

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Application of Andersen's Behavioral Model of Health Services Use – A scoping review with a focus on qualitative health services research
AUTHORS	Lederle, Mareike; Tempes, Jana; Bitzer, Eva

VERSION 1 – REVIEW

REVIEWER	Elizabeth H. Bradley Vassar College, USA
REVIEW RETURNED	30-Nov-2020

GENERAL COMMENTS	One area that might be interesting to comment on in the discussion (but up to you) is what we know about how Aday and Andersen developed in their thinking. Perhaps it is important that even the originators had additional thoughts on their model (e.g., Andersen coauthored ref 29 because he saw the gap in psychosocial factors of the original model and was interested in expanding the view on this), and it may be true for Aday as well.
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REVIEWER	KM Saif-Ur-Rahman Nagoya University Graduate School of Medicine Faculty of Medicine, Public Health and Health Systems
REVIEW RETURNED	17-Dec-2020

GENERAL COMMENTS	<p>I appreciate the effort of the review authors. This is an interesting article. Please find my comments here:</p> <ol style="list-style-type: none">1. Page 6: Methods: Please clarify regarding full-text screening. Please mention whether that was conducted independently by two review authors or not.2. Page 6: Line 12: “.. researchers (ML, JT) independently extracted half of the studies....”. What about the rest of the studies? Please resolve the confusion.3. Page 7: Line 14-16: “For abstracts with insufficient information regarding our extraction characteristics, we obtained the full-text version of the publications” - Please clarify. Does it mean that the authors extracted information from the abstract? Have you extracted information from full-text only if it is not available in the abstract? It seems that the authors have not gone through the full-text of all articles. Is that so? Please clarify and explain.4. What about the Grading/ Certainty of evidence? If authors do not consider that, please explain why?5. Authors should mention that the findings should be interpreted considering the quality of the included studies.6. Authors should explain the ‘influence of the review authors on the scoping review’ briefly.
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REVIEWER	Mirjam Dieckelmann Goethe University Frankfurt, Germany
REVIEW RETURNED	15-Jan-2021

GENERAL COMMENTS	<p>Thank you for the opportunity to review this scoping review entitled “Application of Andersen’s Behavioral Model of Health Services Use – A scoping review with a focus on qualitative health services research”. The work contributes to developing Andersens model further by applying an evidence-based approach.</p> <p>My main concerns are a) the way the search strategy has been programmed and b) the change of exclusion criteria throughout the screening process.</p> <p>a) I cannot identify a straightforward logic of search blocks. The way of combining search terms may be uncommon. If this was a protocol, I would have recommended the support of a peer-programmer or an experienced librarian to double check, whether the systematically and carefully achieved results of this work are derived from a relevant base of publications (i.e. have all previously known key publications been identified through this search strategy?) I believe the work would have profited from a clearer and more comprehensible search strategy. This could probably be achieved by restructuring some combinations of terms and by simplifying the strategy’s architecture.</p> <p>b) What is the rationale behind discontinuing the screening process and adding exclusion criteria throughout the process? The scoping exercise was based on data derived from the ti/ab Screening whereas the more in-depth synthesis was based on the full systematic screening process. Could the authors identify all relevant papers that address the BSHMU and individuals above 18 y only with the limited information available from Ti/Ab? Is there any reference the authors can provide that would justify the methodological procedure of “short-cutting” the screening process?</p> <p>Please find my minor comments for improvement/ clarification below:</p> <ul style="list-style-type: none"> • Abstract: The abstract does not point out that two levels of analysis have been applied in this study. A) a descriptive overview including studies with populations 18+ as well as reference to BMHSU B) a qualitative synthesis including studies that underwent full-text screening and additional exclusion criteria. • Abstract: The objective stated in the abstract as well as the results listed in the abstract do not fully match with the main objective stated on p. 5 ll.38-45 later in the manuscript. • Strength and limitations: The authors state that “This scoping review is the first which provides an exploration of the application widely adopted Behavioral Model of Health Services Use”. However, the authors also mention a previous review that has been conducted by Babitsch et al. What is the difference between those? Why has the search by Babitsch et al not simply been updated?
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	<ul style="list-style-type: none"> • Introduction: On p5, ll.38-40 the main objective is outlined. The authors state “to provide qualitative synthesis of qualitative studies”. However, we do not learn which outcomes are considered for synthesis (Synthesis of what?) • Methods: The subheading “quantitative overview” may be misleading: Do the authors aim at synthesising outcome data quantitatively (meta-analysis) or do they want to provide a descriptive overview on study characteristics (from quantitative/ non-qualitative studies)? • Methods: The search strategy seems to be partly based on the strategy that Babitsch et al. published. If this was the case it should be mentioned in the methods section. • Methods: the inclusion/exclusion criteria on pp.6-7 do not match the flow chart. If I understand it correctly, exclusion criteria were added at the start of the full text screening. Please provide rationale. • Methods: As a reader I am curious to learn how the categories applied for descriptively synthesizing the non-qualitative studies (i.e. care setting or target group) were defined. Were they deductively derived? • Is the quality appraisal tool applicable for mixed-methods studies? Were the MM-studies part of the synthesis at all? • Methods: Was the subcode “potential for and limitations of the BMHSU” based on descriptions/ conclusions of the individual studies’ authors or does this subcode mirror the evaluations of the authors of this review? • Results: Please define “General health care” more specifically (p.9 l4-5). Does it refer to care provided by GP’s? • Table 1: Looking into the column “Target group” as an example and adding all numbers together, I do not achieve the full number of 1.879 studies. If some studies were difficult to pool to a category, it would be helpful to add the line “Others” that summarises all studies that do not fall under any of the target groups. • Discussion: The authors discuss the challenge of assigning the codes to the model’s various factors. Please elaborate on the process of how an agreement was achieved.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

