage in activities that can improve their well-being. Finally, almost half of the Malaysian retirees reported low life satisfaction, which improved following improvements in health, activity engagement, and social support (31, 32). These findings suggest that efforts to promote balanced engagement in activities among retirees can positively impact their physical and mental health and quality of life.

Nevertheless, defining occupational balance is complex, with multiple definitions available in the literature. For example, Backman (33) proposed definitions of occupational balance across different populations and time periods, but it remains difficult to define due to the individual nature of occupations. Furthermore, Anaby et al. (34) highlighted that balance and imbalance in occupations are distinct states, leading to a need for a nuanced definition. On the other hand, Dür et al. (35) systematically explored the definitions of occupational and life balance and identified 19 categories of definitions, with "balance of various occupational patterns and areas" being the most commonly used definition. However, despite efforts to establish a shared definition of occupational balance, there is still no consensus (36, 37). Therefore, this study aimed to reach a consensus on the definition of occupational balance and its attributes in the context of retirement to promote its effective implementation.

Materials and Methods

A mixed-method Delphi study was conducted to achieve a consensus definition and attributes of occupational balance following retirement among occupational therapy academicians and practitioners. Therefore, to enhance knowledge about occupational balance, the Delphi study is recommended in the exploratory phase (38). Furthermore, utilising the Delphi study method can also help to identify areas of consensus and disagreement among experts regarding the definition and attributes of occupational balance (38-40). Achieving consensus among experts in occupational therapy is crucial because it provides a solid and agreed-upon framework for understanding and measuring occupational balance. Without a shared understanding of what occupational balance means, it would be difficult to accurately assess and address retirees' needs regarding their occupational engagement and well-being. Furthermore, this method has been previously utilised to define a concept (41); hence may be an effective approach to gaining a comprehensive understanding of occupational balance. Additionally, this study was the preliminary work of a larger study that became the foundation to explore the constructs of occupational balance following retirement among retirees in Malaysia.

In the Delphi study, the panellists later referred to as experts, were selected from Malaysian academicians in occupational therapy or practitioners in the primary healthcare setting of occupational therapy. Both groups were chosen as experts as academicians in occupational therapy were familiar with the theoretical foundation of occupational therapy practice whereas the practitioners in the primary healthcare setting of occupational therapy were usually involved in the community program including the retirees population. A purposive sampling technique was used to select the experts for the study. While there is no consensus on the recommended sample size to generate consensus on occupational balance definition and attributes following retirement using the Delphi technique (42), previous literature on occupational therapy has reported varying sample sizes. The sample size for Delphi studies that included experts globally ranged from 14 to 46 experts (43-46), while for studies conducted in a single country, the sample size ranged from 15 to 23 experts

(47-49). This study's inclusion criteria were limited to academicians or practitioners in the primary healthcare setting with five years of experience and above. Although years of practice may not equal expertise, considering the small community of occupational therapy in Malaysia, the researchers want to ensure that the experts received valuable exposure, hands-on practice and a solid foundation in occupational therapy. However, occupational therapy experts who have retired, are currently inactive in research/clinical practices or have chronic illnesses that affect their ability to respond to questions were excluded from the study. The sampling strategy and inclusion/exclusion criteria are critical components of the Delphi study, ensuring that the study's objectives are achieved, and the results are of high quality.

The inclusion of experts from both academia and clinical practices brought different perspectives and experiences to the study. Thus, this inclusion may help to identify a broader range of ideas and insights, which can be especially useful when establishing concepts or making decisions. Furthermore, bringing experts from different backgrounds may help bridge the gap between research and practice and promote better communication and understanding between different communities. Hence, the consensus achieved on the occupational balance definition and its attributes following retirement were the results of this bridge that may ensure the relevancy and practicality of the findings.

In this study, items for the Delphi open-ended questionnaire were generated through a comprehensive review of relevant literature. The first round of the Delphi study employed an open-ended questionnaire agreed upon by all authors. In the second round, a close-ended questionnaire was administered to the experts to rate each item and achieve consensus among experts. Selecting a rating scale that aligns with the research context is crucial. While there is no consensus on the gold standard rating scale for Delphi studies, a nine-point rating scale was chosen for this study, considering its ease of use and suitability for achieving consensus among a diverse group of experts (50).

The first round of the Delphi was conducted on June 2021 until October 2021 while the second round was subsequently conducted until December 2021. ATLAS.ti 9 software was used to analyse literature reviews and generate open-ended items related to the definition and attributes of occupational balance following retirement. The experts were interviewed in the first round through an individual semi-structured interview. A set of items was generated from the first round. Subsequently, experts rated their agreement on each item in the second round. To ensure anonymity, the experts remained anonymous throughout all Delphi rounds.

