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OPEN PEER REVIEW

Validation of the Knowledge Sharing Behavior Scale Among Nursing and Midwifery Faculty Members in Iran: Psychometric Properties and Cross-Cultural Adaptation

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SUBMITTED	REVISED	ACCEPTED	DOI
10 Jan 2023	9 Jul 2023	12 Jul 2023	10.5812/mejrh-134886

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

5 comments · 15 Jan 2023 – 24 Jan 2023

Referee 1 Reviewer

MAJOR REVISION 15 Jan 2023

Dear Authors
The manuscript needs Major Revision.
First of all, the text of your manuscript should be corrected in terms of English grammar and language structure and then confirmed to read as though written by a native English speaker.
Format the manuscript according to the journal's requirements.
Please see and apply my comments below.

Abstract:
Mention the type of study design.
Please write the keywords according to MeSH.

Introduction:
What is the innovation of the study? It is not mentioned in the text.
Write out each abbreviation in full the first time it is used.

Methodology:
Report the intra-class correlation coefficient (ICC) for instrument reliability.
Please explain CVR and CVI and other scales in the methodology.

Results:
Please present descriptive results at the beginning of the results.
The graphs are of very poor quality; please increase the resolution of the images.
The tables are very confusing; please provide full explanations in the footnotes of the tables.

Discussion:
Discuss each of the results obtained. Please read the following two articles and use them as a guide to avoiding methodological mistakes regarding the reliability of measurement tools. DOI: 10.1007/s10561-018-9737-7 https://doi.org/10.1002/ejp.1316.
Good luck

Referee 2 Reviewer

MAJOR REVISION 17 Jan 2023

560 faculty members from nursing and midwifery colleges in Iran participated in this cross-sectional research to verify the reliability and validity of the Knowledge Sharing Behavior Scale (KSBS). The authors came to the conclusion that the KSBS is a viable scale to assess the behavior of academic communities in Iran toward the sharing of knowledge.
1. Please rephrase the following sentence in order to enhance readability:
“The first step in increasing knowledge sharing is to assess the status quo”.
2. According to the authors, “A variety of tools have been introduced to measure knowledge-sharing behavior”. Please introduce some other related tools.
3. Why did you choose the KSBS and not select other related tools? You should justify your choice to the readers.
4. Please cite the following sentence with a suitable related reference:
“Despite the importance of this tool in measuring knowledge-sharing behavior”.

5. “A sample of 560 people was selected”. How did you determine this sample size?
6. Please discuss the results of the following articles and compare them with the current study:
https://www.researchgate.net/publication/285493927_A_Knowledge_Sharing_Model_for_Iranian_Educational_and_Researc
https://www.sid.ir/paper/264640/en

Referee 3 Reviewer

ACCEPT 18 Jan 2023

Thanks to the authors for considering MEJRH for their submission.
I read this manuscript and can say that it is appropriate in terms of scientific writing structure, sample size, statistical analysis, results presentation, and results interpretation. Therefore, it is appropriate for publication in MEJRH.

Associate Editor

MAJOR REVISION 22 Jan 2023

Dear Author/s
Thank you very much for considering the MEJRH as a venue for publishing your article entitled "Validation of the Persian Version of the Knowledge Sharing Behavior Scale in Faculty Members of Nursing and Midwifery Schools in Iran: An Exploratory and Confirmatory Factor Analysis". Our respected reviewers and I read the article carefully, and we believe your manuscript needs major revision before any firm decision can be made. Please remember that resubmission of the revised version does not guarantee that your paper will be published; it will still need to undergo a proper review process. I hope you do not give up but keep working and resolve the issues.
Looking forward to reviewing the revised article
Best of luck, AE

Editor-in-Chief

MAJOR REVISION 24 Jan 2023

Dear Authors
According to the reviewers’ and associate editor’s comments, your article requires major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Point-by-point Response to Reviewer’s Comments

Dear editor/reviewer.

I would like to thank you for these constructive, building, and improvable comments on this manuscript that would improve the substance and content of the manuscript. We considered each comment of reviewers on the manuscript thoroughly. My point-by-point responses for each comment are described in detail on the following pages.

Response to Reviewers' Comments

Reviewer 1

We are grateful to the reviewer for taking the time to carefully review the manuscript and give detailed and constructive comments, which has greatly helped to improve this paper. Below is our point-by-point response to each respective comment

Reviewer 1:
Dear Authors
The manuscript needs Major Revision.
First of all the text of your manuscript should be corrected in terms of English grammar and language
Reviewer 1-1-*structure and then confirmed as a native English document.*

Author's reply

Thanks for the comment.

While apologizing for this matter, we remind you that the editing of the text of the article and the format of the magazine is guaranteed by Breifland Publications.

Based on coordination with Brifland, it was decided that the article will be edited again if the article is accepted.

Reviewer 1-2-*Make the manuscript in the format of the journal.*

Author's reply

Thanks for the comment.

While apologizing for this matter, we remind you that the editing of the text of the article and the format of the magazine is guaranteed by Breifland Publications.

Based on coordination with Brifland, it was decided that the article will be edited again if the article is accepted.

Please see and apply my comments below.

Abstract:
Reviewer 1-3-*Mention the type of study design.*

Author's reply

Thanks for the comment.

Revised manuscript (Page 1, Line: 9):

This research is a cross-sectional study of scale psychometric type.

Reviewer 1-4-*Please write Keywords according to MeSH.*

Author's reply

Thanks for the comment.

Revised manuscript (Page 2, Line: 25):

Keywords: Validation, Knowledge, sharing, Persian, version.

Introduction:
Reviewer 1-5-*What is study innovation? Not mentioned in the text.*

Author's reply

Thanks for the comment.

Revised manuscript (Pages 2-4, Line: 43-79):

Knowledge management as a vital resource has led to the development of initiatives in modern organizations, among the various aspects of knowledge management, knowledge-sharing is a prerequisite and the backbone of the success of knowledge management initiatives in 21st-century organizations. Much attention has been paid to knowledge-sharing in industrial companies compared to universities, while knowledge-sharing in universities plays a central role in the sustainable socio-economic, psycho-social and political development of societies through education, research and dissemination of knowledge; It is, therefore, reasonable to expect universities to adopt a proactive approach to knowledge management to maximize their knowledge assets. However, most universities, especially in developing countries, adopt an inappropriate approach to knowledge management; Therefore, universities must promote knowledge-sharing behaviour among their faculty members.

Existing knowledge-sharing questionnaires are designed to evaluate knowledge-sharing in economic organizations. In the following, these scales are introduced. Dixon's standard knowledge-sharing

questionnaire (2000) has 15 questions on a five-point Likert scale (strongly agree to strongly disagree) and is designed in 4 dimensions [1]. Ryu et al.'s (2003) knowledge-sharing attitude questionnaire has 10 items on a five-point Likert scale (strongly agree to strongly disagree) [2]. Ajzen's knowledge-sharing questionnaire (1991), which has 10 questions on a five-point Likert scale from 1 to 5, is designed [3]. Wang's (2012) KMQ scale has 13 questions on a 7-point Likert scale (strongly disagree to "strongly agree) [4]. Lin's (2007) TEKS scale has four items on a five-point Likert scale. is an option (never to forever) [5]. The common problem in universities is the accumulation of knowledge instead of knowledge-sharing, because, in production organizations, knowledge-sharing has financial benefits for the knowledge owners [6]. While in universities, academic and teaching success plays a greater role in the financial benefits of professors [6]. Due to this difference, the existing tools for evaluating knowledge-sharing are not suitable in universities because these tools are designed to evaluate knowledge-sharing in production organizations.

The only scale available to assess knowledge-sharing is the Yi (2009) scale [7]. This scale was developed and validated in the United States of America to determine knowledge-sharing between faculty members and large commercial companies. This scale is widely used in scientific research and university knowledge-sharing evaluation [6-9].

This scale has not been used in Iran, despite its validity being confirmed in studies and widely used in the evaluation of knowledge-sharing in universities; Therefore, to provide a valid scale based on Iranian culture in the field of knowledge-sharing in universities, it is necessary to validate this scale in Iranian universities [10]; Therefore, according to the role of knowledge-sharing among clinical board members, this research aims to validate the knowledge-sharing scale among nursing and midwifery faculty members.

Reviewer 1-6-*Write the full text of the words that are used as abbreviations for the first time.*

Author's reply

Thanks for the comment.

Revised manuscript (Page 1, Line: 11-15):

Validation through face validity, content validity by determining content validity index (CVI) and content validity ratio (CVR), construct validity by determining exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), concurrent validity by determining the correlation between

Knowledge-sharing behaviour scale (KSBS) and Knowledge management questionnaire (KMQ) and tacit knowledge-sharing scale (TEKS), internal consistency reliability (Cronbach's α coefficient), and stability reliability (test-retest) were determined

Methodology:
Reviewer 1-7-*Report intra-class correlation coefficient (ICC) for instrument reliability.*

Author's reply

Thanks for the comment.

Revised manuscript (Pages 8, 11, 15 and 20, Line: 178-180, 238-239, 255):

Intra-class correlation coefficient (ICC) was performed with five experts. Experts gave each item a score of one to five (three with a PhD in nursing, and two with a PhD in midwifery).

ICC results showed that the average measurement coefficient of 0.94 is greater than 0.9.

ICC results showed that the average measurement coefficient of 0.94 is greater than 0.9.

Therefore, the reliability of the scale is quite acceptable [11, 12]. These findings were confirmed by Yi and Ramayah et al [6, 7]

Table 7. Intraclass Correlation Coefficient

	Intraclass Correlation	**95% Confidence Interval**		**F Test with True Value 0**			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	0.74	0.61	0.85	15.59	27	108	0.001
Average Measures	0.94	0.89	0.97	15.59	27	108	0.001

Reviewer 1-8-*Please explain CVR and CVI and other scales in the methodology.*

Author's reply

Thanks for the comment.

Revised manuscript (Pages 6, 7 and 8, Line: 130-138, 152-173):

KMQ was designed by Wang (2012). This questionnaire has 13 questions on a 7-option Likert scale (‘‘1’’ (totally disagree) to ‘‘7’’ (totally agree)). This scale has two dimensions, tacit knowledge-sharing (Items 1-6), and explicit knowledge-sharing (Items 7-13). Convergent validity, divergent validity, and construct

validity of the scale have been confirmed by Wang [4]. Cronbach α values of the factors ranged from 0.89 to 0.97 [4]. Its validity and reliability have been confirmed in Iran [13, 14].

TEKS Lin developed the brief four-item scale to assess tacit knowledge-sharing. The scale was developed from existing literature to measure how often employees share their unspoken and implicit knowledge with their co-workers in the workplace. The four items are rated on a five-point scale that ranges from 1 (never) to 5 (always). All the items are positively worded, with higher scores indicating that employees more willingly share their tacit knowledge with co-workers[5]. The items yielded high internal consistency reliability, with Cronbach's alpha of .81 [15] In this study, Cronbach's alpha was calculated as 0.89.

KSBS was developed by Yi (2009). KSBS has 28 items (On a five-point Likert scale of always=4, often=3, sometimes=2, rarely=1, and never=0 (The minimum score is 0, and the maximum score is 112. The closer the score is to 112, the better the status of knowledge-sharing)) with 4 dimensions: organizational communication (eight statements, coefficient alpha (CA) = 0.905 and items 6-13), written contributions (five statements, CA = 0.458 and items 1-5), communities of practices (seven statements, CA = 0.934 and items 22-28), personal interactions (eight statements, CA = 0.723 and items 14-21), and. Each statement was assessed on a 5-point Likert scale (ie, never, rarely, sometimes, often, and always). This scale as a valid and reliable instrument can assess knowledge-sharing behaviour among academics [6-9, 16].

In content validity, the CVR and CVI of the questionnaire were evaluated by 10 experts. For this purpose, to examine CVR, scale questions were based on a 3-part Likert: "necessary, useful but not necessary, and unnecessary" were evaluated (A CVR value above 0.62 is acceptable based on the Lawshe table [17]). To examine CVI, scale questions were evaluated in 3 criteria of simplicity (A scale with 28 items on a four-point Likert scale (not easy, relatively easy, easy, and quite easy), specificity (Scale with 28 items on a four-point Likert scale (unrelated, somewhat related, related, and completely related)), and clarity (Scale with 28 items on a four-point Likert scale (Not clear, relatively clear, clear, and quite clear)) based on a 4-part Likert from 1 (lowest score) to 4 (highest score) (Score above 0.79 is acceptable [18, 19]).

Results:
Reviewer 1-9-*Please use descriptive results at beginning of the results.*

Author's reply

Thanks for the comment.

Revised manuscript (Pages 9 and 10, Line: 193-206):

The results showed that 25 (3.73%) were instructors, 355 (53.06%) were assistant professors, 193 (28.84%) were associate professors, and 96 (14.34%) were professors. In addition, 274 (40.95%) were women, and 395 (59.04%) were men. Also, 270 (40.35%) cases had work experience of fewer than 15 years, and 399 (59.64%) had over 15 years. 260 (38.86%) were women, and 409 (61.14%) were men. 381 (56.95%) people were under 45 years old, and 288 (43.05%) people were over 45 years old. Demographic information related to Face validity, EFA, CFA, Concurrent Validity, Reliability (internal consistency), and Reliability (stability) is presented in Table 2.

Based on descriptive information, the mean and standard deviation for KSBS were 56.97 and 9.2, respectively. for its dimensions, organizational communications were equal to 16.32 and 3.6 respectively; personal interactions were equal to 16.38 and 3.74 respectively; communities of practice were equal to 14.02 and 3.85 respectively and written contributions were equal to 10.25 and 3.24 respectively. Similarly, for the KMQ scale, the mean and standard deviation were 52.27 and 6.69, respectively, and for the TEKS scale, the mean and standard deviation were 11.56 and 2.78, respectively (Table 3).

