

RESEARCH ARTICLE

Validation of the Cadre's Satisfaction of the *Posyandu Lansia* Questionnaire

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Abstract

Integrated health post for elderly/*posyandu lansia* is one of the community empowerment actions in improving the quality of life of the elderly. The role of cadres in managing the *posyandu lansia* is significant and is influenced by motivational factors that will cause satisfaction or dissatisfaction at work. A qualitative study in Bandung succeeded in exploring the components of satisfaction based on Herzberg's theory. Until now, no questionnaires have been developed to measure the satisfaction of *posyandu lansia* cadres. This study aims to set up and validate the satisfaction questionnaire for *posyandu lansia* cadres. A cross-sectional study was conducted on 200 cadres taken by multistage sampling in Bandung, West Java, Indonesia, from October to November 2020. Fifty-four items consisting of 19 motivator factor items and 35 hygiene factor items were tested for validity using the Pearson product-moment correlation coefficient, exploratory factor analysis, and communalities test. In addition, a reliability test was carried out using Cronbach's alpha. The results showed that 16 of 54 items did not meet the requirements, consisting of 5 items from motivator factors and 11 from hygiene factors. The dimensions of the motivator factors changed from 6 dimensions to 4 dimensions, and the dimensions of hygiene factors changed from 8 dimensions to 9 dimensions. It concluded that a new questionnaire on the satisfaction of *posyandu lansia* cadres has been compiled and can be used to measure the level of satisfaction of cadres. However, further studies need to be carried out involving various regions in Indonesia.

Keywords: Herzberg's theory, *posyandu lansia*, satisfaction

Introduction

Integrated health post for the elderly (*posyandu lansia*) is community support to enhance the quality of life of the elderly.¹ It is developed by the local community and run by community health workers/cadres.¹ Cadre is selected from the community where the elderly live. They know the elderly well, the community cultures, and the languages used.² They have been trained some tasks and performed them as unpaid volunteers.² The roles of cadres include health promotion, health education, some basic health services, and the collection of health data.^{2,3} They involve in activities both within the community and linked to the public health center/*puskesmas* they are connected.²⁻⁴ In Indonesia, there are 100,740 *posyandu lansia* distributed in the provinces, mainly in West Java, Central Java, East Java, and South Sumatera.^{5,6}

The cadre's satisfaction places an essential factor in the continuity of the *posyandu lansia*.⁷ Herzberg⁸ mentioned that motivator and hygiene

factors are contributed to work satisfaction.⁹ Motivator factors are factors that come from the person his/herself (intrinsic factors) that produce work satisfaction and consist of 5 dimensions: 1) achievement, 2) recognition, 3) the work itself, 4) possibility for growth, and 5) responsibilities. On the other hand, hygiene factors are factors that come from the work environment (extrinsic factors) that reduce dissatisfaction and consist of 7 dimensions: 1) policies and administration, 2) supervision, 3) interpersonal relationships, 4) incentives, 5) personal life, 6) working conditions, and 7) status.^{8,9} A qualitative study conducted in Bandung city, Indonesia revealed two new dimensions from each Herzberg's two-factor theory. Practicing religious teachings was a new dimension of the motivator factors found in this study.¹⁰ The respondents were Moslems and stated that they worked sincerely (*ikhlas*), believing that becoming a cadre was worship (*ibadah*), and made this work as a saving for the afterlife (*akhirah*).¹⁰ Social relations emerged as a new dimension of hygiene factors. The

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respondents stated that being cadres, they had more opportunities to meet their community, made new friends, and were very happy if they could help others, so that one day if they needed help, the community could help them.¹⁰

Policy generated from evidence needs to be carried out to improve the *posyandu lansia*. One of the pieces of evidence that should be collected is the measurement of the cadre's work satisfaction. In doing so, a questionnaire should be developed and validated. The study's objectives were to develop and validate the cadre's work satisfaction at the *posyandu lansia*.