<p>One area that might be interesting to comment on in the discussion (but up to you) is what we know about how Aday and Andersen developed in their thinking. Perhaps it is important that even the originators had additional thoughts on their model (e.g., Andersen coauthored ref 29 because he saw the gap in psychosocial factors of the original model and was interested in expanding the view on this), and it may be true for Aday as well.</p>	<p>Thank you very much for this very important and interesting note. We added this thought in the discussion:</p> <p><i>“It is important to consider that even R.M. Andersen himself had additional thoughts on the model [9]. For example, he co-authored a publication [29] with the aim to expand the view from the original model on psychosocial factors.”</i></p>
<p>Reviewer: 2</p>	
<p>1. Page 6: Methods: Please clarify regarding full-text screening. Please mention whether that was conducted independently by two review authors or not.</p>	<p>Thank you for your very helpful comments. We have modified this in the methods:</p> <p><i>“Data extraction from title and abstract was divided between two researchers (ML, JT). One researcher’s extraction was verified by the other researcher with extracting data of a 25% random sample and discrepancies were resolved through discussion. For the qualitative synthesis, a 25% random sample from the total number of full-texts was screened and extracted independently by the two researchers (ML, JT), agreement was examined and in case of ambiguity discussed. For the remaining publications, the data extraction was divided between two researchers (ML, JT). Two researchers (ML, JT) coded the material together. Through all these processes, discrepancies were discussed and resolved by a team of reviewers (ML, JT, EMB).”</i></p>
<p>2. Page 6: Line 12: “.. researchers (ML, JT) independently extracted half of the studies....”. What about the rest of the studies? Please resolve the confusion.</p>	

3. Page 7: Line 14-16: "For abstracts with insufficient information regarding our extraction characteristics, we obtained the full-text version of the publications" - Please clarify. Does it mean that the authors extracted information from the abstract? Have you extracted information from full-text only if it is not available in the abstract? It seems that the authors have not gone through the full-text of all articles. Is that so? Please clarify and explain.