Table 2. Demographic Characteristics of the Participants

	Age (y)		**Sex**		**Academic ran**				**Work Experience**		**Total**	**Missing**
	<45	>45	Female	Male	instructors	assistant	associate	professors	<15	>15		
Face validity	11 (57.89)	8 (42.11)	7 (36.84)	12 (63.16)	1 (5.26)	10 (52.63)	5 (26.32)	3 (15.79)	8 (42.11)	11 (57.89)	19	1
EFA	170(54.14)	134(42.68)	120(38.22)	194(61.78)	13(4.14)	167(53.18)	86(27.39)	48(15.29)	125(39.81)	189 (60.19)	334	26
CFA	106 (56.99)	80 (43.01)	72 (38.71)	114 (61.29)	6 (3.23)	99 (53.23)	54 (29.03)	27 (14.52)	75 (40.32)	111 (59.68)	186	14
Concurrent Validity	53 (56.99)	40 (43.01)	36 (38.71)	57 (61.29)	3 (3.23)	49 (52.69)	28 (30.11)	13 (13.98)	38 (40.86)	55 (59.14)	93	7
Reliability (internal consistency)	16 (55.17)	13 (44.82)	12 (41.37)	17 (58.62)	1 (3.44)	15 (51.72)	10 (34.48)	3 (15.79)	13 (44.82)	16 (55.17)	29	1
Reliability(stability)	15 (53.57)	13 (46.42)	13 (46.42)	15 (53.57)	1 (3.57)	15 (53.57)	10 (35.71)	2 (7.14)	11 (39.28)	17 (60.71)	28	2

Total	381 (56.95)	288 (43.05)	260 (38.86)	409 (61.14)	25 (3.74)	355 (53.06)	193 (28.85)	96 (14.35)	270 (40.36)	399 (59.64)	669	51

Table 3. Descriptive statistics results (n=93)

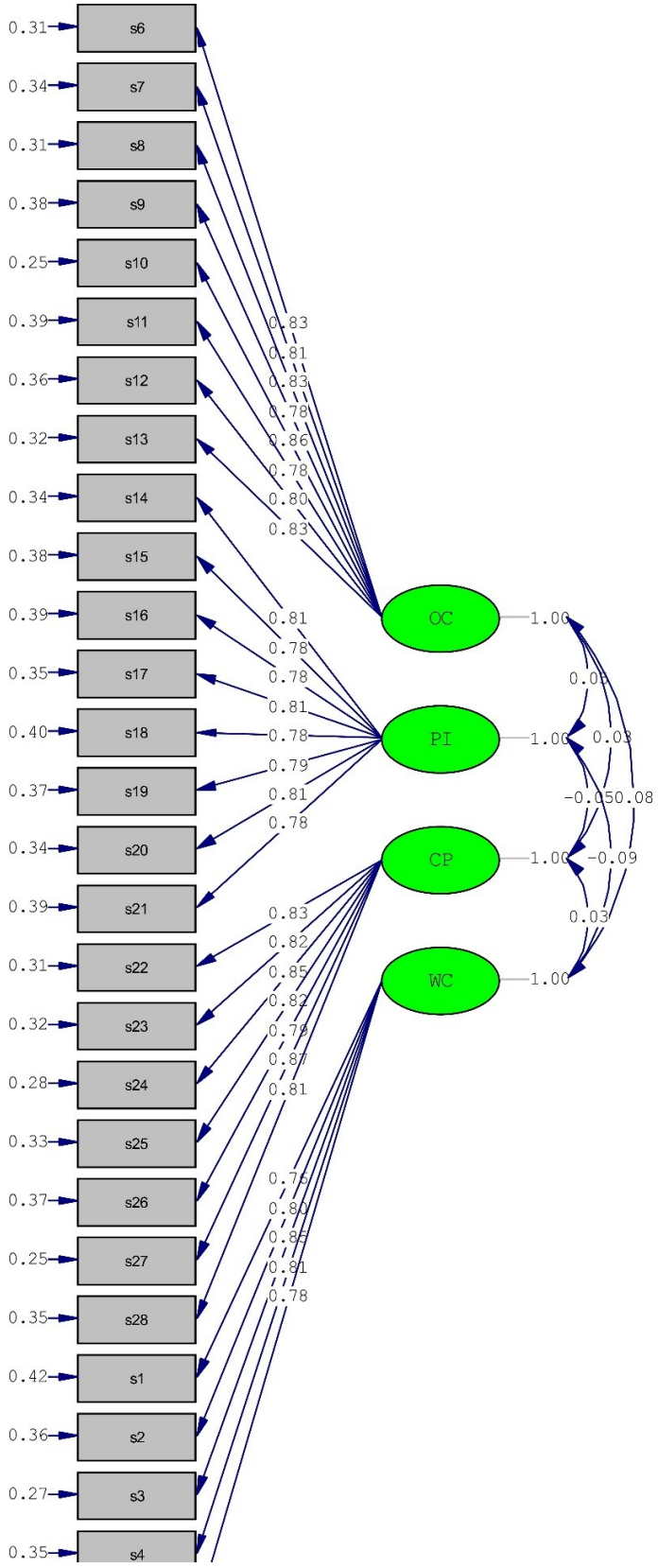
	organizational communications (OC)	personal interactions (PI)	communities of practice (CP)	written contributions (WC)	KSBS	KMQ	TEKS
Mean	16.32	16.38	14.02	10.25	56.97	52.27	11.56
Median	16	17	14	11	58	53	12
Mode	16	13	13	12	60	53	10
Std. Deviation	3.6	3.74	3.85	3.24	9.2	6.69	2.78
Skewness	-0.17	-0.06	0.17	-0.21	-0.08	-0.04	-0.17
Kurtosis	-0.62	0.33	0.17	-0.19	0.8	-0.42	0.09
Minimum	8	7	5	1	29	38	5
Maximum	24	28	25	17	82	69	18

Reviewer 1-10-*The graphs are not quality at all, please increase the resolution of the images*

Author's reply

Thanks for the comment.

Revised manuscript (Page 17, Line: 257):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0.80
0.86
0.81
0.78
OC
PI
CP
WC
1.00
1.00
1.00
1.00
0.05
0.03
-0.05
0.08
-0.09
0.03

Reviewer 1-11-*The tables are very confusing, please provide full explanations in the footnotes of the tables*

Author's reply

Thanks for the comment.

Revised manuscript (Page14 and 15, Line: 247-250):

Table 4. Rotated Component Matrix

Items	Component			
	organizational communications [1]	personal interactions	communities of practice	written contributions
i1	0.27	0.16	0.28	**0.63**
i2	0.23	0.15	0.19	**0.68**
i3	0.19	0.17	0.16	**0.72**
i4	0.23	0.12	0.22	**0.68**
i5	0.26	0.13	0.23	**0.73**
i6	**0.7**	0.21	0.16	0.13
i7	**0.67**	0.16	0.13	0.16
i8	**0.72**	0.18	0.22	0.19
i9	**0.66**	0.29	0.12	0.2
i10	**0.67**	0.21	0.11	0.2
i11	**0.7**	0.22	0.13	0.19
i12	**0.75**	0.18	0.16	0.15
i13	**0.67**	0.22	0.1	0.2
i14	0.2	**0.71**	0.16	0.09
i15	0.26	**0.65**	0.2	0.06
i16	0.2	**0.64**	0.14	0.17
i17	0.14	**0.7**	0.15	0.18
i18	0.23	**0.74**	0.17	0.08
i19	0.22	**0.67**	0.22	0.17
i20	0.2	**0.67**	0.15	0.07
i21	0.15	**0.7**	0.19	0.12

[1] - In each column, coefficients above 0.5 indicate items related to the dimension above the column.

i22	0.16	0.19	**0.66**	0.05
i23	0.17	0.19	**0.62**	0.23
i24	0.11	0.11	**0.73**	0.11
i25	0.06	0.2	**0.65**	0.22
i26	0.15	0.2	**0.68**	0.2
i27	0.12	0.18	**0.69**	0.21
i28	0.21	0.17	**0.75**	0.13

Table 6. Mean Scores, Standard Deviations, and Internal Consistency Reliability (Measured by Cronbach α) for the Scale and Factors Obtained

Domains/scales	Number of items	Mean (SD)	Cronbach's alpha
Scale[2]	28	58.35 (16.61)	0.82
Organizational communications	8	16.76 (9.247)	0.92
Personal interactions	8	16.66 (9.205)	0.92
Communities of practice	7	14.53 (8.063)	0.91
Written contributions	5	10.4 (5.615)	0.88
Half one[3]	14	29.23 (11.27)	0.84
Half two[4]	14	29.12 (10.92)	0.83
Correlation between half one and a half two[5]			0.22

Discussion:

[2] - Total scale score
[3] - For items 1 to 14
[4] - For items 15 to 28
[5] - Split-half reliability is another form of internal consistency reliability. A basic assumption of split-half reliability is that the two halves of the test should yield similar true scores and error variances. This comes from another assumption that the test items are focused on the construct.

Reviewer 1-12-*Discuss each of the results obtained. Please read the following two articles and use them as a guide to avoiding methodological mistakes regarding the reliability of measurement tools. DOI: 10.1007/s10561-018-9737-7 https://doi.org/10.1002/ejp.1316.*

Author's reply

Thanks for the comment.

Revised manuscript (Page17 and 19, Line: 304-308):

The face validity results showed that the impact score of all the items was more than 1.5 and no item was omitted. This finding is consistent with Yi's finding [7]. In explanation, it can be said that the questions of the scale were edited and localized by the research team and several members of the academic staff before face validity. Therefore, none of the questions was removed at this stage.

In this study CVR for the 28-question scale was between 73% to 100%; thus, the content validity of all questions was approved by the experts [20]. The CVI value (0.81) was also acceptable. Therefore, the scale has content validity. This finding is consistent with Yi's finding [7]. As a possible explanation, we can point to the purpose of this questionnaire, which is to evaluate the knowledge-sharing among academic staff members, which is compatible with the statistical population of this research. Also, the level of literacy of the statistical population of the research is probably another possible reason for increasing the validity of the content of this scale.

The alpha coefficient was for the whole scale 82%. This indicates good internal consistency. These data indicate the scale's optimal internal consistency coefficient [21]. The test-retest correlation coefficient was 0.72. This indicates the stability of the scale [22]. ICC results showed that the average measurement coefficient of 0.94 is greater than 0.9. Therefore, the reliability of the scale is quite acceptable [11, 12].

Good luck
Reviewer 2:
Thanks to the authors for considering MEJRH for their submission.
I read this manuscript and can be mentioned that it is appropriate according to scientific writing structure, sample size, statistical analysis, results presentation, and results interpretation. Therefore, it is appropriate for publication in the MEJRH.

We are grateful to the reviewer for taking the time to carefully review the manuscript and give detailed and constructive comments, which has greatly helped to improve this paper. Below is our point-by-point response to each respective comment

Author's reply

Thanks for the comment.

Reviewer 3:
This article is not acceptable in its current format and need to revise (major revision), especially in the method and result section. Comments are provided in the text of the article.

We are grateful to the reviewer for taking the time to carefully review the manuscript and give detailed and constructive comments, which has greatly helped to improve this paper. Below is our point-by-point response to each respective comment

Reviewer 3-1-**3. Methods**

Author's reply

Thanks for the comment.

Revised manuscript (Page7 and 8, Line: 151-172):

KMQ was designed by Wang (2012). This questionnaire has 13 questions on a 7-option Likert scale (‘‘1’’ (totally disagree) to ‘‘7’’ (totally agree)). This scale has two dimensions, tacit knowledge-sharing (Items 1-6), and explicit knowledge-sharing (Items 7-13). Convergent validity, divergent validity, and construct validity of the scale have been confirmed by Wang [4]. Cronbach α values of the factors ranged from 0.89 to 0.97 [4]. Its validity and reliability have been confirmed in Iran [13, 14].

TEKS Lin developed a brief four-item scale to assess tacit knowledge-sharing . The scale was developed from existing literature to measure how often employees share their unspoken and implicit knowledge with their co-workers in the workplace. The four items are rated on a five-point scale that ranges from 1 (never) to 5 (always). All the items are positively worded, with higher scores indicating that employees more willingly share their tacit knowledge with co-workers[5]. The items yielded high internal consistency reliability, with Cronbach’s alpha of .81 [15] In this study, Cronbach's alpha was calculated as 0.89.

KSBS was developed by Yi (2009). KSBS has 28 items (On a five-point Likert scale of always=4, often=3, sometimes=2, rarely=1, and never=0 (The minimum score is 0, and the maximum score is 112. The closer the score is to 112, the better the status of knowledge-sharing)) with 4 dimensions: organizational

communication (eight statements, coefficient alpha (CA) = 0.905 and items 6-13), written contributions (five statements, CA = 0.458 and items 1-5), communities of practices (seven statements, CA = 0.934 and items 22-28), personal interactions (eight statements, CA = 0.723 and items 14-21), and. Each statement was assessed on a 5-point Likert scale (ie, never, rarely, sometimes, often, and always). This scale as a valid and reliable instrument can assess knowledge-sharing behaviour among academics [6-9, 16].

Reviewer 3-2-In the surrent cross-sectional research, the research questionnaire was first translated into Persian. After obtaining the final questionnaire, its validation was performed.

Author's reply

Thanks for the comment.

Revised manuscript (Page4, Line: 84):

In the current cross-sectional research, the research questionnaire was first translated into Persian. After obtaining the final questionnaire, its validation was performed.

Reviewer 3-3-By entering each person’s page, we accessed the person’s email.

Author's reply

Thanks for the comment.

Revised manuscript (Page 5, Line: 105-106):

By checking the CV page or checking the articles in which the persons were the responsible authors, an email was registered for each faculty member.

Reviewer 3-4-Table 1 shows the population and sample information by the university.

Author's reply

Thanks for the comment.

Revised manuscript (Page 5, Line: 105-106):

The 720 questionnaires were emailed to academic staff members, of which 669 (93% response rate) were received.

Reviewer 3-5-A sample of 560 people was selected based on 20 people for each item in the construct validity and 100 people for concurrent validity [23].

Author's reply

Thanks for the comment.

Revised manuscript (Pages 4 and 5, Line: 89-98):

The minimum sample for validity and reliability studies is 400 samples [24]. In this study, a sample of 700 people was determined as follows.

According to Jeremy et al.'s study, the minimum sample size in validation studies for concurrent validation is 79 people [25]. In this research, the number of samples was considered to be 100 according to the statistical population and the possibility of theirs. The minimum sample for EFA based on Tabachnick & Fidell's study is equal to 300 people, in this study [26], 340 people were determined as a sample due to the possibility of respondents dropping out. Coleman reported that a sample size of 200 was appropriate for CFA [27]. Therefore, 200 participants were selected as the sample. The minimum sample for consistency reliability and internal reliability is 30 items. Therefore, 30 sample people were considered for each neighbourhood [28].

Reviewer 3-6-In the stage of face validity, 2 methods were used: qualitative and quantitative. In the qualitative method, the questionnaire was provided to 10 people in the target community to determine the clarity, relevance, and comprehensibility of the questions. In the quantitative method, a questionnaire was provided to 20 people in the target group to determine the “item score.” The criterion for maintaining each question was a score above 1.5 [29].

Revised manuscript (Page 6, Line: 118-128):

Author's reply

Thanks for the comment.

In the stage of face validity, 2 methods were used: qualitative and quantitative. In the qualitative method, To determine face validity, face-to-face interviews were conducted with ten people from the target community (difficulty level cases (difficulty in understanding phrases and words) and ambiguity (probability of

misunderstanding of phrases or lack of meaning of words) were examined) their opinions regarding The questionnaire were applied [30].

In the quantitative part, to determine the face validity of the questionnaire, five options for each of the primary questions ("Not at all important=1," "Slightly Important=2," Important=3," "Fairly Important=4," and "Very Important=5."). Then the questionnaires were given to 10 people from the target community, and they were asked to express their opinions about the questions. Questions with an item score of less than 1.5 will be removed or modified. The item score is the percentage of 4 and 5 answers for each question in the average scores of all respondents [30].

Reviewer 3-7-The minimum factor loading was 0.4 [31].

Author's reply

Thanks for the comment.

Revised manuscript (Page 7, Line: 142):

The minimum factor loading was 0.4 [32].

Reviewer 3-8-Cronbach α values of the factors ranged from 0.89 to 0.97 [4].

Author's reply

Thanks for the comment.

Revised manuscript (Page 7, Line: 155):

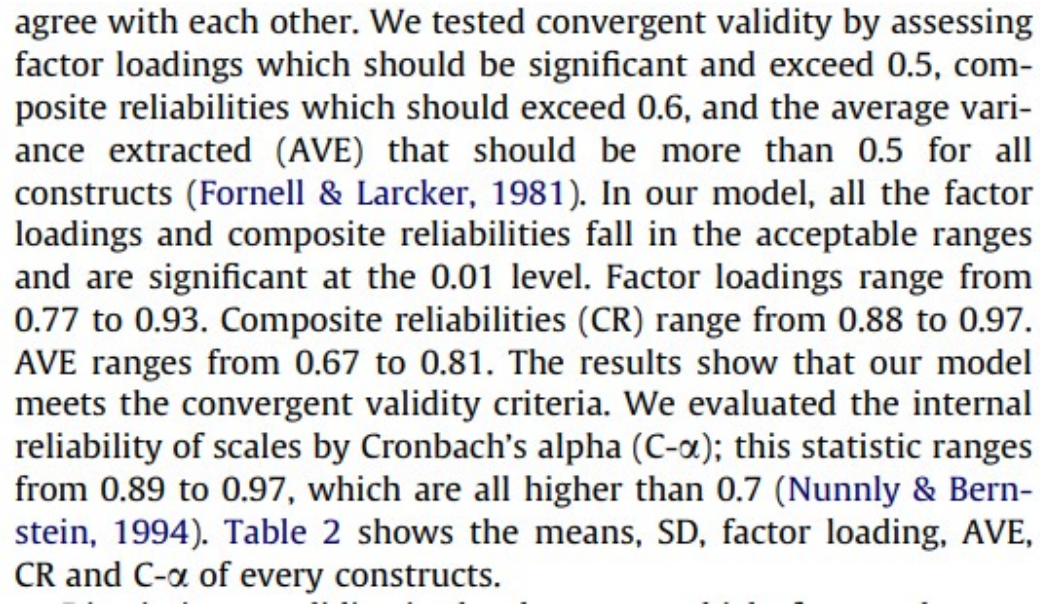
Thank you for your valuable comment; The article file that is included in the address below is a summary

https://www.sciencedirect.com/science/article/abs/pii/S0957417412002618

so these coefficients are not found in it, to access the entire article, the PDF file must be downloaded.