Methods

A cross-sectional study was conducted in Bandung city, Indonesia, from October to December 2020. Bandung city is the capital of West Java province and is divided into six administrative regions and has 80 *puskesmas*. *Puskesmas* is one of the primary health facilities responsible for the health of the community they serve, among others, the health of the elderly. Moreover, *puskesmas* have the responsibility to enhance the skills of the cadres to perform some tasks they are expected to do. From each region, one *puskesmas* was selected by simple random sampling. The researchers collected data of the cadres from the *puskesmas* chosen that met the inclusion and exclusion criteria. The inclusion criteria were: (1) For more than one year, they were cadres and are still active as cadres; (2) They could operate a mobile phone; (3) They had Whatapps web; (4) Willing to participate in this study. Moreover, the exclusion criteria were cadres who did not fill out the questionnaire in Google Form. After the number of cadres who met the requirements was gathered, a proportionate sampling was carried out from each *puskesmas* to collect 200 participants.¹¹

The six dimensions of the motivator factor were: (1) Achievement: the success in cadre work; (2) Recognition: obtaining an appreciation for the accomplishment of the work as a cadre; (3) The work itself: an activity or a task that gives a positive or negative feeling; (4) Possibility for growth: opportunities to develop themselves and improve knowledge/skills/expertise; (6) Responsibilities: the obligation to carry out the work.¹⁰

Moreover, hygiene factors consisted of eight dimensions and 26 categories.¹⁰ The eight

dimensions of hygiene factors were: (1) Policies and administration work from the *puskesmas* and local government: policies or rules and administrative system given by *puskesmas* and local government to cadres in providing services in the *posyandu lansia*; (2) Supervision: supervising and guiding the cadre in providing service in the *posyandu lansia*; (3) Interpersonal relationships: the communication bond between cadres and the supervisors from *puskesmas* and the local government; (4) Incentives: wages or salaries given to the cadre; (5) Personal life: the condition of the private life of cadres affecting their work as cadres; (6) Working conditions: an environment is affecting cadres in providing services in the *posyandu lansia*; (7) Status: cadre position in the community; (8) Social relations: help the community, socialize with the community, and make new friends.

The researchers set up a questionnaire from the theoretical construct and established that 54 items consisted of 19 items that contributed to motivator factors and 35 contributed to hygiene factors. Each item was scored with a Likert scale from 1 to 4 (strongly disagree, disagree, agree, and strongly agree). After establishing the questionnaire, a pre-testing was carried out on 23 cadres as the target population of this study. This pre-testing aimed to identify the clarity of the language used, the relevance to the theoretical construct revealed without changing the initial meaning of the concepts, and the possible suggestions to improve the question phrase. The researchers decided to perform the pre-testing twice. The first pre-testing was conducted on 13 cadres who came to the meeting location and met the inclusion and exclusion criteria. One of the researchers explained the aim of the study and the questionnaire. The cadres read each item carefully and gave inputs. From this first pre-testing, only two items from the motivator factors should be revised.

Those were
 "I can socialize with my fellow cadres and the community so that it can prevent my aging process (Saya dapat bersosialisasi dengan sesama kader dan masyarakat sehingga dapat mencegah proses penuaan)"
 to
 "I can socialize with my fellow cadres and the community so that it can delay my aging process (Saya dapat bersosialisasi dengan sesama kader dan masyarakat sehingga dapat memperlambat

proses penuaan)”

and

“*I became smarter compare with other community members (Saya menjadi lebih pintar dibanding dengan anggota masyarakat lainnya)*”

to

“*I know better compare with other community members (Saya menjadi lebih tahu dibanding dengan anggota masyarakat lainnya).*”

The second pre-testing was held with ten cadres whose location and members differed from the first group. The second pre-testing was expected to reassure that the items were understood and could be answered easily. The cadres gave no inputs anymore since they understood the items very well. The proposed questionnaire was discussed among the researchers to obtain the final questionnaire. Due to the COVID-19 pandemic, the questionnaire was designed in a Google Form and linked via Whatsapp.

The reliability and validity testing was conducted on 200 cadres from 6 *puskesmas* in Bandung city. Every *puskesmas* had a different number of total cadres. The number of the cadres selected from each *puskesmas* was calculated proportionately. Every cadre who met the inclusion criteria was selected until the required sample size was achieved. Demographic data consisted of age, religion, education level, marital status, occupation, cadre status, and years being a cadre. The age category was divided into six categories: 20–30 years, 31–40 years, 41–50 years, 51–60 years, 61–70 years, and 71–80 years. Religion was divided into two categories: Moslem and non-Moslem. Education level was divided into three categories: junior high school and below, high school or equivalent, and higher education. Marital status was divided into four categories: unmarried, married, widow divorced, and widow partner had died. Occupation is divided into two categories, namely no and yes. Cadre status is divided into two categories: only as *posyandu lansia* cadres and as *posyandu lansia* and children cadres; and years being a cadre are divided into three categories: 1–5 years, 6–10 years, and >10 years. The collected data were processed and tested using SPSS version 22.0. Demographic data were presented in percentages. Pearson's correlation was employed to analyze the construct validity. This coefficient is a number between –1 and 1. The *r* values are distributed as follows: $r=0.0-0.29$, negligible