Yes, that is right. We learned from exploratory searches that its application in qualitative research will be difficult to find. Therefore, for this manuscript, we decided to provide a descriptive overview of the application of the BMHSU at the title/abstract level and focus on qualitative studies for the more in-depth qualitative synthesis at the full-text level. Especially since these are underrepresented in previous reviews. To clarify this, we have added a section in the introduction:

"Primarily we aimed at a review of qualitative applications of the BMHSU. We learned from exploratory searches that its application in qualitative research will be difficult to find. That was when we decided to undertake a meticulous screening of titles and abstracts of publications dealing with the BMHSU, to provide a descriptive overview on study characteristics as a first step, to learn about the application of the model in general which would help to put the qualitative findings into perspective. In a second step, we focus on a qualitative synthesis of the application of the BMHSU in qualitative health service research. Here, we synthesize (1) the application of different versions of the BMHSU, (2) the (un)suitability of the BMHSU from the authors' perspective and (3) which factors of the BMHSU were analyzed in publications with qualitative approach."

Nevertheless, it would be interesting to shed more light on all identified results, not only those with qualitative approach. We would like to do this in future research, outlined in the introduction:

"Further analyses, e.g. the synthesis of the quantitative studies is object of future publications."

<p>4. What about the Grading/ Certainty of evidence? If authors do not consider that, please explain why?</p>	<p>For the descriptive overview, we have clarified this in the methods:</p> <p><i>“Beyond labelling included studies as quantitative, qualitative, or mixed-methods we undertook no attempt to specify details of the study design, quantify reporting quality or risk of bias. Such a strategy is consistent with scoping reviews [19].”</i></p> <p>And for the qualitative synthesis, we have also elaborated this section also for the qualitative synthesis:</p> <p><i>“The quality of the qualitative studies and the qualitative part of studies with a mixed-method design was assessed (ML, JT) using the “Critical Appraisal Checklist for Qualitative Research” [20]. The checklist contains ten items that assess the methodological quality of the design, data collection, and data analysis of the publications. The tool comprises four answer choices: ‘Yes’, ‘No’, ‘Unclear’, and ‘Not Applicable’. If there was insufficient information to answer a given question, the response was recorded as ‘Unclear’. We included all studies with qualitative and mixed-method approach in the qualitative synthesis regardless of the analyzed quality of the studies.”</i></p>
<p>5. Authors should mention that the findings should be interpreted considering the quality of the included studies.</p>	<p>We have added a sentence in the strengths and limitations:</p> <p><i>“Also, the quality of this scoping review is based on the quality of the information contained in the included publications.”</i></p>
<p>6. Authors should explain the ‘influence of the review authors on the scoping review’ briefly.</p>	<p>We have further explained this in the strengths and limitations:</p> <p><i>“Regarding the influence of the reviewers on the review, it should be mentioned that the review team was composed of individuals with experience in systematic reviews, health services research and qualitative methods, had no affiliation with the research and no funding for the review.”</i></p>
<p>Reviewer: 3</p>	
<p>Thank you for the opportunity to review this scoping review entitled “Application of Andersen’s Behavioral Model of Health Services Use – A scoping review with a focus on qualitative health services research”. The work contributes to developing Andersens model further by applying an evidence-based approach.</p> <p>My main concerns are</p> <p>a) the way the search strategy has been programmed and b) the change of exclusion criteria throughout the screening process.</p>	<p>Thank you very much for your constructive comments. In the following, we address your concerns.</p>

a) I cannot identify a straightforward logic of search blocks. The way of combining search terms may be uncommon. If this was a protocol, I would have recommended the support of a peer-programmer or an experienced librarian to double check, whether the systematically and carefully achieved results of this work are derived from a relevant base of publications (i.e. have all previously known key publications been identified through this search strategy?) I believe the work would have profited from a clearer and more comprehensible search strategy. This could probably be achieved by restructuring some combinations of terms and by simplifying the strategy's architecture.

We are grateful for your comments and have adjusted or added modifications in the manuscript. We have based the search strategy for this scoping review on a previous review (Babitsch et al. 2012), and we are able to find the previously known key publications:

Methods – Search strategy

“We expanded the search strategy of Babitsch et al. [3] inter alia without limitation on the target groups, care settings, and diseases of interest. We adjusted the search terms to the particular databases and combined thesaurus and keywords pertaining to the BMHSU and its three core factors.”

