Effects from acupuncture in treating anxiety: integrative review

Efeitos da acupuntura no tratamento da ansiedade: revisão integrativa

Efectos de la acupuntura en el tratamiento de la ansiedad: revisión integradora

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ABSTRACT

Objective: to evaluate the scientific evidence that is available in the literature on the effects of acupuncture for treating anxiety and on the quality of such studies. **Method:** the study is an integrative review of CINAHL, LILACS, PUBMED-PICO, SciELO, and The Cochrane Library between 2001 and 2014. Keywords *anxiety*, *acupuncture therapy*, *acupuncture*, and *anxiety disorders* were combined among themselves to ensure a wide search of primary studies. **Results:** among 514 articles, 67 were selected to be fully read and 19 were included. Among these, 11 were found to have strong evidence levels. Among the six articles about randomized clinical studies, five were found to be of reasonable quality. Two studies used acupuncturist nurses to perform their interventions. Its results showed positive and statistically significant effects from using acupuncture for treating subjects with anxiety. **Conclusion:** acupuncture seems to be a promising treatment for anxiety; however, there is a need for improving the methodological quality of the research on this field.

Descriptors: Acupuncture; Anxiety; Acupuncture Therapy; Evidence-Based Medicine; Comprehensive Health Care.

RESUMO

Objetivo: avaliar as evidências científicas disponíveis na literatura sobre os efeitos da acupuntura no tratamento da ansiedade e a qualidade desses estudos. **Método:** revisão integrativa, realizada nas bases/bancos de dados CINAHL, LILACS, PUBMED-PICO, SciELO, *The Cochrane Library*, no período entre 2001 a 2014. Os descritores *anxiety*, *acupuncture therapy*, *acupuncture* e *anxiety disorders* foram combinados entre si para garantir a ampla busca de estudos primários. **Resultados:** dos 514 artigos, 67 foram selecionados para leitura na íntegra e 19 incluídos. Desses, 11 apresentaram forte nível de evidência. Dos seis artigos de estudos clínicos randomizados, cinco apresentaram qualidade classificada como razoável. Dois estudos utilizaram acupunturistas enfermeiros para a aplicação da intervenção. Os resultados mostram efeitos positivos e estatisticamente significativos do uso da acupuntura para tratamento de indivíduos com ansiedade. **Conclusão:** a acupuntura parece ser um tratamento promissor para a ansiedade, no entanto, há necessidade de melhorar a qualidade metodológica das pesquisas nessa temática.

Descritores: Acupuntura; Ansiedade; Terapia por Acupuntura; Medicina Baseada em Evidências; Assistência Integral à Saúde.

RESUMEN

Objetivo: evaluar las evidencias científicas disponibles en la literatura sobre los efectos de la acupuntura en el tratamiento de la ansiedad, y la calidad de dichas investigaciones. **Método:** revisión integradora, llevada a cabo en las bases y bancos de datos CINAHL, LILACS, PubMed PICO, SciELO, The Cochrane Library, en el periodo entre el año 2001 hasta el 2014. Se combinaron entre sí mismas las palabras clave "*anxiety*", "*acupuncture therapy*", "*acupuncture*" y "*anxiety disorders*" con el fin de garantizar

la amplia búsqueda de estudios primarios. **Resultados:** de los 514 artículos encontrados, se eligieron 67 para lectura íntegra, y se incluyeron 19. De estos, once presentaron fuerte nivel de evidencia. De seis estudios clínicos randomizados, cinco presentaron calidad clasificada como razonable. En dos estudios fueron empelados acupunturistas enfermeros para aplicar la intervención. Los resultados mostraron efectos positivos y estadísticamente significantes en el empleo de la acupuntura para el tratamiento de sujetos con ansiedad. **Conclusión:** la acupuntura puede ser un tratamiento prometedor para la ansiedad, sin embargo se debe mejorar la calidad metodológica de las investigaciones en este tema.

Descriptores: Acupuntura; Ansiedad; Terapia con Acupuntura; Medicina Basada en Evidencias; Asistencia Integral a la Salud.

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INTRODUCTION

Anxiety disorders are very frequent nowadays, and they are characterized by unpleasant subjective states of restlessness, tension, and apprehension, with a trend for chronicity. As they bring consequences into the daily lives of people, this has led to an increase in the number of studies involving several groups of people[1-3].

The term anxiety disorder is mentioned in several situations, such as in cases of generalized anxiety disorder, panic disorder, post-traumatic stress disorder, phobias, obsessive-compulsive disorder, and indirectly, in other medical conditions such as coronary artery disease, gastrointestinal disorders, and asthma[4].