correlation; $r=0.3-0.49$, low correlation; $r=0.5-0.69$, moderate correlation; $r=0.7-0.89$, high correlation; $r=0.9-1.0$, very high correlation.¹² To test the validity, the results were evaluated using the critical value table of the Pearson product-moment correlation coefficient. We used *df* 198 (200 samples minus 2), r count > 0.138), p value < 0.05.¹³ The Kaiser-Meyer-Olkin (KMO) index for sampling adequacy and Bartlett's test for sphericity were used to verify the suitability of the application of exploratory factor analysis (EFA) for the collected data. The recommended value of the KMO index is equal to or above 0.6, and Bartlett's test of sphericity is significant at $\alpha < 0.05$.¹⁴ with exploratory factor analysis was conducted. It adopted the varimax rotation method in a correlation matrix composed of 19 items of motivator factors and 35 items of hygiene factors (a total of 54 items). The commonalities test was conducted to test the unidimensionality of the items. Communalities define that the items are well explained. The value should equal to or above 0.3–0.5.¹⁴ However, according to the previous study, the dimensions had already been set up for six dimensions of motivator and eight dimensions of hygiene factors. The number of dimensions was confirmed by assessing the scree plot, employing question retention through the Kaiser-Guttman criterion of the components with eigenvalues higher than 1. The reliability test used in this study was Cronbach's alpha, which Lee Cronbach developed in 1951. It provides a measure that describes the extent to which all the items in a test measure the same concept or construct (internal consistency) or stable and consistent result.^{15,16} It also describes the inter-relatedness of the items within the test.¹⁵ No absolute rules exist for internal consistencies. Some experts suggest cut-off points for reliability are unacceptable: $\alpha < 0.5$, poor: $0.5 \leq \alpha < 0.6$, questionable: $0.6 \leq \alpha < 0.7$, acceptable: $0.7 \leq \alpha < 0.8$, good: $0.8 \leq \alpha < 0.9$, and excellent: $\alpha \geq 0.9$.¹⁷ However, for a pilot study, it is suggested that reliability should be equal to or above 0.60.¹⁶

This study was approved by the Health Research Ethics Committee, Universitas Padjadjaran, Bandung, Indonesia, number: 776/UN6.KEP/EC/2020.

Results

The cadres comprised 200 subjects, and their backgrounds are described in Table 1. All cadres

Table 1 Characteristics of the Participants

Characteristics	n=200	%
Age group (years)		
20–30	5	2.5
31–40	23	11.5
41–50	76	38.0
51–60	64	32.0
61–70	27	13.5
71–80	5	2.5
Religion		
Moslem	199	99.5
Non-moslem	1	0.5
Education		
Junior high school and below	32	16
High school	120	60
Higher education	48	24
Marital status		
Single	1	0.5
Married	166	83.0
Widow (divorced)	5	2.5
Widow (partner died)	28	14.0
Occupation		
No	177	88.5
Yes	23	11.5
Cadre status		
Only as posyandu lansia cadre	58	29
As posyandu lansia and children cadre	142	71
Work as a cadre (years)		
1–5	101	50.5
6–10	58	29.0
>10	41	20.5

were female and of their productive age, although a small percentage of the elderly became cadres. Most of the cadres had a high school education, and they were housewives. This study discovered that they were not only *posyandu lansia* cadres but also *posyandu* for children cadres.

The Pearson correlation test was conducted on all items. This study discovered that 53 of 54 items (98.15%) had r count > r table. Moreover, 94.4% had equal to or above moderate correlation. Three items had a correlation coefficient below 0.5. Those were M6, H2, and H5 (Table 2).

