

Programs to improve equitable access to entrepreneurship in the United States, a systematic review

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Abstract

With more attention to the effects of social determinants on life opportunities and health outcomes for minority populations, increasing access to entrepreneurship is often cited as a solution to improve economic mobility. We conducted a systematic review of the literature on the effectiveness of programs with the goal of increasing entrepreneurship among racial and ethnic minority populations. We summarize the evidence for community and school-based efforts as well as preferential procurement and affirmative action programs at various levels of implementation. Preferential procurement programs were the most commonly assessed and had the largest body of evidence for effectiveness; however, variation in effectiveness of associated programming provides guidance for increasing the impact of future iterations. In addition to an evidence summary for the full range of programs identified, we provide guidance for increasing validity of program evaluation through improved research methods and reporting.

Introduction

A key driver of health inequities, differences in economic opportunity is associated with extensive differences in life expectancy among racial and ethnic minority populations (1–3). Increasing access to entrepreneurship for minority populations has been identified as a potential mechanism of reducing economic inequalities (4–6). Based on our calculations of the most recent data from the United States Census Bureau, 4.1 per 1,000 adults ages 18-64 owned a business that is less than two years old in 2018. For Black and African American adults, this rate is 0.9 per 1,000 while for Hispanic Americans the rate is 1.6 per 1,000 (7). To increase access to business ownership, significant efforts to decrease systemic barriers will be a necessity.

With more than 400 years of systemic and institutional racism in the United States, access to business ownership for many racial and ethnic minority populations is not just unequal but inequitable. Starting a business requires individuals to have sufficient financial resources. Significant differences in generational wealth and income inequality produce an unlevel playing field for business ownership opportunities. Furthermore, inequitable access to education, business loans, mentorship, and many other facilitating factors disproportionately impact people of color and further divides the chasm of opportunity for entrepreneurship (8–12).

The 2020 coronavirus pandemic has and continues to quickly exacerbate inequities in business ownership by race and ethnicity. The effects of social distancing regulations on the closure of small businesses and the virus' toll on population health has disproportionately affected underserved populations (13–17). Between February and April of 2020, the pandemic was associated with a historic drop in business ownership with 22% of business owners closing their doors (16). For Black and African American owned businesses, the proportion closing during this time was 41%; for Latinx owned businesses, the proportion was 32%.

Entrepreneurship and small business owners are broadly supported across political party lines. Through Small Business Administration initiatives, several technical support organizations are in place in communities across the United States, including Small Business Development Centers and Women's Business Centers. Other programs to bolster support for aspiring entrepreneurs and small business owners include incubator or accelerator programs (18,19). Another category of programs include microloan programs, with a focus on borrowers

with subprime credit (20,21). Other efforts to expand entrepreneurship include education efforts woven into the K-12 curricula as well as through college-level degree programs and training courses (22,23). While programs within each of these categories may have some consistency in offerings, the diversity of both programmatic goals and the populations served can make it difficult to disentangle the key ingredients for effective intervention (18,24–26).

Recently, the “Start Us Up” initiative led by the Ewing Marion Kauffman Foundation and supported by a coalition of over 150 organizations across the county, has outlined a new business plan for the United States that includes a set of policy and programmatic recommendations to support entrepreneurship (27). A key aspect of this plan is the focus on equity in access to entrepreneurship for racial and ethnic minority populations. In order to best serve minority populations and their increased opportunities for business ownership, a deeper understanding of the effectiveness of existing programs for these groups is needed.

To understand the existing landscape of evidence-based programs and policies, we completed a systematic review of the peer reviewed literature. Rather than broadly looking for programs with evidence of efficacy in the general population, we were interested in interventions that were evaluated through an equity lens. Specifically, we searched for intervention evaluations that were focused on efficacy for racial and ethnic minority populations in the United States.

Research Methods

To define study inclusion criteria, we used a modified-PICOTS (Population, Intervention, Comparison, Outcomes, Timing, and Setting) framework (28). A detailed description of each aspect is presented in Table 1. The study population was required to be a minority racial or ethnic group, or a study was conducted in a broader population could be included if the evaluation included an assessment of differential outcomes for minority populations. We limited the review to studies conducted in the United States.