This demonstrates research on anxiety is extremely important, as this illness is highly prevalent in the population in all age ranges, thus having reflects on public health resulting from its high social and individual costs and pressing demand for care[2-3,5]. Such care is based on the biological view of the health-disease process in all health care fields, with a predominance of an hegemony of doctors over the remaining professionals and high-density technologies of the secondary and tertiary levels[6].

The predominant treatments for anxiety disorders have been pharmacological and psychotherapeutic. Among the treatments using drugs, the ones using benzodiazepines stand out. They are the most prescribed medications in the world, and are used for anxiolytic and hypnotic purposes. There is great concern regarding the use of these drugs, as they can cause physical, chemical, and psychological dependence, especially in cases of abuse and prolonged use[7].

In this context, many discussions have been taking place regarding the practice of care, in order to shift focus from a healing and drug-based care, which may be achieved through the use of complementary therapies, as another way to promote comprehensive care[8].

In Brazil, in 2006, complementary therapies were given priority as therapeutic conducts by the Brazilian Unified Health System (SUS), with the ratification of Brazil's National Policy on Integrative and Complementary Practices (PNPIC). The Brazilian Ministry of Health recommends the use of these practices, especially at the primary health care level, as a new strategy for health promotion, maintenance, and recovery, which has led more people to know and use them[9].

Among known complementary therapies, acupuncture stands out. It is an old technique from ancient traditional Chinese medicine, which aims at diagnosing diseases and promoting healing by stimulating the body's ability to heal itself. Acupuncture originated more than 4,000 years ago, later being used in Japan, North, and South Korea, being expanded to the whole Asian continent. This therapy hit the western world in the 1970s, and its efficiency has been questioned ever since. The therapy aims at realigning and redirecting energy through the stimulation of acupuncture points with fine metal needles, laser, or pressure, which, in turn, stimulate the peripheral nerves, with a change taking place in the central nervous system's neurotransmitters.

Concerning patients, clinical conditions, and anxiogenic events, the World Health Organization (WHO) had already been indicating acupuncture for the treatment of several acute and chronic diseases since 2002, with efficiency in all age ranges and health care levels. It was found to be effective in the treatment of respiratory, digestive, and nervous disorders, as well as psychological and emotional problems[12].

Thus, studies have been conducted to analyze the effect of acupuncture in the treatment of anxiety in different populations, such as women with breast cancer submitted to chemotherapy treatments[13], nursing mothers of preterm newborn infants[14], in anxiety patients treated in primary health care units[15], military members who returned from wars and experienced physical and psychological traumas[16], which reveals diversified interest in the use of this therapy.

To determine the best treatment for several pathologies, anxiety among them, it is essential to use evidence-based practice (EBP), which is understood as the conscious, explicit, and fair use of the best evidence available for taking decisions related to providing care to an individual patient[17].

It is a process in which the real and potential problems that affect the health of users are presented as questions, whose answers are systematically sought and evaluated based on the results from the most recent research, serving as basis for decision-making. When the investigation is separated from the clinical reality, new discoveries are not incorporated in nursing processes and activities, which is harmful to clients[18].

In nursing, EBP involves defining a problem, critically examining and evaluating the available evidence in the scientific literature, implementing them in clinical practice, and analyzing results through the integration of three elements: the best evidence, clinical expertise, and patient preferences[19]. EBP uses methods to identify evidence, in order to determine whether a treatment or diagnostic method is effective, which includes strategies to evaluate the quality of scientific publications and ways for incorporating treatments in the practice of care[20].

This article focuses on and aims to evaluate the evidence on the effects of acupuncture in the treatment of anxiety and the quality of the studies, which requires proper planning of research questions and literature search[20]. By doing so, the goal is to identify the best evidence from scientific publications, to stimulate this practice in a safe way for all nursing professionals.

It is important to remember that, in Brazil, the Federal Council of Nursing (COFEN) ensures the exercise of acupuncture through COFEN resolution no. 197/97[21] and also recognizes and regulates its official status of nursing specialty, established by COFEN resolution no. 326/2008[22].

Before that, searching for scientific evidence of the effects from acupuncture treatment in the treatment of anxiety in clinical practice becomes relevant to help reduce the use of drugs in patient treatments. It also intends on contributing to nursing professionals by giving legitimacy to the use of acupuncture for treating anxiety in different populations. Also, the importance of adding new knowledge to the scientific field is highlighted, including the nursing field, by evaluating the quality of the research on this topic, thus providing more safety to patients making use of this therapy.

