

Appendix 16

Summaries of included systematic reviews of adapted interventions

Study reference

Whitt-Glover and Kumanyika 2009²⁷⁶

Title

Systematic review of interventions to increase physical activity and physical fitness in African-Americans

Aim/objectives/questions addressed in the review

To identify characteristics of effective interventions designed to increase physical activity or fitness among African Americans

Number of studies included in the review

Twenty-nine studies with African American adults

Fourteen studies with African American children

Design of included studies

Controlled trials and RCTs

Interventions included

Physical activity and fitness

Settings included

For adults: churches and other community locations such as YMCAs, community centres or public housing projects chosen for convenience for African Americans; health-care settings – primary care, hospitals and medical centres

For children: schools, community centres, churches, summer camps, internet programmes, neighbourhood clinics, medical centres, etc.

Population included

African American

Date

1985–2006

Key findings

This systematic review focused on increasing physical activity among African American adults and children. In total, 40 of the 43 studies indicated some degree of cultural adaptation. There is evidence that physical activity and dietary interventions which include educational components, including written materials; involving group sessions; and utilising behaviour change theory are successful in improving physical activity and dietary outcomes. The most minimal degree of adaptation was a deliberate recruitment of an African American-only study population. Other adaptations included the use of specific music, e.g. African music, gospel; dancing, e.g. hip-hop, 'afrobics'; direct attempts to change ideas and attitudes about exercise among African American participants; consideration of cultural, social, historical, environmental and psychological factors that had been found to influence physical activity among African Americans. Intervention settings were also an important part of cultural adaptation, e.g. utilising churches. Some studies conducted focus groups and discussions before tailoring the interventions to suit the specific populations included in the study

Although these studies were adapted, it is unclear how cultural adaptations affected intervention results. Only three studies evaluated the effect of utilising a culturally tailored programme compared with the same programme with no or fewer adaptations. The results from these studies indicated that none of the studies showed statistically significant differences between culturally adapted or unadapted interventions

Conclusions

The findings of this review suggest that explicit cultural adaptations do not necessarily result in better physical activity outcomes. The review identifies factors that could have influenced the intervention findings, including the use of the randomised controlled design, implementation of structured exercise programmes and the measures used to assess physical activity. The influence of these factors on the findings, including the influence of culturally adapted strategies, is unclear and requires further research

Comments

The limited number of studies with long-term follow-up suggests that, although various physical activity interventions might increase activity levels in short-term controlled circumstances, there is no evidence that these changes are sustainable. Further high-quality studies of adapted interventions are required to assess if adaptation results in significantly better outcomes

RCT, randomised controlled trial; YMCA, Young Men's Christian Association.

Study referenceHawthorne *et al.* 2008²⁷⁸**Title**

Culturally appropriate health education for type 2 diabetes mellitus in ethnic minority groups

Aim of/objectives of/questions addressed in the review

To assess the effects of culturally appropriate health education interventions for people with type 2 diabetes mellitus in ethnic minority groups

Number of studies included in the review

There were 11 studies in this review, all of which focused on culturally appropriate health interventions for individuals with type 2 diabetes mellitus

Design of included studies

RCTs

Interventions included

Culturally adapted type 2 diabetes mellitus health education interventions

Settings included

Most studies were set in deprived areas, either in rural or in inner city urban settings

Population included

Individuals of ethnic minority communities with type 2 diabetes mellitus of any duration of diagnosis, with or without complications of diabetes. With regard to the populations of interest to this review, there were four studies with African American-origin populations and three with South Asian-origin populations

Date

Until August 2007

Key findings

This review considered the effects of culturally appropriate health education interventions for ethnic minority populations with type 2 diabetes mellitus. Of the three primary outcome measures, blood pressure and quality of life measures showed no significant improvements, whereas glycaemic control [as measured by HbA_{1c} (glycated haemoglobin) levels] showed improvement at 3 and 6 months; however, there was no effect at 12 months post intervention

Of the secondary measures, knowledge scores improved significantly at 3, 6 and 12 months post intervention but there was no change in total cholesterol levels, high-density lipoprotein or low-density lipoprotein between the intervention and control groups at 3 and 6 months post intervention

Conclusions

There is a lack of high-quality data on the effectiveness of culturally appropriate diabetic health education programmes for ethnic minority groups, and the data that do exist are difficult to standardise and compare in a formal meta-analysis. However, it does appear that this type of intervention is effective in improving glycaemic control and knowledge about diabetes in the short to mid-term. There is a need for long-term, well-designed multicentre RCTs that examine a range of different types of health education intervention involving different combinations of educators, link workers or advocates in a number of differing ethnic minority groups

Comments

Of the 11 studies included in the review, four included African American populations and three South Asian populations. This review suggests that culturally adapted interventions may be successful among these ethnic minority populations; however, the outcomes measured in each study varied and this made assimilation of results difficult. The authors recommend that culturally appropriate interventions should be the 'gold standard' for health education programmes for ethnic minority populations. The strategies used for cultural adaptations ranged from tailoring education material based on levels of knowledge in the target population to using recognised theoretical models, and having suitable individuals deliver health education interventions using appropriate language when necessary

RCT, randomised controlled trial.