Programs and policies designed to increase access to business ownership were the interventions of focus. We broadly defined access to business ownership to include all phases of business development including start-up, maintaining operation, and growth. Interventions could be focused on generating change at various levels including individuals, organizations, and municipal jurisdiction. To accommodate the limited amount of evidence, we did not require

Table 1. Study inclusion Criteria

Population	Adults and youth from underserved populations, specifically racial and ethnic minority groups
Intervention	<ul style="list-style-type: none"> • <i>Programs designed to increase access to business ownership at the individual-level.</i> Examples include mentorship, technical assistance, business leadership, and low interest or zero interest business loans programs. • <i>Programs designed to increase access to business ownership through interventions targeted at the level of the entrepreneurial support ecosystem.</i> The entrepreneurial ecosystem is defined as the collective set of organizations and individuals that support aspiring entrepreneurs and small business owners. Examples of programs at the level of the entrepreneurial support ecosystem include efforts to increase trust, connectivity, and collective action among organizations within the local ecosystem. • <i>Policies designed to increase access to business ownership at the federal, state, local, or organization level.</i> Examples of policies include tax benefits and regulations for contract procurement.
Comparison group	<ul style="list-style-type: none"> • Head to head comparison or an inactive comparison group (e.g. waitlist), all with black entrepreneurs/potential entrepreneurs • Pre-post analysis of a population of black/racial and ethnic minority groups entrepreneurs/potential entrepreneurs • Subgroup analysis: black vs. white participants
Outcomes	<ul style="list-style-type: none"> • Individual-level outcomes: entrepreneurial interest/aptitude, number of business started, access to start-up capital, employment, health outcomes • Business-level outcomes: business survival, firm size (number of employees) and revenue • Systems-level outcomes: proportion of contacts to minority owned businesses, proportion of entrepreneur support organizations who are culturally competent • Population-level outcomes: change in the equity gap of rate of new businesses or total business ownership by race
Timing	2000 - present
Setting	The United States
Publication type	Peer-reviewed journal articles

a comparison group for evaluation and included studies with an assessment of differences among the study population pre- and post-intervention. Outcomes were also very broadly defined to allow for an open and inclusive assessment of the existing evidence.

After defining the study inclusion criteria, we designed a systematic literature search to scan the peer reviewed evidence for relevant studies. We searched four databases in total, with two databases specific to business research and two focus on social science literature and health outcomes. Web of Science provides a comprehensive index of citations related to the

social, physical, and theoretical sciences. The Proquest Entrepreneurship Database includes numerous types of literature oriented to small business topics. EBSCO’s Business Source Complete includes peer-reviewed works as well as a variety of other resources on all facets of business. PubMed provides an extensive citation index of medical and social journals.

We used a Boolean search strategy to identify articles that were relevant to our population and interventions of interest. An overview of the search strategy is provided in Table 2. Detailed descriptions of the search strategy used for each database is provided in an appendix.

Table 2. Literature Search Strategy

Search terms (“anywhere” not limited to title, abstract, key words)

Boolean search: (“population terms”) & (“intervention terms”) & (“other terms”)

Population	African American OR Immigrant OR Hispanic OR Ethnic Minority OR Racial Minority
Intervention	((entrepreneur* OR microenterprise OR small business) AND (program OR policy)) OR business assistance OR business incubators
Other	(evaluation OR assessment)
Other limits	Source: Peer reviewed journal Publication date: 2000-2020 Location: United States Language: English

The lead author trained two research associates to review abstracts for potential inclusion. All abstracts were reviewed by both associates and only one person was required to identify the abstract as a study that may meet inclusion criteria for a study to move forward to full text review. Using a decision tree with a hierarchy of questions specific to the predefined inclusion criteria, both associates reviewed articles at the full text level and identified reasons for exclusion if an article was not included. Disagreements on reason for exclusion or inclusion at the full text level were discussed until consensus could be reached. A third party was available for input when agreement was not successfully met during the arbitration process. Abstract and full text article reviews were tracked in Zotero, a program for reference management. The abstract and article review process is presented in a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) diagram (29).

