

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Twenty-five years after the introduction of Evidence-based Medicine: knowledge, use, attitudes, and barriers among physiotherapists in Italy. A cross-sectional study.
<b>AUTHORS</b>	Castellini, Greta; Corbetta, Davide; Cecchetto, Simone; Gianola, Silvia

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Emiel van Trijffel SOMT University of Physiotherapy, Amersfoort, The Netherlands Vrije Universiteit Brussels, Brussels, Belgium
<b>REVIEW RETURNED</b>	23-Feb-2020

<b>GENERAL COMMENTS</b>	<p>General comments</p> <p>Thank you for the opportunity to review this well written manuscript which reports on the findings of a survey among physiotherapists in Italy investigating, predominantly, aspects of knowledge, attitudes, and barriers related to Evidence-Based Practice. The authors conclude that physiotherapists overrated their knowledge of EBP and they identified a gap between therapists' actual and perceived knowledge. The results of this study are of importance to the practice and education in physiotherapy in Italy and could inform policy-making by the Italian Association of Physiotherapists (AIFI). A strong point of the study is that the researchers were able to generate a relatively large response rate of 1289/2000 among invitees.</p> <p>However, some concerns may affect the validity and generalisability of the study's findings as well as the comprehensibility of the manuscript itself.</p> <p>Starting with the last, I found it difficult to discover consistency between terms used in the title, the abstract, the main body of the text, the primary outcome measures, and the actual content of the survey questionnaire. For instance, the title mentions only 'actual knowledge' while the researchers have attempted to explore both perceived and actual knowledge. In addition, 'actual knowledge' was tested by a very limited number (items 14-16) of questions instead of a formal, validated instrument such as the Fresno Test or the Berlin Questionnaire. Further, the title, abstract etc. repeatedly mention both 'use' and 'application' but their distinction is unclear and both aspects were only covered by two questions (items 21,22) in the survey. On the other hand, attitudes were covered more broadly but this term was not included in the title etc. Suggest rewriting terms used in the title, abstract, primary outcome measures, and the text consistent with what the content of the survey instrument actually</p>
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reflects (or was intended to reflect).  
The validity (and generalisability) of the study's results depends in part on the question as to whether the respondents could systematically differ from non-respondents (n=711). It is possible that respondents were those with more knowledge and positive attitudes towards EBP. The results could then still give an overestimated impression of knowledge, attitudes etc. of members of AIFI. The authors describe this source of bias in the Article summary but not as a limitation in the Discussion section. Suggest elaborating on this study limitation in the Discussion and, additionally, expand on the consequences of the self-reported nature of the data (e.g. social desirability of answers potentially explaining the gap between perceived and actual knowledge).  
Overall, this study confirms findings from several other studies among physiotherapists and other healthcare professionals. Reproducing these findings is relevant to the Italian population of therapists but may be of less interest to a broader international audience. However, I find the educational implications of the findings newsworthy; apparently, improving knowledge, skills, and attitudes towards EBP may be most strongly determined by upgrading to Master's degrees while short continued educational courses may be of limited effectiveness. Suggest further focusing on these results and their consequences for educational and, inevitably, national policy decisions. In my opinion, this manuscript would then be better placed in a physiotherapy journal that (also) has an educational scope.

#### Additional comments

##### TITLE

Please see earlier remark. Suggest rephrasing as, for instance: ".....: knowledge, use, attitudes, and barriers among physiotherapists in Italy".

##### ABSTRACT

Objectives: Please see earlier remark with respect to terms used - suggest rephrasing.

Setting and participants: Suggest removing 'national'. Please see earlier remark with respect to terms used- suggest rephrasing.

Primary outcome measures: Please see earlier remark with respect to terms used - suggest rephrasing. Regarding 2), 'ability to critically appraise the literature' was only reflected in one item (13) in the survey instrument – suggest rephrasing or deleting.

##### ARTICLE SUMMARY

The authors describe two potential sources of bias from their study; self-reported data and potential non-response. Both these sources require more thorough elaboration in the Discussion section of the manuscript.