METHOD

This is an integrative review, one of the research methods used in EBP, which allows incorporating evidence in clinical practice. This method aims to gather and summarize results from investigations on a certain topic or issue, in a systematic and organized way, to get more knowledge on the investigated topic[17,23-24].

Thus, an integrative review can be used as an instrument to generate knowledge in nursing. Because it has an approach that allows including diversified methodologies, it has an important role in EBP, therefore being able to help researchers summarize the theoretical and empirical literature about a specific topic[25].

The steps in the development of this review were the following: 1) identifying the topic and choosing a guiding question; 2) establishment of criteria for inclusion and exclusion of articles (search in the literature); 3) definition of the information to be extracted from selected studies; 4) evaluation of the selected studies; 5) analysis and summary of results, and review presentation[17]. The question guiding this review was: What scientific evidence is available in the literature on the effects of acupuncture for treating anxiety and on the quality of such studies?

A literature review including national and international articles was conducted through databases Cumulative Index to Nursing and Allied Health Literature (CINAHL), Latin-American and Caribbean System on Health Sciences Information (LILACS), Scientific Electronic Library (SciELO), and The Cochrane Library, considering articles published in full between 2001 and 2014. This period was chosen because this therapy started being more used in clinical practice during those years in Brazil, including for treating anxiety.

At the bibliographical search stage we also used PICO strategy, whose abbreviation stands for P (Patient/Problem), I (Intervention or indicators), C (comparison), and O (Outcomes). This strategy has been used to formulate research guiding questions of different natures that arise from clinical practice[26].

We employed the Health Science Descriptors (DEcS) and the terms from Medical Subject Headings (MeSH) and used AND boolean operator, thus forming a search strategy based on keywords and controlled terms, under the following combination: anxiety AND acupuncture therapy AND acupuncture. The databases were accessed between April and June 2014.

The inclusion criteria for selecting articles were: having abstracts and full texts published in Portuguese, English, and Spanish; being related to the guiding question; not distinguishing between evidence levels; and being electronically available. The articles were selected by their titles and abstracts, and those selected were read in full and thoroughly analyzed. The criteria for excluding articles comprised: not answering the guiding question; not pointing acupuncture treatment as a therapeutic option for anxiety; and duplicate publications.

The data extracted from the selected publications were transcribed onto a validated instrument, which was adapted to meet the study objectives. The instrument contained variables of research interest, and its items were: title of the article, year of publication, location of the study, periodical that published the article, objective, method, population/sample, results, conclusions, level of evidence, and quality of the study[2,26].

We adopted the proposal by Gershon et al.[27], which aimed to analyze the research design and classify the levels of scientific evidence extracted from the publications.

The randomized controlled clinical studies, which are identified under level I of evidence, were analyzed regarding the efficiency of acupuncture for treating anxiety. Later, these studies were classified concerning their quality, through the use of the instrument proposed by Sniezek and Siddiqui[2], the Quality Score for Acupuncture Trials - QSAT. This Likert scale is the first instrument for evaluating the specific quality of randomized clinical studies on acupuncture[2].

QSAT combines measures that are specific of acupuncture trials with measures that can be generalized to all randomized clinical trials. It can be used to evaluate randomized clinical studies on acupuncture as a kind of treatment. The ten QSAT quality measures are: (1) inclusion and exclusion criteria; (2) experiment design; (3) treatment control; (4) sample size; (5) randomization; (6) blinding; (7) acupuncture method; (8) acupuncture treatment progression; (9) outcome; and (10) loss of patients during treatment supervision[2].

The total scores ranged from 0 to 20, and were assessed through a Liker-type scale from 0 to 2 points. A QSAT score between 18 and 20 indicates an acupuncture treatment study of the highest quality, a score range between 15 and 17 indicates reasonable quality, and a score range between 11 and 14 indicates low quality, whereas scores of 10 or below indicate bad quality[2].

Concerning ethical aspects, the specific information extracted from the articles was accessed through databases, and no authorization was needed to use them, as they were public domain.

RESULTS

The collection and selection of articles from the five databases resulted in the inclusion of 19 articles in the study. Table 1 shows the distribution of included articles, according to the

databases and the inclusion and exclusion criteria, published between January 2001 and June 2014.

Table 1 - Distribution studies according to the databases and inclusion and exclusion criteria, published between January 2001 and June 2015, Alfenas, Minas Gerais, Brazil, 2015

	Articles found	Selected articles	Excluded articles	Included articles
CINAHL	41	8	7	1
LILACS	29	7	6	1
PUBMED-PICO	398	46	30	16
SciELO	5	2	2	0
The Cochrane Library	41	4	3	1
TOTAL	514	67	48	19

Source: CINAHL, LILACS, PUBMED-PICO, SciELO, and The Cochrane Library databases, 2001 - 2014.