Link to the full file of the article

https://drive.google.com/file/d/1-6P7RwMEeINMGc9q7jTW1vmxK7eqZ64N/view?usp=sharing



agree with each other. We tested convergent validity by assessing factor loadings which should be significant and exceed 0.5, composite reliabilities which should exceed 0.6, and the average variance extracted (AVE) that should be more than 0.5 for all constructs (Fornell & Larcker, 1981). In our model, all the factor loadings and composite reliabilities fall in the acceptable ranges and are significant at the 0.01 level. Factor loadings range from 0.77 to 0.93. Composite reliabilities (CR) range from 0.88 to 0.97. AVE ranges from 0.67 to 0.81. The results show that our model meets the convergent validity criteria. We evaluated the internal reliability of scales by Cronbach's alpha (C-α); this statistic ranges from 0.89 to 0.97, which are all higher than 0.7 (Nunnly & Bernstein, 1994). Table 2 shows the means, SD, factor loading, AVE, CR and C-α of every constructs.

Reviewer 3-9with 4 dimensions: organizational communication (eight statements, (CA) = 0.905 and items 6-13), written contributions (five statements, CA = 0.458 and items 1-5), communities of practices (seven statements, CA = 0.934 and items 22-28), personal interactions (eight statements, CA = 0.723 and items 14-21),

Author's reply

Thanks for the comment.

Revised manuscript (Page 8, Line: 168):

with 4 dimensions: organizational communication (eight statements, coefficient alpha (CA) = 0.905 and items 6-13), written contributions (five statements, CA = 0.458 and items 1-5), communities of practices (seven statements, CA = 0.934 and items 22-28), personal interactions (eight statements, CA = 0.723 and items 14-21),

Reviewer 3-10Cronbach α, Cronbach α if item deleted, test-retest and split-half methods were applied to examine the reliability

Author's reply

Thanks for the comment.

Revised manuscript (Page 8, Line: 177):

Reviewer 3-11-Cronbach α, Cronbach α if item deleted, test-retest and split-half methods were applied to examine reliability (30 people for Cronbach's alpha and 30 people for test-retest).

Reviewer 3-12-At this stage, based on the opinions of the sample people, the items were edited based on simplicity, comprehensibility, and relevance to the research topic. Also, the impact score of all items was more than 1.5; and no item was removed.

Author's reply

Thanks for the comment.

Revised manuscript (Page 10, Line: 209):

At this stage, based on the opinions of the sample people, the items were edited based on simplicity, comprehensibility, and relevance to the research topic. Also, the item score of all items was more than 1.5.

Reviewer 3-13-In this study, the significance level was 0.01[33, 34].

Author's reply

Thanks for the comment.

Revised manuscript (Page 9, Line: 101):

In this study, the significance level was 0.01.

Reviewer 3-14- **Results**

Author's reply

Thanks for the comment.

Revised manuscript (Pages 9 and 13, Line: 197-206 and 245-246):

Based on descriptive information, the mean and standard deviation for KSBS were 56.97 and 9.2, respectively. for its dimensions, organizational communications were equal to 16.32 and 3.6 respectively; personal interactions were equal to 16.38 and 3.74 respectively; communities of practice were equal to 14.02 and 3.85 respectively and written contributions were equal to 10.25 and 3.24 respectively. Similarly, for the KMQ scale, the mean and standard deviation were 52.27 and 6.69, respectively, and for the TEKS scale, the mean and standard deviation were 11.56 and 2.78, respectively (Table 3).

Table 3. Descriptive statistics results

	organizational communications (OC)	personal interactions (PI)	communities of practice (CP)	written contributions (WC)	KSBS	KMQ	TEKS
Mean	16.32	16.38	14.02	10.25	56.97	52.27	11.56
Median	16	17	14	11	58	53	12
Mode	16	13	13	12	60	53	10
Std. Deviation	3.6	3.74	3.85	3.24	9.2	6.69	2.78
Skewness	-0.17	-0.06	0.17	-0.21	-0.08	-0.04	-0.17
Kurtosis	-0.62	0.33	0.17	-0.19	0.8	-0.42	0.09
Minimum	8	7	5	1	29	38	5
Maximum	24	28	25	17	82	69	18

Reviewer 3-15-**Face Validity**

Author's reply

Thanks for the comment.

Revised manuscript

Appendix 1: Farsi version of KSBS

Reviewer 3-16-In this stage, CVR for the 28-question scale was between 73% to 100%; thus, the content validity of all questions was approved by the experts [20].

Author's reply

Thanks for the comment.

Revised manuscript (Pages 9-13, Line: 194-239):

The results showed that 25 (3.73%) were instructors, 355 (53.06%) were assistant professors, 193 (28.84%) were associate professors, and 96 (14.34%) were professors. In addition, 274 (40.95%) were women, and 395 (59.04%) were men. Also, 270 (40.35%) cases had work experience of fewer than 15 years, and 399 (59.64%) had over 15 years. 260 (38.86%) were women, and 409

(61.14%) were men. 381 (56.95%) people were under 45 years old, and 288 (43.05%) people were over 45 years old. Demographic information related to Face validity, EFA, CFA, Concurrent Validity, Reliability (internal consistency), and Reliability (stability) is presented in Table 2.

Based on descriptive information, the mean and standard deviation for KSBS were 56.97 and 9.2, respectively. for its dimensions, organizational communications were equal to 16.32 and 3.6 respectively; personal interactions were equal to 16.38 and 3.74 respectively; communities of practice were equal to 14.02 and 3.85 respectively and written contributions were equal to 10.25 and 3.24 respectively. Similarly, for the KMQ scale, the mean and standard deviation were 52.27 and 6.69, respectively, and for the TEKS scale, the mean and standard deviation were 11.56 and 2.78, respectively (Table 3).

Face Validity

At this stage, based on the opinions of the sample people, the items were edited based on simplicity, comprehensibility, and relevance to the research topic. Also, the item score of all items was more than 1.5 (**Appendix 1)**.

Content Validity

In this stage, CVR for the 28-question scale was between 73% to 100% ("CVI values for relevance index range from 0.75 to 0.91", "CVI values for clarity index range from 0.74 to 0.92" and "CVI values for simplicity index range from 0.77 to 0.96")

Concurrent Validity

The correlation coefficient between the research scale and KMQ and TEKS scales was 0.72 and 0.87 ($p<0.001$).

Construct Validity

Based on the results of KMO=0.93 and the significance level of Bartlett test of sphericity test is less than 0.05 Bartlett test of sphericity (Approx. chi-square=4522.76, df=378). Factor extraction showed that the extraction coefficients of all items were more than 0.4.

According to the principal component method with varimax rotation, the scale comprises 4 saturation factors, which together explain 57.07% of the variance. The first factor explains 16.47%, the second factor 15.97%, the third factor 13.99% and the fourth factor 10.64% of this variance. The first factor is organizational communications (items 6-13), the second factor is personal interactions (items 14-21), the third factor is communities of practice (items 22-28), and the fourth factor is written contributions (items 1-5) (Table 4).

All the goodness-of-fit measures were matched with their respective criterion (SRMR=0.081<0.1, RMSEA=0.067<0.08, CFI=0.92>0.9, GFI=0.93>0.9, AGFI=0.92>0.9, and CMIN/DF=2.23<3). Figure 1 indicates the model compatibility with the data. This means that the data supports a 4-factor model.

Reliability

The obtained alpha coefficient was for the whole scale, and all the factors were above 82%. The halving coefficient related to the first (14 items) and second (14 items) half of the data was 0.84 and 0.83, respectively; the correlation between the 2 halves was 0.22 (Table 5). The Cronbach α value did not change with the removal of each item, indicating that no items will be deleted. The test-retest results were 0.72. ICC results showed that the average measurement coefficient of 0.94 is greater than 0.9 (Table 6).

Reviewer 3-17-In this study, the CVI value (0.81) was also acceptable.

Author's reply

Thanks for the comment.

Revised manuscript (Pages 6 and 10, Line: 212-214):

In content validity, the CVR and CVI of the questionnaire were evaluated by 10 experts. For this purpose, to examine CVR, scale questions were based on a 3-part Likert: “necessary, useful but not necessary, and unnecessary” were evaluated (A CVR value above 0.62 is acceptable based on the Lawshe table [17]). To examine CVI, scale questions were evaluated in 3 criteria of simplicity (A scale with 28 items on a four-point Likert scale (not easy, relatively easy, easy, and quite easy), specificity (Scale with 28 items on a four-point Likert scale (unrelated, somewhat related, related, and completely related)), and clarity (Scale with 28 items on a four-point Likert scale (Not clear, relatively clear, clear, and quite clear)) based on a 4-part Likert from 1 (lowest score) to 4 (highest score) (Score above 0.79 is acceptable [18, 19]).

In this stage, CVR for the 28-question scale was between 73% to 100% ("CVI values for relevance index range from 0.75 to 0.91", "CVI values for clarity index range from 0.74 to 0.92" and "CVI values for simplicity index range from 0.77 to 0.96")

Reviewer 3-18 Based on the results of the KMO and Bartlett test of sphericity (Table 2), the sample size was sufficient; thus, it justified performing factor analysis for the obtained data [35]. Factor extraction showed that the extraction coefficients of all items were more than 0.4; thus, none of the items on the scale was deleted. [36, 37].

Author's reply

Thanks for the comment.

Revised manuscript (Page 10, Line: 219-221):

Based on the results of KMO=0.93 and the significance level of Bartlett test of sphericity test is less than 0.05 Bartlett test of sphericity (Approx. chi-square=4522.76, df=378).

Factor extraction showed that the extraction coefficients of all items were more than 0.4.

Reviewer 3-19-This value and the amount of variance explained for each of the 4 factors are shown in Table 3.

Author's reply

Thanks for the comment.

Revised manuscript (Page 10, Line: 223-225):

The first factor explains 16.47%, the second factor 15.97%, the third factor 13.99% and the fourth factor 10.64% of this variance.

Reviewer 3-20-**Table 2.** Kaiser-Meyer-Olkin and Bartlett Test for Knowledge-sharing Behavior Scale

Author's reply

Thanks for the comment.

Revised manuscript (Page 10, Line: 219-220):

This table has been deleted; Based on the results of KMO=0.93 and the significance level of the Bartlett test of sphericity test is less than 0.05 Bartlett test of sphericity (Approx. chi-square=4522.76, df=378).

Reviewer 3-21-**Table 3.** Total Variance Explained (Principal Component Analysis)

Author's reply

Thanks for the comment.

Revised manuscript (Page 10, Line: 223-224):

This table has been deleted. The first factor explains 16.47%, the second factor 15.97%, the third factor 13.99% and the fourth factor 10.64% of this variance.

Reviewer 3-22-The first factor is organizational communications (with 8 questions), the second factor is personal interactions (with 8 questions), the third factor is communities of practice (with 7 questions), and the fourth factor is written contributions (with 5 questions). The items related to each factor and the number of item loadings are shown in Table 4.

Author's reply

Thanks for the comment.

Revised manuscript (Page 10, Line: 223-227):

The first factor is organizational communications (items 6-13), the second factor is personal interactions (items 14-21), the third factor is communities of practice (items 22-28), and the fourth factor is written contributions (items 1-5) (Table 4).

Reviewer 3-23-For the scale comparative fit index, a model obtained from the EFA was developed and evaluated.

Standardized Root Mean Square Residual (SRMR), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Adjusted Goodness of Fit Index (AGFI), root mean square error of approximation (RMSEA), and chi-square/degrees of freedom (CMIN/DF) were applied to assess the model overall fitness. All the goodness-of-fit measures were matched with their respective criterion (Table 5). Figure 1 indicates the model compatibility with the data. This means that the data supports a 4-factor model.

Author's reply

Thanks for the comment.

Revised manuscript (Pages 10 and 11, Line: 228-231):

All the goodness-of-fit measures were matched with their respective criterion (SRMR=0.081<0.1, RMSEA=0.067<0.08, CFI=0.92>0.9, GFI=0.93>0.9, AGFI=0.92>0.9, and CMIN/DF=2.23<3). Figure 1 indicates the model compatibility with the data. This means that the data supports a 4-factor model.

The Cronbach α value did not change with the removal of each item, indicating that no items will be deleted

Reviewer 3-24- (Table 7).

Author's reply

Thanks for the comment.

This table has been deleted.

Reviewer 3-25- **subtotal**

University of Medical Sciences	*N*	*n*	University of Medical Sciences	*N*	*n*
1. Abadan	115	7	2. Shiraz	967	62
3. Arak	274	18	4. Qazvin	268	17
5. Ardabil	313	20	6. Kerman	538	35
7. Urmia	371	24	8. Kermanshah	410	26
9. Isfahan	941	61	10. Guilan	452	29

11. Iran	1029	66	12. Lorestan	300	19
13. Birjand	307	20	14. Mazandaran	518	33
15. Jiroft	105	7	16. Mashhad	967	62
17. Shahr-e Kord	266	17	18. Hormozgan	287	18
19. Shahid Beheshti	1475	97	20. Hamadan	480	32
[6]**subtotal**	5196	337	**Subtotal**	5187	333
[7]**Total**	10383	670			

Author's reply

Thanks for the comment.

Revised manuscript (Page 12 in a footnote):

-Total population and a sample of 10 first-row universities
- Total population and a sample of 20 first-row universities

Reviewer 3-26- organizational communications [8] personal interactions

Author's reply

Thanks for the comment.

Revised manuscript (Pages 14 and 11, Line: 246):

Table 4. Rotated Component Matrix

Items	Component			
	organizational communications [9]	personal interactions	communities of practice	written contributions

[6] -Total population and a sample of 10 first-row universities
[7] - Total population and a sample of 20 first-row universities
[8] - In each column, coefficients above 0.5 indicate items related to the dimension above the column.

i1	0.27	0.16	0.28	**0.63**
i2	0.23	0.15	0.19	**0.68**
i3	0.19	0.17	0.16	**0.72**
i4	0.23	0.12	0.22	**0.68**
i5	0.26	0.13	0.23	**0.73**
i6	**0.7**	0.21	0.16	0.13
i7	**0.67**	0.16	0.13	0.16
i8	**0.72**	0.18	0.22	0.19
i9	**0.66**	0.29	0.12	0.2
i10	**0.67**	0.21	0.11	0.2
i11	**0.7**	0.22	0.13	0.19
i12	**0.75**	0.18	0.16	0.15
i13	**0.67**	0.22	0.1	0.2
i14	0.2	**0.71**	0.16	0.09
i15	0.26	**0.65**	0.2	0.06
i16	0.2	**0.64**	0.14	0.17
i17	0.14	**0.7**	0.15	0.18
i18	0.23	**0.74**	0.17	0.08
i19	0.22	**0.67**	0.22	0.17
i20	0.2	**0.67**	0.15	0.07
i21	0.15	**0.7**	0.19	0.12
i22	0.16	0.19	**0.66**	0.05
i23	0.17	0.19	**0.62**	0.23
i24	0.11	0.11	**0.73**	0.11
i25	0.06	0.2	**0.65**	0.22
i26	0.15	0.2	**0.68**	0.2
i27	0.12	0.18	**0.69**	0.21
i28	0.21	0.17	**0.75**	0.13

Reviewer 3-27- **Table 5.** Goodness-of-Fit Measures

Author's reply

[9] - In each column, coefficients above 0.5 indicate items related to the dimension above the column.

Thanks for the comment.