##### INTRODUCTION

In general, concisely written and well substantiated. The second paragraph may be redundant for the purpose of this study.

Concerning the research questions, please see earlier remark with respect to terms used - suggest rephrasing. L. 163: Suggest replacing 'correlation' with 'association'.

##### METHODS

In general, clearly written.

Study sample

L. 184-185: Was the time needed to complete the questionnaire

actually measured as taking 10 minutes? Or was it estimated a priori?  
Sample size calculation  
I am not sure as to whether sample size calculations based on SurveyMonkey's calculator are scientifically valid. Suggest redoing calculations as directly related to one of the research questions, preferably the primary one.  
Survey questionnaire  
L. 221: Actual knowledge of EBP was measured only by a limited number of items in the survey instrument, not by employing a formal, validated instrument such as the Fresno Test or the Berlin Questionnaire. Please discuss as a potential limitation and threat to the study's validity in the Discussion section.

## RESULTS

### Respondents' characteristics

In this section, please provide some data concerning missing values per item of the survey questionnaire.

L. 264: 'physiotherapists' (Br-Eng) and 'physical therapists' (Am-Eng) are sometimes used interchangeably in the manuscript. Please choose one consistently.

## DISCUSSION

L. 364: Please write as '...David Sackett.'

L. 392-394: This statement is in accordance with the study's finding that Italian physiotherapists <29 yrs show higher odds of better attitudes towards EBP (Table 3). Do the authors feel that with new generations of physiotherapists in Italy the prognosis of better adoption of EBP will be positive?

### Strengths and limitations

L. 421: A somewhat dated Cochrane review is available providing evidence for increasing response to digital questionnaires (Edwards PJ, Roberts I, Clarke MJ, DiGuseppi C, Wentz R, Kwan I, Cooper R, Felix LM, Pratap S. Methods to increase response to postal and electronic questionnaires. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: MR000008. DOI: 10.1002/14651858.MR000008.pub4). Suggest comparing the study's methods with these recommended methods and discussing potential for lower or selective response.

### Implications for research, practice and education

Suggest enhancing focus on the educational consequences of the study's findings (please see earlier remark).

## TABLE 1

Suggest adding absolute frequencies. Suggest adding descriptions of respondents' level of education.

## TABLE 2

Suggest replacing 'comprehension' with 'perceived knowledge' in the table's title.

## TABLE 3

Suggest replacing 'actual knowledge of EBP' with 'attitudes towards EBP' in the table's title.

<b>REVIEWER</b>	Emma Stokes Qatar University, Qatar
<b>REVIEW RETURNED</b>	02-Mar-2020

<b>GENERAL COMMENTS</b>	<p>Title: should reflect that the research is in Italian PTs</p> <p><b>Introduction</b> Given that this is a paper researching physiotherapy and the practice of physiotherapists, I wonder if the introduction to the concept of using evidence to inform decision making might focus on the profession and evidence based practice and shared decision making in physiotherapy rather than evidence based medicine and medical practice.</p> <p>The authors state that there 'Issues in EBP have attracted growing debate and discussion' and evidence this by citing 3 sources that appear to document the increase in the number of research studies etc. It would be valuable for a reader to be directed to some publications that actually consider or report on the nature of EBP in physiotherapy practice rather than the quantification of publications which may inform practice but as can be seen in research on EBP in physiotherapists does not always translate into EBP.</p> <p>These are just a few suggestions for an otherwise well written introduction that sets the scene for study. It might be interesting for readers to know about physiotherapy in Italy and the healthcare settings where physiotherapists practice as well as perhaps a brief description of how education has developed over the past 2 decades.</p> <p><b>Methods</b></p> <ul style="list-style-type: none"> <li>• Could the authors provide the readers with some information about AIFI for example, it reports a membership of circa 12,000 from a total of 65,000 physiotherapists in Italy. <a href="https://www.wcpt.org/node/24510/cds">https://www.wcpt.org/node/24510/cds</a></li> <li>• Was ethical approval sought and provided?</li> <li>• How is 'socially active' defined?</li> <li>• Where was the survey 'posted online'?</li> <li>• It would be interesting to know why an existing survey was not utilized. How did the surveys of Jette et al. (2003) Silva et al. (2015) and Herbert et al. [note no date in reference list citation] inform its development?</li> <li>• The questions 14 and 16 appear to be the ones that were utilized to ascertain actual knowledge and have been reported previously which does not support the authors earlier assertion in the Introduction that 'none to date have explored the gap between their perceived and actual knowledge'</li> </ul> <p><b>Results – overall clearly described. I found some sentences hard to follow or unclear for example</b></p> <ul style="list-style-type: none"> <li>• From questions regarding how physical therapist perceived EBP, if useful, comprehensive of patient values and effective, the respondents showed an overall positive attitude towards EBP and agreed that its application is both useful and necessary (90%). This could be reworded to simply state 90% of respondents 'agreed' with [insert relevant statements from survey].</li> <li>• While 90% knew that scientific literature is part of the EBP, 56% did not agree that patients' preference and 39% that clinical expertise are part of the EBP process (Figure 2). – it is probably</li> </ul>
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clearer to describe these results are opinion and not knowledge because that is how the question was framed as described in figure 2. Or perhaps clarify exactly how this was asked in the Italian version of the survey.