Among the 19 articles included, 17 were foreign and 2 were Brazilian. Regarding the countries where the studies were conducted, we found the United States of America had the highest number of articles on this topic (31.6%), followed by Brazil (15.7%). In turn, Canada, the United Kingdom, and Australia presented the same production percentages (10.5%). Sweden, Turkey, Austria, and Israel also had the same production percentage (5.3%).

When the number of studies was analyzed by continent, according to the countries where they were conducted, North America was found to have the highest number of articles on that topic (42%), followed by Europe (26.3%). South America accounted for 15.8% of the total number, whereas Oceania, 10.5%. The continent that was found to have the smallest number of studies was Asia (5.3%).

Regarding the classifications of periodicals, according to the quality-related strata from Coordination for higher Education Staff Development (CAPES), WEBQualis, or journals in which they were published, we found a publication with an A1 Qualis, six (31.6%) publications with an A2 classification, followed by two (10.5%) B1 publications, five (26.3%) B2 publications, four (21.0%) B4 publications, one (5.3%) publication with a B5 Qualis, and one (5.3%) that did not have a classification according to this system. Later, an analysis was conducted on the impact factors of the electronic journals on which the articles were published. Thus, it was possible to notice that the impact factors of the publications ranged from 0.09 and 5.163.

Among the publications selected for the review, 14 (73.7%) were published in periodicals related to medicine, three (15.8%) of them belonged to the nursing field, one (5.3%) to the psychology field, and one (5.3%) to several disciplines.

2013 had the highest number of publications with five articles (26.3%), followed by years 2001, 2004, 2007, 2010, and 2012, with two articles each year, totaling 52.7%. In turn, in years 2003, 2008, 2009, 2010, and 2014, we found on article for each year, totaling 21.0%.

Table 2 shows the distribution of articles based on the study types regarding the classification of their evidence levels.

Table 2 – Distribution of studies regarding the classification of the evidence levels of publications selected between 2001 and June 2014, Alfenas, Minas Gerais, Brazil, 2015

Study Type	Level of evidence*	n	%
Meta-analysis, systematic review of a randomized clinical trial, controlled randomized clinical trial	I	11	57.9
At least one well designed controlled randomized clinical trial	II	-	-
Clinical trial, not randomized	III	1	5.3
Cohort study, case-control study	IV	3	15.8
Systematic review of descriptive or qualitative studies	V	2	10.5
Descriptive or qualitative studies	VI	2	10.5
Opinion from authorities or report from committee of specialists	VII	-	-
Total	7	19	100

*Note: *Gershon RR, Karkashian CD, Vlahov D, Kummer L, Kasting C, Green-McKenzie J. et al. Compliance with universal precautions in correctional health care facilities. J Occup Environ Med 1999;41(30):181-9.*

Among the 19 articles included in the sample, six concerned RCSs, and their information can be found in Box 1.

Regarding the classification of evidence levels, levels I and II were considered as strong evidence; III and IV as moderate, and from V to VII they were considered weak. Among all articles included, 11 (57.9%) fell into evidence level I; that is, strong level of evidence; four of them (21.0%) had a moderate level; and four (21.0%) had a weak level of evidence. Among the articles analyzed, no studies with evidence levels II or VII were found.

The number of subjects ranged from 4 to 1,201. There were many types of anxiety. Examples included from acute anxiety originating from a specific event to generalized anxiety disorder. Most studies used validated measurement instruments to evaluate the efficiency of acupuncture treatments.

Among the six articles about randomized clinical studies that were analyzed as QSAT, five were found to be of reasonable quality, and one was found to be of low quality. Four items with low scores stood out in this analysis: sample size, randomization, blinding, and acupuncture treatment. The number of subjects ranged from 29 to 120; in two randomized clinical studies (RCS), the interventions were conducted by acupuncturist nurses who were graduated and experienced in their intervention field.

Regarding the scales for measuring anxiety, four RCSs used the State Trait Anxiety Inventory (STAI), one of them used the Visual Analog Scale (VAS-Anxiety), and another one used the anxiety sub-scale in the Hospital Anxiety and Depression Scale (HADS-A).