The KMO index for motivator factors was 0.843, and Bartlett's test was significant at $\alpha < 0.001$ (approx. chi-square=1468.746). This result was similar to the hygiene factors. The development of the KMO index for hygiene factors

was 0.871, and Bartlett's test was significant at $\alpha < 0.001$ (approx. chi-square=3465.747). Based on the KMO index and Bartlett's test, the unidimensionality test of the questionnaire was conducted through commonality, employing the principal component method. Table 3 exhibits the items and communality value for each item.

Items M6, M10, M11, M14, and H2, presented communality lower than 0.5. On the other hand, the others revealed a value higher than 0.5. After the commonality analysis, the component matrix was verified. Employing the principal component analysis as the extraction method and the varimax rotation method with Kaiser normalization, dimensions of the motivator factors went from 6 dimensions initially to 4 dimensions, and dimensions of the hygiene factors went from 8 dimensions to 9 dimensions. Moreover, the items of motivators elements have moderate to high correlation, but some themes of hygiene factors had low correlation (H2, H6, H11, H12, H21, H22, H23, H26, H27, and H34). Table 4 displays this analysis.

The internal consistency (Cronbach's alpha) ranged from -0.368 to 0.84 for the dimensions of the motivator factors, with the overall score being 0.841. Recognition, the work itself, and personal growth were the dimensions that did not meet the recommended 0.60 or higher. After M13 was deleted, the internal consistency of personal growth increased from 0.514 to 0.663. The internal consistency (Cronbach's alpha) ranged from -0.195 to 0.884 for the dimensions of the hygiene factors, with the overall score being 0.899. Policies and administration, incentives, and work conditions were the dimensions that did not meet the recommended of 0.60 or higher. After H2 was deleted, the internal consistency of policies and administration dimension increased from 0.434 to 0.609 (Table 5). After testing its validity and reliability, some dimensions and items were deleted from the questionnaire.

Table 6 displays the final dimensions and items. M6, M10, M11, M13, and M14 were deleted from the questionnaire. M6 did not meet the recommended value of the coefficient correlation and commonalities, and if deleted, the Cronbach's alpha of the recognition dimension increased from 0.306 to 0.402. M10, M11, and M14 did not meet the recommended value of commonalities (equal to or higher than 0.5). Moreover, if M13 was deleted, the Cronbach's alpha of the personal growth dimension increased from 0.514 to 0.663.