Revised manuscript (Pages 10 and 11, Line: 228-231):

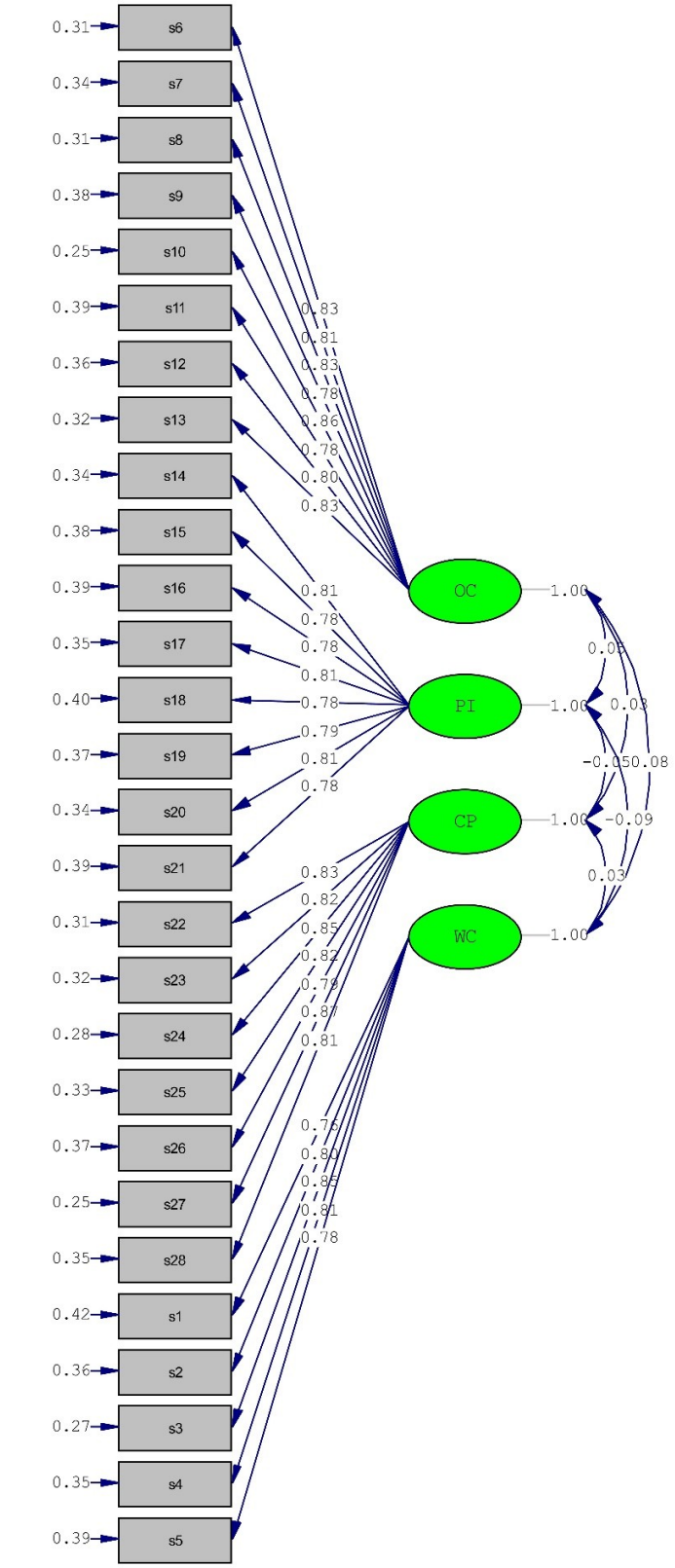
This table has been deleted. All the goodness-of-fit measures were matched with their respective criterion (SRMR=0.081<0.1, RMSEA=0.067<0.08, CFI=0.92>0.9, GFI=0.93>0.9, AGFI=0.92>0.9, and CMIN/DF=2.23<3). Figure 1 indicates the model compatibility with the data. This means that the data supports a 4-factor model.

Reviewer 3-28- **Figure 1.** Confirmatory factor analysis results

Author's reply

Thanks for the comment.

Revised manuscript (Page 16, Line: 252):



Chi-Square=764.69, df=344, P-value=0.00000, RMSEA=0.081

Reviewer 4:
560 faculty members from nursing and midwifery colleges in Iran participated in this cross-sectional research to verify the reliability and validity of the Knowledge-sharing Behavior Scale (KSBS). The authors came to the conclusion that the KSBS is a viable scale to assess the behavior of academic communities in Iran toward the sharing of knowledge.

We are grateful to the reviewer for taking the time to carefully review the manuscript and give detailed and constructive comments, which has greatly helped to improve this paper. Below is our point-by-point response to each respective comment

Reviewer 4-1- *Please rephrase the following sentence to enhance readability:*
"The first step in increasing knowledge-sharing is to assess the status quo".

Author's reply

Thanks for the comment.

Revised manuscript (Page 2, Line: 38-39):

The first step in increasing knowledge-sharing is to assess the current situation, which requires a valid scale for assessment

Reviewer 4-2- *According to the authors, "A variety of tools have been introduced to measure knowledge-sharing behaviour". Please introduce some other related tools.*

Author's reply

Thanks for the comment.

Revised manuscript (Page 3, Line: 55-63):

Existing knowledge-sharing questionnaires are designed to evaluate knowledge-sharing in economic organizations. In the following, these scales are introduced. Dixon's standard knowledge-sharing questionnaire (2000) has 15 questions on a five-point Likert scale (strongly agree to strongly disagree) and is designed in 4 dimensions [1]. Ryu et al.'s (2003) knowledge-sharing attitude questionnaire has 10 items

on a five-point Likert scale (strongly agree to strongly disagree) [2]. Ajzen's knowledge-sharing questionnaire (1991), which has 10 questions on a five-point Likert scale from 1 to 5, is designed [3]. Wang's (2012) KMQ scale has 13 questions on a 7-point Likert scale (strongly disagree to "strongly agree) [4]. Lin's (2007) TEKS scale has four items on a five-point Likert scale. is an option (never to forever) [5].

Reviewer 4-3- *Why did you choose KSBS and not select other related tools? You should justify the readers.*

Author's reply

Thanks for the comment.

Revised manuscript (Pages 3 and 4, Line: 55-79):

Existing knowledge-sharing questionnaires are designed to evaluate knowledge-sharing in economic organizations. In the following, these scales are introduced. Dixon's standard knowledge-sharing questionnaire (2000) has 15 questions on a five-point Likert scale (strongly agree to strongly disagree) and is designed in 4 dimensions [1]. Ryu et al.'s (2003) knowledge-sharing attitude questionnaire has 10 items on a five-point Likert scale (strongly agree to strongly disagree) [2]. Ajzen's knowledge-sharing questionnaire (1991), which has 10 questions on a five-point Likert scale from 1 to 5, is designed [3]. Wang's (2012) KMQ scale has 13 questions on a 7-point Likert scale (strongly disagree to "strongly agree) [4]. Lin's (2007) TEKS scale has four items on a five-point Likert scale. is an option (never to forever) [5]. The common problem in universities is the accumulation of knowledge instead of knowledge-sharing because, in production organizations, knowledge-sharing has financial benefits for the knowledge owners [6]. While in universities, academic and teaching success plays a greater role in the financial benefits of professors [6]. Due to this difference, the existing tools for evaluating knowledge-sharing are not suitable in universities because these tools are designed to evaluate knowledge-sharing in production organizations. The only scale available to assess knowledge-sharing is the Yi (2009) scale [7]. This scale was developed and validated in the United States of America to determine knowledge-sharing between faculty members and large commercial companies. This scale is widely used in scientific research and university knowledge-sharing evaluation [6-9].

This scale has not been used in Iran, despite its validity being confirmed in studies and widely used in the evaluation of knowledge-sharing in universities; Therefore, to provide a valid scale based on Iranian culture in the field of knowledge-sharing in universities, it is necessary to validate this scale in Iranian universities [10]; Therefore, according to the role of knowledge-sharing among clinical board members, this research aims to validate the knowledge-sharing scale among nursing and midwifery faculty members.

Reviewer 4-4- *Please cite the following sentence with a suitable related reference:*
"Despite the importance of this tool in measuring knowledge-sharing behaviour".

Author's reply

Thanks for the comment.

Revised manuscript (Pages 3 and 4, Line: 55-79):

The following paragraphs have been added to the text for this purpose

The common problem in universities is the accumulation of knowledge instead of knowledge-sharing because, in production organizations, knowledge-sharing has financial benefits for the knowledge owners [6]. While in universities, academic and teaching success plays a greater role in the financial benefits of professors [6]. Due to this difference, the existing tools for evaluating knowledge-sharing are not suitable in universities because these tools are designed to evaluate knowledge-sharing in production organizations.

The only scale available to assess knowledge-sharing is the Yi (2009) scale [7]. This scale was developed and validated in the United States of America to determine knowledge-sharing between faculty members and large commercial companies. This scale is widely used in scientific research and university knowledge-sharing evaluation [6-9].

This scale has not been used in Iran, despite its validity being confirmed in studies and widely used in the evaluation of knowledge-sharing in universities; Therefore, to provide a valid scale based on Iranian culture in the field of knowledge-sharing in universities, it is necessary to validate this scale in Iranian universities [10].

Reviewer 4-5- *"A sample of 560 people was selected". How did you determine this sample size?*

Author's reply

Thanks for the comment.

Revised manuscript (Pages 4 and 5, Line: 89-98):

The minimum sample for validity and reliability studies is 400 samples [24]. In this study, a sample of 700 people was determined as follows.

According to Jeremy et al.'s study, the minimum sample size in validation studies for concurrent validation is 79 people [25]. In this research, the number of samples was considered to be 100 according to the statistical population and the possibility of theirs. The minimum sample for EFA based on Tabachnick & Fidell's study is equal to 300 people, in this study [26], 340 people were determined as a sample due to the possibility of respondents dropping out. Coleman reported that a sample size of 200 was appropriate for CFA [27]. Therefore, 200 participants were selected as the sample. The minimum sample for consistency reliability and internal reliability is 30 items. Therefore, 30 sample people were considered for each neighbourhood [28].

Reviewer 4-6- *Please discuss the results of the following articles and compare them with the current study:*
https://www.researchgate.net/publication/285493927_A_Knowledge_Sharing_Model_for_Iranian_Educational_and_Research_Organizations
https://www.sid.ir/paper/264640/en

Author's reply

Thanks for the comment.

Revised manuscript (Pages 8 and 17, Line: 175-176 and 256-257):

Cronbach's alpha values above 0.7 indicate acceptable internal reliability of the scale [38])

And the limited research done on knowledge management, their goal is to identify the factors affecting it[39].

1. Dixon, N.M., *Common Knowledge: How Companies Thrive by Sharing What They Know*. 2000: Harvard Business School Press; 1st edition (March 1, 2000).
2. Ryu, S., S.H. Ho, and I. Han, *Knowledge-sharing behavior of physicians in hospitals.* Expert Systems with Applications, 2003. **25**(1): p. 113-122.

3. Ajzen, I., *The theory of planned behavior.* Organizational Behavior and Human Decision Processes, 1991. **50**(2): p. 179-211.
4. Wang, Z. and N. Wang, *Knowledge-sharing , innovation and firm performance.* Expert Systems with Applications, 2012. **39**(10): p. 8899-8908.
5. Lin, C.-P., *To Share or Not to Share: Modeling Tacit Knowledge-sharing , Its Mediators and Antecedents.* Journal of Business Ethics, 2007. **70**(4): p. 411-428.
6. Ramayah, T., J.A.L. Yeap, and J. Ignatius, *Assessing Knowledge-sharing Among Academics: A Validation of the Knowledge-sharing Behavior Scale (KSBS).* Eval Rev, 2014. **38**(2): p. 160-187.
7. Yi, J., *A measure of knowledge-sharing behavior: scale development and validation.* knowl Manag Res Pract, 2009. **7**(1): p. 65-81.
8. Asghar, A. and M.A. Naveed *Psychometric Evaluation of Knowledge-sharing Behavior Scale in Academic Environment*. Libr Philos Pract [serial online], 2021. **4655**, DOI: https://digitalcommons.unl.edu/libphilprac.
9. Yangguang, C. and W. Yanping, *Reliability and validity of the Chinese version of the Knowledge-sharing Behavior Scale in clinical nurses.* J Nurs Sci, 2015. **2015**(22): p. 28.
10. Sanjari, S., et al., *Construction Stardization ability to prevent HIV test.* PSYCHOMETRY, 2018. **6**(24): p. 107-118.
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2 Revision 1

3 comments · 24 Apr 2023 – 6 May 2023

Referee 2 Reviewer

ACCEPT 24 Apr 2023

Dear authors,
Thank you very much for the revisions.
Best regards

Associate Editor

MAJOR REVISION 3 May 2023

Dear author/s
Thank you very much for considering our respected reviewers' comments. I realized that you did your best to address as many comments as possible. However, to make the final decision, I read the revised manuscript carefully, and I think many corrections must be considered beforehand. You may find my comments listed below to help you improve the quality of the manuscript.
1) In the abstract, you wrote: "Knowledge-sharing behaviour among faculty members in Iran is fragile". You cannot be so sure about this, since if this is a fact, why did you make a tool to assess knowledge-sharing behaviors? Instead, please write a more neutral sentence, for example: "The knowledge-sharing behaviours among academic members enhances the organizations' sustainability. Therefore, we are in-depth need for a proper, valid instrument to evaluate this bahvaiour among the academic members".
2) You have assessed many psychometric features but limited your title to only "confirmatory and explanatory factor analysis". I would suggest changing your title to: "Cross-cultural adaptation and psychometric features of the Knowledge Sharing Behavior Scale in Nursing and Midwifery Schools in Iran". Using an umbrella term like "psychometric features" would explain the work you have done.
3) You should have line numbers throughout the manuscript so that we can comment on your manuscript more easily.
4) In the introduction, you have written: "Today, several functions are mentioned for universities by experts: knowledge production (research) [1], knowledge transfer (education) [2], knowledge dissemination [3] and helping the socialization of youth, knowledge management, and research to guide knowledge and information, which these functions differentiate universities from other institutions of society [4]. The most important step among the above steps is a knowledge sharing [5]". I cannot find 'knowledge sharing' among the steps above. Besides, the font of these lines was different; please check it.
5) Since your title includes 'knowledge sharing behaviors', please start your introduction with a definition of this term. Then talk about its features. In the next paragraph, you can present the functions of universities and what is wrong with their functions now. Then say what instruments are available to assess knowledge-sharing behaviors, what strengths and weaknesses these tools have, and why you chose this specific tool. You have tried to say why you are going to make a tool, which is understandable. Read your introduction again; I feel you can merge some parts and refine it. Ask a colleague to read your article; it will be a big help. Right now, your readers would be lost in this section; please tidy up the information.
6) Your objectives go beyond what you have written. Please be specific and write at least three objectives according to what you have done.
7) Your methods must be written according to international guidelines such as those of Beaton et al. or WHO. You need to provide a graph or a flowchart and show step by step how you conducted the cross-cultural adaptation. Check out these articles; they will help you write a cross-cultural paper:
https://journals.lww.com/spinejournal/Citation/2000/12150/Guidelines_for_the_Process_of_Cross_Cultural.14.aspx

https://doi.org/10.1016/j.ijporl.2019.109858
https://www.sciencedirect.com/science/article/abs/pii/089543569390142N
Right now, the information in your method section is scattered throughout; tidy it up according to the guideline.
8) There are two lines at the end of the method section: "Intra-class correlation coefficient (ICC) was performed with five experts. Experts gave each item a score of one to five (three with a PhD in nursing, and two with a PhD in midwifery)." What was the point of writing these lines in the Reliability part?
9) I want to see the following organization in your method section: 1) the cross-cultural steps, including forward translation, synthesis, backward translation, synthesis, expert committee review, cognitive interview + validity, final proofreading, & pretest (participants—inclusion & exclusion criteria—, procedure, statistical analysis, ethical considerations). Please remember that you have different participants for each step, and you need to be clear about each.
10) Your results section must follow the steps in the previous section. The data presentation looks disorganized.
11) In the discussion:
a. We never start our discussion with these sentences: "Studies have shown that knowledge-sharing behaviour among faculty members in Iran is low [53], And the limited research done on knowledge management, their goal is to identify the factors affecting it [54]. thus, a valid tool is essential to measure knowledge-sharing behaviour among these people." Read these articles to see how to write your discussion:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4548568/
https://blog.wordvice.com/research-writing-tips-editing-manuscript-discussion/
https://studybay.com/blog/how-to-write-a-discussion-paper/
Start with your main findings that are related to your aims. Then, in later paragraphs, compare your findings with similar studies and talk about the sources of differences. Please do not talk about your statistical methods or your procedure; instead, tell your readers how to interpret your findings. For example, you may say that your questionnaire had excellent reliability (remember, you must introduce your benchmarks in the method section, using something like this:
https://www.researchgate.net/figure/Cronbachs-Alpha-Interpretation_tbl3_343064759
).
12) In the conclusion: "Psychometric results showed that KSBS was a valid and reliable tool to use among Iranian faculty members"—to do what?
13) Acknowledgement: "We thank Shahrood University of Medical Sciences."—for what?
14) Your references lack information: 2, 3, 5, 7, 8, 9, 10, 19, 20, 26, 27, 30, 31, 32, 39, 43, 46, 47, 49, 52, 53, 56, 58, 60, & 62. Check the page numbers for journal articles; for books, the place of publication and publisher; and for theses, the department and location. Remember that Vancouver style requires you to abbreviate journal names.
Best of luck

Editor-in-Chief

MAJOR REVISION 6 May 2023

Dear Authors
According to the associate editor's comments, your article requires major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Point-by-point Response to Reviewer's Comments

Dear editor/reviewer.