- We found a statistically significant association between questions related to how physical therapist perceived EBP comprehensive of patient values and clinical expertise, and sample demographics: age, sex, working time, level of education (variables entered into the model) – does this mean that there was a statistical association between whether a physiotherapist's opinion was that EBP should include patients' values and clinical expertise and a number of sample demographics? I think it does but it could be clearer perhaps.

- Considering the question related to patients' values as part of EBP model, young physiotherapists seems to be more conscious about patient's value in EBP model than adults > 49 years (OR 1.57, 95% CI 1.02 - 2.42) as well, being male (0.50, 95% CI 0.38 – 0.67). Clarify 'young' and I am not clear what is being reported about gender in this statement.

- Who works in patient care (OR 0.99, 95% CI 0.98 – 0.99) seems to be less likely able to understand the EBP model more than who does not work in this area. – this is not clear. Moreover, the sentences following this are also a little unclear but I assume the authors wish to state that 'physiotherapists who work in clinical practice are less likely to report understanding the model of EBP compared to ....'

- There are quite a few sentences where the sentence construction could be clearer in this section of the results.

- The authors might provide a description of what is meant by 1st and 2nd level Master's degrees for reader unfamiliar with the terms.

#### Discussion

It would be helpful to being the discussion with a description of the extent to which the sample of 370 is representative of the 65,000 physiotherapists in Italy or indeed the membership of AIFI. This would allow the reader to get an idea of the extent to which the results apply to the practice of physiotherapists in Italy.

When comparing to other countries, it would be useful to understand why the comparisons are relevant – is the delivery of physiotherapy similar, the development of the profession and its education, the reimbursement models [if relevant]?

Is it reasonable to state that EBP in entry to practice programs is relatively recent, then cite two studies – one of which focused on EBP in IPE and one of which while published in 2018 is a report of 8 years of EBP in the curriculum? It has been in the curriculum in Italy for 15 years according to the authors which would not really be 'relatively recent'.

#### Minor changes

Try to be consistent with the use of professional title, it varies throughout the paper – physiotherapist and physical therapist

## VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Emiel van Trijffel

Institution and Country: SOMT University of Physiotherapy, Amersfoort, The Netherlands; Vrije Universiteit Brussels, Brussels, Belgium

Please state any competing interests or state 'None declared': None declared

### General comments

Thank you for the opportunity to review this well written manuscript which reports on the findings of a survey among physiotherapists in Italy investigating, predominantly, aspects of knowledge, attitudes, and barriers related to Evidence-Based Practice. The authors conclude that physiotherapists overrated their knowledge of EBP and they identified a gap between therapists' actual and perceived knowledge. The results of this study are of importance to the practice and education in physiotherapy in Italy and could inform policy-making by the Italian Association of Physiotherapists (AIFI). A strong point of the study is that the researchers were able to generate a relatively large response rate of 1289/2000 among invitees.

