Review Article

Complementary therapies for anxiety management in people with HIV: a systematic review

Terapias complementares para manejo de ansiedade em pessoas com HIV: revisão sistemática

Terapias complementarias para la gestión de la ansiedad en personas con VIH: revisión sistemática

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Abstract

Objective: To assess the effectiveness of complementary therapies in reducing anxiety in people living with HIV.

Methods: Systematic review of articles available in MEDLINE®, Scopus, Cinahl and Web of Science databases. The search was performed using the English descriptors "Complementary Therapies", "Anxiety" and "HIV" as the main concepts. Primary studies such as randomized controlled trials conducted with people living with HIV were included. The methodological quality was assessed using Cochrane's RoB 2 tool. Results were displayed as means and standard deviation or confidence intervals and as p-values for the analysis of intra- and inter-group differences.

Results: A total of 14 articles were selected. The study population consisted mostly of men, adults and North Americans. Among the ten therapies evaluated, five significantly reduced anxiety in people with HIV, namely: massage; therapeutic touch; yoga; auricular acupuncture concomitant with spiritual therapy; and the program composed of muscle relaxation, relaxation training assisted by electromyographic biofeedback, meditation and hypnosis. Among the studies, 78.6% had a risk of bias between moderate and high.

Conclusion: Complementary therapies proved to be effective for the management of HIV comorbidity and anxiety, with emphasis on therapeutic touch, massage and yoga. There is a lack of research with greater methodological rigor that investigates the adverse effects of therapies.

Resumo

Objetivo: Avaliar a efetividade de terapias complementares na redução da ansiedade em pessoas vivendo com HIV.

Métodos: Revisão sistemática de artigos disponíveis nas bases de dados MEDLINE®, Scopus, Cinahl e *Web of Science*. A busca foi realizada utilizando como conceitos principais os descritores em inglês "*Complementary Therapies*", "*Anxiety*" e "*HIV*". Foram incluídos estudos primários do tipo ensaios clínicos randômicos e controlados, realizados com pessoas vivendo com HIV. A análise da qualidade metodológica foi implementada por meio da ferramenta RoB 2, da Cochrane. Os resultados foram exibidos em médias e desvio-padrão ou intervalo de confiança e de valores de p para as análises de diferenças intra e intergrupos.

Resultados: Foram selecionados 14 artigos. A população dos estudos foi composta majoritariamente de homens, adultos e norte-americanos. Dentre as dez terapias avaliadas, cinco reduziram significativamente a ansiedade em pessoas com HIV, a saber: massagem; toque terapêutico; ioga; acupuntura auricular concomitante à terapia espiritual; e o programa composto de relaxamento muscular, treinamento de relaxamento assistido por *biofeedback* eletromiográfico, meditação e hipnose. Dentre os estudos, 78,6% apresentaram risco de viés entre moderado e alto.

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Conflicts of interest: none to declare.

Conclusão: As terapias complementares se mostraram efetivas para manejo da comorbidade HIV e ansiedade, com destaque para toque o terapêutico e massagem e a ioga. Há carência de pesquisas com maior rigor metodológico e que investiguem os efeitos adversos das terapias.

Resumen

Objetivo: Evaluar la efectividad de terapias complementarias en la reducción de la ansiedad en personas que viven con el VIH.

Métodos: Revisión sistemática de artículos disponibles en las bases de datos MEDLINE®, Scopus, Cinahl y *Web of Science*. La búsqueda se realizó utilizando los descriptores en inglés "*Complementary Therapies*", "*Anxiety*" y "*HIV*" como conceptos principales. Se incluyeron estudios primarios del tipo ensayos clínicos aleatorios y controlados, realizados con personas que viven con VIH. El análisis de la calidad metodológica se implementó por medio de la herramienta RoB 2, de Cochrane. Los resultados se presentaron en promedios y desviación típica o intervalo de confianza y de valores de p para los análisis de diferencias intra e inter grupos.

Resultados: Se seleccionaron 14 artículos La población de los estudios estuvo formada, mayoritariamente, por hombres, adultos y norteamericanos. De las diez terapias evaluadas, cinco redujeron significantemente la ansiedad en personas con VIH, a saber: masaje, tacto terapéutico, yoga, acupuntura auricular junto con terapia espiritual y el programa compuesto por relajación muscular, entrenamiento de relajación asistida por *biofeedback* electromiográfica, meditación e hipnosis. El 78,6 % de los estudios presentó riesgo de sesgo entre moderado y alto.

