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OPEN PEER REVIEW

Development and Psychometric Properties of the Activity of Daily Living Questionnaire in Patients with Heart Failure

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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

4 comments · 6 May 2024 – 13 May 2024

Referee 1 Reviewer

REJECT 6 May 2024

After a thorough review of the manuscript titled "Development and Validation of an Activities of Daily Living Questionnaire for Patients with Heart Failure," I regret to inform you that I must recommend rejecting the manuscript in its current form for publication in Middle East Journal of Rehabilitation and Health Studies.

While the study addresses an important topic and attempts to develop a new questionnaire for assessing activities of daily living (ADL) in heart failure patients, the manuscript suffers from several significant shortcomings that hinder its clarity, organization, and overall quality.

The primary concerns regarding the manuscript are as follows:

1. Lack of coherence and organization: The manuscript is poorly structured, with sections lacking clear flow and logical progression. Key information is scattered throughout the text, making it challenging for the reader to follow the study's rationale, methodology, and findings.

2. Insufficient methodological details: The methods section lacks crucial details on various aspects of the study, such as sample size considerations, data collection processes, and specific analytical approaches employed. This lack of transparency hinders the reproducibility and interpretability of the findings.

3. Inadequate justification and literature review: The introduction section fails to provide a comprehensive review of the existing literature, inadequately justifying the need for a new ADL questionnaire and its potential contribution to the field.

4. Unclear presentation of results: The results section is disorganized, with findings scattered throughout the text. Key information, such as the rationale for item selection, patient feedback incorporation, and expert panel composition, is either missing or insufficiently explained.

5. Limited discussion and interpretation: The discussion section lacks in-depth interpretations of the study's findings, fails to address potential limitations, and does not provide clear clinical implications or future research directions.

However, I encourage the authors to carefully consider the feedback provided and undertake a comprehensive revision of the manuscript, ensuring a clear organization, thorough methodological descriptions, and a well-supported rationale and discussion. Once these issues are addressed, the authors may consider resubmitting the manuscript for further consideration.

Referee 2 Reviewer

MAJOR REVISION 7 May 2024

Comments on the article titled " Development and Validity of Activity of Daily Living Questionnaire in Patients with Heart Failure"
Title:
The title should be as follows:
Development and psychometric properties of Activity of Daily Living Questionnaire in Patients with Heart Failure
Abstract:
Comment 1: The purpose is not clear.
Comment 2: In the method, the type of study and the time and place of the study are not mentioned.

Comment 3: The method of data analysis should be mentioned.

Introduction

Comment 4: Population should be used instead of context in line 32.

Comment 5: Please provide specific details on how parameters such as independence, fatigue, dyspnea, pain, and performance time in ADL will be incorporated into the new questionnaire.

Method

Comment 6: In the stages of development and validation, there is little information about the characteristics of the participants, such as age, gender, and comorbidity.

Comment 7: Provide more information regarding the qualitative methods for modifying the initial questionnaire based on patient feedback and the data collection and analysis methods.

Comment 8: What were the criteria for choosing 8 experts to check content validity, and what was their professional experience?

Comment 9: What were the criteria for selecting 15 medical personnel to assess face validity?

Comment 10: Provide a rationale for the sample size chosen and discuss potential limitations related to sample representativeness.

Comment 11: How many experts were included in the expert panel, what were their specialties, and what were the criteria for their selection?

Comment 12: Why did you choose a two-week interval for the intra-rater assessment?

Comment 13: The data analysis method was not mentioned in the method.

Comment 14: In the method, you did not state whether the participants filled out the informed consent form or whether the study had an ethics code.

Comment 15: In addition to evaluating the reliability of the questionnaire using interrater reliability and internal consistency, provide information about the stability of the questionnaire over time.

Comment 16: Mention the rationale for excluding patients classified as level 4 NYHA due to significant limitations in physical activity.

Comment 17: When assessing convergent validity by correlating the ADL questionnaire with the ADL section of the Iranian Heart Failure Quality of Life (IHF-QoL) questionnaire, please provide information about the IHF-QoL questionnaire, its psychometric properties, or its suitability as a comparator for convergent validity assessment.

Comment 18: Please provide a clear discussion of the identified factors and their theoretical relevance or practical implications in factor analysis.

Result

Comment 19: The first paragraph after the Result heading should be deleted.

Comment 20: Use consistent formatting and labeling of tables throughout the manuscript.

Comment 21: Please provide an in-depth interpretation of the specific results obtained, such as the factor analysis findings and the implications of the identified dimensions.

Discussion

Comment 22: Line 184 is a redundant sentence.