Box 1 – Title, year, country, design, number of patients, interventions, and outcomes from the randomized clinical trials included in the sample

Title	Year Country	Design/number of patients	Interventions	Outcomes
Effects of an integrative treatment, therapeutic acupuncture and conventional treatment in alleviating psychological distress in primary care patients - a pragmatic randomized controlled trial[15].	2013 Sweden	Randomized controlled clinical trial n = 120	Integrative treatment (IT) versus acupuncture therapy (AT) versus conventional treatment (CT)	The integrative treatments and acupuncture therapies resulted in statistically and clinically significant reduction of anxiety in patients of primary care services. In 4 weeks, the differences between the groups were IT-CT (p = 0.005) and AT-CT (p = 0.006). The same way, both AT and IT have improved significantly more than the CT (both p < 0.001) of the 8-week baseline.
The effect of acupuncture on working memory and anxiety[27].	2013 USA	Randomized controlled clinical trial n = 90	Acupuncture treatment versus conventional treatment	Subjects undergoing acupuncture treatments reported having a lower anxiety state, after their interventions than subjects going through conventional treatments (26.14 vs. 29.63, p = 0.0146).
Acupuncture for Anxiety in Lactating Mothers with Preterm Infants: A Randomized Controlled Trial[14].	2013 Brazil	Randomized controlled clinical trial n = 29	Acupuncture treatment versus placebo	The data were collected before and after the treatments, and submitted to a blind rater. Before and after the treatment, the difference in STAI - State for both groups was not statistically significant (p = 0.888), although the analyses inside the groups was significant for both of them (p < 0.005). Saliva corticol levels remained unchanged after the treatments in both groups (p = 0.480).
Auricular Acupressure as a Treatment for Anxiety in Prehospital Transport Settings[28].	2003 USA	Randomized controlled clinical trial n = 36	Ear acupressure treatment on the relaxation point versus sham point	The patients who were submitted to ear acupressure treatment in the relaxation group reported having significantly less anxiety than the patients in the sham group when they arrived the hospital (p = 0.002).
The use of auricular acupuncture to reduce preoperative anxiety[29].	2001 USA	Randomized controlled clinical trial n = 91	Traditional Chinese medicine group, Relaxation group versus Control group	After the interventions, there were significant differences among the three groups (p = 0.014). The patients in the relaxation group were found to have less anxiety as compared to the patients in the control group (p = 0.01). The anxiety in the patients in the traditional Chinese medicine group was not found to significantly differ as compared to the control group (p = 0.28) and to the relaxation group (p = 0.37).
Auricular acupuncture: a potential treatment for anxiety[30].	2001 USA	Randomized controlled clinical trial n = 55	Shenmen group versus Relaxation group versus Sham group	There were significant differences among the three treatment groups (p = 0.001). A post hoc analysis showed that the patients in the relaxation group were found to be significantly less anxious in 30 minutes (p = 0.007) and 24 h (p = 0.035), as compared to the patients in both the shenmen and sham group, and less anxious in 48h (p = 0.042), as compared with the patients in the shenmen group.

DISCUSSION

PICO strategy prescribes proper planning of the research question and maximizes the retrieval of evidence from the databases, shows the focus of studies, and avoids unnecessary searches. Using this search method to select the best evidence from scientific publications enables accurate and fast access to knowledge that has been produced on a certain

clinical matter. It is an important resource for evidence-based nursing practice[20].

The quality of scientific production is measured by QUA-LIS/CAPES quality-indicative stratum, and is represented by: A1, A2, B1, B2, B3, B4, B5, and C, in that A1 stratum represents the highest weight (100) and C the minimum value (zero). This indicator induces a publication, showing in which periodical a researcher should publish their work on, based on the scientific quality of periodicals[31].

Regarding the year of publication, 2013 was found to be the one with the highest number of publications in the period. This result shows that using acupuncture for treating anxiety is a current topic. In Brazil, there are still very few publications, but this number is expected to increase as a result from the publication of Brazil's National Policy of Integrative and Complementary Practices[9].

Among the articles analyzed, most were found to correspond to evidence level 1, which shows how relevant a study is based on the research method adopted. Evidence level 1 is related to evidence from studies involving meta-analysis, systematic reviews, and randomized clinical trials - either controlled or complying with clinical guidelines that are supported by systematic reviews of controlled randomized clinical experiments[32].

Although systematic review is an unquestionable method for searching evidence from RCSs on a certain treatment or diagnosis for supporting clinical decision-making, the studies are also found to be inconclusive due to the quality of their research. It is important to point out that quality must be the first step towards evaluating evidence[33].

Different authors explicit the factors that are related to the quality of research conducted, such as: lack of reasons for selecting acupuncture points, number of sessions, and length of treatment, which was shown in this study through the use of QSAT instrument[2,15,27].