Discussion – Strengths and limitations

“However, it became apparent, that all previously known key publications have been identified through our search strategy [3, 8, 9, 11, 12, 15].”

b) What is the rationale behind discontinuing the screening process and adding exclusion criteria throughout the process? The scoping exercise was based on data derived from the ti/ab Screening whereas the more in-depth synthesis was based on the full systematic screening process.

Could the authors identify all relevant papers that address the BHMSU and individuals above 18 y only with the limited information available from Ti/Ab? Is there any reference the authors can provide that would justify the methodological procedure of “short-cutting” the screening process?

We learned from exploratory searches that its application in qualitative research will be difficult to find. Therefore, for this manuscript, we decided to provide a descriptive overview of the application of the BMHSU at the title/abstract level and focus on qualitative studies for the more in-depth qualitative synthesis at the full-text level. Especially since these are underrepresented in previous reviews. To clarify this, we have added a section in the introduction:

“Primarily we aimed at a review of qualitative applications of the BMHSU. We learned from exploratory searches that its application in qualitative research will be difficult to find. That was when we decided to undertake a meticulous screening of titles and abstracts of publications dealing with the BMHSU, to provide a descriptive overview on study characteristics as a first step, to learn about the application of the model in general which would help to put the qualitative findings into perspective. In a second step, we focus on a qualitative synthesis of the application of the BMHSU in qualitative health service research. Here, we synthesize (1) the application of different versions of the BMHSU, (2) the (un)suitability of the BMHSU from the authors’ perspective and (3) which factors of the BMHSU were analyzed in publications with qualitative approach.”

In addition, the screening of results at title and abstract level is a common method in (systematic) reviews to remove obviously irrelevant reports, as described for example by the Cochrane Handbook (<https://training.cochrane.org/handbook/current>).

Nevertheless, it would be interesting to shed more light on all identified results, not only those with qualitative approach. We would like to do this in future research, outlined in the introduction:

“Further analyses, e.g. the synthesis of the quantitative studies is object of future publications.”

Even though a systematic literature search was conducted, we are aware that we do not know for sure if all publications have been identified. We already mention this aspect in the strengths and limitations. But we have found the previously known key publications:

“However, it became apparent, that all previously known key publications have been identified through our search strategy [3, 8, 9, 11, 12, 15].”

<p>Please find my minor comments for improvement/ clarification below:</p> <p>Abstract: The abstract does not point out that two levels of analysis have been applied in this study. A) a descriptive overview including studies with populations 18+ as well as reference to BMHSU B) a qualitative synthesis including studies that underwent full-text screening and additional exclusion criteria.</p>	<p>We have elucidated our procedure in the abstract:</p> <p><i>“A recent overview of the application of the BMHSU is lacking, particularly regarding its application in qualitative research. Therefore, we provide a) a descriptive overview of the application of the BMHSU in health services research in general and b) a qualitative synthesis on the (un)suitability of the model in qualitative health services research.”</i></p>
<p>Abstract: The objective stated in the abstract as well as the results listed in the abstract do not fully match with the main objective stated on p. 5 ll.38-45 later in the manuscript.</p>	<p>We have modified the part with the objectives in the introduction:</p> <p><i>“Primarily we aimed at a review of qualitative applications of the BMHSU. We learned from exploratory searches that its application in qualitative research will be difficult to find. That was when we decided to undertake a meticulous screening of titles and abstracts of publications dealing with the BMHSU, to provide a descriptive overview on study characteristics as a first step, to learn about the application of the model in general which would help to put the qualitative findings into perspective. In a second step, we focus on a qualitative synthesis of the application of the BMHSU in qualitative health service research. Here, we synthesize (1) the application of different versions of the BMHSU, (2) the (un)suitability of the BMHSU from the authors’ perspective and (3) which factors of the BMHSU were analyzed in publications with qualitative approach. Further analyses, e.g., the synthesis of the quantitative studies is object of future publications.”</i></p>

Strength and limitations: The authors state that “This scoping review is the first which provides an exploration of the application widely adopted Behavioral Model of Health Services Use”. However, the authors also mention a previous review that has been conducted by Babitsch et al. What is the difference between those? Why has the search by Babitsch et al not simply been updated?