Conclusión: Las terapias complementarias demostraron ser efectivas para la gestión de la comorbilidad VIH y ansiedad, con énfasis en el tacto terapéutico, el masaje y el yoga. Hay una falta de investigaciones con más rigor metodológico y que investiguen los efectos adversos de las terapias.

Introduction

Human immunodeficiency virus (HIV) infection is often accompanied by psychiatric comorbidities, with anxiety being one of the most common manifestations.[1] While in the general population, a prevalence of 3.6% of people suffering from anxiety is estimated, in people living with HIV, these rates are higher than 40% and show an upward trend, in addition to manifesting more severe cases.[2-4] Anxiety disorders can have serious consequences when they occur concomitantly with HIV, resulting in worse adherence to antiretroviral therapy, substance use, risky sexual behavior, suicidal thoughts, behaviors and stories, low cognitive performance and poor quality of life.[3]

The exact nature of the disproportionate involvement of people living with HIV by anxiety is unknown, but multiple factors are pointed out, such as stigma, discrimination, the concern with the disclosure of the diagnosis, low social support, especially emotional, self-blame and the adverse effects of antiretroviral therapy.[5-7] These factors can often act synergistically, and the experience of multiple simultaneous negative experiences contributes to a greater likelihood of developing anxiety disorders.

A study that evaluated anxiety in people living with HIV using a self-reported instrument found a rate of underdiagnosis of 38% for moderate anxiety and 41% for severe anxiety in people living with HIV, in addition to a prevalence of treatment of only 14% for those with moderate anxiety and 31% for people living with HIV with severe anxiety.[6] This fact highlights the ineffectiveness of existing strategies to solve or mitigate this health demand in this group alone.

Thus, there are many social, cultural, physical and economic barriers faced by people living with HIV in accessing mental health care, so that a large proportion of people living with HIV diagnosed with anxiety do not receive treatment. Therefore, the approach to mental health care strategies aimed at people living with HIV is instrumental. In this context, complementary therapies are presented as a resource with great potential to respond to the problem.[6,8,9]

The benefits of complementary therapies for the health of the general population are pointed out in the literature, especially when the limitations of the biomedical model are recognized in the resolution of health demands in their entirety. However, more research on the evidence of these techniques is needed, in order to contribute to their regulation and incorporation into health systems.[8]

An appropriate response to the health situation depends on the systematic analysis of which strategies are effective for this purpose, so the objective was to evaluate the effectiveness of complementary therapies in reducing anxiety in people with HIV.

Methods

This was a systematic review of complementary therapies used to manage anxiety in people living

with HIV. Based on the PICO strategy, the population (people living with HIV), the intervention (complementary therapies), the comparison (other therapies, usual routine or placebo intervention) and the outcome (anxiety) were determined.

The search was implemented in June 2020 and updated in November 2021. In order to ensure effective coverage of relevant references, four scientific databases with wide coverage in the international scenario in health and nursing were selected: Cumulative Index to Nursing and Allied Health Literature (Cinahl), SCOPUS, Web of Science and Medical Literature Analysis and Retrieval System Online (MEDLINE®) via OVID. Additional searches were performed on Google Scholar and on the references of the studies of interest, in order to verify the specificity and sensitivity of the search and to include studies not covered.

Inclusion criteria were randomized, controlled trials conducted with people living with HIV, evaluating the effect of complementary therapies, compared to other therapies, usual routine or placebo intervention, and including anxiety among the outcomes of interest. No time limit or publication language for manuscripts was implemented. For the exclusion criteria, the following were established: studies evaluating pharmacological and non-pharmacological psychotherapy-type interventions, whether individual or in groups, such as treatments using the cognitive-behavioral therapy approach.

The English terms "Complementary Therapies", "Anxiety" and "HIV" were used as descriptors of the main concepts, typifying the intervention sought, the outcome to be analyzed and the target population, respectively.

The search specificities for each of the databases were respected, making use of controlled vocabularies, keywords, synonyms and other search resources, such as Boolean logical operators, quotation marks, parentheses and truncations, whenever appropriate.