Table 2 Pearson Correlation Coefficient

Items	r	p
A Motivator factors		
1 Achievement		
M1 My <i>posyandu lansia</i> becomes a role model for other <i>posyandu lansia</i>	0.822	<0.001
M2 There are so many elderly who come to my <i>posyandu lansia</i>	0.767	<0.001
M3 The elderly become healthy	0.693	<0.001
M4 My <i>posyandu lansia</i> joins a competition	0.751	<0.001
2 Recognition		
M5 Thank you note from the community makes me feel rewarded	0.729	<0.001
M6 I didn't expect any awards	0.462	<0.001
M7 I feel more motivated when I get an award in the form of goods such as uniforms	0.726	<0.001
3 The work itself		
M8 I am happy and proud to be able to help the community	0.598	<0.001
M9 Although being a cadre is a tiring job because there are many activities and many reports to do	0.698	<0.001
4 Possibility for growth		
M10 I can apply the knowledge and skills I have	0.603	<0.001
M11 I can socialize with fellow cadres and the community so it delays my aging process	0.710	<0.001
M12 I can improve my knowledge and skills	0.662	<0.001
M13 I know better compared to other members of the community	0.638	<0.001
5 Responsibilities		
M14 I am responsible for persuading the elderly to come to <i>posyandu lansia</i>	0.771	<0.001
M15 I want to help people to be healthy	0.810	<0.001
M16 A cadre has to carry out activities at the <i>posyandu lansia</i>	0.746	<0.001
6 Practicing religious teaching		
M17 I carry out activities at <i>posyandu lansia</i> sincerely	0.877	<0.001
M18 The job of the cadre is to worship	0.910	<0.001
M19 Helping the community is a saving for the life after	0.825	<0.001
B Hygiene factors		
1 Policies and administration work		
H1 Although the tasks and reports that I must do are a burden for me	0.592	<0.001
H2 Among cadres always share works so that the works and the reports that should be made can be finished quickly	0.304	<0.001
H3 Although the programs at <i>posyandu lansia</i> are constantly changing	0.770	<0.001
H4 Although the report formats change frequently	0.731	<0.001
2 Supervision		
H5 Although <i>puskesmas</i> staff rarely attend <i>posyandu lansia</i>	0.123	0.082
H6 <i>Puskesmas</i> officers guide the <i>posyandu lansia</i>	0.598	<0.001
H7 I can attend seminars or meetings to gain insight and exchange ideas	0.768	<0.001
H8 As a cadre, I have the opportunity to take part in various training	0.668	<0.001
H9 The head of the hamlet guides the <i>posyandu lansia</i>	0.625	<0.001
H10 Village officers guide the <i>posyandu lansia</i>	0.745	<0.001
3 Interpersonal relation		
H11 The relationship with the <i>puskesmas</i> staff is very close and good	0.745	<0.001
H12 Good support from the hamlet and village officers	0.664	<0.001
H13 I and other cadres always help each other	0.768	<0.001
H14 The cadres are very solid in their work	0.813	<0.001
H15 The relationship between cadres makes me comfortable to work at the <i>posyandu lansia</i>	0.810	<0.001
H16 The relationship between the cadres is very close	0.817	<0.001
H17 I know the character of each other cadre so I can communicate well	0.779	<0.001
4 Incentives		
H18 Although there aren't any incentives	0.669	<0.001
H19 Incentives can increase my motivation to work as a cadre	0.681	<0.001
5 Personal life		
H20 My family supports me to become a cadre	0.666	<0.001
H21 I can fill my daily activities as a cadre so I don't get bored at home	0.682	<0.001
H22 My health conditions are one of the factors that keep me as a cadre	0.722	<0.001
H23 I have a lot of free time to work as a cadre	0.674	<0.001
H24 Financial need is not my reason to stop being a cadre	0.667	<0.001
H25 Taking care of my family is not an excuse for me to stop being a cadre	0.688	<0.001
H26 Age is a consideration for me to remain as a cadre	0.520	<0.001
6 Working conditions		
H27 <i>Posyandu lansia</i> schedule does not burden me	0.715	<0.001
H28 The facilities at <i>posyandu lansia</i> are adequate for the success of my work as <i>posyandu lansia</i> cadre	0.881	<0.001
7 Status		
H29 I am more trusted by the community	0.805	<0.001
H30 I became more known by the community	0.867	<0.001
H31 I became a community leader in my environment	0.824	<0.001
8 Social relation		
H32 I can help the community, for example when someone is sick I can take her/him to the health center	0.694	<0.001
H33 I can chat, laugh together and share feelings both among cadres and the elderly	0.798	<0.001
H34 I get to know a lot of people	0.820	<0.001
H35 I can make new friends	0.822	<0.001

Note: M1–M19: code number of motivator factors; H1–35: code number of hygiene factors; r: correlation coefficient

Table 3 Communalities of 54 Items

Items of Motivators Factors	Communalities	Items of Hygiene Factors	Communalities
M1	0.649	H1	0.587
M2	0.714	H2	0.453
M3	0.596	H3	0.801
M4	0.502	H4	0.636
M5	0.517	H5	0.578
M6	0.441	H6	0.610
M7	0.692	H7	0.768
M8	0.543	H8	0.808
M9	0.617	H9	0.653
M10	0.372	H10	0.682
M11	0.456	H11	0.636
M12	0.552	H12	0.728
M13	0.536	H13	0.777
M14	0.421	H14	0.762
M15	0.613	H15	0.796
M16	0.659	H16	0.823
M17	0.704	H17	0.643
M18	0.642	H18	0.543
M19	0.709	H19	0.685
		H20	0.613
		H21	0.620
		H22	0.627
		H23	0.563
		H24	0.685
		H25	0.709
		H26	0.532
		H27	0.573
		H28	0.534
		H29	0.713
		H30	0.736
		H31	0.699
		H32	0.655
		H33	0.680
		H34	0.716
		H35	0.764

Hygiene factors had 11 items that were considered to be deleted, which are H2, H5, H6, H11, H12, H21, H22, H23, H26, H27, and H34. H2 did not meet the recommended value of the coefficient correlation and commonalities, and if deleted, increased the Cronbach's alpha of the policies and administration dimension from 0.434 to 0.609. H5 did not meet the recommended coefficient correlation value and, if deleted, can increase the Cronbach's alpha of the supervision dimension from 0.617 to 0.759. The item of H6, H11, H12, H21, H22, H23, H26, H27, and H34 did not meet the recommended value of the coefficient

correlation.