Yes, that is correct, the review by Babitsch et al. (2012) also focuses on the application of BMHSU in general health care. However, the authors excluded some target groups, care settings, and diseases in their review. In addition, only quantitative studies are considered. We already address this in our introduction, and added the name of Babitsch et al. (2012) to make the similarities but also the differences and the reasons for this more visible:

“The application of the BMHSU and its different versions has already been examined in several systematic reviews. These are, for example, reviews focusing on specific diseases [17] or settings [18]. The most recent systematic review from Babitsch et al. [3] has examined the application of the BMHSU in general health care, but excludes specific care settings (e.g., maternal health), specific target groups (e.g., veterans), and studies that focus on specific diseases (e.g., HIV) [3]. These reviews considered quantitative studies only and excluded qualitative studies, although qualitative methods have become an important and integral part of health services research, and are useful for recording detailed descriptions and complex issues in the context of health care utilization and health care services [4, 5].”

We comprehensively extended the search strategy from Babitsch et al. 2012 to include all publications regardless of target groups, care settings, diseases, or study designs, explained in the methods:

“We expanded the search strategy of Babitsch et al. [3] inter alia without limitation on the target groups, care settings, and diseases of interest. We adjusted the search terms to the particular databases and combined thesaurus and keywords pertaining to the BMHSU and its three core factors.”

Introduction: On p5, ll.38-40 the main objective is outlined. The authors state “to provide qualitative synthesis of qualitative studies”. However, we do not learn which outcomes are considered for synthesis (Synthesis of what?)

We added the outcomes, which we considered for synthesis, in the introduction:

“In a second step, we focus on a qualitative synthesis of the application of the BMHSU in qualitative health service research. Here, we synthesize (1) the application of different versions of the BMHSU, (2) the (un)suitability of the BMHSU from the authors’ perspective and (3) which factors of the BMHSU were analyzed in publications with qualitative approach.”

<p>Methods: The subheading “quantitative overview” may be misleading: Do the authors aim at synthesising outcome data quantitatively (meta-analysis) or do they want to provide a descriptive overview on study characteristics (from quantitative/ non-qualitative studies)?</p>	<p>Thanks for this comment. We clarify this in the introduction:</p> <p><i>“Primarily we aimed at a review of qualitative applications of the BMHSU. We learned from exploratory searches that its application in qualitative research will be difficult to find. That was when we decided to undertake a meticulous screening of titles and abstracts of publications dealing with the BMHSU, to provide a descriptive overview on study characteristics as a first step, to learn about the application of the model in general which would help to put the qualitative findings into perspective.”</i></p>
<p>Methods: The search strategy seems to be partly based on the strategy that Babitsch et al. published. If this was the case it should be mentioned in the methods section.</p>	<p>We added a sentence in the methods:</p> <p><i>“We expanded the search strategy of Babitsch et al. [3] inter alia without limitation on the target groups, care settings, and diseases of interest. We adjusted the search terms to the particular databases and combined thesaurus and keywords pertaining to the BMHSU and its three core factors.”</i></p>
<p>Methods: the inclusion/exclusion criteria on pp.6-7 do not match the flow chart. If I understand it correctly, exclusion criteria were added at the start of the full text screening. Please provide rationale.</p>	<p>Many thanks for this hint. We revised the study selection process in the flow chart (Figure 2) as well as in the methods:</p> <p><i>“Based on the data extraction of the descriptive overview, we obtained the full-texts of all publications with a qualitative approach, either specifically or as part of a mixed-method design. Finally, we screened the full-texts of the remaining results and excluded publications with no relation to the BMHSU in the qualitative part (Figure 2).”</i></p>
<p>Methods: As a reader I am curious to learn how the categories applied for descriptively synthesizing the non-qualitative studies (i.e. care setting or target group) were defined. Were they deductively derived?</p>	<p>We have added a sentence in the methods to make it clearer:</p> <p><i>“The following inductively formed characteristics were extracted from the title and abstract of each included study: publication year, first author, region, methodological approach, target group, care setting, and the applied version of the BMHSU.”</i></p>
<p>Is the quality appraisal tool applicable for mixed-methods studies? Were the MM-studies part of the synthesis at all?</p>	<p>We considered all publications with qualitative or mixed-method approach for the qualitative synthesis. For this reason, we applied the tool for quality appraisal for both study designs. The tool is not explicitly designed for mixed-method studies, but as we only considered the qualitative part of these publications, it is suitable for us. We added further explanations for this in the methods:</p> <p><i>“The quality of the qualitative studies and the qualitative part of studies with a mixed-method design was assessed (ML, JT) using the “Critical Appraisal Checklist for Qualitative Research” [20].”</i></p>