Duplicate studies were excluded using the Mendeley software. Then, the manuscripts were read by title and abstract, selecting those that met the inclusion and exclusion criteria. Subsequently, the articles were read in full. Data collection was carried out from the selected studies using a form prepared by the authors themselves, containing the study title, authors, year and place of publication, characteristics of the participants, design, intervention and control characteristics, way of measuring the outcome and results found. The selection of studies and data extraction were performed in duplicate by the first two authors, and differences were resolved by consensus.

Results for the outcome were displayed mostly as means and standard deviation or confidence intervals for all measurements performed by the studies and p-values for the analysis of intra- and inter-group differences, whenever available. Interventions that showed significant differences in anxiety, $p<0.05$, compared to the control group after treatment were considered effective.

Studies were evaluated for risk of methodological bias using the Revised Cochrane risk-of-bias tool for randomized trials (RoB 2), and these judgments were considered in the interpretation and discussion of results.[10] The Cochrane tool for assessing the risk of methodological bias, it comprises five domains, which assess biases related to the randomization process, deviation from the intended intervention, missing data, outcome measurement and selection of reported results. To judge deviation from the intended intervention, intention-to-treat analysis was used. The description of this research followed the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist.[11]

Results

The final sample of this review consisted of 14 randomized controlled trials, with a total population of 630 randomized participants and an average of 45 people per study. The article sorting process is shown in the flow diagram in figure 1.

The studies were conducted from the 1990s onwards, with samples formed mostly by male adults with HIV, with the North American context being the setting for 64.3% of the interventions. Only three studies were conducted in developing countries. Two articles evaluated interventions

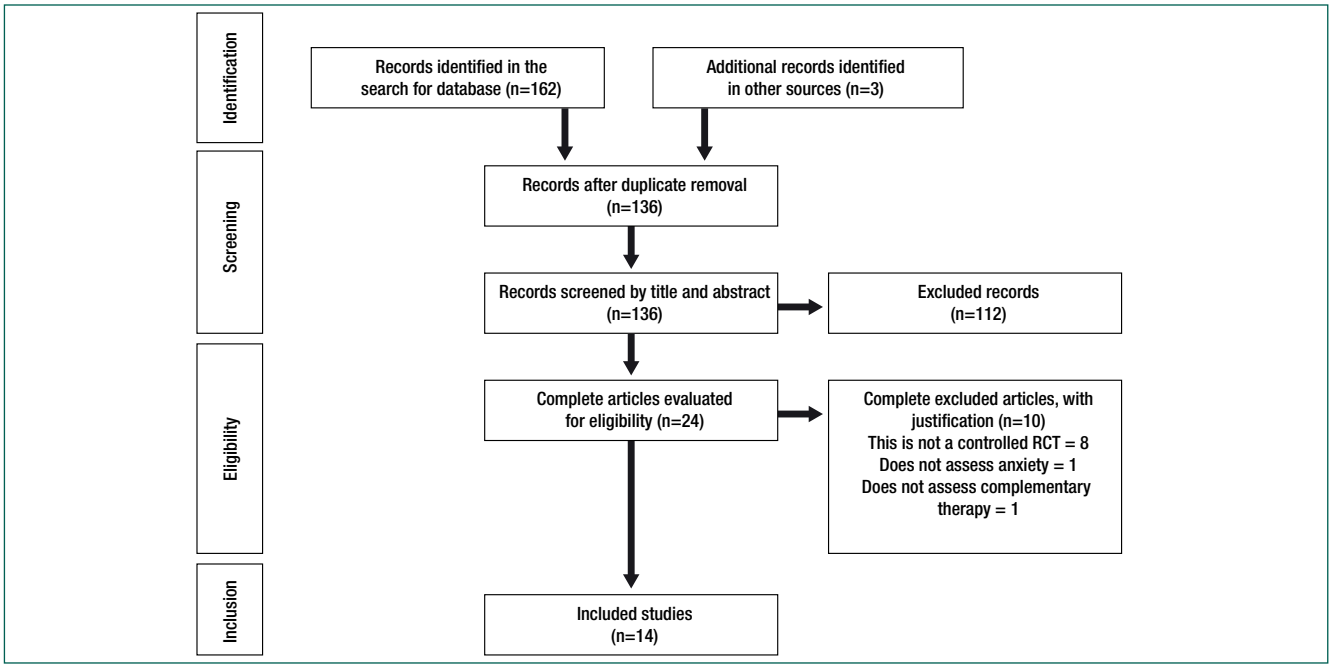

Figure 1. Flow diagram according to PRISMA recommendation

aimed at children with HIV and one at adolescents. Treatments included between one and 40 sessions and lasted from 1 day to 6 months, with a mean follow-up of approximately 9 weeks (Chart 1).