However, some concerns may affect the validity and generalisability of the study's findings as well as the comprehensibility of the manuscript itself.

Starting with the last, I found it difficult to discover consistency between terms used in the title, the abstract, the main body of the text, the primary outcome measures, and the actual content of the survey questionnaire. For instance, the title mentions only 'actual knowledge' while the researchers have attempted to explore both perceived and actual knowledge. In addition, 'actual knowledge' was tested by a very limited number (items 14-16) of questions instead of a formal, validated instrument such as the Fresno Test or the Berlin Questionnaire.

### Author's answer

We thank the reviewer for underlying this point. We took advantages to better specify our purpose that aimed to investigate a wider content (perceived and actual knowledge, use, attitudes, barriers) rather than just the actual knowledge. Firstly, the manuscript title is now amended accordingly. Secondly, about the contents tested, we are aware that the 'actual knowledge we tested can be limited but our aim was broader and included perceived and actual knowledge, use, attitudes, barriers. To accomplish our aim, we looked for a quick and easily implementable via web instrument that allowed us to rapidly and preliminary answer simultaneously to all these goals (including the actual and the perceived knowledge).

Looking at our findings, we can now hypothesise a further study to investigate more deeply the actual knowledge using the tools the reviewer mentioned above. Thank you for the suggestion. We amended the limitation section adding a sentence on this issue. Page 20, Lines 455 – 462.

Further, the title, abstract etc. repeatedly mention both 'use' and 'application' but their distinction is unclear and both aspects were only covered by two questions (items 21,22) in the survey. On the other hand, attitudes were covered more broadly but this term was not included in the title etc.

Suggest rewriting terms used in the title, abstract, primary outcome measures, and the text consistent with what the content of the survey instrument actually reflects (or was intended to reflect).

Author's answer

Thank you. We revised the whole manuscript reporting consistently the terms.

The validity (and generalisability) of the study's results depends in part on the question as to whether the respondents could systematically differ from non-respondents (n=711). It is possible that respondents were those with more knowledge and positive attitudes towards EBP. The results could then still give an overestimated impression of knowledge, attitudes etc. of members of AIFI. The authors describe this source of bias in the Article summary but not as a limitation in the Discussion section. Suggest elaborating on this study limitation in the Discussion and, additionally, expand on the consequences of the self-reported nature of the data (e.g. social desirability of answers potentially explaining the gap between perceived and actual knowledge).

Author's answer

We elaborated the limitation section as suggested. Page 20, lines 466 – 470.

Overall, this study confirms findings from several other studies among physiotherapists and other healthcare professionals. Reproducing these findings is relevant to the Italian population of therapists but may be of less interest to a broader international audience. However, I find the educational implications of the findings newsworthy; apparently, improving knowledge, skills, and attitudes towards EBP may be most strongly determined by upgrading to Master's degrees while short continued educational courses may be of limited effectiveness. Suggest further focusing on these results and their consequences for educational and, inevitably, national policy decisions. In my opinion, this manuscript would then be better placed in a physiotherapy journal that (also) has an educational scope.

Author's answer

The reviewer pointed out a crucial point: education is important for an adequate and efficient Evidence-Based Practice. We strongly believe that the educational implications of our findings have to be addressed to a broader international audience such as the community of Evidence-Based Practice, not only for the population of therapists. Thus, we stressed this concept in the discussion section as suggested. Page 18-20, lines 423 – 430. Page 23, lines 524 - 526.

Additional comments

TITLE

Please see earlier remark. Suggest rephrasing as, for instance: ".....: knowledge, use, attitudes, and barriers among physiotherapists in Italy".

Author's answer

Thank you for the suggestion. Amended.

## ABSTRACT

Objectives: Please see earlier remark with respect to terms used - suggest rephrasing.

Author's answer

We have consistently amended the terms throughout the whole manuscript.