I would like to thank you for these constructive, building, and improvable comments on this manuscript that would improve the substance and content of the manuscript. We considered each comment on the manuscript thoroughly. My point-by-point responses for each comment are described in detail on the following pages.

comment1 : In abstract you wrote: "Knowledge-sharing behaviour among faculty members in Iran is fragile", you can not be so sure about this, since if this is a fact, why did you make a tool to assess the knowledge-sharing behaviors? Instead, please write a more neutral sentence, for example: "The knowledge-sharing behaviours among academic members enhances the organizations' sustainability. Therefore, we are in-depth need for a proper, valid instrument to evaluate this bahvaiour among the academic members".

Author's reply

Thanks for the comment. Revised manuscript (Page 1, Line: 4-6)

The desired text was edited as follows:

Knowledge-sharing behaviors among academic members in Iran are believed to enhance organizational sustainability. However, the current status of these behaviors is unknown due to the lack of a valid scale to assess them.

Comment 2 : You have assessed many psychometric features but limited your title to only and only "confirmatory and explanatory factor analysis", I would suggest to change your title into: "Cross-cultural adaptation and psychometric features of the Knowledge Sharing Behavior Scale in Nursing and Midwifery Schools in Iran". Using an umbrella term like "psychometric features" would explain the works you have done.

Author's reply

Thanks for the comment. Revised manuscript (Page 3, Line: 1-2):

According to the content of the article and based on your valuable comment, the title of the article was changed as follows

Validation of the Knowledge Sharing Behavior Scale among Nursing and Midwifery Faculty Members in Iran: Psychometric Properties and Cross-Cultural Adaptation

Comment 3 : You should have line numbers for all manuscript, then we are able to comment on your manuscript easier.

Author's reply

Thanks for the comment.

In the current version of my article revisions, I will add line numbering to easily identify the corrections made for each comment or issue.

Comment 4 : In introduction, you have written: “Today, several functions are mentioned for universities by experts: knowledge production (research) [1], knowledge transfer (education) [2], knowledge dissemination [3] and helping the socialization of youth, knowledge management, and research to guide knowledge and information, which these functions differentiate universities from other institutions of society [4]. The most important step among the above steps is a knowledge sharing [5]”. I can not find ‘knowledge sharing’ in your above steps. Besides the font of these lines were different, check that out.

Author's reply

Thanks for the comment. Revised manuscript (Page2 &3, Line: 36-55):

To solve the problem, the desired text was rewritten as follows:

Universities play a critical role in the advancement of societies by producing, storing, and disseminating knowledge through innovative and applied research. This knowledge is highly sought after by institutions, organizations, and the community at large [1]. Within universities, faculty members play an essential role in knowledge sharing as a means of enhancing organizational effectiveness [2-4]. By sharing their knowledge and expertise with other members of the university community, faculty members can help ensure that the knowledge produced by the university is effectively transferred to society [5]. Thus, knowledge sharing is a critical component of a university's overall mission to advance culture through producing and disseminating knowledge.

Although universities play a critical role in advancing society through the production, storage, and dissemination of knowledge, much attention has been paid to knowledge sharing in industrial companies compared to universities [6].

However, knowledge sharing in universities plays a central role in the sustainable socio-economic, psycho-social, and political development of societies through education, research, and dissemination of knowledge, making it essential for universities to adopt a proactive approach to knowledge management to maximize their knowledge assets [7].

Unfortunately, many universities, especially in developing countries, adopt an inappropriate approach to knowledge management, which hinders their ability to promote knowledge-sharing behaviour among their faculty members [6]. One of the prerequisites for promoting knowledge sharing is a valid scale for evaluating knowledge sharing. However, the lack of assessment tools to measure the current situation, particularly in developing countries where knowledge producers may be hesitant to share their knowledge due to concerns about losing its benefits, poses a significant challenge to universities [7-10].

Comment 5 : Since your title includes the ‘knowledge sharing behaviors’ please start your introduction with its definition. Then talk about its features. In next paragraph, you can bring universities functions, and what wrong is with their functions now. Then say what instruments are available to assess the knowledge sharing behaviors, what the strengths and weaknesses these tools have, and why you chose this specific tool. You have tried to say why you are going to make a tool which is understandable, read your introduction again, I feel you can merge some parts and refine it. Ask a colleague to read your article it will be a big help. Right now, your readers would be lost in this section, please tidy up the information.

Author's reply

Thanks for the comment. Revised manuscript (Page 2 & 3, Line: 27-55):

The following paragraphs were added to the beginning of the introduction:

Knowledge sharing means the distribution, collaboration, and exchange of information and cognitive skills related to knowledge among individuals and groups [11]. This process leads to an

increase in collective knowledge, since when individuals share their knowledge with others, collective knowledge increases [12]

Knowledge sharing in universities is done formally through places such as libraries and informally through social networks such as student societies and research groups, which improve the learning and efficiency of educational units [13, 14]. As a communication process, knowledge sharing can contribute to improving organizational issues, increasing efficiency, and enhancing the quality of services in universities [15].

Universities play a critical role in the advancement of societies by producing, storing, and disseminating knowledge through innovative and applied research. This knowledge is highly sought after by institutions, organizations, and the community at large [1]. Within universities, faculty members play an essential role in knowledge sharing as a means of enhancing organizational effectiveness [2-4]. By sharing their knowledge and expertise with other members of the university community, faculty members can help ensure that the knowledge produced by the university is effectively transferred to society [5]. Thus, knowledge sharing is a critical component of a university's overall mission to advance culture through producing and disseminating knowledge.

Although universities play a critical role in advancing society through the production, storage, and dissemination of knowledge, much attention has been paid to knowledge sharing in industrial companies compared to universities [6]. However, knowledge sharing in universities plays a central role in the sustainable socio-economic, psycho-social, and political development of societies through education, research, and dissemination of knowledge, making it

essential for universities to adopt a proactive approach to knowledge management to maximize their knowledge assets [7].

Unfortunately, many universities, especially in developing countries, adopt an inappropriate approach to knowledge management, which hinders their ability to promote knowledge-sharing behaviour among their faculty members [6]. One of the prerequisites for promoting knowledge sharing is a valid scale for evaluating knowledge sharing. However, the lack of assessment tools to measure the current situation, particularly in developing countries where knowledge producers may be hesitant to share their knowledge due to concerns about losing its benefits, poses a significant challenge to universities [7-10].

Comment 6 : Your objectives are more than what you have written, please be specific, and write at least three objectives according to what you have done.

Author's reply

Thanks for the comment. Revised manuscript (Page 4, Line: 82-92):

The objectives was modified as follows:

This study aims to assess the psychometric properties of the Knowledge Sharing Behavior Scale (KSBS) among nursing and midwifery faculty members in Iran. The assessment will include face validity, content validity, construct validity, concurrent validity, internal consistency reliability, and stability reliability.

Furthermore, the study intends to determine the cross-cultural adaptation of the KSBS to the Iranian context by considering the cultural and contextual factors that may influence knowledge-sharing behaviors among faculty members.

Ultimately, the study aims to provide a valid and reliable instrument for measuring knowledge-sharing behavior among nursing and midwifery faculty members in Iran. Researchers and organizations can utilize this instrument to evaluate and enhance knowledge-sharing practices in academic settings.

Comment 7 : Your method must be written according some of the international guidelines such as Beaton et al or WHO, you need to provide a graph or a flowchart and show step by step how you ran the cross-cultural adaptation. Check out these articles, they will help you how to write a cross-cultural paper:

https://journals.lww.com/spinejournal/Citation/2000/12150/Guidelines_for_the_Process_of_Cross_Cultural.14.aspx

https://doi.org/10.1016/j.ijporl.2019.109858

https://www.sciencedirect.com/science/article/abs/pii/089543569390142N

right now, your method section has everything in everywhere, tidy it up according to the guideline

Author's reply

Thanks for the comment. Revised manuscript (Page 4-10, Line: 94-216):

The method was rewritten as follows:

In this study, the cross-cultural adaptation of a research questionnaire was conducted. The Methods section was organized as follows:

3.1. The Cultural Adaptation Process

The cultural adaptation process consisted of several steps, including forward translation, synthesis, backward translation, expert committee review, cognitive interview and validity assessment, final proofreading, and pretest.

Forward translation: The main questionnaire was translated into Persian by two researchers who were proficient in both Persian and English.

Synthesis: The differences between the translations were resolved through discussion and dialogue between the two translators.

Backward translation: The agreed-upon version was given to two independent translators who were also proficient in both English and Persian for back-translation (i.e., translating from Persian to English).

Expert committee review: Meetings were held with the translators to reach a consensus on the back-translation. Then, a group of experts including specialists in information science, midwifery, nursing, and psychology compared the original and back-translated questionnaires to resolve any ambiguities (Figure 1).

Cognitive interview and validity assessment: The questionnaire was pilot-tested on a sample of the target population to ensure its feasibility and comprehensibility.

Final proofreading: Any necessary modifications were made based on the results of the pilot test.

Pretest: The culturally adapted questionnaire was pretested on a sample of participants who met the inclusion and exclusion criteria.

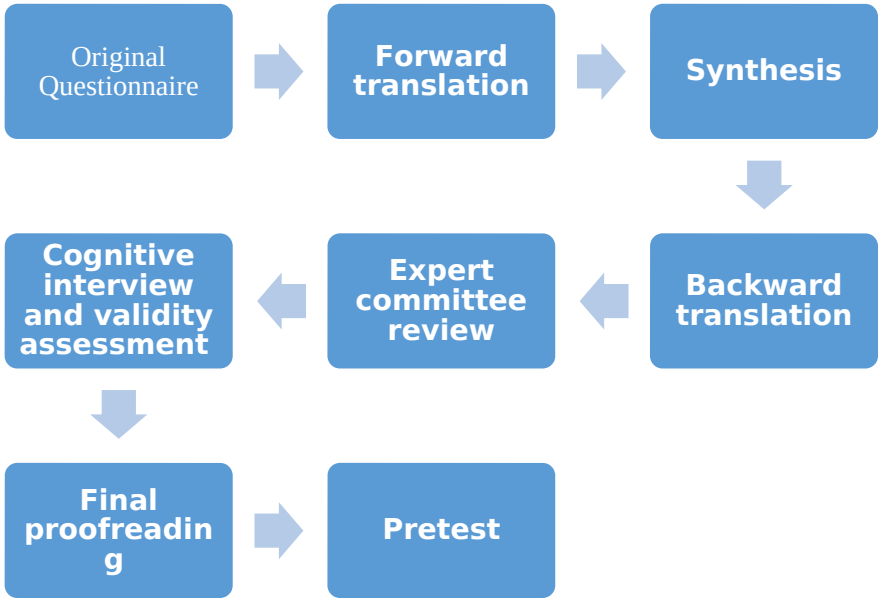

Fig 1- Diagram of the scale translation process

3.2. Participants and Inclusion & Exclusion Criteria

The study population consisted of faculty members from medical universities throughout Iran, regardless of age or gender. The minimum sample size required for validity and reliability studies is 400 samples [16]. In this study, a sample of 700 participants was determined.

For concurrent validation, Jeremy et al. suggested a minimum sample size of 79 participants [17]. In this research, the number of samples was set at 100 based on the statistical population and their availability. The minimum sample size for exploratory factor analysis (EFA) according to Tabachnick & Fidell's study is 300 participants [18]. In this study, the sample size of 340 participants was selected due to the possibility of respondents dropping out. For confirmatory factor analysis (CFA), Coleman recommended a sample size of 200 participants [19]. Therefore, 200 participants were chosen as the sample in this study. The minimum sample size required for consistency reliability and internal reliability is 30 items. Thus, 30 participants were chosen for each neighborhood [20].

The entrance criteria for participation in the study included being a member of the faculty of nursing and midwifery and having at least one year of teaching experience. Participants were also required to express informed consent to participate in the research. The exit criteria for the study included a lack of willingness to continue collaboration and non-response to research questionnaires.

3.3. Procedure

To select the sample, two universities were randomly selected from each educational center (10 educational centers in the whole country). Then, a list of faculty members from the selected universities was prepared and saved in an Excel file using scientometric information from the Ministry of Health's database (https://isid.research.ac.ir/). The sample for each university was selected using the random function in Excel, with the number of samples from each university selected proportionally to the number of faculty members. The email addresses of the participants were obtained by checking their CV pages or articles in which they were responsible authors. An online link to the questionnaire was then emailed to the participants, and written consent was obtained along with the questionnaires. Data were collected between June and September 2021. Table 1 presents the population and sample information by university. A total of 720 questionnaires were emailed to academic staff members, of which 669 (93% response rate) were received.

3.4. Ethical Consideration

This study was conducted following the ethical guidelines for research involving human subjects. Written informed consent was obtained from all participants, and their anonymity and confidentiality were ensured.

3.5. Validity and Reliability:

To evaluate the questionnaire's validity, face validity, construct validity, content validity, and concurrent validity were employed. Internal consistency and test-retest were used to evaluate reliability.

For face validity, two methods were employed, i.e., qualitative and quantitative. In the qualitative method, face-to-face interviews were conducted with ten participants from the target community. The interviews aimed to explore difficulty level cases (difficulty in understanding phrases and words) and ambiguity (probability of misunderstanding of phrases or lack of meaning of words). Participants' opinions regarding the questionnaire were sought [21].

In the quantitative part, to determine the face validity of the questionnaire, five options were provided for each primary question ("Not at all important=1," "Slightly Important=2," "Important=3," "Fairly Important=4," and "Very Important=5."). Next, the questionnaires were distributed among ten participants from the target community who were asked to express their opinions about the questions. Questions with an impact score of less than 1.5 were modified or removed. The impact factor is defined as the percentage of answers with a score of 4 or 5 for each question multiplied by the average scores of all respondents [21, 22].

Content validity was evaluated by ten experts who assessed the CVR and CVI of the questionnaire. For this purpose, scale questions were based on a 3-part Likert scale: "necessary," "useful but not necessary," and "unnecessary." A CVR value above 0.62 was considered acceptable according to the Lawshe table [23]. For CVI evaluation, scale questions were assessed based on a 4-part Likert scale from 1 (lowest score) to 4 (highest score) in three criteria of simplicity, specificity, and clarity. A score above 0.79 was considered acceptable [24, 25].

To determine the validity of the structure, EFA was used. Sampling adequacy was determined with Kaiser-Meyer-Olkin (KMO) and Bartlett's coefficient. A KMO value above 0.7 and the

significance level for Bartlett's test below 0.05 indicated the adequacy of the samples for EFA [26]. The principal factors were extracted by PCA, and the minimum factor loading was set at 0.4 [27]. CFA was used to confirm the extracted dimensions. Standardized Root Mean Square Residual (SRMR), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Adjusted Goodness of Fit Index (AGFI), and CMIN/DF were used to assess the model overall fitness. A model was considered to have a good fit if SRMR<0.1, GFI>0.9, CFI>0.9, AGFI>0.9, RMSEA<0.08, and CMIN/DF<3 [28].

To evaluate concurrent validity, the correlation between the scores obtained from the research scale and the scores obtained from KMQ and TEKS were assessed.

KMQ was designed by Wang (2012). This questionnaire has 13 questions on a 7-option Likert scale (‘‘1’’ (totally disagree) to ‘‘7’’ (totally agree)). This scale has two dimensions, tacit knowledge sharing (Items 1-6), and explicit knowledge sharing (Items 7-13). Convergent validity, divergent validity, and construct validity of the scale have been confirmed by Wang [29]. Cronbach α values of the factors ranged from 0.89 to 0.97 [29]. Its validity and reliability have been confirmed in Iran [30, 31].