All studies investigated anxiety using a self-report scale, using an instrument that measured anxiety symptoms across clinical disorders. Among the four instruments to quantify anxiety, the State-Trait Anxiety Inventory (STAI) was used in 64.3% of the studies.

The trials tested the effectiveness of ten complementary therapies: the program comprised of muscle relaxation, electromyographic biofeedback-assisted relaxation training, meditation, and hypnosis; Chinese herbs; therapeutic touch; massage; auricular acupuncture with and without spiritual therapy; mantra; art therapy; Reiki; yoga and mindfulness training.[1,12-24]

Five complementary therapies have been shown to be effective in reducing anxiety in people living with HIV: ear acupuncture with spiritual therapy, therapeutic touch, massage, program consisting of muscle relaxation, relaxation training assisted by electromyographic biofeedback, meditation and hypnosis, and yoga.[1,12,15,17,18,23]

Among the complementary therapies with a significant result, two were studies that included interventions only with adults and grouped more than one technique simultaneously: auricular acupuncture with spiritual therapy and the program composed of muscle relaxation, relaxation training assisted by electromyographic biofeedback, meditation and hypnosis. The first reduced anxiety by 22.0% and the second reduced anxiety as a state by 48.4% and anxiety as a trait by 35.8%.[12,18]

Among the other therapies, two (therapeutic touch and massage) were developed individually and with children, and yoga was developed in a group and only with adults. Massage was applied and proved to be effective in both adults and children. Therapeutic touch reduced the mean anxiety scores of children aged 6 to 12 years old by 8.6% and, in the massage group, 75% of children aged 6 years old and older had reduced anxiety. The assessment of anxiety in children relied on the contribution of parents' reports. In treatments performed with adults, yoga showed the greatest difference in mean in anxiety at the end of the intervention, with a mean reduction of 52% in scores, and massage reduced anxiety by 17.6% of the mean scores.

The study with Chinese herbs was the only one to describe adverse effects of the therapy, with a prevalence in 79% of the patients who received the treatment, with gastrointestinal symptoms be-