Study referenceHudson 2008²⁷⁷**Title**

An integrative review of obesity prevention in African American children

Aim of/objectives of/questions addressed in the review

To examine attitudes and perceptions of African American children and parents, and lifestyle behaviours in African American children aged from 2 to 18 years

Number of studies included in the review

A total of 28 studies were included, of which six were experimental RCTs, 14 were cross-sectional, two were longitudinal, five were qualitative and one was mixed

Design of included studies

Qualitative and quantitative studies were included

Interventions included

Obesity prevention interventions, including nutrition and physical activity

Settings included

Any

Population included

African American

Date

1997–2007

Key findings

Although the review mentions culturally appropriate methods used in various studies there is not much detail in relation to qualitative and non-experimental studies. Almost all of the six RCTs were culturally adapted and included the use of dance; involved families in interventions; modified diet; used culturally appropriate newsletters, lectures and comic books; and ran day camps as well as culturally appropriate family interventions, etc. The findings of the planet health study were interesting as they demonstrated a large effect in African American females (compared with control subjects) on reducing obesity prevalence (OR 0.14, 95% CI 0.04 to 0.48), although this study did not have ethnically targeted content

Conclusions

The existing research on obesity prevention that targets African American children and adolescents is limited. Most studies were pilot studies and had insufficient power because of their small sample size and short-term intervention and follow-up. The author states that, although the findings of preliminary RCTs appear to be promising, the final results are still pending

Comments

Although the results of this review highlight the importance of the attitudes and perceptions of the African American population for successfully adapting interventions, more research is needed because of the limited number of RCTs reporting interventions for obesity prevention among African American children and adolescents

CI, confidence interval; OR, odds ratio; RCT, randomised controlled trial.

Study referenceWebb 2008²⁴⁶**Title**

Treating tobacco dependence among African Americans: a meta-analytic review

Aim of/objectives of/questions addressed in the review

To evaluate the overall efficacy of smoking cessation interventions among African American adults and to examine specific study characteristics and methods that influence treatment outcome

Number of studies included in the review

A total of 20 published and unpublished studies evaluating the efficacy of smoking cessation interventions among African Americans

Design of included studies

RCTs

Interventions included

Smoking cessation

Settings included

Any – ranging from clinics to churches, community locations, inpatient hospitals, mail, telephone, etc.

Population included

African American

Date

1984–2006

Key findings

Studies conducted in a clinic setting by a paraprofessional yielded a treatment effect of OR 1.48 (95% CI 1.09 to 2.01) at post test whereas the effect for studies conducted in a church context was of a slightly larger magnitude: OR 1.69 (95% CI 1.08 to 2.65). However, a contrast analysis indicated that this difference was not statistically significant (contrast 1.23, 95% CI 0.73 to 3.19, $z=0.76$, $p=0.22$). The treatment effect for studies testing a culturally specific intervention was OR 1.47 (95% CI 1.12 to 1.91) at the post-treatment assessment. The effect of standard interventions was OR 1.34 (95% CI 0.99 to 1.82). At follow-up the effect for standard interventions was significant (OR 1.35, 95% CI 1.02 to 1.78); however, the effect for culturally specific interventions was not

Conclusions

The findings suggest that a positive relationship exists between smoking cessation interventions and abstinence among African American adults. Results support the overall efficacy of smoking cessation treatment targeting African Americans. The clinical benefit is meaningful in both the short and the longer term. The odds of short-term smoking cessation varied according to seven of the 11 moderators investigated (treatment type, setting, control group, cultural specificity, unit of analysis, outcome measure and biochemical verification). In the longer term, these variables did not differentially affect treatment effects. Optimal treatment conditions include paraprofessional contact and behavioural counselling conducted in either a clinic or a church setting. Treatment effects were also maximised compared with attention placebos or minimal contact controls, and when defined as 7-day PPA or abstinence at the time of assessment. The odds of abstinence were also greatest when evaluated from both the community and individual levels, and when biochemically verified

Comments

Homogeneity tests were not significant and variability in effect size was attributed to sampling errors. The primary treatment modalities included nicotine replacement, bupropion, individual counselling, group counselling, counsellor telephone calls, targeted or tailored print materials, community outreach, video and radio media or a combination of these formats. The ORs for culturally specific interventions do not seem to be much different from those of the standard interventions, although they seemed to have some advantage in the short term

CI, confidence interval; OR, odds ratio; RCT, randomised controlled trial.

