

# Strategies to Recruit Minority persons: A Systematic Review

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**Abstract** To identify and describe strategies used to recruit persons of ethnically and culturally diverse backgrounds and to examine their reported effectiveness. Studies ( $n = 26$ ) reporting on recruitment of persons of different cultural and ethnic backgrounds, published in English between 1995 and 2012, were included in this systematic review. Data on the type of recruitment strategies and overall reported effectiveness of the strategy in recruiting participants were extracted. The vote counting method was used to synthesize the findings on effectiveness. Both proactive (face-to-face) and reactive recruitment strategies (collaboration with key leaders, snowball and word of mouth, printed material, and broadcast media) and providing compensation, being flexible, building rapport and trust, and employing ethnically and culturally diverse research staff were effective in recruiting participants. A list of strategies that are effective in recruiting persons of diverse ethnic and cultural backgrounds were generated. Researchers can select the evidence-based strategies that are most applicable in the context of their study.

**Keywords** Recruitment · Ethnic minorities · Research participants

## Introduction

Recruitment is the process of finding and informing potentially eligible participants about a study [1, 2]. It is fundamental in research as it facilitates the accrual of the required sample size. Insufficient recruitment may lead to adverse scientific consequences. It reduces the sample size, which yields low statistical power and increased risk of Type II error [3]. Inappropriate recruitment may potentially alter the sample composition relative to key characteristics such as risk level, which may influence the study findings. Problems with recruitment may also have economic implications for a study, illustrated with increased costs and prolonged time period for the recruitment of participants [4–7]. Often, recruitment is a challenging, time-consuming and costly process, particularly in studies that target participants of ethnically and culturally diverse backgrounds.

Different strategies have been used to enhance recruitment. These have been categorized into proactive or direct, reactive or indirect and combination strategies [8]. Proactive recruitment strategies involve the direct contact with potential participants to provide information about the study. The proactive strategies include face-to-face interactions, presentations, and attendance at events such as health fairs. Reactive recruitment strategies involve indirect contact with potential participants. They consist of informing the public or the target population about the study and requesting interested persons to contact the study personnel to receive further information about the study. Reactive recruitment strategies include printed material (e.g. newspaper advertisements, newsletters, flyers); media outlets (e.g. radio, television), and word-of-mouth referrals by healthcare professionals or community leaders. Combination strategies refer to the use of both proactive and reactive recruitment strategies [8].

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The National Institutes of Health (NIH) Revitalization Act (1993) and other funding agencies such as the Canadian Institutes of Health Research (CIHR) have recognized the importance of including persons of different ethnic and cultural backgrounds in research to expand the generalizability of findings to this subset of the target population. Evidence [9, 10] suggests that an inadequate number of ethnically and culturally diverse persons participate in intervention and epidemiological research. This low participation rate limits understanding of the biological or the clinical makeup as well as the treatment effects in of this subset of the population. Therefore, the relevance and applicability of a study's results to various ethnic and cultural groups are jeopardized [11]. The NIH regulatory changes, specifically the Revitalization Act, mandate the development of guidelines to support the inclusion of culturally and ethnically diverse populations in research. Enrollment of the latter populations in epidemiological and clinical research is necessary to generate knowledge of their health needs and to design culturally tailored interventions. Recruitment of persons with diverse backgrounds is reported as challenging and associated with several factors.

### Barriers to Recruitment

Evidence suggests that recruiting persons of ethnically and culturally diverse backgrounds is challenging for two interrelated reasons. The first related to previous unethical conduct of research involving participants' abuse and deception, as well as the withholding of treatment for the purposes of research. An example highlighting the abuse of participants is the Tuskegee Syphilis Study, performed between 1931 and 1972 in the United States [12]. The study aimed to determine the course of syphilis in African American men. Participants were deceived through incomplete and misleading consent. They were misinformed regarding diagnostic tests and denied medical treatment specifically penicillin, which was an effective treatment for syphilis [13, 14]. Minority populations were also exposed to unethical treatment in research studies well before the Tuskegee Syphilis study. The Nazi Medical Experiments implemented by the Third Reich in Europe between the 1930s and 1940s [12] exposed persons belonging to some ethnic or racial groups to sterilization, euthanasia, and physical harm such as hypothermia, surgery, and traumatic injuries [15].

The unethical conduct of research resulted in mistrust and fear. In addition, persons expressed concerns associated with the sense of being dehumanized and treated like "guinea pigs" in experiments [16]. These concerns, along with the fear and mistrust impedes recruitment of ethno-culturally diverse participants [13, 14, 17–19].