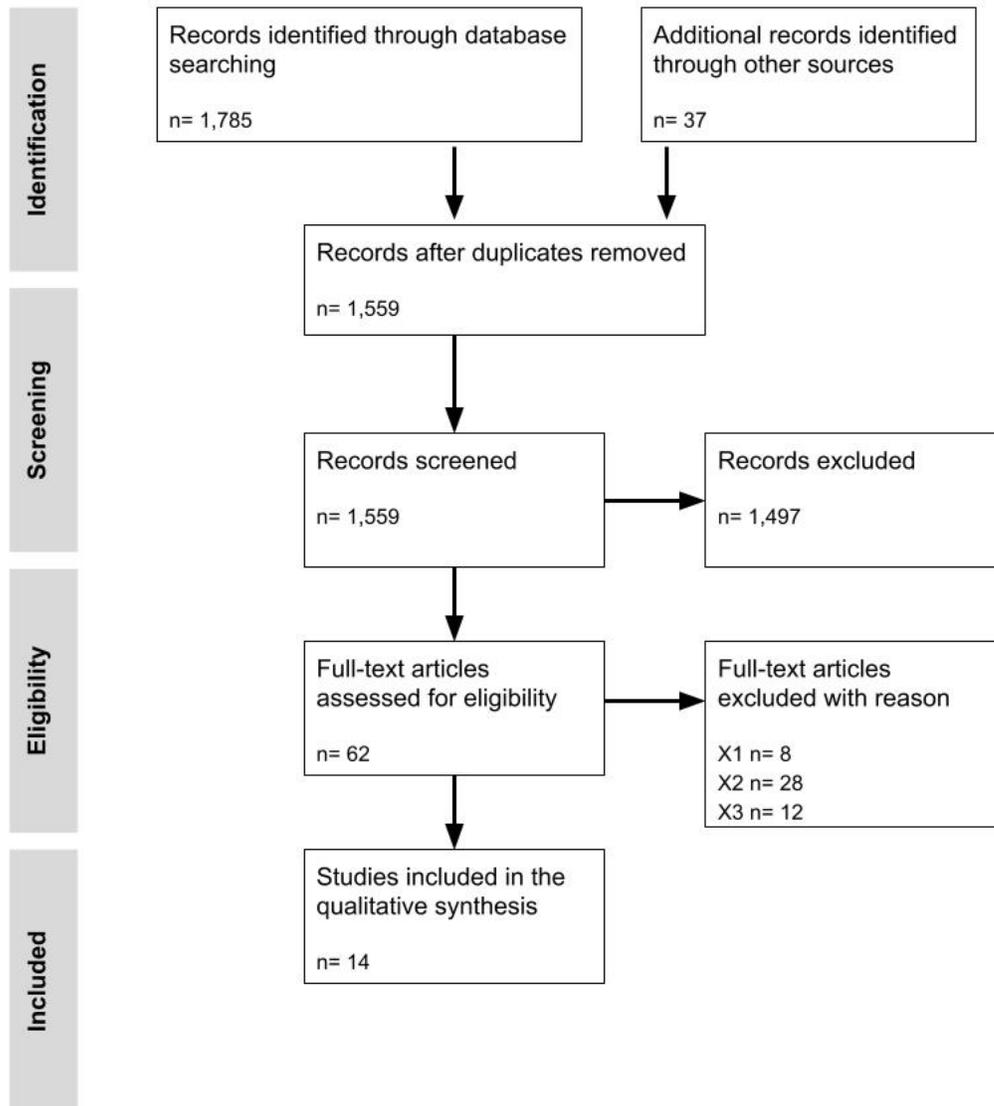
Evidence from included studies was abstracted into summary tables by one associate and reviewed for accuracy by the second research associate. Only comparisons and outcomes relevant to our research question were included in the summary tables. Specifically, all outcomes for studies with a sample consisting of only a racial and ethnic minority populations were included. To maximize the inclusion of relevant studies, we included studies with a study population defined as “disadvantaged” (per the authors definition) if 90% or more of the sample was from a racial or ethnic minority population or if the sample was matched based on these characteristics. For studies that included both minority and non-minority racial and ethnic populations, we included comparisons of outcomes between minority and non-minority study participants through a subgroup analysis.