Chart 1. Synthesis of studies

Reference and country	Sample	Intervention	Control	Follow-up (weeks)	Measure of anxiety	Outcome	Risk of bias – RoB 2
Gregory et al.,[1] Belgica	29 people, 72.4% men, 46.3 years old on average	Therapeutic massage	No intervention	4	HADS-A	The anxiety score decreased from 8.5±2.8 to 7.0±2.9 in the IG (p=0.04); there was no effect in the CG (7.6 ± 5.1 to 7.3 ± 3.3; p= 0.67)	Some concern
Taylor,[12] United States	10 men, 28-44 years old	Program composed of muscle relaxation, electromyographic biofeedback, meditation and hypnosis relaxation	No treatment	10	IDATE	Anxiety as a State in the IG decreased from 62.00±8.29 to 32.00±9.69 and in the CG it increased from 51.00±13.30 to 57.60±7.74. As a Trait in the IG it decreased from 55.80±6.97 to 35.80±8.44 and in the CG it increased from 46.20±6.37 to 49.20±7.39. The analysis of variance showed that the IG presented a more significant change than the CG when comparing the means from baseline to after treatment, in State Anxiety (F1.8 =15.25; p<0.01) and Trait (F1.8 = 17.34; p<0.01)	High risk
Burack et al.,[13] United States	30 people, 93.5% men, average of 36.1 years old	Pills composed of 31 Chinese herbs	Placebo pills composed of cellulose	12	Anxiety inventory Trait	Baseline anxiety: IG=43.1±2.6 and CG=48.1±2.2. IG had a mean difference of -2.7 (95%CI -6.9-1.5) and CG -1.6 (95%CI -6.6-3.4) between baseline and week 13. There was no significant difference between the groups	Low risk
Weber et al.,[14] Switzerland	68 people, 79.4% men, 35 years old on average	Pills containing 35 Chinese herbs	Placebo pills.	24.	IDATE	State Anxiety: IG with a mean of 45 (range 31-53) before the intervention and 44 (range 34-52) after (p=0.911); CG from 44 (range 37-52) to 44 (range 39-57), p=0.80. Trait-anxiety: IG was 40 (range 32-51) to 40 (range 35-48), p=0.627; CG from 42 (range 30-49) to 41 (range 30-57), p=0.619. There was no significant difference within or between groups (IG and State CG p=0.680 and IG and Trace CG p=0.240)	Some concern
Ireland,[15] United States	20 children, 65% female, aged 6-12 years old	Therapeutic touch	Therapeutic mimic or sham touch	1	STAIC segment state	IG=29.20±3.04 to 26.70±4.42; CG=31.20±4.51 to 29.50±3.37. Pre- and post-test difference in IG was 2.50±2.46 and 1.70±3.91 in CG. ANCOVA result for the effect of the group F(1.17)=1.067; p=0.32, it was not significant. The t test showed a significant intragroup difference, comparing pre and post-test, for the IG (p<0.01) only, in the CG (p=0.20)	Some concern
Diego et al.,[16] United States	24 people, 91.7% women, 17 years old on average	Massage	Guided muscle relaxation	12	Anxiety inventory State	Both groups significantly reduced state anxiety immediately after treatment, in the first (IG=44.25±13.63 to 30.83±9.45 and CG=42.08±7.15 to 35.75±8 .06) and last day (IG=39.08±9.78 to 27.17±7.63 and CG=41.58±7.42 to 36.83±8.12), F(1.22) =49.97; p<0.001. The study reported no difference analysis between the first and last session	Some concern
Hernandez-Reif et al.,[17] Dominican Republic	52 children, 64.5% female, 4.9 years old on average	Massage	Recreation (coloring and building blocks)	12	CBCL versions from 1.5 to 5 years and 6 to 18 years	Nonparametric analyzes showed that there were no significant changes (p>0.05) in anxiety/depression for children aged 1.5 to 5 years old. Analyzes in older children, using intragroup Wilcoxon assigned rank tests to determine the percentage of children whose anxiety/depression decreased between baseline and the last day of the study, revealed significant decreases for the massage group, 75%. (Z=2.23; p=0.026)	High risk
Margolin et al.,[18] United States	40 people, 60% men, 42.8 years old on average	IG 1: auricular acupuncture with 5 needles. IG 2: auricular acupuncture with 1 to 3 needles inserted gradually	IG 3: Auricular acupuncture with 5 needles and group spiritual therapy IG 4: Auricular acupuncture with 1 to 3 needles and therapy	8	IDATE	IG 1= 45.17±8.4 to 44.0±3.3; IG 2= 42.18±8.89 to 38.45±10.9; IG 3= 48.0±10.4 to 32.5±5.1 and IG 4= 42.29±17.0 to 37.29±15.1, before and after, respectively Anxiety significantly reduced with time F(1.26 =14.69; p=0.001). Groups that received spiritual therapy showed greater reductions in mean anxiety scores between baseline 44.9±14.1 and after treatment 35±11.4 when compared to the group without this therapy (43.2±8.6 for 40.4±9.2), F(1.26)=5.48; p=0.03. There was no difference by type of acupuncture, F(1.26)=1.44; p=0.24. The interaction between spirituality and acupuncture was not significant, F(1.26)=3.89; p=0.59	High risk
Bormann et al.,[19] United States	93 people, 80.6% men, 42.9 years old on average	Psychoespiritual intervention: repetition of mantra	Control of attention: HIV videos and group discussions	10	Anxiety inventory Trait	Anxiety was reduced over time in both groups. IG: 44.1±11.13; 40.7±9.62; 40.2±9.74 to 40.3±10.46. CG: 44.9±10.37; 43.1±9.63; 43.7±9.32 to 42.1±9.74. There was no group-time interaction. ANOVA for repeated measures, group (F=1.22; p=0.27), time (F=12.0; p=0.001), group-time (F=1.77; p=0.15). Effect size (ηp2=0.02) between small and medium	Low risk
Rao et al.,[20] United States	79 people, 75% men, 42 years old on average	Art therapy	Videotape about art therapy	1	STAI, segment State	Post-test state anxiety scores were analyzed after adjustment for pre-test scores and age (R2=0.61; F(3.67)=35.44; p<0.001). Scores improved for those in the art therapy group when compared to videotape. However, the differences in mean scores between groups were not statistically significant (post-test adjusted means of IG=62.8 and CG=61.2)	Some concern
Bremner et al.,[21] United States	37 people, 86.2% men, 49.6 years old on average	Reiki and music	Music	10.	IDATE	Score for initial state-anxiety: RMG 38.3±11.4 and MOG 37.7±11.2. Anxiety-Initial Trait: RMG 43.1±6.9 and MOG 40.8±9.1. Anxiety as a state was significantly reduced in all participants at the end of the study, F(2, 52)=4.50; p=0.016	High risk