Methods: Was the subcode “potential for and limitations of the BMHSU” based on descriptions/ conclusions of the individual studies’ authors or does this subcode mirror the evaluations of the authors of this review?	We have added a sentence to the methods to make it more understandable: <i>“The subcode ‘potential and limitations of the BMHSU’ is based solely on descriptions and conclusions of the authors of the individual publications.”</i>
Results: Please define “General health care” more specifically (p.9 l4-5). Does it refer to care provided by GP’s?	We defined the term “general health care” more specifically in Table 1 and in the results: <i>“General health care, as care provided by general practitioners [...].”</i>
Table 1: Looking into the column “Target group” as an example and adding all numbers together, I do not achieve the full number of 1.879 studies. If some studies were difficult to pool to a category, it would be helpful to add the line “Others” that summarises all studies that do not fall under any of the target groups.	As there are numerous of diverse care settings, target groups and diseases of interest, we think it is not useful to combine them in one category like “others”. Based on your helpful hint, we have revised Table 1 and added a corresponding explanation as a footnote which refers to the new additional file 3, providing and presentation of all identified characteristics. Further we explain this in the results: <i>“As there are numerous diverse care settings, target groups and diseases of interests, Table 1 presents the three most frequent categories. An overview of the broad range of the characteristics can be found in additional file 3.”</i> And in Table 1: <i>“* The sum might be less than 100% as only the three most frequent categories are represented in this table. Additional file 3 shows all characteristics.”</i>
Discussion: The authors discuss the challenge of assigning the codes to the model’s various factors. Please elaborate on the process of how an agreement was achieved.	We have added a description of the assignment of the factors in the discussion: <i>“The detailed description of the current BMHSU by Andersen et al. [16] served us substantially for the assignment of the factors. Any uncertainties were discussed in the review team.”</i>

VERSION 2 – REVIEW

REVIEWER	Bradley, Elizabeth Yale University, Vassar College
REVIEW RETURNED	14-Mar-2021
GENERAL COMMENTS	Nice work!
REVIEWER	Saif-Ur-Rahman, KM Nagoya University Graduate School of Medicine Faculty of Medicine, Public Health and Health Systems
REVIEW RETURNED	11-Mar-2021
GENERAL COMMENTS	I am not satisfied with the response of the authors regarding the methods. There are some major methodological concerns. For example:

	<p>1. Some of the data have been extracted from the abstract only. It's so strange. Authors should extract the data from the full texts.</p> <p>2. The authors did not follow the standard norms of systematic review/scoping review. The screening of title and abstract, screening of the full text, data extraction, and quality assessment should be conducted by two independent review authors.</p> <p>3. It seems that there was no full-text screening.</p> <p>However, the topic is interesting, and the results are convincing. Authors may try to publish this as a traditional review/review article. Methodological rigor should be there as per the standard norms if authors want to present the work as a systematic review or scoping review. It's clear that the authors did not follow the standard procedure and methods of a scoping review.</p>
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REVIEWER	Dieckelmann, Mirjam Goethe-Universität Frankfurt am Main Institut für Allgemeinmedizin
REVIEW RETURNED	23-Mar-2021

GENERAL COMMENTS	All comments have been adequately addressed.
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VERSION 2 – AUTHOR RESPONSE