Results

After combining the results, removing duplicates from the systematic search of the four literature databases, and completing hand searches of relevant articles we identified 1,559 articles to assess for inclusion at the abstract level-(Figure 1. PRISMA Diagram). The references cited in all included articles and relevant background articles identified during the abstract review were hand searched for potential includes that may have been missed in the systematic search. Of these articles, 62 moved forward to the full text review stage. Disagreements on article inclusion and reasons for article exclusion between the two associates happened for 13 articles. Consensus was established through discussion among associates for all but two of the articles for which the lead author assisted in arbitration. We identified 14 articles to be included in the qualitative summary of the literature.

We identified programs and policies that covered a range of intervention approaches. Programs evaluated in the included studies fell into three broad categories of intervention: youth and young adult programs that were often school-based programs for students, training and technical assistance programs for aspiring and current business owners, and public policies and programs. The most commonly studied efforts were associated with affirmative action programs and preferential procurement policies at the local, state, and national level. Smaller-scale programs were also evaluated in several studies, though no program was evaluated in more than one study.

Figure 1. PRISMA diagram



Few evaluations were conducted in a population composed solely of individuals from racial and ethnic minorities or immigrant populations. More commonly, authors provided insight on differences in program efficacy through an analysis of differential effects by population. Though authors often reported the results of extensive research methods to evaluate the research questions posed in *their* study, the team extracted evidence into the summary tables for research that directly answered *our* research question. In the summary tables, we report evidence from the most comprehensive analysis presented by the authors in a plain language summary for the purposes of this review. While we did not identify any major cause for concern regarding the internal validity of studies, the rigor of research methods applied and comprehensiveness of reporting varied extensively across studies.

Policy-based interventions to promote equity in entrepreneurship

Federal procurement programs with the goal of increasing contract acquisition among minority owned businesses were the most commonly studied efforts. Several studies assess the impact of the Small Business Administration efforts to diversify contract procurement for all small, disadvantaged business enterprises (DBE) across industries throughout the United States (30–33), others were focused on federal contracts in specific industries such as the Federal Aviation Administration (34) and the Federal Highway Administration (35). One study was specific to contracts for a particular local program, the Chicago’s Metropolitan Pier and Exposition Authority (36). Specific SBA Section 8(a) programming that supplemented the SBA efforts to identify and certify Minority Owned Enterprises (MBEs), specifically participation in the program was the focus of two articles (30,31). The impact of Affirmative Action policies at the state and local level on the rates of self-employment among minority populations was examined in one study meeting our inclusion criteria (37). Each of these studies is outlined in Table 3 with the evidence across studies summarized below.

Overall, the evidence for preferential contract procurement policies support this approach as a viable mechanism for increasing equity in business ownership through greater contract acquisition, business growth, increases in revenue, and business viability (30,32–36). Two studies also showed a decrease in unemployment rates in minority communities associated with this policy approach (33,36). Using a qualitative approach, one study included feedback from program participants who described how the program benefited their MBEs via three areas of growth: opportunity identification, opportunity evaluation, and opportunity exploitation (32).

However, studies that went deeper into their attempts at understanding why and when the preferential procurement programs were effective provides important additional context. Beyond federal designation as a MBE, the SBA programs often include additional offerings to assist in the development of businesses in the Section 8(a) program including business training programs, counseling and marketing assistance, mentorship by more experienced government contractors, surplus government property, SBA backed loans, and bonding assistance. Participation in these supplemental programmatic offerings was not associated with greater likelihood of a business staying open than already provided by MBE certification (30). However,

Table 3. Public Programs and Policy-based interventions to promote equity in entrepreneurship