Continue...

Continuation.

Reference and country	Sample	Intervention	Control	Follow-up (weeks)	Measure of anxiety	Outcome	Risk of bias – RoB 2
Naoroibam et al.,[22] India	44 people, 59% men, 36 years old on average	Yoga	Usual routine	4	HADS in English	The score for anxiety in the IG dropped from 10.82±3.86 to 9.91±3.39 (non-significant reduction p=0.13; -8.2%) and in the CG it rose from 10.14±3, 16 for 11.45±3.36 (p=0.06; +12.91%). There was no significant difference between the groups (F [1.21] =3.34; p=0.81)	High risk
Kuloor et al.,[23] India	60 people, 65% women, 42 years old on average.	Yoga	Waiting list	8	HADS-A	In intragroup analyses, anxiety score in the IG ranged from 11.29±2.15 to 5.45±1.34 (-52%; p=0.001) and in the CG it rose from 11.45±2.17 to 12, 48±2.20 (+9%; p=0.001). In the analysis of differences between groups, yoga showed a significant reduction in anxiety (p<0.001) compared to control	Some concern
Carey et al.,[24] United States	44 people, 50% women, 47.5 years old on average	Mindfulness Attention Training by phone	Health coach by phone	8	GAD	Consecutive measurements in the IG: 9.25±5.87; 7.88±6.15 and 7.20±5.33; in CG: 7.50±6.20; 5.0±4.58 and 4.45±4.22. There was a significant difference between the participants regarding the time F(2.74)=4.59; p=0.021. There was no significant difference between group and time, simultaneously	Low risk

RoB - Risk of Bias; HADS-A - Hospital Anxiety and Depression Scale-Anxiety; IG - Intervention group; CG - Control group; CI95% - 95% confidence interval; IDATE - State-Trait Anxiety Inventory; STAIC - State-Trait Anxiety Inventory for Children; ANCOVA - covariance analysis; CBCL - Child and Behavior Checklist; ANOVA - analysis of variance; STAI - State-Trait Anxiety Inventory; RMG - Reiki and music; MOG - only music; HADS - Hospital Anxiety and Depression Scale; GAD - General Anxiety Disorder

ing the main reports.[14] Regarding methodological rigor, 78.6% of the studies presented risk of bias between moderate and high (Figure 2). Among the main factors related to this evaluation were the fact that only three studies used a placebo or sham intervention as control,[13-15] and four articles reported that the control group received no intervention, being referred to as a usual routine, without description of what it consisted of, waiting list or no treatment.[1,12,22,23] Still, most studies evaluated anxiety through self-report of participants;[1,12,13,15,16,18-24] interventions, often due to their characteristics, did not allow blinding of the professionals who offered the treatment;[1,18,21-30] details on the randomization method were absent[12,16,18,20] and there were dropouts or poor adherence of participants to therapy and incomplete reporting of outcomes.[14,17,21,24]

Furthermore, six studies were self-styled as preliminary, pilot-type, in most cases including samples of less than 40 people and short, one-session interventions.[1,12,13,15-22] Some trials may have involved controls very potent actives, which may also have contributed to difficulties in detecting effects in interventions.[16,18,24]

Discussion

This systematic review identified complementary therapies that significantly reduce anxiety in peo-