Additional barriers to recruitment include personal characteristics such as participants' political perspectives, health status, language, religion, cultural values and beliefs, and literacy levels [20, 21]. Practical issues such as lack of access to transportation and child care [16, 22], inability to take time off work as a result of financial constraints [16, 22, 23], and lack of knowledge regarding research [16, 23] interfere with recruitment.

Following the NIH Revitalization Act (1993), research practice shifted to include persons of diverse ethno-cultural backgrounds in studies. The recruitment of such populations however warrants careful planning and preparation, as well as the implementation of various strategies [21]. The strategies are used simultaneously to address multiple barriers that impact active enrollment of diverse client populations in research. The planning requires delineation of recruitment strategies to be used and determination of those reported effective. Identification of effective strategies is important to guide researchers in selecting those found most helpful in increasing the representation of persons of ethnically and culturally diverse backgrounds.

The purpose of this systematic review was twofold: (1) to describe strategies used to recruit persons of ethnically and culturally diverse backgrounds; and (2) to identify strategies that were reported as effective in recruitment.

## Methods

### Selection Criteria

Studies were included in the systematic review if the following selection criteria were met: (a) the sample represented persons of ethnically and culturally diverse backgrounds; (b) the strategies used to recruit participants were described; (c) the study reports were written in the English language and published between 1995 and 2012. The start date of 1995 provided a time period following the Revitalization Act for publications of studies that applied strategies to recruit diverse populations.

### Search Strategies

A literature search was conducted to identify studies that recruited persons of ethnically and culturally diverse backgrounds and reported on the type of recruitment strategies applied. The databases used to locate relevant publications were: Cumulative Index to Nursing and Allied Health Literature (CINHAL), Cochrane Review, MEDLINE (PubMed), PSYCHINFO and EBSCO. The search was done with the following key words used in combination: recruitment, minority and research. The initial screening of publication titles and abstracts was conducted by two

researchers working independently. To ensure comprehensiveness of the search, the reference list of selected papers was reviewed to identify additional studies targeting minority populations. A total of 2,500 articles and abstracts were reviewed. Of these, 2,450 were excluded because they did not meet the selection criteria. Of the 50 studies that met the criteria, 24 were excluded because of redundancy. A total of 26 studies comprised the sample for this systematic review.

## Data Extraction

Data were extracted on study characteristics and recruitment strategies. The following information of the study characteristics was obtained: (a) author's last name and year of publication; (b) targeted cultural or ethnic group; and (c) country in which the study was conducted. Data related to recruitment strategies included: (a) type of specific strategies used in the study; and (b) the reported effectiveness of the strategies in recruiting participants, as indicated by the study findings or as discussed by the researchers.

## Data Analysis

Descriptive statistics were used to characterize the studies. The vote counting method was applied to synthesize the studies' findings related to the reported effectiveness of the strategies [24]. The vote counting method consisted of determining the number of studies which findings indicated that the strategies were successful in recruiting persons of ethnically and culturally diverse backgrounds.

## Results

### Study Characteristics

The characteristics of the selected studies are presented in Table 1. All 26 papers were published between 2000 and 2010. The majority ( $n = 23$ , 88.5 %) of the studies were conducted in the United States whereas two were done in Australia (7.6 %), and one in Canada and the United States (3.8 %). The reported target population included specific ethnic or cultural groups: Muslim ( $n = 1$ , 3.8 %); African American ( $n = 8$ , 30.7 %); Middle Eastern ( $n = 1$ , 3.8 %), Chinese ( $n = 2$ , 7.4 %); Latino ( $n = 1$ , 3.8 %) and Hispanic ( $n = 2$ , 7.4 %); a mix of groups such as African American and Latino ( $n = 3$ , 11.5 %); African American and Non-Hispanic White ( $n = 1$ , 3.8 %) or a combination of groups encompassing Caucasian, Hispanic,

Latino, Italian, Greek, African American, American Indian, and Vietnamese ( $n = 7$ , 26.9 %).

### Recruitment Strategies

In the majority ( $n = 25$ , 96 %) of the studies, multiple recruitment strategies were implemented, whereas one study (4 %) used only one recruitment strategy [25]. A variety of specific strategies were mentioned. These were categorized into proactive or direct and reactive or indirect and are described next.

#### Proactive Recruitment Strategies

In the reviewed studies, only one proactive strategy was implemented to recruit persons of diverse ethnic and cultural backgrounds. It involved direct face to face interactions of research personnel with potential participants. The interactions consisted of presentations at community centers, health fairs, churches, senior centers, street fairs, and farmers market. The presentations aimed at informing potential participants about the nature of the study, inclusion and exclusion criteria, expectations of being a participant in the study, the consent form process, and benefits and potential risks of participating in the study [8, 26–28]. The presentations also offered potential participants the opportunity to ask questions regarding the study and to meet the research team [26].