Setting and participants: Suggest removing 'national'. Please see earlier remark with respect to terms used- suggest rephrasing.

Author's answer

The term "National" was removed.

Primary outcome measures: Please see earlier remark with respect to terms used - suggest rephrasing. Regarding 2), 'ability to critically appraise the literature' was only reflected in one item (13) in the survey instrument – suggest rephrasing or deleting.

Author's answer

We rephrased the sentence. Page 3, Line 80.

## ARTICLE SUMMARY

The authors describe two potential sources of bias from their study; self-reported data and potential non-response. Both these sources require more thorough elaboration in the Discussion section of the manuscript.

Author's answer

Thank you for pointing out this issue. We have now deepen these aspects in the discussion section. Page 20, lines 455 – 470.

## INTRODUCTION

In general, concisely written and well substantiated. The second paragraph may be redundant for the purpose of this study. Concerning the research questions, please see earlier remark with respect to terms used - suggest rephrasing. L. 163: Suggest replacing 'correlation' with 'association'.

Author's answer

We consistently amended the terms used and replaced that suggested.

## METHODS

In general, clearly written.

Study sample



L. 184-185: Was the time needed to complete the questionnaire actually measured as taking 10 minutes? Or was it estimated a priori?

Author's answer

The time of 10 minutes was a median based on a priori piloted questionnaire with six expert physiotherapists in EBP. We reported the sentence in the methods. Page 8, lines 192-194.

Sample size calculation

I am not sure as to whether sample size calculations based on SurveyMonkey's calculator are scientifically valid. Suggest redoing calculations as directly related to one of the research questions, preferably the primary one.

Author's answer

The SurveyMonkey sample size calculator offers a user-friendly interface to calculate sample size for simple random and systematic random samples. Sample size formula is based on Cochran's (1977) sample size formula so that information gathered from the survey can generalize findings from a drawn sample back to a population, within the limits of random error. Indeed, Bartlett et al. in *Organizational Research: Determining Appropriate Sample Size in Survey Research* (James E. Bartlett, II Joe W. Kotrlik, Chadwick C. Higgins, *Information Technology, Learning, and Performance Journal*, Vol. 19, No. 1, Spring 2001) showed a table for determining minimum returned sample size for a given population size for continuous and categorical data that SurveyMonkey replicates in an automated way.

We added Bartlett et al. reference #23.

Survey questionnaire

L. 221: Actual knowledge of EBP was measured only by a limited number of items in the survey instrument, not by employing a formal, validated instrument such as the Fresno Test or the Berlin Questionnaire. Please discuss as a potential limitation and threat to the study's validity in the Discussion section.

Author's answer

Please see the previous answer for a comprehensive response in the general comments. We are aware that the 'actual knowledge' items can be limited but our aim was broader (perceived and actual knowledge, use, attitudes, barriers) and we looked for a quick and easily implementable via web instrument that allowed us to rapidly and preliminary answer to all these goals coincidentally. In fact now, looking at our findings, we can hypothesise a further study with which investigates more deeply the actual knowledge using the tools the reviewer mentioned above. We added this issue as limitation in the Discussion. Page 20, lines 455 – 470.

## RESULTS

Respondents' characteristics

In this section, please provide some data concerning missing values per item of the survey questionnaire.

Author's answer

We showed the flow of missing values/respondents at each step in figure 1. We reported numbers also in the text. Page 12, lines 284 – 286.

L. 264: 'physiotherapists' (Br-Eng) and 'physical therapists' (Am-Eng) are sometimes used interchangeably in the manuscript. Please choose one consistently.

Author's answer

We consistently used "physiotherapists" throughout the text.

## DISCUSSION

L. 364: Please write as '...David Sackett.'

Author's answer

Done

L. 392-394: This statement is in accordance with the study's finding that Italian physiotherapists <29 yrs show higher odds of better attitudes towards EBP (Table 3). Do the authors feel that with new generations of physiotherapists in Italy the prognosis of better adoption of EBP will be positive?