Intervention, Population Served	Key Program Components	Program Results
<p>Preferential Procurement, US SBA 8a (32)</p> <p>Qualitative review of Inc. 5000 firms and interviews with 30 entrepreneurs with businesses less than 10 years old in Los Angeles area</p>	<p>It is a stated goal of preferential procurement programs to facilitate access to markets for the minority owned businesses served with the intent of enhancing the businesses' profitability and growth.</p> <p>-</p>	<p>Based on qualitative assessment, preferential procurement programs increased market access and thus, allowed participating minority owned businesses to leverage their certified MBE status to attain greater profitability and growth. Expanding market access was a benefit for minority businesses regardless of their goals for growing their businesses. Evidence for three specific areas of the authors model for program influence (opportunity identification, opportunity evaluation, and opportunity exploitation) were presented through qualitative analysis.</p>
<p>Small Business Administration's 8(a) Program - Supplemental Supports (31)</p> <p>36 responses from firms in the NY district</p>	<p>Beyond MBE certification, the program is divided into two stages: (1) the development stage where they focus on business development assistance, and (2) the transitional stage where they work on overcoming remaining elements of economic disadvantage and prepare to leave the program. Participation could last up to 9 years.</p>	<p>The results of the survey indicate those who participated in the program had the following outcomes: (1) over time there was a change in accounting and finance management as they became better equipped to strive for firm growth, (2) over time there was a decreased need for marketing assistance and assistance obtaining financing, and (3) an increase in firm size as a function of time spent in participating in the program.</p>
<p>Small Business Administration's Section 8(a) Program - Supplemental Supports (30)</p> <p>Over 16,000 small business with contracts awarded, with 6,713 defined as small disadvantaged businesses (3738 of which participated in the Section 8(a) program)</p>	<p>The author examines the efficacy of the SBA section 8(a) program in increasing income and growth of minority owned businesses.</p> <p>In addition to the SBA preferential procurement programs, Section 8(a) participants also receive additional benefits including access to assistance business training programs, counseling and marketing assistance, mentorship by more experienced government contractors, surplus government property, SBA backed loans, and bonding assistance.</p>	<p>Compared to other SBA priority groups, the Section 8(a) program had no significant impact on whether a business remained viable or not during the time frame examined after adjusting for the positive effects of being identified as a small disadvantaged business.</p> <p>In contrast, participation did positively impact growth in both employees and sales for the Section 8(a) participants after adjusting for the effects of being identified as a small disadvantaged business.</p>

Table 3. Continued

Intervention, Population Served	Key Program Components	Program Results
<p>Federal Aviation Administration's Disadvantaged Business Program (34)</p> <p>5,385 FAA contracts representing nearly all for the 2004 year; 1,896 DBE and 3,489 Non-DBE*</p>	<p>The federal transit administration funds work to support improvements to aviation infrastructure with the requirement that recipients set a goal for DBE utilization for subcontracts. Disadvantaged Business Enterprises are <i>primarily</i> those owned by individuals form minority racial and ethnic groups and women.</p>	<p>Findings show that in airports when subcontractors were used there was overutilization of DBEs in the number of subcontract awards and in the amount of subcontract dollars awarded.</p> <p>White women receive 48.3% of the FAA DBE contracts and 36.5% of the dollars. Which means that the FAA DBE program does not direct remediation or redistribution where Congress expected and does not provide opportunities to owners who do not qualify through race and gender presumptions.</p>
<p>Federal Highway Administration's Disadvantaged Business Program (35)</p> <p>DBE procurement data for the 50 states in 1983-1987 and 1988-1999</p>	<p>State-level affirmative action policy to increase the utilization of disadvantaged business enterprises (DBEs), specifically minority-owned business enterprises (MBE) and women owned business enterprises (WBE), through goal setting for procurement. The minimum goal was 10% of contracts to be awarded to DBEs. Prior to 1988 the goals were set for DBEs in total, after this point, the goals for MBE and WBE were disaggregated.</p>	<p>Higher state-level policy goals for % DBE utilization are associated with higher total contract dollars going to DBE. When MBE and WBE goals are set separately and when they are combined into a single DBE goal, increases in the goals are associated with increases in the percent MBE utilization. This is not the case for WBE for whom goal changes are not associated with changes in utilization.</p>
<p>Chicago's Metropolitan Pier and Exposition Authority Procurement Program for Minority Business Enterprises (36)</p> <p>239 respondents of 615 surveyed who done business with the MPEA during the 2002 to 2005 or interested in selling their products MPEA</p>	<p>This study explores procurement policies through survey information on Chicago's convention authority, Metropolitan Pier and Exposition Authority (MPEA), operator of McCormick Place and Navy Pier to better understand how minority business enterprises (MBEs) are impacted by their ability to sell their products to government clients.</p>	<p>For every one of the five barriers to selling their products to the MPEA minority vendors were more likely to be adversely affected than non-Hispanic Whites, namely the large contracts that are unobtainable for MBEs to access. Findings indicate that MPEA's constructed procurement spending translates to an increase in jobs for minorities when procurement contracts are more accessible to MBE vendors. Removal of barriers creates greater minority presence in public sector procurement, ensuring MBE expansion and reallocation of employment opportunities expands job access for minority communities.</p>