TEKS Lin developed a brief four-item scale to assess tacit knowledge sharing. The scale was developed from existing literature to measure how often employees share their unspoken and implicit knowledge with their co-workers in the workplace. The four items are rated on a five-point scale that ranges from 1 (never) to 5 (always). All the items are positively worded, with higher scores indicating that employees more willingly share their tacit knowledge with co-workers[32]. The items yielded high internal consistency reliability, with Cronbach’s alpha of .81 [33] In this study, Cronbach's alpha was calculated as 0.89.

KSBS was developed by Yi (2009). KSBS has 28 items (On a five-point Likert scale of always=4, often=3, sometimes=2, rarely=1, and never=0 (The minimum score is 0, and the maximum score is 112. The closer the score is to 112, the better the status of knowledge sharing)) with 4 dimensions: organizational communication (eight statements, coefficient alpha (CA) = 0.905 and items 6-13), written contributions (five statements, CA = 0.458 and items 1-5), communities of practices (seven statements, CA = 0.934 and items 22-28), personal interactions (eight statements, CA = 0.723 and items 14-21), and. Each statement was assessed on a 5-point Likert scale (ie, never, rarely, sometimes, often, and always). This scale as a valid and reliable instrument can assess knowledge-sharing behaviour among academics [6, 34-37].

To ensure the internal reliability of the scale, Cronbach's alpha values were calculated, with values above 0.7 indicating acceptable internal reliability [38]. In addition, the Cronbach α if item deleted was also computed. To examine the reliability of the scale, both the test-retest and split-half methods were employed, with a sample of 30 individuals participating in each method. Furthermore, the intra-class correlation coefficient (ICC) was calculated by five experts, three of whom held a PhD in nursing and two of whom held a PhD in midwifery. These experts rated each item on a scale of one to five.

3.6. **Statistical Analysis**

Descriptive statistics were used to estimate the frequency and frequency percentage. According to Lawshe, the acceptance value of questions for CVR (according to the opinion of 10 experts) was higher than 0.62 [39]. An acceptable value for CVI was equal to or higher than 0.79 [40]. To investigate the structure validity and the factor structure of the current scale, PCA was performed with varimax rotation. Factors that had eigenvalues greater than 1.5 were regarded as the major factors [41, 42]. EFA and Pearson correlation coefficient were performed using SPSS version 21,

and CFA was performed using LISREL version 8.8. The KSBS internal consistency was evaluated by the Cronbach α coefficient, with a value of >0.7 being regarded acceptable [43, 44]. In this study, the significance level was 0.01.

Comment 8 : There are two lines at the end of method section as: “Intra-class correlation coefficient (ICC) was performed with five experts. Experts gave each item a score of one to five (three with a PhD in nursing, and two with a PhD in midwifery).” What was the point to write these lines in Reliability part?

Author's reply

Thanks for the comment. Revised manuscript

Considering that one of the methods to check the reliability of the questionnaire is one of the reviewers of the article (Respected Reviewer No. 1) objected that ICC should be added in the reliability part, therefore ICC was added in this part. In the following, the comment of the respected reviewer is given along with the answer. Sent:

Methodology:
Reviewer 1-7-*Report intra-class correlation coefficient (ICC) for instrument reliability.*

Revised manuscript (Pages 10, 14, and 22, Line: 213-215; 223-331, 387-389):

Intra-class correlation coefficient (ICC) was performed with five experts. Experts gave each item a score of one to five (three with a PhD in nursing, and two with a PhD in midwifery).

ICC results showed that the average measurement coefficient of 0.94 is greater than 0.9.

ICC results showed that the average measurement coefficient of 0.94 is greater than 0.9.

Therefore, the reliability of the scale is quite acceptable [45, 46]. These findings were confirmed by Yi and Ramayah et al [6, 34]

Table 7. Intraclass Correlation Coefficient

	Intraclass Correlation	**95% Confidence Interval**		**F Test with True Value 0**			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	0.74	0.61	0.85	15.59	27	108	0.001
Average	0.94	0.89	0.97	15.59	27	108	0.001

Measures

Comment 9 :I want to see such organization in your method section: 1) the cross-cultural steps including the forward translation, synthesis, backward translation, synthesis, expert committee review, cognitive interview + validity, final proofreading, & pretest (participants -inclusion & exclusion criteria-, procedure, statistical analysis, ethical consideration), please remember you have different participants for each step and you need to be clear about each.

Author's reply

Thanks for the comment. Revised manuscript (Page 4-10, Line: 94-216):

Based on the comment of the respected referee, the corrections and rewriting of this part were done as follows:

3. Methods

In this study, the cross-cultural adaptation of a research questionnaire was conducted. The Methods section was organized as follows:

3.1. The Cultural Adaptation Process

The cultural adaptation process consisted of several steps, including forward translation, synthesis, backward translation, expert committee review, cognitive interview and validity assessment, final proofreading, and pretest.

Forward translation: The main questionnaire was translated into Persian by two researchers who were proficient in both Persian and English.

Synthesis: The differences between the translations were resolved through discussion and dialogue between the two translators.

Backward translation: The agreed-upon version was given to two independent translators who were also proficient in both English and Persian for back-translation (i.e., translating from Persian to English).

Expert committee review: Meetings were held with the translators to reach a consensus on the back-translation. Then, a group of experts including specialists in information science, midwifery, nursing, and psychology compared the original and back-translated questionnaires to resolve any ambiguities (Figure 1).

Cognitive interview and validity assessment: The questionnaire was pilot-tested on a sample of the target population to ensure its feasibility and comprehensibility.

Final proofreading: Any necessary modifications were made based on the results of the pilot test.

Pretest: The culturally adapted questionnaire was pretested on a sample of participants who met the inclusion and exclusion criteria.

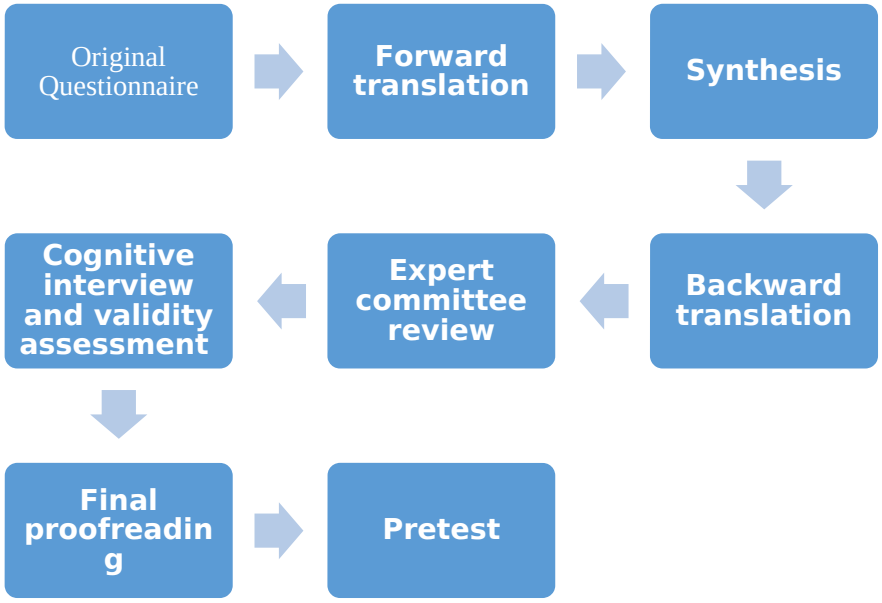

Fig 1- Diagram of the scale translation process

3.2. Participants and Inclusion & Exclusion Criteria

The study population consisted of faculty members from medical universities throughout Iran, regardless of age or gender. The minimum sample size required for validity and reliability studies is 400 samples [16]. In this study, a sample of 700 participants was determined.

For concurrent validation, Jeremy et al. suggested a minimum sample size of 79 participants [17]. In this research, the number of samples was set at 100 based on the statistical population and their availability. The minimum sample size for exploratory factor analysis (EFA) according to Tabachnick & Fidell's study is 300 participants [18]. In this study, the sample size of 340 participants was selected due to the possibility of respondents dropping out. For confirmatory factor analysis (CFA), Coleman recommended a sample size of 200 participants [19]. Therefore, 200 participants were chosen as the sample in this study. The minimum sample size required for consistency reliability and internal reliability is 30 items. Thus, 30 participants were chosen for each neighborhood [20].

The entrance criteria for participation in the study included being a member of the faculty of nursing and midwifery and having at least one year of teaching experience. Participants were also required to express informed consent to participate in the research. The exit criteria for the study included a lack of willingness to continue collaboration and non-response to research questionnaires.

3.3. Procedure

To select the sample, two universities were randomly selected from each educational center (10 educational centers in the whole country). Then, a list of faculty members from the selected universities was prepared and saved in an Excel file using scientometric information from the Ministry of Health's database (https://isid.research.ac.ir/). The sample for each university was selected using the random function in Excel, with the number of samples from each university selected proportionally to the number of faculty members. The email addresses of the participants were obtained by checking their CV pages or articles in which they were responsible authors. An online link to the questionnaire was then emailed to the participants, and written consent was obtained along with the questionnaires. Data were collected between June and September 2021. Table 1 presents the population and sample information by university. A total of 720 questionnaires were emailed to academic staff members, of which 669 (93% response rate) were received.

3.4. Ethical Consideration

This study was conducted following the ethical guidelines for research involving human subjects. Written informed consent was obtained from all participants, and their anonymity and confidentiality were ensured.

3.5. Validity and Reliability:

To evaluate the questionnaire's validity, face validity, construct validity, content validity, and concurrent validity were employed. Internal consistency and test-retest were used to evaluate reliability.

For face validity, two methods were employed, i.e., qualitative and quantitative. In the qualitative method, face-to-face interviews were conducted with ten participants from the target community. The interviews aimed to explore difficulty level cases (difficulty in understanding phrases and words) and ambiguity (probability of misunderstanding of phrases or lack of meaning of words). Participants' opinions regarding the questionnaire were sought [21].

In the quantitative part, to determine the face validity of the questionnaire, five options were provided for each primary question ("Not at all important=1," "Slightly Important=2," "Important=3," "Fairly Important=4," and "Very Important=5."). Next, the questionnaires were distributed among ten participants from the target community who were asked to express their opinions about the questions. Questions with an impact score of less than 1.5 were modified or removed. The impact factor is defined as the percentage of answers with a score of 4 or 5 for each question multiplied by the average scores of all respondents [21, 22].

Content validity was evaluated by ten experts who assessed the CVR and CVI of the questionnaire. For this purpose, scale questions were based on a 3-part Likert scale: "necessary," "useful but not necessary," and "unnecessary." A CVR value above 0.62 was considered acceptable according to the Lawshe table [23]. For CVI evaluation, scale questions were assessed based on a 4-part Likert scale from 1 (lowest score) to 4 (highest score) in three criteria of simplicity, specificity, and clarity. A score above 0.79 was considered acceptable [24, 25].

To determine the validity of the structure, EFA was used. Sampling adequacy was determined with Kaiser-Meyer-Olkin (KMO) and Bartlett's coefficient. A KMO value above 0.7 and the

significance level for Bartlett's test below 0.05 indicated the adequacy of the samples for EFA [26]. The principal factors were extracted by PCA, and the minimum factor loading was set at 0.4 [27]. CFA was used to confirm the extracted dimensions. Standardized Root Mean Square Residual (SRMR), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Adjusted Goodness of Fit Index (AGFI), and CMIN/DF were used to assess the model overall fitness. A model was considered to have a good fit if SRMR<0.1, GFI>0.9, CFI>0.9, AGFI>0.9, RMSEA<0.08, and CMIN/DF<3 [28].

To evaluate concurrent validity, the correlation between the scores obtained from the research scale and the scores obtained from KMQ and TEKS were assessed.

KMQ was designed by Wang (2012). This questionnaire has 13 questions on a 7-option Likert scale (‘‘1’’ (totally disagree) to ‘‘7’’ (totally agree)). This scale has two dimensions, tacit knowledge sharing (Items 1-6), and explicit knowledge sharing (Items 7-13). Convergent validity, divergent validity, and construct validity of the scale have been confirmed by Wang [29]. Cronbach α values of the factors ranged from 0.89 to 0.97 [29]. Its validity and reliability have been confirmed in Iran [30, 31].

TEKS Lin developed a brief four-item scale to assess tacit knowledge sharing. The scale was developed from existing literature to measure how often employees share their unspoken and implicit knowledge with their co-workers in the workplace. The four items are rated on a five-point scale that ranges from 1 (never) to 5 (always). All the items are positively worded, with higher scores indicating that employees more willingly share their tacit knowledge with co-workers[32]. The items yielded high internal consistency reliability, with Cronbach’s alpha of .81 [33] In this study, Cronbach's alpha was calculated as 0.89.

KSBS was developed by Yi (2009). KSBS has 28 items (On a five-point Likert scale of always=4, often=3, sometimes=2, rarely=1, and never=0 (The minimum score is 0, and the maximum score is 112. The closer the score is to 112, the better the status of knowledge sharing)) with 4 dimensions: organizational communication (eight statements, coefficient alpha (CA) = 0.905 and items 6-13), written contributions (five statements, CA = 0.458 and items 1-5), communities of practices (seven statements, CA = 0.934 and items 22-28), personal interactions (eight statements, CA = 0.723 and items 14-21), and. Each statement was assessed on a 5-point Likert scale (ie, never, rarely, sometimes, often, and always). This scale as a valid and reliable instrument can assess knowledge-sharing behaviour among academics [6, 34-37].

To ensure the internal reliability of the scale, Cronbach's alpha values were calculated, with values above 0.7 indicating acceptable internal reliability [38]. In addition, the Cronbach α if item deleted was also computed. To examine the reliability of the scale, both the test-retest and split-half methods were employed, with a sample of 30 individuals participating in each method. Furthermore, the intra-class correlation coefficient (ICC) was calculated by five experts, three of whom held a PhD in nursing and two of whom held a PhD in midwifery. These experts rated each item on a scale of one to five.

3.6. **Statistical Analysis**

Descriptive statistics were used to estimate the frequency and frequency percentage. According to Lawshe, the acceptance value of questions for CVR (according to the opinion of 10 experts) was higher than 0.62 [39]. An acceptable value for CVI was equal to or higher than 0.79 [40]. To investigate the structure validity and the factor structure of the current scale, PCA was performed with varimax rotation. Factors that had eigenvalues greater than 1.5 were regarded as the major factors [41, 42]. EFA and Pearson correlation coefficient were performed using SPSS version 21,

and CFA was performed using LISREL version 8.8. The KSBS internal consistency was evaluated by the Cronbach α coefficient, with a value of >0.7 being regarded acceptable [43, 44]. In this study, the significance level was 0.01.

Comment 10 : Your result section must follow the steps in the previous one. The data presentation looks disorganized.

Author's reply

Thanks for the comment. Revised manuscript (Page 10-14, Line: 226-331):

Based on the comment of the respected referee, the corrections and rewriting of this part were done as follows:

This section presents the results of the cultural adaptation, validity, and reliability tests of the KSBS questionnaire.

4.1. Cultural Adaptation Process

The cultural adaptation process consisted of six steps: forward translation, synthesis, backward translation, expert committee review, cognitive interview and validity assessment, and final proofreading and pretest. The details of each step are as follows:

Forward translation: Two bilingual translators translated the original questionnaire from English to Persian independently. They compared their translations and resolved any discrepancies by discussion and consensus.

Synthesis: A third bilingual translator synthesized the two translations into one Persian version of the questionnaire. The synthesized version was then sent back to the original translators for verification and feedback.

Backward translation: Two other bilingual translators who were native speakers of English translated the synthesized Persian version back to English independently. They compared their translations and resolved any differences by discussion and consensus.

Expert committee review: A panel of experts consisting of four faculty members from the nursing and midwifery school, two experts in knowledge sharing and management, and two experts in questionnaire design reviewed both the Persian and English versions of the questionnaire for clarity, relevance, accuracy, and cultural appropriateness. They suggested some minor revisions and modifications to improve the quality of the questionnaire.