Author's answer

We are absolutely positive on thinking that future generation might adopt better the EBP. We have taken advantage of this observation and add a statement in the discussion. Page 18, lines 423 – 425.

## Strengths and limitations

L. 421: A somewhat dated Cochrane review is available providing evidence for increasing response to digital questionnaires (Edwards PJ, Roberts I, Clarke MJ, Di Guiseppi C, Wentz R, Kwan I, Cooper R, Felix LM, Pratap S. Methods to increase response to postal and electronic questionnaires. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: MR000008. DOI: 10.1002/14651858.MR000008.pub4). Suggest comparing the study's methods with these recommended methods and discussing potential for lower or selective response.

Author's answer

Thank you for the suggestion that will greatly improve the quality of our paper: we have added the following sentences in the discussion section. "Potential non response bias might have affected results and interpretation of this cross-sectional study. Factors such as the length of the questionnaire, the term 'survey' in the body of the mail, and the non-inclusion of incentives might have influenced the rate response: a Cochrane review showed as odds of response are reduced in these situations". Page 20, lines 466 – 470.

Implications for research, practice and education

Suggest enhancing focus on the educational consequences of the study' findings (please see earlier remark).

Author's answer

Thank you for stressing this point. We have added this in the discussion section. Pages 18 – 19, lines 422 – 430.

TABLE 1

Suggest adding absolute frequencies. Suggest adding descriptions of respondents' level of education.

Author's answer

Since the number of total respondents per each characteristics can be different, we prefer to maintain only the relative frequencies which are better informative and comparable to each other – the total number per each category is reported in the first column from the left under the subheading defining the characteristic. The descriptions of respondents' level of education can be multiple represented (most responders have signed more than one level of education), so we think it might not so informative to report this.

Suggest replacing 'comprehension' with 'perceived knowledge' in the table's title.

Author's answer

Done

TABLE 3

Suggest replacing 'actual knowledge of EBP' with 'attitudes towards EBP' in the table's title.

Author's answer

Done

Reviewer: 2

Reviewer Name: Emma Stokes

Institution and Country: Qatar University, Qatar

Please state any competing interests or state 'None declared': None declared

Title: should reflect that the research is in Italian PTs

Introduction

Given that this is a paper researching physiotherapy and the practice of physiotherapists, I wonder if the introduction to the concept of using evidence to inform decision making might focus on the

profession and evidence based practice and shared decision making in physiotherapy rather than evidence based medicine and medical practice. The authors state that there 'Issues in EBP have attracted growing debate and discussion' and evidence this by citing 3 sources that appear to document the increase in the number of research studies etc. It would be valuable for a reader to be directed to some publications that actually consider or report on the nature of EBP in physiotherapy practice rather than the quantification of publications which may inform practice but as can be seen in research on EBP in physiotherapists does not always translate into EBP.

Author's answer

Following your suggestions, we added evidence (reference #4 and #5) regarding EBP in physiotherapy.

4. Condon C, McGrane N, Mockler D, Stokes E. Ability of physiotherapists to undertake evidence-based practice steps: a scoping review. *Physiotherapy*. 2016;102(1):10-19.

5. Scurlock-Evans L, Upton P, Upton D. Evidence-based practice in physiotherapy: a systematic review of barriers, enablers and interventions. *Physiotherapy*. 2014;100(3):208-219.

These are just a few suggestions for an otherwise well written introduction that sets the scene for study. It might be interesting for readers to know about physiotherapy in Italy and the healthcare settings where physiotherapists practice as well as perhaps a brief description of how education has developed over the past 2 decades.

Author's answer

We added this part: "In addition, no similar research exists in the Italian context which is relatively recent: university courses for physiotherapy were established in 2006 with three-year full-time degree. The course is an intensive mix of class time and mandatory internship right from the first year. Consequently, students can apply to the "Laurea Magistrale" (equivalent to the European Master of Science) and to a Doctoral Program." Page 6-7, lines 161-165.