Comment 23: In the discussion, you have presented the tools but have not compared them precisely or correctly explained the reasons for their differences and similarities.

Comment 24: It is necessary to first discuss the theoretical framework of ADL questionnaire design and the extent to which these results align with theories in occupational therapy and heart failure treatment.

Comment 25: Discuss the generalizability of the study results by considering the inclusion and exclusion criteria of the study and the characteristics of the population.

Comment 26: In addition to the need to evaluate significant change, mention future studies, such as assessing the validity of the questionnaire in different societies, cultural adaptation, or predictive validity for clinical outcomes.

Comment 27: In the discussion of limitations, mention methodological limitations, such as the exclusion of NYHA class IV patients or the use of specific comparative tools to assess convergent validity.
Comment 28: Mention specific suggestions or directions for future studies on meaningful changes.
Comment 29: In the discussion of limitations, mention sources of bias or limitations affecting the results of the study.
Comment 30: Future research could consider validating the questionnaire in diverse populations to enhance its applicability.
Comment 31: It is better to move lines 225 to 229 to the conclusion.

Associate Editor

MAJOR REVISION 11 May 2024

Dear Editor

I have reviewed the comments provided by the three reviewers for the manuscript titled "Development and Validity of Activity of Daily Living Questionnaire in Patients with Heart Failure". Based on these comments, the manuscript needs major revisions.

Best regards

Editor-in-Chief

MAJOR REVISION 13 May 2024

Dear Authors
According to the reviewers' and associate editor's comments, your article needs 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.

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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.

Associate Editor:
Dear Editor

I have reviewed the comments provided by the three reviewers for the manuscript titled "Development and Validity of Activity of Daily Living Questionnaire in Patients with Heart Failure". Based on these comments, the manuscript needs major revisions.

Best regards,

Author response

Thank you for allowing us to submit a revised version of the manuscript titled " Development and Validation of an Activities of Daily Living Questionnaire for Patients with Heart Failure ". We value the time and effort you and the reviewers have put into providing valuable comments on our manuscript. We have addressed the reviewers' comments and detailed the changes made, which are highlighted within the manuscript.

Sincerely,

Reviewer 1:
After a thorough review of the manuscript titled "Development and Validation of an Activities of Daily Living Questionnaire for Patients with Heart Failure," I regret to inform you that I must recommend rejecting the manuscript in its current form for publication in Middle East journal of Rehabilitation and Health Studies.

Author response: I would like to express my sincere gratitude for taking the time to review the manuscript. Your insightful comments and constructive feedback have been invaluable in improving the quality of the paper. We attempted to address these comments. I hope that you find our response satisfactory.

While the study addresses an important topic and attempts to develop a new questionnaire for assessing activities of daily living (ADL) in heart failure patients, the manuscript suffers from several significant shortcomings that hinder its clarity, organization, and overall quality. The primary concerns regarding the manuscript are as follows:

1. Lack of coherence and organization: The manuscript is poorly structured, with sections lacking clear flow and logical progression. Key information is scattered throughout the text, making it challenging for the reader to follow the study's rationale, methodology, and findings.
Author response: The necessary revisions have been made to improve the structure and flow of the manuscript, particularly in the introduction section where the descriptions have been enhanced.

2. Insufficient methodological details: The methods section lacks crucial details on various aspects of the study, such as sample size considerations, data collection processes, and specific analytical approaches employed. This lack of transparency hinders the reproducibility and interpretability of the findings.

Author response: Corrections, such as sample size considerations, data collection processes, and specific analytical approaches, have been added in the Method section.

3. Inadequate justification and literature review: The introduction section fails to provide a comprehensive review of the existing literature, inadequately justifying the need for a new ADL questionnaire and its potential contribution to the field.

Author response: The descriptions have been made in the introduction section.

4. Unclear presentation of results: The results section is disorganized, with findings scattered throughout the text. Key information, such as the rationale for item selection, patient feedback

incorporation, and expert panel composition, is either missing or insufficiently explained.
Author response: Corrections and descriptions have been added to the "Construct validity" and the "Results" section.

5. Limited discussion and interpretation: The discussion section lacks in-depth interpretations of the study's findings, fails to address potential limitations, and does not provide clear clinical implications or future research directions.

Author response: Descriptions have been added to the discussion, study limitations and conclusion section

However, I encourage the authors to carefully consider the feedback provided and undertake a comprehensive revision of the manuscript, ensuring a clear organization, thorough methodological descriptions, and a well-supported rationale and discussion. Once these issues are addressed, the authors may consider resubmitting the manuscript for further consideration.