Based on the results, the motivators factors consisted of four dimensions: achievement, recognition, the work itself, and responsibilities, with 14 items. Moreover, hygiene factors consisted of 9 dimensions: policies, administration work, supervision, interpersonal relation, incentives, personal life, working conditions, status, and social relation with 24 items.

Discussion

Millions of community health workers/cadres

Table 4 Principal Component Analysis of the Motivator and Hygiene Factors

Dimension of Motivators Factors					Dimension of Hygiene Factors									
Items	1	2	3	4	Items	1	2	3	4	5	6	7	8	9
M1		0.751			H1				0.652					
M2		0.820			H2	0.462								
M3		0.562			H3									0.775
M4		0.671			H4				0.673					
M5		0.677			H5				0.697					
M6	0.518				H6							0.495		
M7			0.811		H7							0.695		
M8	0.586				H8							0.838		
M9				0.717	H9			0.747						
M10	0.569				H10			0.710						
M11	0.614				H11	0.486								
M12	0.717				H12			0.480						
M13			0.605		H13	0.731								
M14	0.562				H14	0.800								
M15	0.754				H15	0.765								
M16	0.588				H16	0.855								
M17	0.836				H17	0.707								
M18	0.801				H18				0.615					
M19	0.721				H19								0.772	
					H20						0.500			
					H21	0.484								
					H22						0.412			
					H23						0.471			
					H24						0.749			
					H25						0.758			
					H26		0.452							
					H27	0.494								
					H28			0.615						
					H29		0.767							
					H30		0.813							
					H31		0.742							
					H32							0.684		
					H33							0.704		
					H34	0.496								
					H35	0.644								

worldwide help people and communities become healthy and improve their quality of life.¹⁸ The cadres are an important force for preventing diseases, promoting healthy behaviors, and extending the reach of health systems, especially in hard-to-reach areas, narrowing the health equity gap.² Most of the cadres work as unpaid volunteers.² According to other studies, volunteerism is defined as “a non-spontaneous aid activity, in which the individual providing the assistants is active in finding opportunities to help others, committing to sacrifice time, effort and material within a certain timeframe.”^{19,20} Being a volunteer has a positive advantage. Volunteer activities can improve volunteers’ physical and mental health.¹⁸ However, not every

cadre has the same motivation when deciding to become a volunteer. Motivation to work has an essential role in contributing to satisfaction and dissatisfaction, which lead to retention.^{21,22}

This study had succeeded in developing and validating the questionnaire as a new, self-administered measure of the cadre’s satisfaction who volunteers at the *posyandu lansia*. Validity and reliability testing are the two most important tests to evaluate a measurement instrument or questionnaire. Validity represents what an instrument measures and the truthfulness of findings or “measure what is intended to be measured,” whereas reliability means the stability and consistency of an instrument.^{16,23}

This study excluded 16 of the 54 initial items

Table 5 Internal Consistency (Cronbach's Alpha)

No.	Dimensions	Cronbach's Alpha	Cronbach's Alpha if Item Deleted	Notes
A	Motivator factors	0.841	0.823	M6, M13, and M19 deleted
1	Achievement	0.751	0.751	No item deleted
2	Recognition	0.306	0.402	M6 deleted
3	The work itself	-0.368	-0.368	No item deleted
4	Personal growth	0.514	0.663	M13 deleted
5	Responsibilities	0.664	0.664	No item deleted
6	Practicing religious teachings	0.840	0.867	M19 deleted
B	Hygiene factors	0.899	0.893	H2, H5, H12, H26, and H32 deleted
1	Policies and administration	0.434	0.609	H2 deleted
2	Supervision	0.617	0.759	H5 deleted
3	Interpersonal relation	0.884	0.886	H12 deleted
4	Incentives	-0.195	-0.195	No item deleted
5	Personal life	0.780	0.793	H26 deleted
6	Work condition	0.434	0.434	No item deleted
7	Status	0.776	0.776	No item deleted
8	Social relation	0.788	0.808	H32 deleted