The analysis was conducted for both rounds of the Delphi study. In the first round, content analysis, guided by the Occupational Therapy Practice Framework, 4th Edition (51), was used to analyse the interviews and explore the definition and attributes of occupational balance following retirement. The first and third authors were involved in the code development and verified by all authors. The categories developed were summarised in an online Google Form to be reviewed by the experts in the following round. In the second round, descriptive statistics were presented using the proportion of agreement to determine the experts' consensus level, with a value of eight and above or ≥ 80% considered achieved consensus (40, 52).

Results

Demographic characteristics of experts

Twenty-two experts agreed to participate in the first round, but only eighteen completed both rounds. Table 1 shows the panel of experts for the Delphi study. The experts consist of academics and practitioners in Malaysia's occupational therapy field. The academics have professional qualifications ranging from Bachelor's to Doctor of Philosophy (PhD) degrees, with years of experience ranging from 7 to 30 years and ages ranging from 34 to 56 years. On the other hand, the practitioners have qualifications ranging from Bachelor's to Master's degrees, with years of experience ranging from 7 to 19 years and ages ranging from 29 to 41 years. The experts remained anonymous throughout the Delphi study rounds. Hence, no other potentially identifying information was included to protect their anonymity.

Table 1: Demographic characteristics of experts (n = 18)

Expert Number	Professional Qualification	Years of Experience	Age
	Academician		
D001	Doctor of Philosophy	30	56
D002	Master's Degree	13	36
D003	Doctor of Philosophy	11	34
D004	Master's Degree	10	35
D007	Doctor of Philosophy	18	42
D010	Doctor of Philosophy	25	47
D013	Doctor of Philosophy	7	35
D014	Doctor of Philosophy	10	35
	Practitioners		
D005	Bachelor's Degree	12	35
D006	Master's Degree	11	35
D015	Bachelor's Degree	10	31
D016	Bachelor's Degree	7	29
D017	Master's Degree	13	40
D018	Master's Degree	11	33
D019	Master's Degree	19	41
D020	Master's Degree	9	31
D021	Master's Degree	7	33
D022	Bachelor's Degree	11	33

Round one

Table 2 shows the key aspects of defining occupational balance by the experts. The key aspects include (i) optimal engagement in meaningful and desired occupations, including self-care, productivity, and restful activity, (ii) balanced engagement in occupations that promote life satisfaction, (iii) subjective sense of balance between different types of occupations, (iv) subjective sense of balance in occupations according to an individual's routine and context, and (v) equal distribution between self-care, productivity, and leisure. The table shows that half of the experts emphasised the first key aspect (n = 9), while the second (n = 7) and third (n = 8) key aspects were emphasised by almost half of them. Less than one-third of the experts focus on the fourth aspect (n = 4), and only one expert highlighted the fifth aspect.

Table 2: Key aspects in defining occupational balance and its relevant attributes (n = 22)

	Experts Number																		
Key aspects	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**10**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**n**
Optimal engagement in meaningful and desired occupations, including self-care, productivity, and restful activity.		/	/		/				/	/	/			/			/	/	9
Balanced engagement in occupations that promotes life satisfaction.	/	/						/	/	/					/	/			7
Subjective sense of balance between different types of occupations.			/	/	/				/		/		/		/		/		8
Subjective sense of balance in occupations according to an individual's routine and context.						/						/		/				/	4
The equal distribution between self-care, productivity and leisure.							/												1
Attributes																			
1. Performance pattern																			
Adaptation to the daily routine		/	/			/	/	/	/	/	/			/				/	10
Adaptation to current roles	/	/		/			/	/	/	/			/	/				/	10
Satisfaction with current roles							/							/				/	3
2. Personal factors																			
Meaningful and desired activities	/	/	/		/	/			/	/	/	/		/	/	/	/	/	14
Prioritised activities					/	/	/	/	/			/	/	/			/	/	10
Staying active			/					/	/		/							/	5
Spirituality	/					/							/						3
Independence in daily activities		/			/			/											3
3. Occupations (Retirees' time use)																			
Social participation			/	/	/	/		/	/	/	/	/		/	/	/	/	/	14
Leisure	/	/	/		/	/	/	/	/	/	/	/		/	/	/		/	15
Health management						/			/					/		/			4
Productivity	/	/	/	/	/	/	/	/	/	/	/		/	/	/		/	/	16
ADL and IADL		/	/		/	/	/	/	/	/	/			/		/		/	12
Rest		/	/	/	/	/	/		/	/	/		/	/	/	/	/	/	15
Personal time			/			/	/									/			4
Mental and emotional care			/																1
4. Contexts																			
Health status		/	/	/		/		/	/		/		/		/	/		/	11
Financial status	/	/	/	/		/	/	/		/		/			/	/		/	12
Perceived social support			/			/				/									3
Perceived well-being	/	/	/	/	/	/	/	/	/	/			/		/	/	/	/	15
Satisfaction with life	/	/	/	/	/	/	/	/	/	/		/	/	/	/	/	/	/	17

/- Experts who contribute to key aspects of occupational balance.