Figure 2. Methodological assessessment and risk of bias of the studies according to the Risk-of-bias assessment for randomized trials by Cochrane Collaboration

ple living with HIV. The result was also replicated and confirmed by a systematic review evaluating the effectiveness of psychosocial therapies for the mental health of people living with HIV.[25] Among the ten treatments identified, five were effective, and of these, three deserve to be highlighted, considering the balance between the effectiveness of the intervention and the lower risk of methodological bias, which are therapeutic touch and massage, for children, and yoga, for adults.[15,17,23]

Therapeutic touch significantly reduced anxiety in children with HIV, aged 6 to 12 years old, by about 9% of the mean scores after one session. A similar result to that identified in this study was also reported by a pilot randomized clinical trial that evaluated the effect of touch plus reading and relaxing music, implemented by parents in critically hospitalized children.[26] However, studies on the effect of therapeutic touch in children in general are rare.

Massage has shown positive effects in the management of anxiety in both children and adults with HIV. Therapeutic massage was also identified as effective for reducing anxiety symptoms in systematic reviews carried out in other populations, such as children and adult women with cancer.[27,28]

Despite the growing popularity of the use and research on yoga as a complementary therapy, in this study only two trials were identified evaluating its effect, and only one of them showed significant results. This one was classified as having a moderate risk of methodological bias and differed from the previous one mainly due to the longer duration of therapy, which was 2 months instead of 1.[22,23,29] This finding is consistent with a meta-analysis on the positive effects of interventions mind-body type for the mental health of people living with HIV.[30]

Positive effects were also identified in two other body-mind interventions included in this study, in auricular acupuncture concomitant with spiritual therapy and in the program composed of relaxation techniques.[12,18] Both interventions combined more than one technique simultaneously. The combination of multiple therapies may contribute to making the study bias control more challenging, making it difficult to measure the effects of individual techniques.

Most studies have evaluated the effectiveness of using the therapies in adults, which may reflect the rates of use of these treatments by the general population. Studies on the use of complementary therapies by people living with HIV indicate a prevalence of 30% to 90%, with an average of 60%, but the data are inconclusive about their use in children with HIV.[31,32]

Only one researcher reported adverse effects of treatment in their study. Although the literature points out the safety of these practices as one of their many advantages, the absence of reports may be related to the lack of investigation of the variable.[33] In any case, therapies that need to be ingested, such as medicinal herbs, vitamins, minerals and supplements, should receive special attention with regard to adverse effects for people living with HIV, given the possibility of interaction with antiretroviral therapy.[34]

Regarding the quality of the evidence presented, the studies included in this review were at risk of methodological bias. Few studies that evaluated intervention with more than one session reported rates of adherence to therapy. Most randomized clinical trials had a low probability of demonstrating a statistically significant difference, so that no study classified as having a low risk of methodological bias found significant results. Still, the interventions, in general, were short-lived. However, studies are relevant as they contribute to showing the feasibility of trials, demonstrating whether there is a possibility of execution in a practical scenario and identifying trends of potential clinical significance, in addition to the analysis of preliminary effects.[13] When At the same time that the need to develop studies with greater methodological rigor is highlighted, the very nature of interventions with complementary therapies should be considered as an important factor in justifying their biases.

The strengths of this review were the inclusion of studies only of the type randomized and controlled clinical trials, absence of delimitation of cut in time, inclusion of populations regardless of age groups, contemplating groups often made invisible in research, exclusive focus on a single outcome and focus on multiprofessional application techniques. On the other hand, the non-inclusion of other specialized databases, such as Embase and PsycINFO, may have limited the identification of additional studies of interest.

Conclusion

The complementary therapies identified in this study proved to be effective for the management of HIV comorbidity and anxiety. Among the investigated treatments, therapeutic touch and massage, for children, and yoga, for adults, stood out. Thus, in order to improve this important dimension of the quality of life of people living with HIV, it is suggested to increase the availability and integration of these treatments into the care routine for these people. In general, the evidence found presented methodological limitations. The findings of this review indicate the need for experimental studies developed with greater methodological rigor in their designs and that also include the older adult population with HIV, reporting the presence or absence of adverse effects of the therapies, in addition to studies with cost and acceptability analyses, which contribute to decision making in prioritizing the therapy to be implemented.

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Collaborations

Farias OO, Costa AKB, Galvao MTG, Cardoso MVLML and Silva VM contributed to the design of the project, analysis and interpretation, article writing, relevant critical review of intellectual content and approval of the final version to be published.

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