Author response: We appreciate the feedback provided by the reviewer and have taken the necessary steps to address the issues raised. The manuscript has undergone comprehensive revisions, focusing on improving the organization, methodological descriptions, and rationale and discussion sections. Thank you for your valuable comments

Reviewer 2:

We appreciate the feedback provided by the reviewer and have taken the necessary steps to address the issues raised. The manuscript has undergone comprehensive revisions, focusing on improving the organization, methodological descriptions, and rationale and discussion sections. Thank you for your valuable comments

The title should be as follows:

Development and psychometric properties of Activity of Daily Living Questionnaire in Patients with Heart Failure

Author response: The corrections have been made

Abstract:

Comment1: The purpose is not clear.

Author response: The corrections have been made

Comment 2: In the method, the type of study, time and place of study are not mentioned.

Author response: The corrections have been made (the type of study). Due to the limitation of the number of words, the place of collection of samples and the year of completion have been added in the text.

Comment 3: The method of data analysis should be mentioned

Author response: The corrections have been made

Introduction

Comment 4: Population should be used instead of context in line 32.

Author response: The corrections have been made

Comment 5: Please provide specific details on how parameters such as independence, fatigue, dyspnea, pain, and performance time in ADL will be incorporated into the new questionnaire.

Author response: The corrections have been made

"In an ADL assessment questionnaire for HF patients, it is crucial to examine parameters related to ADL, such as independence, fatigue, dyspnea, pain, and performance time because this factors that affected performance in HF (1)."

Method

Comment 6: In the stages of development and validation, there is little information about the characteristics of the participants, such as age, gender, and comorbidity.

Author response: The corrections have been made

“The initial questionnaire was completed by 30 individuals with HF. 53% (16 people) of each group's participants were male, and 46% were female. The participants' ages ranged from 22 to 65 years old, with a mean (SD) age of 50.57 (11.3). 8 people (25%) were at level I, 14 people (43%) were at level II, and 8 people (25%) were at level III NYHA functional class”

“The questionnaire was completed by 180 people with HF level NHYA 1-3. 65% (117 people) of the participants in each group were male and 35% were female. The participants were 18 to 65 years old the mean (SD) age of the participants was 50.12 (12.49), 83 people (46.1%) were at level I, 58 people (32.2%) were at level II and 39people (21.7%) were at level III NYHA functional class”

Comment 7: Provide more information regarding qualitative methods for modifying the initial questionnaire based on patient feedback, data collection, and analysis methods

Author response: The descriptions have been added in the method section

“To improve item generation, a qualitative study was carried out, involving semi-structured interviews with individuals at different levels of HF, using purposive sampling. The interviews were audio-recorded and transcribed directly by an occupational therapist. The focus was on HF patients' views and recommendations on questionnaire items and parameters. The first author conducted an inductive analysis and thematic evaluation of the qualitative data from the interviews. “

Comment 8: What was the criteria for choosing 8 experts and their professional experience to check content validity?

Author response: The studies recommended using 5 to 10 experts for content validation. .(2)

Comment 9: What was the criteria for selecting 15 medical personnel in face validity?

Author response: To assess the face validity, it is recommended in the literature to be between 10 and 20 participated.(3)

Comment 10 : Provide a rationale for the sample size chosen and discuss potential limitations related to sample representativeness.

Author response: thank you for your valuable comment, the descriptions have been added.

Recommendations in the literature for the sample size determination when conducting a confirmatory factor analysis range from 150 to 1000 subjects (4). Norman and Streiner state that factor analysis is a large-sample procedure, recommending an arbitrary sample size of 100 to 200 (5).

" Norman and Streiner state that factor analysis is a large-sample procedure, recommending an arbitrary sample size of 100 to 200 (5)"

Comment 11 : How many experts were included in the expert panel and what were their specialties and what was the criteria for their selection?

Author response: the descriptions have been added in the method section.

"A team of five experts, including three people with a doctorate in occupational therapy, one person with a doctorate in neuroscience, and 1 person with a doctorate in physiotherapy"

Comment 12 : Why did you choose a two-week interval for the intra-rater?

Author response: To further reduce the potential for rater recollection introducing bias into their scoring, a two-week washout period was introduced between rating sessions (6). It has been demonstrated that a two-week interval between ratings adequately counteracts bias resulting from memory(7)

"The reliability was evaluated by two raters and 30 HF patients on two occasions, with 2-week intervals, to minimize the chance of rater recall bias in their evaluations."

Comment 13: Data analysis method was not mentioned in the method

Author response: This section has been added to the manuscript.