Cognitive interview and validity assessment: Ten faculty members from the nursing and midwifery school who met the inclusion criteria participated in a cognitive interview to assess the face validity of the questionnaire. They were asked to rate each item on a 4-point Likert scale for simplicity, comprehensibility, and relevance to the research topic. They were also asked to provide any comments or suggestions for improvement. The results showed that all items had a score of more than 1.5 for each criterion, indicating good face validity. The participants also expressed their satisfaction with the questionnaire and did not propose any major changes.

Final proofreading and pretest: The final Persian version of the questionnaire was proofread by a professional editor for grammar, spelling, punctuation, and formatting errors. A pretest was conducted with 30 faculty members from the nursing and midwifery school who met the inclusion criteria to check the feasibility and acceptability of the questionnaire. The participants completed the questionnaire in an average time of 15 minutes and did not report any difficulties or problems (Appendix 1: Farsi version of KSBS).

4.2. Participants and Inclusion & Exclusion Criteria

The study population consisted of 669 faculty members from the nursing and midwifery school who met the inclusion criteria. The inclusion criteria were being in

the target group of the research, i.e., faculty members of the nursing and midwifery school, having at least one year of teaching experience, and expressing informed consent for participating in the research. The exclusion criteria were lack of willingness to continue cooperation and lack of response to the research questionnaires.

The demographic characteristics of the participants are presented in Table 2. The results showed that 25 (3.73%) were instructors, 355 (53.06%) were assistant professors, 193 (28.84%) were associate professors, and 96 (14.34%) were professors. In addition, 274 (40.95%) were women, and 395 (59.04%) were men. Also, 270 (40.35%) cases had work experience of fewer than 15 years, and 399 (59.64%) had over 15 years. 260 (38.86%) were women, and 409 (61.14%) were men. 381 (56.95%) people were under 45 years old, and 288 (43.05%) people were over 45 years old.

4.3. Procedure

The data collection procedure was as follows:

The researchers obtained permission from the ethics committee of Tehran University of Medical Sciences to conduct the study.

The researchers contacted the heads of departments of the nursing and midwifery school and explained the purpose and objectives of the study.

The researchers distributed paper copies of the questionnaire along with a cover letter that explained the aim of the study, assured confidentiality and anonymity, requested informed consent, and provided contact information for any questions or concerns.

The researchers collected the completed questionnaires from the participants after one week.

The researchers entered the data into SPSS software for analysis. The response rate was 88%, with 589 out of 669 participants returning their questionnaires.

4.4. Ethical Consideration

The ethical considerations for this study were as follows: The researchers obtained ethical approval from Shahrood University of Medical Sciences before conducting the study. The researchers informed the participants about the purpose and objectives of the study and obtained their written informed consent. The researchers assured the participants that their participation was voluntary and that they could withdraw at any time without any consequences. The researchers protected the privacy and confidentiality of the participants by not asking for any personal or identifying information and by using codes to label the questionnaires.

The researchers stored the data in a secure place and used it only for the purposes of the study.

4.5. Validity and Reliability

The validity and reliability of the KSBS questionnaire were assessed using various methods. The results are as follows:

Content validity: The content validity of the questionnaire was evaluated by calculating the content validity ratio (CVR) and the content validity index (CVI) for each item based on the opinions of 10 experts. The results showed that the CVR for the 28-item scale ranged from 73% to 100%, and the CVI values for relevance, clarity, and simplicity indices ranged from 0.75 to 0.91, 0.74 to 0.92, and 0.77 to 0.96, respectively. These values indicated that the questionnaire had good content

validity.

Construct validity: The construct validity of the questionnaire was evaluated by performing exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The results of EFA showed that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.93, and the Bartlett's test of sphericity was significant (chi-square=4522.76, df=378, $p<0.001$), indicating that the data was suitable for factor analysis. The factor extraction showed that all items had factor loadings greater than 0.4, and that four factors emerged from the analysis, explaining 57.07% of the total variance. The first factor explains 16.47%, the second factor 15.97%, the third factor 13.99% and the fourth factor 10.64% of this variance.

The first factor is organizational communications (items 6-13), the second factor is personal interactions (items 14-21), the third factor is communities of practice (items 22-28), and the fourth factor is written contributions (items 1-5) (Table 3). The results of CFA showed that all goodness-of-fit indices met their respective criteria, indicating that the four-factor model fitted the data well. Figure 1 shows the standardized path diagram of the CFA model.

Concurrent validity: The concurrent validity of the questionnaire was evaluated by measuring the correlation coefficient between the KSBS scale and two other scales: the Knowledge Management Questionnaire (KMQ) and the Teaching Effectiveness Knowledge Sharing Scale (TEKS). The results showed that the correlation coefficient between the KSBS scale and the KMQ scale was 0.72 ($p<0.001$), and between the KSBS scale and the TEKS scale was 0.87 ($p<0.001$). These values indicated that the questionnaire had good concurrent validity.

Reliability: The reliability of the questionnaire was evaluated by calculating Cronbach's alpha coefficient, split-half coefficient, test-retest reliability, and intraclass correlation coefficient (ICC). The results showed that Cronbach's alpha coefficient for the whole scale was 0.92, and for each

factor was above 0.82, indicating high internal consistency. The split-half coefficient for the first half (14 items) and second half (14 items) of the scale was 0.84 and 0.83, respectively, and the correlation between them was 0.22, indicating good stability (table 5). The test-retest reliability for a subsample of 30 participants who completed the questionnaire twice with a two-week interval was 0.72, indicating good temporal stability. The ICC for a subsample of 30 participants who completed the questionnaire twice with a two-week interval was 0.94, indicating high agreement among repeated measurements (table 5).

Comment 11 : In discussion:

a. We never start our discussion with these sentences: “Studies have shown that knowledge-sharing behaviour among faculty members in Iran is low [53], And the limited research done on knowledge management, their goal is to identify the factors affecting it [54]. thus, a valid tool is essential to measure knowledge-sharing behaviour among these people.” Read these articles to see how to wirte your discussion:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4548568/

https://blog.wordvice.com/research-writing-tips-editing-manuscript-discussion/

https://studybay.com/blog/how-to-write-a-discussion-paper/

start with your main findings which are related to your aims, then in later paragraphs compare your findings with similar studies, talk about the source of differences. Please do not talk about your statistical methods or your procedure, instead tell your readers the interpretation of your findings, for example, you may say our questionnaire had excellent reliability (remember you must introduce your benchmarks in method section something like this:

https://www.researchgate.net/figure/Cronbachs-Alpha-Interpretation_tbl3_343064759

Author's reply

Thanks for the comment. Revised manuscript (Page21-23, Line: 346-403):

Based on the comment of the respected referee, the corrections and rewriting of this part were done as follows:

The present study provided comprehensive information on the validity and reliability of the Knowledge Sharing Behavior Scale (KSBS) among faculty members of medical universities. The analyses included a range of validity tests such as face, concurrent, construct, and content validity, as well as reliability calculations.

The results of face validity showed that all items had an impact score higher than 1.5, and none of them were deleted. This means that all questions were deemed relevant and appropriate by the experts and did not need to be removed or modified. This indicates a desirable face validity of the scale. This finding is consistent with those of Yi (2009) and Ramayah et al. (2014) [6, 34]. As an explanation, it can be said that the questions of the scale were designed and localized by the research team and several expert faculty members before face validity. Therefore, none of the questions were deleted at this stage.

The CVR for the 28-item scale ranged from 73% to 100%. Therefore, the content validity of all questions was confirmed by the experts [47]. The CVI value (0.81) was also acceptable. Therefore, the scale has content validity. These findings are in line with those of Yi (2009) and Ramayah et al. (2015) [6, 34]. As a possible explanation, we can refer to the aim of this questionnaire, which is to assess knowledge sharing behavior among faculty members, which is consistent with the statistical population of this research. Also, the level of literacy of the statistical population of the research is probably another reason for increasing the content validity of this scale.

The results of factor analysis showed that KSBS is a 28-item tool with four factors: written participation, organizational communication, personal interactions, and communities of practice. These findings were confirmed by Yi, Ramaya et al. [6, 34].

The questions for the written participation factor in this scale are consistent with those for modes of sharing tacit and explicit knowledge, intention (Islam), tendency to share tacit organizational knowledge (Holste), Chennamanen's scale, and sharing explicit knowledge (Wang) [29, 48-52]. The questions for organizational communication are consistent with those for modes of sharing tacit and explicit knowledge, performance, intrinsic motivation (Islam), tendency to share tacit organizational knowledge (Holste), Karamitri's scale, and sharing tacit knowledge (Wang) [29, 48-52].

The questions for personal interactions are consistent with those for modes of sharing tacit and explicit knowledge, intention, intrinsic motivation (Islam), tendency to share tacit organizational knowledge, tendency to exploit tacit organizational knowledge (Holste), Chennamanen's scale, and sharing tacit knowledge (Wang) [29, 48-52]. The questions for communities of practice are consistent with those for modes of sharing tacit and explicit knowledge (Rehman), intention (Islam), tendency to share tacit organizational knowledge (Holste), Karamitri's scale, and expected reciprocal relationship (Bock) [48-50, 53].

The results of concurrent validity showed a correlation between KSBS and KMQ and TEKS. This correlation was lower for KMQ because it only measures some dimensions of knowledge sharing behavior.

The alpha coefficient for KSBS was 82%. This indicates a desirable internal consistency. These data indicate that KSBS has an optimal internal consistency coefficient [26]. The test-retest correlation coefficient was 0.72. This indicates stability in KSBS [28]. The ICC results showed that the mean measurement coefficient was 0.94, which is greater than 0.9. Therefore, KSBS has acceptable reliability [45, 46]. These findings were confirmed by Yi and Ramayah et al. [6, 34].

KSBS is a comprehensive scale for the university community; therefore, it is more specific than many other scales because in most scales, knowledge sharing is one dimension of the scale. Our statistical population was faculty members from Iranian universities. This tool can have practical and research applications. Identifying practical knowledge sharing behavior among faculty members can help to design targeted interventions to improve knowledge sharing behavior. Researchers can use this scale to assess knowledge sharing behavior among faculty members.

The main strength point in this study was that it was validated based on the university community, not an administrative one. On the other hand, samples were taken from all over the country, which increases generalizability. One of the limitations of this study was that validation was done only in medical universities. Therefore, it is suggested that validation be done in other universities affiliated with the Ministry of Science as well. Also, a study can be conducted that compares knowledge sharing behavior between professors of medical universities and universities of the Ministry of Science. Another limitation of the study was the lack of divergent and convergent validity assessment in the study.

Comment 12 : In conclusion: “Psychometric results showed that KSBS was a valid and reliable tool to use among Iranian faculty members” to do what?

Author's reply

Thanks for the comment. Revised manuscript (Page 23, Line: 405-406):

The desired text was modified as follows:

Psychometric results showed that KSBS was a valid and reliable tool for measuring knowledge-sharing behaviour among Iranian faculty members.

Comment 13 : Acknowledgement: “We thank Shahrood University of Medical Sciences.” for what?

Author's reply

Thanks for the comment. Revised manuscript (Page 24, Line: 411-412):

The desired text was modified as follows:

This study was supported by Shahrood University of Medical Sciences, and we are grateful for their assistance.

Comment 14 : Your references have lack of information: 2, 3, 5, 7, 8, 9, 10, 19, 20, 26, 27, 30, 31, 32, 39, 43, 46, 47, 49, 52, 53, 56, 58, 60, & 62. Check the page numbers for journals' articles, for books: place of publish and publisher, thesis; department and the place of thesis; & remember the Vancouver style needs you to write the journals' names abbreviated.

Author's reply

Thanks for the comment. Revised manuscript (Page 24-28, Line: 426-544):

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Best of luck

3 Revision 2

2 comments · 27 Jun 2023 – 27 Jun 2023

Associate Editor

MAJOR REVISION 27 Jun 2023

Dear authors
Thank you very much for considering most of my comments in this revised version. While I do appreciate what you have done, I am afraid to say your manuscript has substantial issues, and I cannot grant you acceptance. Besides, the journal policy does not allow us to give you another chance to revise. But I do believe you have done a great job and deserve to be granted another revision. Thus, I leave the comments listed below to help you address those issues and elevate the quality of the paper. Please remember this is the last chance.
1- You did this work in 2021, so please change all the verbs describing the aim and method in both your abstract and the body of the text to the past tense. For example, in line 9, 'is' must be changed to 'was'; lines 82-92 must all be written in the past tense.
2- In the conclusion of the abstract, add 'reliable' to line 23: a valid and reliable
3- I checked your keywords, and except for 'knowledge', the rest of them were not registered in MeSH. Please choose keywords that are in MeSH to elevate the chance of being seen by others.
4- Throughout the text, please write numbers below 10 in letters, not figures, for example, in line 60.
5- Lines 65-68 must be moved to line 51.
6- Lines 68-70 must be moved to line 64 right after due to.
7- Lines 71-74: what is the name of Yi's tool? Is this what you have done with the cross-cultural adaptation? If so, then elaborate on these lines and provide enough explanation about this tool (the number of items, how to score each item, what scores can be estimated by this tool, how we can interpret its results, …) and its psychometric features in English culture and other cultures, since you must return to these explanations in the discussion.
8- Please remove lines 75-80; they repeat your aims.
9- Line 144: please use 'correspondence' instead of 'responsible'.
10- Lines 173-175: you have calculated the CVI in the wrong way. CVI is related to relevancy, but not simplicity or clarity, …. So its results are wrong too. Check I-CVI, S-CVI, and how to calculate them.
11- Lines 211- 215: It is an odd way to calculate the ICC and Alpha-Cronbach. You need to re-evaluate 10-20 percent of the participants between one and two weeks after the first evaluation to be able to calculate the ICC for test-retest. The alpha is another story; you can calculate it for all items from the first evaluation. So the results of this part are wrong too.
12- Lines 217-219 and lines 227-228 are repetitive; please eliminate them.
13- Lines 227-330 are a repetition of what you have written in your method. I told you that you should have similar steps, but not similar content. In the results, you must say what you found in each step. Please go to this link to see how to write these parts concisely and effectively:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5425347/
14- If you elaborate on Yi's study in the introduction, you can compare your findings in your discussion. Please revise the discussion properly.
15- Lines 350-352 are wrong; eliminate them.
16- It would be better to remove lines 405-407.
Best of luck

Editor-in-Chief MAJOR REVISION 27 Jun 2023

Dear Authors
Based on the reviewers' and associate editor's comments, your article requires major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments.

4

Revision 3

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Associate Editor 1,

We are grateful for your valuable comments and suggestions on our manuscript. We have carefully considered and addressed all the issues raised by you and revised our manuscript accordingly. We hope that our revisions have improved the quality and clarity of our paper and that it is now suitable for publication in your journal. Below, we provide detailed responses to each of your comments, along with the changes we have made in the manuscript. The revised parts are highlighted in yellow in the attached file

1- You have done this job in 2021, so please change all those verbs in the aim and method either in your abstract or in the text body to the past tense, example: in line 9: ‘is’ must be turned into ‘was’; or lines 82-92 all must be written in the past.

Authors' response: We appreciate your valuable comment on the verbs in the abstract, introduction, objectives, method, and findings sections. We have revised the verbs in these sections to be in the past tense. (All Page and All line)

2- In the conclusion of the abstract, add ‘reliable’ to line 23: a valid and reliable

Authors' response: We thank you for your valuable comment and have made the corrections based on it. (Page 2 and line 23)

Conclusions: KSBS is a valid and reliable scale to measure knowledge-sharing behaviour in the

Iranian academic community.

3- I checked out your keywords, except the ‘knowledge’, the rest of them were not registered in MeSH. Please choose keywords that are in the MeSH to elevate the chance of being seen by others.

Authors' response: We appreciate your valuable comment and have revised the keywords accordingly. (Page 2 and line 25)

Keywords: Knowledge, Behavior, Psychometrics, Cross-Cultural Adaptation, Iran

Knowledge : MeSH Descriptor

Behavior: MeSH Descriptor

Psychometrics: MeSH Descriptor

Cross-Cultural Comparison: MeSH Descriptor

Iran: MeSH Descriptor

4- In the whole text, please write numbers below 10 in letters, not figures, for example: in line 60

Authors' response: We thank you for your valuable comment and have rewritten the numbers less than 10 in words. (All Page and All line)

5- Lines 65-68 must be shifted to line 51.