Table 6 Final Items and Dimensions of the Motivator and Hygiene Factors

No.	Dimensions	Items
A	Motivator factors (14 items)	
1	Achievement	M1, M2, M3, M4, M5
2	Recognition	M7
3	The work itself	M9
4	Responsibilities	M8, M12, M15, M16, M17, M18, M19
B	Hygiene factors (24 items)	
1	Policies	H3
2	Administration work	H1, H4, H18
3	Supervision	H9, H10, H28
4	Interpersonal relation	H13, H14, H15, H16, H17, H35
5	Incentives	H19
6	Personal life	H24, H25
7	Work conditions	H27, H8,
8	Status	H29, H30, H31
9	Social relation	H20, H32, H33

based on validity and reliability testing. Five from the motivator factors and 11 from hygiene factors. Those items had low correlation, $r_{count} < 1.38$, and were not well explained.¹²⁻¹⁴ Although many items were excluded, the rest of the items were well defined in every dimension. This study revealed that the initial number of dimensions of the motivator and hygiene factors (6 and 8, respectively) that was set based on Herzberg's theory²¹ and a study in Bandung city,¹⁰ changed to four dimensions of the motivator factors and nine dimensions of the hygiene factors after employing the principal component analysis and the varimax

rotation method with Kaiser normalization.

The final dimensions of the motivator factors are achievement, recognition, the work itself, and responsibilities. In this study, possibilities for growth and practicing religious teachings were either excluded or blended into other dimensions. Three items of possibilities for the growth dimension were excluded from the questionnaire since they did not meet the validity and reliability values criteria, and one item (M12) correlated to the responsibilities dimension according to the principal component analysis results. According to Herzberg's two-theory of motivation,

possibilities for growth are essential intrinsic factors that make a person satisfied in working. Still, the absence of this dimension does not make him/her dissatisfied.⁸ Possibilities for growth are the opportunities for a person to learn new skills, gain new knowledge, and be promoted in the workplace.⁹ Further exploratory studies should be conducted to explore new items correlated to the possibilities for the growth dimension. Practicing religious teachings identified as one of the motivator factors,¹⁰ became part of the responsibilities dimension. A study in Bandung city revealed that as a Moslem, it is his/her responsibility to help other people taught in their religion.²⁴ Voluntary action driven by a sense of caring, sense of social responsibility, and part of worship.²⁴ This study revealed that hygiene factors consisted of nine dimensions. The new dimension is the policies dimension. Herzberg's theory of motivation stated that policies are part of the administration work dimension, nine, but this study discovered it is separated from that dimension. The statement that contributes to policies was, "Although the programs at *posyandu lansia* are constantly changing (H3)."

We found that the two-theory of motivation influence volunteering. Motivator factors as intrinsic factors cover Maslow's hierarchy needs related to achievement, recognition for accomplishment, and satisfaction with the job.^{25,26} The absence of the motivation factors rarely causes dissatisfaction.^{8,25,26} Hygiene factors as extrinsic factors can demotivate or cause dissatisfaction. Still, these factors do not necessarily create satisfaction.^{8,25,26} Which factors contribute to satisfaction at the volunteering work vary around the world. Opportunities to learn new skills and gain experience; clear tasks and procedures; and recognition was the most factors that contributed to satisfaction and dissatisfaction.^{25,27,28}

Several limitations of this study have been identified: (1) The study was conducted from only six *puskesmas* and one district, raising the generalizability of the results. To minimize this concern, 200 respondents were selected from a list of names of cadre and simple randomized selected based on the inclusion and exclusion criteria. (2) Test-retest reliability did not conduct in this study. However, this test has disadvantages if the respondents are familiar with the instruments and the period of the retest is narrow from the first test. (3) The study was conducted on cadres from one area, and they did

not represent other ethnicities, religions, and cultures that exist in the Indonesian population.

The last limitation of this study was the collection of the data using the Google Form link to Whatsapps. Some of the disadvantages of using an online survey are the answers could be filled by another person, dishonest answers, misunderstanding, and misinterpretation.

Conclusions

The questionnaire demonstrates a promising performance after testing its validity and reliability. Therefore, this questionnaire can measure the *posyandu lansia* cadre's satisfaction. However, since Indonesia is a big country and its population has various demographic characteristics, a study should be conducted to represent those groups.

Conflict of Interest

The authors affirm no conflict of interest in this study.

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