Comment 14: In the method, you did not state whether the participants filled out the informed consent form or whether the study had a ethic code or not?

Author response: The ethical considerations have been written in the Ethical Considerations section

"This study was approved by the Research Ethics Committee of the Iran University of Medical Sciences (IR.IUMS.REC.1395.95-03-32-28606). In this sense, the informed consent form was signed by the experts and HF patients"

Comment 15: In addition to evaluating the reliability of the questionnaire, using interrater reliability and internal consistency, provide information about the stability of the questionnaire over time.

Author response: This descriptions have been added.

“Pearson correlations and ICC are influenced by the score range. Calculating the proportion of agreement of test-retest differences with a referent value of ± 1 could offer more insight into the questionnaire's stability (8).”

“The results indicated that the questionnaire's stability over time was considered adequate.”

Comment 16: Mention rationale for excluding patients classified as level 4 NYHA due to significant limitations in physical activity

Author response: This descriptions have been added.

“Individuals classified as level four of the New York Heart Association (NHYA) were excluded due to their significant limitations in physical activity. Consequently, as advised by the cardiologist, only patients categorized as levels 1-3 were considered for the study.”

Comment 17: When assess convergent validity by correlating the ADL questionnaire with the ADL section of the Iranian Heart Failure Quality of Life (IHF-QoL) questionnaire, Please provide information about the IHF-QoL questionnaire, its psychometric properties, or its suitability as a comparator for convergent validity assessment.

Author response: This descriptions have been added.

“The IHF-QoL questionnaire showed acceptable convergent validity, with a Cronbach's alpha of 0.92 and a significant ICC for all components (9).”

Comment 18 :Please provide a clear discussion of the identified factors and their theoretical relevance or practical implications in factor analysis.

Author response: Corrections and descriptions have been added to the "Construct validity" and the "Results" section

Result

Comment 19: The first paragraph after result should be deleted

Author response: The first paragraph in the result section has been be deleted

Comment 20 : Use consistent formatting and labeling of tables throughout the manuscript

Author response: The corrections have been made.

Comment 21: Please write in-depth interpretation of the specific results obtained, such as the factor analysis findings and the implications of the identified dimensions.

Author response: Corrections and descriptions have been added to the "Construct validity" and the "Results" section

Discussion

Comment 22: Line 184 is a redundant sentence

Author response: The extra sentence was deleted

Comment 23: In the discussion, you have brought the tools, but have not compared them more precisely and have not explained the reason for the difference and similarity correctly.

Author response: These corrections have been made in the discussion section.

Comment 24: It is necessary to first discuss the theoretical framework of ADL questionnaire design and how much these results are aligned with theories in occupational therapy and heart failure treatment.

Author response: These corrections have been made in the discussion section.

Comment 25: Discuss the generalizability of the study results by considering the inclusion and exclusion criteria of the study and the characteristics of the population.

Author response: These corrections have been made in the conclusion section

Comment 26: In addition to the need to evaluate the significant change, mention the future studies, such as checking the validation of the questionnaire in different societies, cultural adaptation or predictive validity for clinical results.

Author response: Descriptions have been added to the conclusion section.

“This questionnaire should assess the significant changes and discuss future studies, including validating the questionnaire in different societies, cultural adaptation, and predictive validity for clinical outcomes.”

Comment 27: In the discussion of limitations, mention the limitation related to the methodology, such as the exclusion of NYHA class IV patients or the use of special comparative tools to assess convergent validity.

Author response: Descriptions have been added to the Study Limitations section.

“Furthermore, patients classified as class IV in the NYHA HF category were excluded because of the substantial restrictions in their physical capabilities”

Comment 28: Mention specific suggestions or directions in future studies for meaningful changes.

Author response: Descriptions have been added to the conclusion section

Comment 29: In the discussion of limitations, mention sources of bias or limitations affecting the results of the study.

Author response: Descriptions have been added to the Study Limitations section

Comment 30: Future research could consider validating the questionnaire in diverse populations to enhance its applicability.

Author response: Descriptions have been added to the conclusion section.

“In addition, Future studies could confirm the validity of the questionnaire across various patient groups”

Comment 31: It is better to move lines 225 to 229 to the conclusion

Author response: the paragraph has been moved in the conclusion section

Reviewer 3:
Three ADL evaluation tools for HF patients are mentioned at the end of the introduction. However, it has yet to be determined which of these tools covers or does not cover the areas mentioned by the authors of the article, such as independence, fatigue, dyspnea, pain, and performance time. As an example, it should be noted that the Kansas City Cardiomyopathy 21 Questionnaire (KCCQ) scale examines these daily activities, but does not examine these numerous ones.