Authors' response: We appreciate your valuable comment and have made the rearrangement based on it. (Page 3 and line 50-55)

Many universities, especially in developing countries, had an unsuitable approach to knowledge management, which prevented them from fostering knowledge-sharing behaviour among their faculty members [1].The common issue in universities was the hoarding of knowledge instead of knowledge sharing because, in production organizations, knowledge sharing had financial rewards for the knowledge owners [1]. While in universities, academic and teaching achievement had a bigger impact on the financial benefits of professors [1]. One of the requirements for enhancing knowledge sharing was a valid scale for measuring knowledge sharing. However, the absence of assessment tools to evaluate the current situation, especially in developing countries where knowledge producers might have been reluctant to share their knowledge due to fears of losing its advantages, created a significant obstacle for universities [2-5].

6- Lines 68-70 must be shifted to line 64 right after due to.

Authors' response: We appreciate your valuable comment and have made the following rearrangement based on it: (Page 3-4 and line 67-71)

Lin's (2007) TEKS scale had four items on a five-point Likert scale. was an option (never to forever) [6]. Due to this difference, the existing tools for evaluating knowledge sharing were not suitable in universities because these tools were designed to evaluate knowledge sharing in production organizations.

7- Lines 71-74: what is the name of Yi's tool? Is this what you have done with the cross-cultural adaptation? If so, then elaborate on these lines and provide enough explanation about this tool (the number of items, how to score each item, what scores can be estimated by this tool, how can we interpret its results, …), its psychometric features in English culture and other culture since you must get back to these explanations in the discussion.

Authors' response: We appreciate your valuable comment and have replaced the text with the following based on it: (Page 4 and line 72-86)

One of the most widely used scales to assess knowledge sharing was the Knowledge Sharing Behavior Scale (KSBS) developed by Yi (2009) [7]. This 28-item scale assessed the extent to which individuals engaged in knowledge-sharing behavior. KSBS consisted of four dimensions: organizational communication, written contributions, communities of practices, and personal interactions which were measured on a five-point Likert scale ranging from zero (never) to four (always). The total score ranged from 28 to 112, with higher scores indicating greater knowledge sharing [7]. This scale was originally developed and validated in the United States to measure knowledge sharing among faculty members in relation to large commercial companies [7]. It showed good psychometric properties, such as high internal consistency (Cronbach's alpha = 0.94), test-retest reliability (r = 0.87), and construct validity (confirmatory factor analysis) [7]. It had been applied and validated in various studies on knowledge-sharing behavior across different countries and cultures, such as China [8], and Pakistan [1, 9].

For cross-cultural adaptation, the KSBS was translated into Persian using the guidelines proposed by Beaton et al. (2000) [10]. The validity and reliability of the Persian version were examined in a sample of university faculty members in Iran

8- Please remove lines 75-80, they are repetitive of your aims.

Authors' response: We appreciate your valuable comment and have deleted the following text based on it:

This scale has not been used in Iran, despite its validity being confirmed in studies and widely used in the evaluation of knowledge sharing in universities; Therefore, to provide a valid scale based on Iranian culture in the field of knowledge sharing in universities, it is necessary to validate this scale in Iranian universities [11]; Therefore, according to the role of knowledge sharing among clinical board members, this research aims to validate the knowledge sharing scale among nursing and midwifery faculty members.

9- Line 144: please use ‘correspondence’ instead of ‘responsible’.

Authors' response: We appreciate your valuable comment and have corrected the text as follows based on it: (Page 7 and line 149)

The email addresses of the participants were obtained by checking their CV pages or articles in which they were correspondence authors.

10- Lines 173-175: you have calculated the CVI in the wrong way, CVI is related to relevancy but not simplicity, or clarity,.... So its results are wrong too. Check out I-CVI, S-CVI and how to calculate them.

Authors' response: We appreciate your valuable comment and have added the following text to the method section based on it: (Page 8-9 and line 178-186)

For CVI evaluation, each item of the scale was rated by 10 experts based on its relevance to the construct of knowledge sharing behavior. The experts used a four-point Likert scale ranging from 1 (not relevant) to 4 (highly relevant). The Item-level Content Validity Index (I-CVI) for each item was calculated by dividing the number of experts who rated the item as 3 or 4 by the total number of experts. The Scale-level Content Validity Index (S-CVI/UA) was calculated by dividing the number of items with I-CVI greater than 0.78 by the total number of items. The S-CVI/Ave was calculated by taking the average of I-CVIs for all items. According to the literature, a scale with excellent content validity should have I-CVIs of 0.78 or higher and S-CVI/UA and S-CVI/Ave of 0.8 and 0.9 or higher, respectively [12, 13].

In the results section, the conclusion of this part was also rewritten as follows: (Page 12 and line 263-267)

All items had I-CVI values greater than 0.78, indicating that they were relevant to the construct of knowledge-sharing behavior. The S-CVI/UA for the whole scale was 1.00, meaning that all items met the criterion of having an I-CVI greater than 0.78. The S-CVI/Ave for the entire scale was 0.93, higher than the recommended value of 0.9. These results indicated that the questionnaire had excellent content validity.

11- Lines 211- 215: It is an odd way to calculate the ICC and Alpha-Cronbach. You need to re-evaluate 10-20 percent of the participants between one and two weeks

after the first evaluation to be able to calculate the ICC for test-retest. The alpha is another story that you can calculate for all items from the first evaluation. So the results of this part are wrong too.

Authors' response: We appreciate your valuable comment and have rewritten the calculation method as follows in the method section based on it: (Page 10 and line 220-225)

To assess the internal reliability of the scale, Cronbach's alpha coefficients were calculated based on the responses of the participants in the CFA stage, with values above 0.7 indicating adequate internal reliability [14]. In addition, Cronbach's alpha if item deleted was also computed. To measure the reliability of the scale, test-retest (by repeating the questionnaire on 64 randomly selected previous respondents) and split-half (using the data collected in the CFA stage) methods were used.

The reliability of the rewriting was explained as follows in the findings section: (Page 13 and line 282-287)

Reliability: The results showed that Cronbach's alpha coefficient for the whole scale was 0.84, and for each factor was above 0.90, indicating high internal consistency. The split-half coefficient for the first half (14 items) and second half (14 items) of the scale was 0.86 and 0.85, respectively, and the correlation between them was 0.16, indicating good stability (table 5). The test-retest reliability for a subsample of 64 participants who completed the questionnaire twice with a two-week interval was 0.74, indicating good temporal stability.

12- Lines 217-219 and lines 227-228 are repetitive, please eliminate them.

Authors' response: Thank you for your valuable comment. Based on this comment, its were deleted

13- Lines 227-330 are a repetition of what you have written in your method, I told you that you should have similar steps, but not similar content, in results you must say what you found in each step. Please go to this link to see how to write these parts concisely and effectively:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5425347/

Authors' response: Thank you for your valuable comment. Based on this comment, we deleted the repetitive items in the text and rewrote the findings as follows: (Page 11-13 and line 237-287)

4.1. Cultural Adaptation Process

The process of cross-cultural adaptation of the questionnaire involved several steps. Two bilingual translators translated the questionnaire into Persian and resolved the differences. Two other bilingual translators back-translated the questionnaire into English. The expert committee reviewed the original and back-translated versions and suggested minor modifications. The face and content validity of the questionnaire were assessed through a cognitive interview with a sample of the target population. The participants rated each item on a 4-point scale for simplicity, clarity, and relevance and expressed satisfaction with the questionnaire. The results showed good face validity, with all items scoring well on each criterion. Any final changes were incorporated into the questionnaire, which was then tested with participants meeting the study criteria. The test showed that it took an average of 15 minutes to complete the questionnaire, with no difficulties reported. As a result, the rigorous process of translation, expert review, cognitive interview, and testing produced a Persian version of the questionnaire that was culturally adapted for use in Iran. The final Persian version of the questionnaire is presented in Appendix 1.

4.2. Participants and Inclusion & Exclusion Criteria

The demographic characteristics of the participants are presented in Table 2. The results showed that 23 (3.82%) were instructors, 325 (53.99%) were assistant professors, 173 (28.74%) were associate professors, and 91 (15.12%) were professors. In addition, 235 (39.04%) were women, and 377 (62.62%) were men. Also, 246 (40.86%) cases had work experience of fewer than 15 years, and 366 (60.80%) had over 15 years. 260 (38.86%) were women, and 409 (61.14%) were men. 340 (56.48%) people were under 45 years old, and 262 (43.52%) people were over 45 years old.

4.3. Validity and Reliability

The validity and reliability of the KSBS questionnaire were assessed using various methods. The results are as follows:

Content validity: The content validity of the questionnaire was evaluated by calculating the content validity ratio (CVR) and the content validity index (CVI) for each item based on the opinions of 10 experts. The results showed that the CVR for the 28-item scale ranged from 73% to 100%, and All items had I-CVI values greater than 0.78, indicating that they were relevant to the construct of knowledge-sharing behavior. The S-CVI/UA for the whole scale was 1.00, meaning that all items met the criterion of having an I-CVI greater than 0.78. The S-CVI/Ave for the entire scale was 0.93, higher than the recommended value of 0.9. These values indicated that the questionnaire had good content validity.

Construct validity: The results of EFA showed that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.93, and the Bartlett's test of sphericity was significant (chi-square=4522.76, df=378, $p<0.001$), indicating that the data was suitable for factor analysis. The factor extraction showed that all items had factor loadings greater than 0.4, and that four factors emerged from the analysis, explaining 57.07% of the total variance. The first factor explains 16.47%, the second factor 15.97%, the third factor 13.99% and the fourth factor 10.64% of this variance.

The first factor is organizational communications (items 6-13), the second factor is personal interactions (items 14-21), the third factor is communities of practice (items 22-28), and the fourth factor is written contributions (items 1-5) (Table 3). The results of CFA showed that all goodness-of-fit indices met their respective criteria, indicating that the four-factor model fitted the data well. Figure 1 shows the standardized path diagram of the CFA model.

Concurrent validity: The results showed that the correlation coefficient between the KSBS scale and the KMQ scale was 0.72 ($p<0.001$), and between the KSBS scale and the TEKS scale was 0.87 ($p<0.001$). These values indicated that the questionnaire had good concurrent validity.

Reliability: The results showed that Cronbach's alpha coefficient for the whole scale was 0.84, and for each factor was above 0.90, indicating high internal consistency. The split-half coefficient for the first half (14 items) and second half (14 items) of the scale was 0.86 and 0.85, respectively, and the correlation between them was 0.16, indicating good stability (table 5). The test-retest reliability for a subsample of 64 participants who completed the questionnaire twice with a two-week interval was 0.74, indicating good temporal stability.

14- If you elaborate the Yi's study in the introduction, you can compare your findings in your discussion. Please revise the discussion properly.

Authors' response: Thank you for your valuable comment. Based on this comment, we added the highlighted items to the text (Page 18-21 and line 298-363)

The present study provided comprehensive information on the validity and reliability of the Knowledge Sharing Behavior Scale (KSBS) among faculty members of medical universities. The analyses included a range of validity tests such as face, concurrent, construct, and content validity, as well as reliability calculations.

The scale had a good face validity. This finding was consistent with those of Yi (2009) and Ramayah et al. (2014) [1, 7]. As an explanation, it can be said that the questions of the scale were designed and localized by the research team and several expert faculty members before face validity. Therefore, none of the questions were deleted at this stage.

The CVR for the 28-item scale ranged from 73% to 100%. Therefore, the content validity of all questions was confirmed by the experts [15]. The I-CVI value (0.78) was also acceptable. Therefore, the scale had content validity. These findings were in line with those of Yi (2009) and Ramayah et al. (2015) [1, 7]. As a possible explanation, we can refer to the aim of this questionnaire, which was to assess knowledge sharing behavior among faculty members, which

was consistent with the statistical population of this research. Also, the level of literacy of the statistical population of the research is probably another reason for increasing the content validity of this scale. This study's content validity of results were consistent with YI (2009), indicating that the scale's items were relevant and representative of the knowledge sharing behavior construct.

The results of factor analysis showed that KSBS was a 28-item tool with four factors: written participation, organizational communication, personal interactions, and communities of practice. These findings were confirmed by Yi, Ramaya et al. [1, 7]. This study's factor structure was consistent with the four-factor model proposed by YI (2009), which supported the generalizability of the scale among faculty members in different countries and disciplines.

The questions for the written participation factor in this scale were consistent with those for modes of sharing tacit and explicit knowledge, intention (Islam), tendency to share tacit organizational knowledge (Holste), Chennamanen's scale, and sharing explicit knowledge (Wang) [16-21]. The questions for organizational communication were consistent with those for modes of sharing tacit and explicit knowledge, performance, intrinsic motivation (Islam), tendency to share tacit organizational knowledge (Holste), Karamitri's scale, and sharing tacit knowledge (Wang) [16-21]. The questions for personal interactions were consistent with those for modes of sharing tacit and explicit knowledge, intention, intrinsic motivation (Islam), tendency to share tacit organizational knowledge, tendency to exploit tacit organizational knowledge (Holste), Chennamanen's scale, and sharing tacit knowledge (Wang) [16-21]. The questions for communities of practice were consistent with those for modes of sharing tacit and explicit knowledge (Rehman), intention (Islam), tendency to share tacit organizational knowledge (Holste), Karamitri's scale, and expected reciprocal relationship (Bock) [16-18, 22].

The results of concurrent validity showed a correlation between KSBS and KMQ and TEKS. This correlation was lower for KMQ because it only measures some dimensions of knowledge sharing behavior. This concurrent validity results are similar to the correlations reported in YI (2009), which suggests that the Persian version of the scale maintains the same level of criterion validity as the KSBS.

The alpha coefficient for KSBS was 84%. This indicates a desirable internal consistency. These data indicate that KSBS has an optimal internal consistency coefficient [23]. The test-retest correlation coefficient was 0.74. This indicates stability in KSBS [24]. These findings were confirmed by Yi and Ramayah et al. [1, 7]. This study's reliability results are comparable to those reported in Yi's study, reinforcing the notion that the Persian version of the scale is a reliable measure of knowledge sharing behavior.

KSBS is a comprehensive scale for the university community; therefore, it is more specific than many other scales because in most scales, knowledge sharing is one dimension of the scale. Our statistical population was faculty members from Iranian universities. This tool can have practical and research applications. Identifying practical knowledge sharing behavior among faculty members can help to design targeted interventions to improve knowledge sharing behavior. Researchers can use this scale to assess knowledge sharing behavior among faculty members.

The main strength point in this study was that it was validated based on the university community, not an administrative one. On the other hand, samples were taken from all over the country, which increases generalizability. One of the limitations of this study was that validation was done only in medical universities. Therefore, it is suggested that validation be done in other universities affiliated with the Ministry of Science as well. Also, a study can be conducted that compares knowledge sharing behavior between professors of medical universities and universities of the

Ministry of Science. Another limitation of the study was the lack of divergent and convergent validity assessment in the study.

Overall, this study's results demonstrate a high level of agreement with the findings of Yi's original study, indicating that the Persian version of the KSBS is a valid and reliable measure for assessing knowledge sharing behavior among faculty members. Further validation in other university settings and the inclusion of additional validity measures would strengthen the evidence supporting the use of the KSBS in various contexts.

15- Lines 350-352 are wrong, eliminate them.

Authors' response: Thank you for your valuable comment. Based on this comment, the following sentences were deleted:

The results of face validity showed that all items had an impact score higher than 1.5, and none of them were deleted. This means that all questions were deemed relevant and appropriate by the experts and did not need to be removed or modified. This indicates a desirable face validity of the scale.

16- Lines 405-407 would be better to be removed.

Authors' response: Thank you for your valuable comment. Based on this comment, the following sentences were deleted

This scale is also practical and can be used in research and related institutions to identify and estimate the level of knowledge-sharing in the Iranian academic community.

4 Revision 3

2 comments · 10 Jul 2023 – 12 Jul 2023

Associate Editor

ACCEPT 10 Jul 2023

Dear Authors
Well done. You considered as many comments as possible to elevate the quality of the manuscript.
I leave the last call to the Editor in Chief.
Best of luck

Editor-in-Chief

ACCEPT 12 Jul 2023

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other high-quality articles from your group.