Table 3. Continued

Intervention, Population Served	Intervention, Population Served	Key Program Components
<p>City Set-Aside Programs (33)</p> <p>Sample of non-Hispanic white and black men from the Current Population Survey from 44 Metropolitan Statistical Areas during 1979-89</p>	<p>Two forms of “set aside” programs were described by the authors. The first was an allotment of a predefined amount or proportion of total federally funded contacts directly to minority-owned contractors. The second type of program was for major contractors funded by federal dollars to have a predefined proportion of the money they received to go to minority owned subcontractors they hired.</p>	<p>The introduction of set-aside programs was associated with a significant impact on the rate of male, African American business ownership in the 1980s, resulting in the black-white self-employment gap shrinking by three percentage points. Additionally, following the implementation of set-aside programs, the racial gap in employment rate also shrank by four percentage points. Of note, the authors also described variation in these changes in different industries.</p>
<p>Affirmative Action & Preferential Procurement (37)</p> <p>4,267,176 observations from 1990 to 2006 Current Population Survey (CPS) Outgoing Rotation Group (ORG) files</p>	<p>A natural experiment estimating how business ownership rates of minorities and women changed after voter initiatives eliminated the use of race or gender as criteria in public employment and contracting. The authors compared at the rates of employment before and after these affirmative action programs were eliminated in California and Washington.</p>	<p>In the within state analysis for CA and WA, and in comparison to all other states, elimination of affirmative action programs was associated with a modest increase in self-employment among minorities and women. This could have occurred because the elimination of the program reduced employment opportunities of minorities and women, which made them turn to self-employment as a necessity.</p> <p>When a set of comparison states that were demographically similar to CA and WA were used, the authors did not find a positive association with self-employment rates in minorities and women after eliminating affirmative action programs. When the analysis was further stratified by gender and minority group, associations with subgroups varied by the comparison state (WA and CA), resulting in limited conclusive evidence of the impact of state level policy for population subgroups.</p>

businesses who participated in the supplemental offerings reported a decrease in needs associated with accounting, marketing, and assistance identifying sources to finance their business and an increase in revenue and growth (30,31). A study on the Federal Aviation Administration's Disadvantaged Business Program provided evidence that programs that do not disaggregate minority-owner and women-owned businesses may not be reaching MBEs at the rate intended with a larger percent of the contracts and subcontract dollars going to businesses owned by white women (34).

An analysis of minority business ownership in California and Washington during a time when Affirmative Action and Procurement policies were in place and soon after the policies were ended, found a modest increase in self-employment among minorities in these states after the policies ended (37). However, the trajectory for minority ownership was increasing at the time of the end of policy. It is also important to note the increase in self-employment may be related to entrepreneurship as a necessity, not a choice, when minority workers were unable to find work, which may have been more difficult after the program was eliminated. When minority populations were stratified by race and gender, and when compared with other similar states the patterns were inconsistent.

School and community-based programs to promote equity in entrepreneurship

We identified 3 studies on programs with the goal of increasing interest in entrepreneurship (38–40) and 3 studies on programs supporting business owners (41–43) that provided evidence for program effectiveness among racial and ethnic minority populations (Table 3). A brief description of the program, the population served, and program evaluation results for each study are presented in Table 4.