#### Reactive Recruitment Strategies

In the reviewed studies, reactive strategies involved indirect contact between the research personnel and potential participants. Research personnel enlisted the assistance of referent members in the community or used the media to inform potential participants of the study. Reactive strategies that were commonly applied included collaboration with community leaders; referrals by healthcare professionals; snowballing; printed material; and broadcast media. Collaboration with community leaders consisted of gaining their support for the study and involving them in the recruitment of participants. Community leaders were well respected individuals within their community such as pastors or priests. They have built rapport and gained the trust of members of their communities. Community leaders were gatekeepers who had an understanding of the cultural beliefs and values of the target population and therefore had the potential to provide insight into the recruitment process [23]. They assisted the researcher in choosing strategies that were most suitable and relevant to the target ethnic and cultural groups and in actually recruiting participants. The second proactive recruitment strategy consisted of referrals from healthcare professionals such as

**Table 1** Overview of study characteristics

Author	Country	Study design	Target population
Banks-Wallace et al. [30]	United States	Descriptive	African American
Brown et al. [39]	United States	Descriptive	Combined (African American, Hispanic and Caucasian)
Cabral et al. [48]	United States	Case control study	African American and Latino
Chasan-Taber et al. [44]	United States	Observational prospective cohort	Hispanic
Ellish et al. [31]	United States	Descriptive	African American
Feldman et al. [42]	Australia	Quantitative	Combined (Vietnamese, Greek, Italian, Maltese, Macedonian Croatian and Anglo Celtic)
Gilliss et al. [26]	United States	Longitudinal	Combined (African Americans, Non-Hispanic Europeans, Mexicans and Central Americans)
Hendrickson [25]	United States	Qualitative	Hispanic
Hines-Martin et al. [49]	United States	Descriptive	African American
Horowitz et al. [27]	United States	Community based participatory research	African American and Latino
Huang and Coker [16]	United States	Descriptive	African American
Jones et al. [29]	United States	Hermeneutic phenomenology	African American
Kahan and Al-Tamimi [34]	United States	Quantitative	Middle Eastern
King et al. [28]	United States	Prospective	African American
Kennedy et al. [38]	United States	Randomized clinical trial	African American and Non-Hispanic
Knobf et al. [23]	United States	Descriptive methodological	Combined (African American, Latino, Hispanic, Asian and Native American)
Larkey et al. [36]	United States	Community based participatory	Latino
Lee et al. [35]	United States	Cross-sectional	Chinese
Mohammadi et al. [21]	Australia	Phenomenology	Muslim
Moinpour et al. [50]	United States	Randomized controlled trial	African American
Moreno-John et al. [19]	United States	Descriptive	Combined (African American, Latino, American Indian)
Nichols et al. [37]	United States	Randomized controlled experimental trial	Combined (African, Black, Caucasian, Hispanic, Latino)
Taylor-Piliae et al. [32]	United States	Quantitative	Chinese
Williams et al. [41]	Canada and United States	Meta-analysis	Combined (Caucasian, Black, African American, Hispanic, Latino, Asian American)
Webb et al. [8]	United States	Randomized clinical trial	African American
Witte et al. [47]	United States	Randomized controlled trial	African American and Latino

physicians. The professionals introduced the study to potentially eligible persons of the study and provided them with study contact information.

The third reactive recruitment strategy was snowball or word of mouth. Word of mouth involved spreading the word about the study by a potential participant that heard about the study or actually participated in the study [29]. The fourth reactive recruitment strategy involved printed materials such as brochures or posters to inform persons about the study's inclusion criteria and contact information. The fifth reactive recruitment strategy used broadcast media to inform the target population of the study. Specifically, advertisements were placed through media outlets such as television, radio or websites targeting different

cultural and ethnic groups (e.g. Spanish-language television and Chinese radio programs) [8, 21, 26, 28–32, 41]. Broadcast media also involved the development of video recordings that captured the researcher explaining the study or persons of diverse ethnic and cultural backgrounds participating in the main research activities (e.g. completing a questionnaire). The video recordings were played routinely in clinics' waiting areas or showed to persons interested in hearing more about the study.