Study referenceChen and Tang 2007²⁷⁵**Title**

Review of smoking cessation research among Asian Americans: the state of the research

Aim of/objectives of/questions addressed in the review

To provide an analytical review of population-based efforts to measure smoking prevalence levels among Asian Americans and peer-reviewed smoking cessation research targeting Asian Americans

Number of studies included in the review

Four studies were included; however, the authors supplemented the review by compiling an example of resources available for population-level tobacco survey data for Asian Americans in California

Design of included studies

Two quasi-experimental, one experimental and one non-experimental

Interventions included

Smoking cessation

Settings included

Any

Population included

Asian American

Date

1986–2005

Key findings

This review focuses on smoking cessation interventions among Asian Americans. All four studies were culturally adapted. Two studies were large-scale interventions conducted among Vietnamese, using similar culturally adapted interventions, one resulting in a positive finding and the other showing no effect. Of the other studies included, individuals in the intervention groups had better cessation rates, quit rates and abstinence rates. *p*-values were reported only for one study, which showed that intervention subjects engaged in more quit attempts ($p=0.0001$) and smoking cessation rates of 17% in the intervention group vs 1% in the control group

The cultural adaptations implemented in these interventions were in language- and culturally specific print media, billboard postings, television programmes, counselling, health education materials, etc.

Conclusions

There is very limited documented evidence of smoking cessation interventions for Asian American-origin populations. The interventions identified suggest that scientifically valid, culturally tailored and language-specific interventions are both potentially and practically effective in reducing tobacco usage among ethnically specific Asian American populations. There is a need for additional research on the effectiveness of these interventions. In addition, care must be taken not to generalise these findings to different Asian populations

Comments

Although this review focused on Asian Americans the majority of the included population was Vietnamese

Study referenceShaya *et al.* 2006²⁷⁹**Title**

Addressing cardiovascular disparities through community interventions

Aim/objectives/questions addressed in the review

To identify the components and impact of intervention programmes aimed at reducing cardiovascular disparities

Number of studies included in the review

A total of 10 studies were included and all of them focused on cardiovascular disparities among African Americans

Design of included studies

Not reported; however, studies appear to be a mix of RCTs and quasi-experimental studies

Interventions included

CVD

Settings included

Any

Population included

African American

Date

1966–2004

Key findings

This systematic review was a descriptive review of interventions to reduce CVD among African Americans. All of the included studies showed positive results and the interventions were either culturally tailored or individually tailored. The strategies that were used for cultural tailoring included the location of the intervention – church-based interventions, barber shops, beauty salons, etc. – and liaising with the community and training lay individuals from the community to deliver health programmes. One study used the Healthier People Health Risk Appraisal (HPHRA) as a culturally appropriate recruitment strategy

Among the studies included only one had a comparison group to evaluate the effectiveness of cultural tailoring and this showed positive effects of cultural tailoring

The studies that used culturally adapted interventions found significant improvements in BMI, waist circumference, dietary fat, exercise, blood pressure, etc.

Conclusions

The review concluded that these programmes are short term and their impact is short-lived. This highlights the need for sustainable programmes possibly implemented through community partnerships

Comments

The review focuses on CVD among African Americans; the findings are positive when the intervention is culturally tailored. It appears that the intervention setting and community involvement are important aspects of cultural tailoring

BMI, body mass index; CVD, cardiovascular disease; RCT, randomised controlled trial.

Study referenceBanks-Wallace and Conn 2002²⁴⁵**Title**

Interventions to promote physical activity among African American women

Aim of/objectives of/questions addressed in the review

To review interventions designed to promote physical activity among African American women

Number of studies included in the review

There were 18 studies included in the review, all of which focused on increasing physical activity among African Americans

Design of included studies

Clinical trials – seven RCTs and eight pre–post designs and three studies that compared various experimental groups with each other

Interventions included

Physical activity

Settings included

Any – three neighbourhood recreation centres, three churches and clinics or hospitals

Population included

Originally intended to focus only on African American women but because of the paucity of research the authors decided to include studies in which African American women comprised at least 35% of the sample (range 41–98%)

Date

1984–2000

Key findings

This study focused on increasing physical activity among African American women. Of the 18 studies, 12 were culturally adapted and nine of these 12 studies reported positive findings with regard to physical activity, weight loss or BMI. Although the results were descriptive, the findings suggest that African American women increase their physical activity in response to culturally adapted interventions; however, the sustainability is questionable

Conclusions

Although the number of studies designed to promote activity among African American women is growing, the study designs and measurement limitations combined with inadequate replication of intervention components prevent the existing evidence from forming a solid base for practice. Further research is needed to illuminate which components are critical for efficacious interventions among this population

Comments

This review addresses interventions to promote physical activity among African American women. The findings of the review suggest that culturally relevant strategies are effective for promoting physical activity and dietary changes in this population. The strategies for cultural adaptation focused heavily on factors related to the delivery of interventions, recruitment and choice of location, whereas minimal attention was devoted to ensure the cultural relevance of retention strategies, data collection instruments and methods of evaluation

BMI, body mass index; RCT, randomised controlled trial.