Concerning length of treatment, two RCSs on acute events used acupuncture sessions - though shorter and less times than recommended by QSAT - which contributes to the smaller scores assigned to these studies. This instrument establishes, as one of the research quality criteria, courses of patient treatment of 8 sessions for longer than 2 weeks or 4 acupuncture sessions for over 8 weeks[2].Fail to define the number of sessions and length of therapy needs new research in order to improve standardization and provide the ideal treatment[34].

Other items in QSAT evaluation criteria, such as true randomization, design of studies, double blinding, inclusion of subject losses in statistical analysis, fundamental characteristics of patients, intervention procedures, and results are important to show the quality of studies[2].

The World Health Organization indicates that acupuncture is more effective for treating anxiety than conventional medicine, once it is considered safe, easy to be applied, is not toxic, which does not lead to abuse or dependence, its secondary effects are scarce and minimal, and it barely has

contraindications. Besides that, it is a simple and inexpensive procedure that does not involving using high technology devices[12]. Before that, the scientific evidence in this study show positive and statistically significant effects from using acupuncture for treating subjects with anxiety.

In this study, two recent articles called nursing professionals acupuncturists[14-15]. In the case of Brazil, nurses have invested in this knowledge field and professional practice, mainly after the publication of Brazil's National Policy of Integrative and Complementary Practices, in 2006, and the regulation of acupuncture therapy as a specialty of nurses in 2008. And this fact has serving to show the need for further investigation in the knowledge field of acupuncture and its efficiency in the clinical practice of nursing[11].

WEBQualis indexation system from CAPES-Brazil constituting a limiting aspect of this study once not all periodicals adopt this system, a fact which restricts the quality analysis of articles published, especially regarding international research about this study topic.

Another limiting factor in the search for evidence is due to periodicals that are not indexed to the electronic databases that were selected as part of the inclusion and exclusion criteria. Searching for articles in English, Spanish, and Portuguese also limited to a certain extent seeking and selecting articles published in periodicals of eastern countries, where acupuncture is a traditional medical treatment. Such fact also results in it being difficult to compare the use of this therapy between western and eastern countries[34].

Scientific evidence still remains limited, and the studies oftentimes have methodological problems that include reduce sample sizes, lack of uniformity in the conduction of treatments and about their length, diversity of instruments for evaluating anxiety, and lack of a gold standard in treatments. High quality theoretical and methodological studies need to be conducted regarding the use of acupuncture for treating anxiety, in different groups of patients and anxiogenic events.

CONCLUSION

The results show that the effects from acupuncture for treating anxiety have been shown to be significant as compared to conventional treatments; however, the studies about randomized clinical trials are of low methodological quality. The Quality Score for Acupuncture Trials is an instrument that may help evaluate the quality of these studies and achieve relevant clinical conclusions in future reviews. That is so because evidence strength levels by themselves cannot ensure the quality of research.

Some scientific evidence shows that it is a promising therapy and that incorporating it for treating anxiety in the clinical practice of nursing, in the context of Brazilian Unified Health System, may contribute to reduce the indiscriminate and prolonged use of drugs, thus avoiding harmful consequences or even death of patients.

REFERENCES

1. Schmidt DR, Dantas RA, Marziale MH. Anxiety and depression among nursing professionals who work in surgical units. Rev Esc Enferm USP [Internet]. 2011[cited 2015 Apr 02];45(2):487-93. Available from: http://www.scielo.br/pdf/reeusp/v45n2/en_v45n2a25.pdf

2. Sniezek DP, Siddiqui IJ. Acupuncture for treating anxiety and depression in women: a clinical systematic review. Med Acupunct [Internet]. 2013[cited 2015 Apr 02];25(3):164-72. Available from: http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0058508/.

3. Silva ALP. O tratamento da ansiedade por intermédio da acupuntura: um estudo de caso. Psicol Cienc Prof [Internet]. 2010[cited 2015 Apr 02];30(1)199-211. Available from: http://www.scielo.br/pdf/pcp/v30n1/v30n1a15.pdf

4. Pilkington K. Anxiety, depression and acupuncture: a review of the clinical research. Auton Neurosci [Internet]. 2010[cited 2015 Apr 02];157(1-2):91-5. Available from: http://www.autonomicneuroscience.com/article/S1566-0702%2810%2900071-8/abstract

5. Prado JM, Kurebayashi LFS, Silva MJP. Auriculotherapy effectiveness in the reduction of anxiety in nursing students. Rev Esc Enferm USP [Internet]. 2012[cited 2015 Apr 02];46(5):1200-6. Available from: http://www.producao.usp.br/bitstream/handle/BDPI/34348/wos2012-3459_en.pdf?sequence=1