Additionally, attributes associated with occupational balance were also identified and categorised into four groups: (i) performance patterns; (ii) personal factors; (iii) occupations; and (iv) contexts. For retirees' performance patterns, more than half of the experts proposed that occupational balance following retirement was associated with retirees' adaptability to their daily routine (n = 10) and current roles (n = 10). On the other hand, only a few experts proposed that occupational balance was associated with retirees' satisfaction with their current roles (n = 3).

Next, for retirees' factors, several factors proposed by the experts were related to the retirees themselves that may influence their occupational balance following retirement. Most experts proposed that the retirees' perceived meaningful and desired activities may contribute to occupational balance (n = 14). Furthermore, more than half of the experts proposed that retirees' prioritised activities play a key role in occupational balance (n = 10). However, only a few experts proposed that staying active (n = 5), engaging in spirituality (n = 3), and being independent in daily activities (n = 3) may contribute to occupational balance.

Additionally, several occupations were proposed as crucial for occupational balance. Interestingly, productivity is one of the most highlighted occupations by the experts (n = 16), followed by leisure (n = 15), rest (n = 15), social participation (n = 14), and activities of daily living (ADL) and instrumental activities of daily living (IADL) (n = 12). Only a few experts highlighted other occupations, such as health management (n = 4) and personal time (n = 4), and one expert highlighted occupations related to retirees' mental and emotional care.

Lastly, several contexts were proposed as associated with occupational balance. Almost all experts proposed that the retirees' occupational balance was associated with life satisfaction (n = 17), while the majority of them proposed it was associated with the retirees' perceived well-being (n = 15), financial status (n = 12), and health status (n = 11). Only three experts proposed that the retirees' occupational balance was associated with their perceived social support.

Round two

Three possible definitions were generated from the key aspects of defining occupational balance following a discussion with the research team to avoid redundancy among the proposed definitions. However, only two definitions achieved consensus among the experts in the second round, as shown in Table 3. Therefore, the occupational balance may be defined as an optimal engagement in meaningful and desired occupations, including self-care, productivity, and restful activity, and a subjective sense of balance in occupations according to an individual's routine and context.

Table 3: Summary of the Delphi study, round two

	Proportion of agreement
Definition	
Occupational balance is an optimal engagement in the meaningful and desired occupation, including self-care, productivity, and restful activity.	8.39
Occupational balance is a subjective sense of balance in occupations according to an individual's routine and context.	8.33
Occupational balance is an exactly equal distribution between self-care, productivity and leisure.	5*
Attributes	
1. Performance pattern	
Adaptation to the daily routine	8.33
Adaptation to current roles	8.11
Satisfaction with current roles	8.22
2. Personal factors	
Meaningful and desired activities	8.56
Prioritised activities	8.06
Staying active	7.89*
Spirituality	7.94*
Independence in daily activities	7.89*
3. Occupations (Retirees' time use)	
Social participation	8.44
Leisure	8.56
Health management	8.67
Productivity	7.56

Table 3: Summary of the Delphi study, round two (continued)

		Proportion of agreement
	ADL and IADL	8.44
	Rest	8.44
	Personal time	8.61
	Mental and emotional care	8.56
4.	Contexts	
	Health status	8.28
	Financial status	7.94*
	Perceived social support	8.22
	Perceived well-being	8.39
	Satisfaction with life	8.50

*Failed to achieve consensus

Attributes associated with occupational balance were also assessed for agreement among the experts. For the retirees' performance pattern, all proposed attributes achieved consensus ranging from 8.11 to 8.33. However, for the retirees' factors, only two proposed attributes achieved consensus, including the retirees' perceived meaningful and desired activities and prioritised activities, with a proportion of agreement of 8.56 and 8.06, respectively.

On the other hand, almost all proposed retirees' time use achieved consensus, ranging from 8.44 to 8.67. Surprisingly, the most highlighted attribute in the first round, productivity, failed to achieve consensus in the second round. Lastly, almost all proposed retirees' contexts achieved consensus, ranging from 8.22 to 8.50. Only financial status failed to achieve consensus among the experts.

Discussion

This study aimed to achieve a consensus definition of occupational balance and its attributes following retirement among occupational therapy experts in Malaysia. While Dür et al. (35) found that occupational balance was mostly defined as related to balance in different types of occupational patterns and areas, this study emphasised that there shall be an optimal engagement in occupations deemed meaningful and desirable by an individual, usually revolving around self-care, productivity, and restful activity. Additionally, the occupational balance was proposed as a subjective sense of balance in occupations unique to an individual's routine and context. This finding enhanced the work of Backman (33), who found a challenge in defining occupational balance as the nature of occupations differed among individuals.