Methods

Could the authors provide the readers with some information about AIFI for example, it reports a membership of circa 12,000 from a total of 65,000 physiotherapists in Italy.  
<https://www.wcpt.org/node/24510/cds>

Author's answer

Thank you for letting us specify better the AIFI numbers. We added this information at page 8, lines 199-205.

Was ethical approval sought and provided?

Author's answer

We added the following sentence in the manuscript: "We conducted our study in compliance with the principles outlined in the Declaration of Helsinki. The survey was filled out anonymously, and responses could not be traced back to the respondents. Written, informed consent was assumed if the respondents completed and submitted the survey since a statement before starting the

questionnaire informed the respondents of the purpose of the study. Ethics approval was not necessary.” Page 24, lines 535 – 540.

How is ‘socially active’ defined?

Author’s answer

We defined socially active the members who, according to the secretariat of the association, received e-mails, constantly exchange and share links on social website and app and are interactive with the AIFI channels. We added this sentence in the methods section. Page 8, Lines 200 – 205.

Where was the survey ‘posted online’?

Author’s answer

The survey was sent by e-mail directly to 2000 members and not posted on the AIFI channels (such as Facebook, Twitter). We preferred sending e-mails in order to be sure about the denominator of the sample investigated and so to calculate the exact response rate.

It would be interesting to know why an existing survey was not utilized. How did the surveys of Jette et al. (2003) Silva et al. (2015) and Herbert et al. [note no date in reference list citation] inform its development?

Author’s answer

Since our scope was to investigate several contents as perceived and real knowledge, use attitude and barriers, we decided to adapt the existing instruments in order to create an ad hoc survey that can reflect all the above contents. For example, we extracted the most representative items from Jette, Silva and Herbert et al. However, we included questions as the interpretation of a meta-analysis that can easily reflect how much really know and comprehend the reader.

The questions 14 and 16 appear to be the ones that were utilized to ascertain actual knowledge and have been reported previously which does not support the authors earlier assertion in the Introduction that ‘none to date have explored the gap between their perceived and actual knowledge’

Author’s answer

We thanks the reviewer for allowing us to better explain this point. The question 14 was adopted and adapted from Jette 2003 which does not aim to investigate the gap between perceived and real knowledge. Then it was tested in 2003, few years after the EBP utilization; whereas the question 16 was an ex novo question (typically used to verify the comprehension of lessons in the education master degree program in Italy). Thus, according to this scenario, we believe that the sentence we already included in the background reflects the situation.

Results – overall clearly described. I found some sentences hard to follow or unclear for example

From questions regarding how physical therapist perceived EBP, if useful, comprehensive of patient values and effective, the respondents showed an overall positive attitude towards EBP and agreed that its application is both useful and necessary (90%). This could be reworded to simply state 90% of respondents 'agreed' with [insert relevant statements from survey].

Author's answer

We rephrased the sentence as suggested. Page 14, lines 326 – 329.

While 90% knew that scientific literature is part of the EBP, 56% did not agree that patients' preference and 39% that clinical expertise are part of the EBP process (Figure 2). – it is probably clearer to describe these results are opinion and not knowledge because that is how the question was framed as described in figure 2. Or perhaps clarify exactly how this was asked in the Italian version of the survey.

Author's answer

These questions were framed with the aim to understand if physiotherapist know the principles of the EBP process and so if they know about the three fundamental principles.

We found a statistically significant association between questions related to how physical therapist perceived EBP comprehensive of patient values and clinical expertise, and sample demographics: age, sex, working time, level of education (variables entered into the model) – does this mean that there was a statistical association between whether a physiotherapist's opinion was that EBP should include patients' values and clinical expertise and a number of sample demographics? I think it does but it could be clearer perhaps.

Author's answer

We found that these variables increased the odds to be aware and know better the principles of EBP therefore linked to the knowledge. We rephrased the sentences to make the concept clearer. From page 15, line 344.

Considering the question related to patients' values as part of EBP model, young physiotherapists seems to be more conscious about patient's value in EBP model than adults > 49 years (OR 1.57, 95% CI 1.02 - 2.42) as well, being male (0.50, 95% CI 0.38 – 0.67). Clarify 'young' and I am not clear what is being reported about

gender in this statement.