6. Azevedo E, Pelicioni MCF. Práticas integrativas e complementares de desafios para a educação. Trab Educ Saúde [Internet]. 2011[cited 2015 Apr 02];9(3):361-78. Available from: http://www.scielo.br/pdf/tes/v9n3/v9n3a02.pdf

7. Marchi KC, Bárbaro AM, Miasso AI, Tirapelli CR. [Anxiety and the consumption of anxiolytics among nursing students of a public university]. Rev Eletrônica Enferm [Internet]. 2013[cited 2015 Apr 02];15(3):729-37. Available from: https://www.fen.ufg.br/fen_revista/v15/n3/pdf/v15n3a15.pdf Portuguese.

8. Paraguaná TTB, Bezerra ALQ, Souza MA, Siqueira KM. As práticas integrativas na Estratégia Saúde da Família: visão dos agentes comunitários de saúde. Rev Enferm UERJ [Internet]. 2009[cited 2015 Apr 02];17(1):75-80. Available from: http://www.facenf.uerj.br/v17n1/v17n1a14.pdf

9. Brasil. Ministério da Saúde. Portaria n. 971, de 4 de maio de 2006. Aprova a Política Nacional de Práticas Integrativas e Complementares (PNPIC) no Sistema Único de Saúde. Diário Oficial da União. Brasília; 2006.

10. Haddad ML, Medeiros M, Marcon SS. Sleep quality of obese workers of a teaching hospital: acupuncture as a complementary therapy. Rev Esc Enferm USP [Internet]. 2012[cited 2015 Apr 02];46(1):82-8. Available from: http://www.scielo.br/pdf/reeusp/v46n1/en_v46n1a11.pdf

11. Kurebayashi LFS, Freitas GF, Oguisso T. Nurses perception about diseases that are treated by acupuncture. Rev Esc Enferm USP [Internet]. 2009[cited 2015 Apr 02];43(4):930-6. Available from: http://www.scielo.br/pdf/reeusp/v43n4/en_a27v43n4.pdf

12. World Health Organization - WHO. Acupuncture: review and analysis of reports on controlled clinical trials. Geneva; 2002.

13. Genç F, Tan M. The effect of acupressure application on chemotherapy-induced nausea, vomiting, and anxiety in patients with breast cancer. Palliat Support Care [Internet]. 2014[cited 2015 Apr 02];30:1-10. Available from: http://journals.cambridge.org/action/displayFulltext?type=1&fid=9672708&jid=PAX&volumeId=13&issueId=02&aid=9672703&bodyId=&membershipNumber=&societyETOCSession=

14. Haddad-Rodrigues M, Nakano AMS, Stefanello J, Silveira RCCP. Acupuncture for anxiety in lactating mothers with preterm infants: a randomized controlled trial. Evid Based Complement Alternat Med [Internet]. 2013[cited 2015 Apr 02];2013:1-9. Available from: http://www.hindawi.com/journals/ecam/2013/169184/.

15. Arvidsdotter T, Marklund B, Taft C. Effects of an integrative treatment, therapeutic acupuncture and conventional treatment in alleviating psychological distress in primary care patients - a pragmatic randomized controlled trial. BMC Complement Altern Med [Internet]. 2013[cited 2015 Apr 02];13:308. Available from: http://bmccomplementalternmed.biomedcentral.com/articles/10.1186/1472-6882-13-308

16. Lee C, Crawford C, Wallerstedt D, York A, Duncan A, Smith J et al. The effectiveness of acupuncture research across components of the trauma spectrum response (tsr): a systematic review of reviews. Syst Rev [Internet]. 2012[cited 2015 Apr 02];1:46. Available from: http://systematicreviewsjournal.biomedcentral.com/articles/10.1186/2046-4053-1-46

17. Mendes KDS, Silveira RCCP, Galvão CM. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. Texto Contexto Enferm [Internet]. 2008[cited 2015 Apr 02];17(4):758-64. Available from: http://www.scielo.br/pdf/tce/v17n4/18.pdf

18. Rodriguez CVA, Paravic KTM. Enfermagem baseada em evidências e gestão do cuidado. Enferm Glob. 2011;10(24):246-53.

19. Pedrolo E, Danski MTR, Mingorance P, Lazzari LSM, Méier MJ, Crozeta K. A prática baseada em evidências como ferramenta para prática profissional do enfermeiro. Cogitare Enferm [Internet]. 2009[cited 2015 Apr 02];14(4):760-3. Available from: http://ojs.c3sl.ufpr.br/ojs2/index.php/cogitare/article/view/16396

20. Santos CMC, Pimenta CAM, Nobre MRA. The PICO strategy for the research question construction and evidence search. Rev Latino-Am Enfermagem [Internet]. 2007[cited 2015 Apr 02];15(3):508-11. Available from: http://www.scielo.br/pdf/rlae/v15n3/v15n3a23.pdf

21. Conselho Federal de Enfermagem (COFEN). Resolução COFEN No. 197/1997. Estabelece e reconhece as Terapias Integrativas como especialidade e/ou qualificação do profissional de enfermagem. Brasília; 1997.