On the other hand, unique to retirees, there were several proposed attributes associated with occupational balance, such as adaptation to routine and current roles, and satisfaction with current roles. These adaptations were necessary as retirees were prone to sedentary lifestyles, leading to activity deprivation (13, 14). Nevertheless, the association between the retirees' satisfaction with current roles and occupational balance was scarcely explored. However, if retirees are satisfied with their current roles, they may continue to engage in activities related to those roles. Hence, this scenario may contribute to a sense of continuity and purpose, leading to occupational balance.

For retirees' factors, the occupational balance was proposedly associated with the retirees' meaningful and desirable activities. Similarly, Håkansson et al. (53) found that engagement in meaningful occupations facilitates the achievement of occupational balance. Furthermore, the occupational balance was also proposedly associated with the retirees' prioritised activities. Prioritised activities may overlap with meaningful and desirable activities but are distinct in nature as prioritisation involves making conscious decisions about which activities to focus on, considering some factors such as urgency, importance, feasibility, and personal values. Nevertheless, both elements were crucial for occupational balance. It was also previously emphasised the need to balance desirable and essential activities (54).

Moreover, there were a variety of occupations deemed necessary for occupational balance following retirement, including health management, leisure, social participation, ADL/IADL, rest, personalised activities, and activities related to mental and emotional care. However, due to the unique and individualised nature of occupations (33), these findings may be verified by future studies among retirees.

Next, retirees' contexts that were proposedly associated with occupational balance were health status, financial status, perceived social support, perceived well-being and satisfaction with life. However, due to the limited studies of occupational balance following retirement, further exploration will be conducted to verify and identify the causal relationship between these attributes and occupational balance. Nevertheless, in other populations, health status was an important predictor of occupational balance (55-57). Furthermore, despite limited explorations, financial stability and social support were also emphasised

in other populations, such as workers, students, and parents (58-60). On the other hand, there were conflicting findings on the association between occupational balance and life satisfaction (61-63). These limited findings among retirees and disparities of findings in other populations warrant future studies specific to the retirees' population.

The consensus on the definition of occupational balance and its associated attributes following retirement has important implications for occupational therapy practice in Malaysia. Firstly, it provides a framework for occupational therapists to assess and promote occupational balance among retirees, which can contribute to their overall well-being and quality of life. In addition, the proposed attributes associated with occupational balance, such as adaptation to routine and current roles, prioritised and meaningful activities, and satisfaction with current roles can guide occupational therapists in developing personalised intervention plans. Furthermore, the variety of occupations deemed necessary for occupational balance can also serve as a reference for therapists to incorporate various activities into their intervention plans. Besides, the study's emphasis on subjective balance in occupations unique to an individual's routine and context highlights the need for a client-centred approach to occupational therapy practice, emphasising the importance of tailoring intervention plans to an individual's preferences and needs.

Despite the contributions of this study, several limitations should be acknowledged. Firstly, the study sample only consisted of occupational therapy experts in Malaysia, and thus the findings may not be generalisable to other populations or cultures. Furthermore, future research should explore retirees' perspectives to obtain a more comprehensive and nuanced understanding of occupational balance following retirement. Secondly, the study relied on expert opinions rather than empirical data, and thus the proposed definition and attributes require further validation. Thirdly, the proposed attributes associated with occupational balance were based on a review of the literature and the experts' opinions and were not directly validated through empirical research. Therefore, further research is needed to explore the relationships between these attributes and occupational balance among retirees. Finally, occupational balance is one of the branches of occupational science with a limited specialisation in Malaysia. Therefore, the experts involved in this study were not specialised in occupational science but were involved in research related to occupational therapy or practised in primary healthcare settings that usually serve community-dwelling retirees in Malaysia. Therefore, the findings of this study should be interpreted carefully and serve as a foundation for a more thorough exploration of the retirees' population.

Conclusion

Malaysian occupational therapy experts have defined occupational balance as an optimal engagement in meaningful and desired occupations, including self-care, productivity, and restful activity, and a subjective sense of balance in occupations according to an individual's routine and context. However, among retirees, the attributes associated with occupational balance may differ, particularly in the occupations involved that contribute to occupational balance. Therefore, future studies may focus on the occupational balance experience among retirees to capture a comprehensive and nuanced understanding of occupational balance.

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Competing interests

The authors declare no conflict of interest.

Ethical clearance

Ethical approval to conduct this study was obtained from the Universiti Teknologi MARA (UiTM) Ethical Committee, reference no: [REC/12/2020 (MR/4360)]. All experts gave their informed consent to participate in this study, and their anonymity was protected throughout this study.

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