Reviewer comments	Answer to the reviewer comments
Reviewer 1	
Nice work!	Thank you!
Reviewer 2	
<p>I am not satisfied with the response of the authors regarding the methods. There are some major methodological concerns. For example:</p> <p>1. Some of the data have been extracted from the abstract only. It's so strange. Authors should extract the data from the full texts.</p>	<p>The article pursues two aims:</p> <ul style="list-style-type: none"> a) a descriptive overview of the application of the BMHSU in health services research in general <ul style="list-style-type: none"> – at title/abstract level b) a qualitative in depth analysis and comprehensive synthesis on the (un)suitability of the model in qualitative health services research <ul style="list-style-type: none"> – at full-text level <p>The descriptive overview (a) aims to put the qualitative studies (b) into perspective and to illustrate the wide range of settings, target groups, diseases applications where the BMHSU is applied in health services research in general. That is why we decided to base those analysis on data extracted from title and abstract only.</p> <p>The manuscript's focus lies on the qualitative synthesis (b). Here, all steps, from study screening, data extraction to quality assessment and analysis of the data were carried out on a full-text level.</p>

Reviewer comments	Answer to the reviewer comments
<p>2. The authors did not follow the standard norms of systematic review/scoping review. The screening of title and abstract, screening of the full text, data extraction, and quality assessment should be conducted by two independent review authors.</p>	<p>Thank you for your comment.</p> <p>The screening of title and abstracts and the screening on full-text level for publications with qualitative or mixed-method design was performed independently by two researchers. For the data extraction we established clear criteria jointly, extracted a 25% random sample of the included publications independently by two researchers (ML, JT), and discussed any uncertainties (calibration) for both the descriptive overview (a) and the qualitative synthesis (b).</p> <p>In response to your feedback, we have supplemented the data extraction and quality assessment for all 77 full-texts with qualitative or mixed-method design independently by two researchers (ML, JT). This did not result in any changes for our results.</p> <p>We have modified the manuscript accordingly.</p> <p><i>“For the qualitative synthesis, the full-texts were independently screened for eligibility and the data were independently extracted by two researchers (ML, JT).”</i></p> <p><i>“The quality of the qualitative studies and the qualitative part of studies with a mixed-method design was assessed independently by two researchers (ML, JT) using the “Critical Appraisal Checklist for Qualitative Research” [20]. Authors resolved disagreement by discussion.”</i></p>
<p>3. It seems that there was no full-text screening.</p>	<p>There is probably a misunderstanding. For the qualitative synthesis, two researchers (ML, JT) screened independently all studies with qualitative and mixed method designs on full-text level.</p> <p>This is described in the methods section of the manuscript:</p> <p><i>„For the qualitative synthesis, the full-texts were independently screened for eligibility and the data were independently extracted by two researchers (ML, JT).”</i></p> <p><i>“Based on the data extraction of the descriptive overview, we obtained the full-texts of all publications with a qualitative approach, either specifically or as part of a mixed-method design. Finally, we screened the full-texts of the remaining results and excluded publications with no relation to the BMHSU in the qualitative part (Figure 2).”</i></p> <p>But you are right, we have misrepresented this a bit in the flow diagram. Based on your helpful comment this now adjusted in Figure 2.</p>

Reviewer comments	Answer to the reviewer comments
<p>However, the topic is interesting, and the results are convincing. Authors may try to publish this as a traditional review/review article. Methodological rigor should be there as per the standard norms if authors want to present the work as a systematic review or scoping review. It's clear that the authors did not follow the standard procedure and methods of a scoping review.</p>	<p>Thank you for your comment.</p> <p>We transparently outlined how we conducted our review, both in the text and in the attached scoping review checklist (additional file 1), and discussed limitations, such as the data extraction of the descriptive overview at title and abstract level.</p> <p>Based on the changes made through your helpful feedback, we are now following the standard norm of a scoping review.</p>
Reviewer 3	
All comments have been adequately addressed.	Thank you!

VERSION 3 – REVIEW

REVIEWER	Saif-Ur-Rahman, KM Nagoya University Graduate School of Medicine Faculty of Medicine, Public Health and Health Systems
REVIEW RETURNED	06-Apr-2021
GENERAL COMMENTS	Thanks to the authors for addressing my comments regarding the methods. I appreciate their effort of data extraction and quality assessment for all 77 full-texts independently by two researchers in response to my comments. The current version of the manuscript has provided methodological clarity and reflected the implementation of standard methodological norms.