22. Conselho Federal de Enfermagem (COFEN). Resolução COFEN No. 326/2008. Regulamenta no Sistema COFEN/corens a atividade de acupuntura e dispõe sobre o registro da especialidade. Brasília; 2008.

23. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. Einstein [Internet]. 2010[cited 2015 Apr 02];8(1):102-6. Available from: http://www.scielo.br/pdf/eins/v8n1/pt_1679-4508-eins-8-1-0102.pdf

24. Paranhos VD, Pina JC, Mello DF. Integrated management of childhood illness with the focus on caregives: an integrative literature review. Rev Latino-Am Enfermagem [Internet]. 2011[cited 2015 Apr 02];19(1):203-11. Available from: http://www.scielo.br/pdf/rlae/v19n1/27.pdf

25. Whittemore R, Knafl K. The integrative review: updated methodology. J Adv Nurs [Internet]. 2005[cited 2015 Apr 02];52(5):546-53. Available from: http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2648.2005.03621.x/abstract

26. Ursi ES, Galvão CM. [Perioperative prevention of skin injury an integrative literature review]. Rev Latino-Am Enfermagem [Internet]. 2006[cited 2015 Apr 02];14(1):124-31. Available from: http://www.scielo.br/pdf/rlae/v14n1/v14n1a17.pdf Portuguese.

27. Bussell J. The effect of acupuncture on working memory and anxiety. J Acupunct Meridian Stud [Internet]. 2013[cited 2015 Apr 02];6(5):241-6. Available from: http://www.jams-kpi.com/article/S2005-2901%2812%2900215-4/fulltext

28. Kober A, Scheck T, Schubert B, Strasser H, Gustorff B, Bertalanffy P, et al. Auricular acupressure as a treatment for anxiety in prehospital transport settings. Anesthesiology [Internet]. 2003[cited 2015 Apr 02];98(6):1328-32. Available from: http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1943510

29. Wang SM, Peloquin C, Kain ZN. The use of auricular acupuncture to reduce preoperative anxiety. Anesth Analg [Internet]. 2001[cited 2015 Apr 02];93(5):1178-80. Available from: http://www.sunshineih.com/Health/wp-content/uploads/2010/11/AA-Preoperative-Anxiety.pdf

30. Wang SM, Kain ZN. Auricular acupuncture: a potential treatment for anxiety. Anesth Analg [Internet]. 2001[cited 2015 Apr 02];92(2):548-53. Available from: http://www.ncbi.nlm.nih.gov/pubmed/11159266

31. Erdmann AL, Marziale MHP, Pedreira MLG, Lana FCF, Pagliuca LMF, Padilha MI, et al. Evaluation of scientific periodicals and the Brazilian production of nursing articles. Rev Latino-Am Enfermagem [Internet]. 2009[cited 2015 Apr 02];17(3):403-9 Available from: http://www.scielo.br/pdf/rlae/v17n3/19.pdf

32. Gershon RR, Karkashian CD, Vlahov D, Kummer L, Kasting C, Green-mckenzie J, et al. Compliance with universal precautions in correctional health care facilities. J Occup Environ Med[Internet]. 1999[cited 2015 Apr 02];41(30):181-9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/10091141

33. Hammerschlag R, Milley R, Colbert A, Weih J, Yohalem-Ilsley B, Mist S, et al. Randomized controlled trials of acupuncture (1997–2007): an assessment of reporting quality with a consort- and stricta-based instrument. Evid Based Complement Alternat Med [Internet]. 2011[cited 2015 Apr 02];2011:1-25. Available from: http://www.hindawi.com/journals/ecam/2011/183910/.

34. Errington-Evans N. Acupuncture for Anxiety. CNS Neurosci Ther[Internet]. 2012[cited 2015 Apr 02];18:277-84. Available from: http://onlinelibrary.wiley.com/doi/10.1111/j.1755-5949.2011.00254.x/abstract