Table 4. School and community-based programs to promote equity in entrepreneurship

Intervention, Population Served	Key Program Components	Program Results
<p>Small Business Institute (38)</p> <p>142 undergraduate students (216 at baseline) at six universities across the US</p>	<p>Created through an initiative of the US Small Business Administration and colleges/ universities across the US, the Small Business Institute is independently implemented by colleges and universities. In a semester-long project, students work with local business owners to provide technical assistance, managerial support, and produce a consulting report on the greatest needs of the client.</p>	<p>After completing the program, scores on all four subscales (entrepreneurial achievement, entrepreneurial innovation, entrepreneurial personal control, and entrepreneurial self-esteem) significantly improved for students who participated, with no differences found by race and ethnicity.</p>
<p>REACH Summer Business Camp (39)</p> <p>118 high school juniors in Southern California</p>	<p>Three-week business camp sponsored by the University of La Verne and taught by members of their business faculty. Camp is intended to increase interest in attending college for historically disenfranchised groups. The camp focuses on business and includes the following components (1) market and economics, (2) success skills, (3) entrepreneurship, (4) financial literacy, (5) and business ethics. The camp also included a team business plan competition.</p>	<p>Participant knowledge in all 5 domains increased markedly (economics, financial literacy, business ethics, success skills, and entrepreneurship) from pre to post with economics and success skills doubling. The majority of program participants indicated the program changed their perspective of college life and business ownership. The number of participants whose desire to own a business doubled from pre to post.</p>
<p>Tu Voz My Venture (40)</p> <p>79 Surveys completed (past and present lead Venturers and team members); 9 Focus Groups (47 Lead Venturers, team members, and allies)</p>	<p>Youth Venture, supported by the Bill & Melinda Gates Foundation, launched <i>Tu Voz My Venture</i> as a collaborative effort. The goal of this program is to empower Latino youth to take action on education, and to inspire and support Latino teams in creating their own sustainable social ventures. 82 teams across the United States were awarded start-up grants of up to \$1,000 to launch their ventures. Also, five finalist teams were selected to receive a \$5,000 scholarship towards higher education.</p>	<p>The program experience significantly impacted the pursuit of educational goals in the Latinx youth involved and within the community. The overall findings show an increase in awareness, motivation, preparedness, and action taken towards higher education in individual lead venturers and team members. The highest increase is in motivation and preparedness for higher education. Many participants planned to continue their ventures beyond the project period with some intending to expand their venture.</p>

Table 4. Continued

Intervention, Population Served	Key Program Components	Program Results
<p>Website Workshops for Small Business Entrepreneurs (41)</p> <p>69 current and pre-revenue businesses; 15 businesses in control group in Northern Arkansas</p>	<p>A free, 5 day workshop (total 37 contact hours) with ability to give 3 hours of graduate-level course credit to interested participants. Participants received (1) training on internet use for business including particularly helpful websites to reference, (2) business software, and (3) support from university students to build a website and powerpoint presentation for their business.</p>	<p>Program participants had a significant increase in economic literacy. Fourteen months after the program, change in business profit was significantly higher for program participants in comparison to a control group who did not participate; average increases in profit were not significantly different based on the race of participants. Change in pre/post test scores was also similar between groups.</p>
<p>Hispanic Business Center (42)</p> <p>74 class participants completed follow up survey Texas</p>	<p>In 2001, the University of Texas at Tyler created an outreach program to provide training and assistance to the Hispanic Community. The Hispanic Business Center offered consulting services (e.g. legal, financing), facilitated connections to support organizations (e.g. Small Business Administration, local Chamber of Commerce), and provided classes on developing a business plan, business English, and computer basics.</p>	<p>The participants had a very positive perception of the Hispanic Business Center. For each aspect of the evaluation, the vast majority of the respondents ($\geq 70\%$) rated the center and quality of services as "very good." For example, 99% reported easy access to the center and 94% rated the quality of instruction as very good. The majority of participants reported they would return to the center if additional needs emerged.</p>
<p>Microenterprise Assistance Program (43)</p> <p>Program Participants n = 86 Control group n=109 United States</p>	<p>Low income, microentrepreneurs from seven different microenterprise assistance programs located in the US evaluated as part of the Self Employment Learning Project were included. Descriptions of program components were not included in the article. Participants were compared to a matched group of micro entrepreneurs who were similar in sociodemographic characteristics.</p>	<p>For both groups, the proportion of microentrepreneur households below 150% poverty decreased, while median family income increased significantly between 1991 and 1995. The difference between groups was not significant. Households in which the business remained open in 1995 had a greater increase in income.</p>