Author's answer

We added the reference of the age <29 years. From page 15, line 344.

Who works in patient care (OR 0.99, 95% CI 0.98 – 0.99) seems to be less likely able to understand the EBP model more than who does not work in this area. – this is not clear. Moreover, the sentences following this are also a little unclear but I assume the authors wish to state that 'physiotherapists who work in clinical practice are less likely to report understanding the model of EBP compared to ....'

Author's answer

We rephrased the sentence as suggested. From page 15, line 344.

There are quite a few sentences where the sentence construction could be clearer in this section of the results.

The authors might provide a description of what is meant by 1st and 2nd level Master's degrees for reader unfamiliar with the terms.

Author's answer

Thank you the review for underling this point that makes differences across countries. We can add a legend in the table 3 providing a description of what is meant by 1st and 2nd level Master's degrees for a better interpretation.

Discussion

It would be helpful to being the discussion with a description of the extent to which the sample of 370 is representative of the 65,000 physiotherapists in Italy or indeed the membership of AIFI. This would allow the reader to get an idea of the extent to which the results apply to the practice of physiotherapists in Italy.

Author's answer

We included a paragraph at the beginning of the discussion section. Page 17, lines 383 – 387.

When comparing to other countries, it would be useful to understand why the comparisons are relevant – is the delivery of physiotherapy similar, the development of the profession and its education, the reimbursement models [if relevant]?

Author's answer

We expanded the issues suggested in the discussion section. Page 17, lines 398 – 401.

Is it reasonable to state that EBP in entry to practice programs is relatively recent, then cite two studies – one of which focused on EBP in IPE and one of which while published in 2018 is a report of 8 years of EBP in the curriculum? It has been in the curriculum in Italy for 15 years according to the authors which would not really be 'relatively recent'.

Author's answer

We revised the text accordingly to the references and the reviewer comment. The text now read as:

“In many countries, studies have highlighted that physiotherapists require more training in EBP in order to acquire confidence in using it; however, the teaching of EBP-oriented skills in undergraduate physiotherapy programmes belong to the past two decades. Since then, EBP has been increasingly integrated into the core curriculum of undergraduate and postgraduate health care programs and continuing professional education. Italy is not an exception, the teaching of EBP has been included as an integral part of the core curriculum of physiotherapy since 2005” Page 18, lines 415-425.

Minor changes

Try to be consistent with the use of professional title, it varies throughout the paper – physiotherapist and physical therapist.

Author's answer

Thank you for stressing this point. We have amended throughout all manuscript the terms and consistently used 'physiotherapist'.

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Emiel van Trijffel SOMT University of Physiotherapy, The Netherlands Vrije Universiteit Brussels, Belgium
<b>REVIEW RETURNED</b>	12-Apr-2020

<b>GENERAL COMMENTS</b>	<p>The authors have succeeded in addressing all raised issues very well. The manuscript is clearly written and the conclusions are stated carefully enough. Some very minor comments:</p> <ul style="list-style-type: none"><li>- The manuscript may require some final editing on language and grammar (e.g. Br-English, past tense, typos).</li><li>- Suggest adding ".....in Italy" to the Title and Objectives (Abstract) and also using 'physiotherapists in Italy' instead of 'Italian physiotherapists'.</li><li>- Discussion, Main findings, last sentence of the first paragraph: Implying that a gap between perceived and actual knowledge of EBP may result in inadequate practice and risk of chronic disability may be some steps too far, in particular, as this is supported by statements in the Introduction section only of a systematic review (Bérubé et al. 2018) which in themselves were based on findings from surveys on guideline adherence which is a different concept to EBP implementation. Suggest connecting here to the concepts of overdiagnosis and overtreatment as proposed by Maher et al. (Int J Rheum Dis 2019;22:1957-60) instead.</li></ul>
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## VERSION 2 – AUTHOR RESPONSE

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