#### Reported Effectiveness of Strategies

Of the 26 studies, eleven (42 %) did not report on or discuss the effectiveness of strategies used to recruit persons

of diverse ethnic and cultural backgrounds. In the remaining 15 studies, the researchers commented on the strategies' effectiveness. Snowball ( $n = 5$ , 33.3 %) was reported as effective in recruiting persons of Muslim, Middle Eastern, African American, and Chinese backgrounds [21, 29, 31, 34, 35]. Collaboration with key community leaders ( $n = 5$ ; 33.3 %) was considered successful in recruiting Muslim, Caucasian, Hispanic, Latino, and African American persons [8, 21, 27, 36, 37]. Media broadcast ( $n = 5$ ; 33.3 %) was reported effective in recruiting Caucasian, Hispanic, Latino, Non-Hispanic European, Mexican, and African Americans [8, 25, 26, 37, 38]. Printed material ( $n = 9$ ; 60 %) was viewed as successful in recruiting Caucasian, Hispanic, Latino, African, Non-Hispanic European, Mexican, Middle Eastern, and Chinese Americans [8, 26, 28, 31, 32, 37–39]. Face-to-face presentations at events ( $n = 5$ ; 33.3 %) such as health and street fairs attended by different target populations was reported as effective [8, 26–28, 37].

Additional recommendations for successful recruitment were: employing ethnically and culturally diverse research assistants for recruitment and data collection; providing compensation and incentives; having research staff who are flexible, accommodating, and able to build trust and rapport with participants of ethnically and culturally diverse backgrounds.

## Discussion

The findings of this systematic review showed that proactive and reactive strategies are successful in recruiting persons of different ethnic or cultural backgrounds. The proactive strategy that was reported as effective consisted of face to face interactions. Face to face interactions with ethnically and culturally diverse persons have the potential to decrease barriers and reservation about participating in a research study. Potential participants get to know the researcher in person which may enhance trust. The interactions promote discussion which may dispel any misunderstanding about any aspect of the study.

Collaboration with key community leaders is reported as an effective reactive strategy. Evidence suggests that ethnically and culturally diverse persons are more inclined to participate in research when community leaders support the research being conducted and are actively disseminating information about the study to their community [21, 40, 41]. Thus, community leaders act as the liaison between researchers and potential participants [42]. Second, snowball is found effective in recruitment. This finding is consistent with evidence indicating that this strategy may be used to locate hard-to-reach potential participants of diverse cultural and ethnic backgrounds [29]. The use of

word of mouth or snowballing as a recruitment strategy may decrease anxiety and distrust from potential participants because they hear about the study from their friends, co-workers or family members who participate in the research study and are trusted [29, 43]. Third, printed material shows effectiveness in recruiting participants. Printed material can take the form of putting advertisements in newspapers or newsletters with wide readership and high acceptability by culturally or ethnically diverse populations (e.g. Chinese newsletters and newspapers). Printed material also involves distribution of flyers or brochures in local facilities that are frequently visited by members of the target community (such as churches, grocery stores). Fourth, broadcast media is reported as effective in recruiting participants. Broadcast media consists of placing advertisement in television, radio and website with high accessibility to different cultural and ethnic populations.

In addition, having ethnically and culturally diverse research assistants and members of the research team is frequently recommended. Findings indicate that ethnicity, race, and sex of the research personnel impact participants' cooperation [44]. Specifically having study personnel of the same ethnicity or culture as the target population reduces fear and mistrust by potential participants [44]; participants feel comfortable and at ease when engaging in discussions with persons sharing the same background [33, 45, 46]. Providing compensation and incentives promotes participation as it covers expenses related to travel, child care, and loss of pay for taking time off work which facilitates engagement in a research study [39, 41–44]. Research personnel are encouraged to be flexible and accommodating for participants [47], to develop trust with potential participants [23, 41, 42]. This is accomplished by answering participants' questions related to the study, providing correct information about the study and the requirements of being a participant in a study, as well as potential risks. Building a rapport and gaining the trust of such persons may decrease fear of participating and distrust of research personnel; this in turn, may potentially increase enrollment.

## Conclusion

Recruiting persons of ethnically and culturally diverse backgrounds is challenging for researchers because of identified barriers such as previous unethical conduct, fear, mistrust, and language barriers. However, enrollment of these persons in research is important to develop an accurate understanding of their health condition and response to treatment. Findings from this systematic review suggest the use of both proactive (e.g. face-to-face

interaction) and reactive recruitment strategies is successful in recruiting diverse client populations. A list of useful strategies is generated to assist researchers in selecting those most relevant to the target population. Researchers are recommended to continue to focus on implementing and identifying the most efficient and effective recruitment strategies to recruit persons of different ethnic and cultural backgrounds in research.

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