Author response: The descriptions have been added in the introduction section

"KCCQ is a 23 or 12 item questionnaire. It is provides a comprehensive evaluation of the patient's health status, including symptom frequency, physical limitations, social limitations, and quality of life domains(10). PMADL-8 assesses the 8 items including Rising from the floor without assistance, Showering, Climbing stairs without a railing, Vacuuming, Sliding a heavy door, Getting in and out of a car,and walking alongside someone of similar age, Walking uphill for 10 minutes(11) . DAQIHF is a daily activity questionnaire used to assess the daily energy expenditure of HF patients (12). These ADL assessment questionnaires do not adequately assess the full spectrum of patients' daily activities and may limit their ability to accurately improve patient outcomes and prevent the development of conditions that could impact daily functioning in the context of disease management and treatment plans."

The implementation method says that the purpose of this study is to design a tool to assess ADL in the Iranian context. Please explain what changes to the ADL occur when context changes.

Author response: The descriptions have been added in the introduction section

"In addition, the cultural differences could lead to a different conceptualization of ADL (13)."

We appreciate the feedback provided by the reviewer and have taken the necessary steps to address the issues raised. The manuscript has undergone comprehensive revisions, focusing on improving the organization, methodological descriptions, and rationale and discussion sections. Thank you for your valuable comments

References

1. Fathipour-Azar Z, Akbarfahimi M, Rabiei F. The challenges of people with heart failure in activity of daily living performance: A qualitative study in Iranian Context. Iranian Rehabilitation Journal. 2020;18(3):263-74.
2. Almanasreh E, Moles R, Chen TF. Evaluation of methods used for estimating content validity. Research in social administrative pharmacy. 2019;15(2):214-21.
3. Mikkonen K, Tomietto M, Watson R. Instrument development and psychometric testing in nursing education research. Nurse Education Today. 2022;119:105603.
4. Anthoine E, Moret L, Regnault A, Sébille V, Hardouin J-B. Sample size used to validate a scale: a review of publications on newly-developed patient reported outcomes measures. J Health quality of life outcomes. 2014;12:1-10.
5. Norman GR, Streiner DL. Biostatistics: the bare essentials, 4th ed.: PMPH USA (BC Decker); 2008.
6. Palmer J, Cuff A, Lindley MJPT, Rehabilitation. Intra-Rater reliability of the Functional Movement Screen (FMS) amongst NHS Physiotherapists. 2017;4:1.
7. Ikiugu MN, Smallfield SJAOTJ. Interrater, intra-rater and internal consistency reliability of the Theory Application Assessment Instrument. 2010;57(4):253-60.
8. Lane AM, Nevill AM, Bowes N, Fox KR. Test-retest stability of the Task and Ego Orientation Questionnaire. Research Quarterly for Exercise Sport. 2005;76(3):339-46.
9. Naderi N, Bakhshandeh H, Amin A, Taghavi S, Dadashi M, Maleki M. Development and validation of the first Iranian questionnaire to assess quality of life in patients with heart failure: IHF-QoL. Research in cardiovascular medicine. 2012;1(1):10-6.
10. Spertus JA, Jones PG, Sandhu AT, Arnold SV. Interpreting the Kansas City Cardiomyopathy Questionnaire in clinical trials and clinical care: JACC state-of-the-art review. Journal of the American College of Cardiology. 2020;76(20):2379-90.
11. Hastalar HSKYO, Aktiviteleri İGY, Türkçe PÖ, ve Geçerliliği VG. Reliability and validity of the Turkish version of the Performance Measure for Activities of Daily Living-8 for patients with mild symptomatic heart failure. heart failure journal 2022;50(7):512-7.
12. Garet M, Degache F, Costes F, Da-Costa A, Jc B, Roche F. DAQIHF: methodology and validation of a daily activity questionnaire in heart failure. Medicine science in sports exercise. 2004;36(8):1275-82.
13. Reijneveld SA, Spijker J, Dijkshoorn H. Katz'ADL index assessed functional performance of Turkish, Moroccan, and Dutch elderly. Journal of clinical epidemiology. 2007;60(4):382-8.

2 Revision 1

2 comments · 12 Jun 2024 – 18 Jun 2024

Associate Editor

ACCEPT 12 Jun 2024

Dear Editor

I have reviewed the revised version of the manuscript titled "Development and Psychometric Properties of Activity of Daily Living Questionnaire in Patients with Heart Failure". All of the reviewers' comments were considered by the authors, and the manuscript can be accepted for publication.

Best

Editor-in-Chief

ACCEPT 18 Jun 2024

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