Each of the programs designed to inspire and encourage entrepreneurship was focused on youth and young adults. Through Tu Voz My Venture, teams of LatinX youth developed socially conscious ventures, resulting in greater aspirations for higher education along with many participants expressing an interest in continuing the work of their venture (40). The REACH Summer Business Camp was also designed to increase interest in college attendance for high school students from disenfranchised groups and included a successful effort to increase aspirations for entrepreneurship (39). The third program for aspiring entrepreneurs that was evaluated, the Small Business Institute, was implemented at the University-level and resulted in increases on several indicators of entrepreneurial aptitude (38).

Three programs to support current business owners, both revenue generating and pre-revenue businesses were identified. Through a 5-day workshop focused on business software, technology, and website development skills, business owners significantly increased their economic literacy. Fourteen months after the workshop, business owners reported a significant increase in profits when compared to a control group (41). Another study assessed at the services provided by a Hispanic Business Center and found strong support for the value of the tailored services for this population of Hispanic business owners (42). For the last study in this category, participants in microenterprise assistance programs in seven cities were compared to a matched group of non-program participants (43). Findings from this analysis did not provide evidence for the effectiveness of program participation in assisting families with microenterprises out of poverty.

Discussion

Our systematic search for evidence on equity focused interventions to support entrepreneurship resulted in a very limited number of peer-reviewed program evaluations. We highlight the key findings from this study to inform current efforts to increase equity in entrepreneurship. To encourage more peer-reviewed, rigorous evaluations of relevant interventions, we provide guidance for future researchers aiming to contribute to this body of literature.

Only six studies met our criteria for programs for increasing access to entrepreneurial aspirations and business support racial and ethnic minority populations. Considering the extent of the need, the dearth of peer reviewed literature was disappointing. To expand and develop

the pipeline of minority business owners, more expansive efforts are needed. Many of these efforts are underway, but far too often program evaluations are not making it to the peer reviewed literature therefore hindering the dissemination of innovative and evidence-based approaches. Some of the other efforts for expanding access for new entrepreneurs include investments in entrepreneur programs at Historically Black Colleges and Universities, experiential learning with minority-led enterprises, and efforts to encourage young people to start thinking, and dreaming, about entrepreneurship (44–46). For current business or startups in progress, a number of intervention programs have been provided to a broad population but would likely be particularly advantageous for disadvantaged communities, including microloan programs, business incubators and accelerators, and mentorship programs (18,20,25,47–49). For existing programs with evidence of effectiveness in the general population, stratified analyses and population specific evaluations will be imperative to generalize results to racial and ethnic minority populations.

By far, the greatest evidence was for preferential procurement policies to increase market access and stimulate growth for certified MBEs. Limitations of the evidence presented should be informative for future iterations and refinements of procurement policies. In addition to what was covered directly in this literature review, evidence for areas of improvement in procurement policies have been identified in other research. Going beyond the certification progress, which appears effective, many MBEs need additional support to compete and deliver services at the same level as businesses that have access to more financial resources, better technology to support their endeavor, and more bridging capital to support contract bids (50,51). Among older businesses, the differences between minority owned and non-minority owned businesses are diminished, but this is not the case for young MBE who may struggle to perform at the same level as non-MBE businesses. As preferential procurement policies gain greater traction among anchor institutions, careful consideration on the inclusion of capacity building and sustainability into programmatic efforts will be important for successful programs.

To better understand variation in access to entrepreneurship for racial and ethnic, disaggregation of disadvantaged populations within studies is critically needed. Federal regulations for the Disadvantaged Business Enterprise certification un Section 8(a) programs define socially disadvantaged business owners as with “At least one objective distinguishing feature that has contributed to social disadvantage, such as race, ethnic origin, gender, physical handicap, long-term residence in an environment isolated from the mainstream of American society,

or other similar causes not common to individuals who are not socially disadvantaged (52).” While each of the groups identified are appropriate, throughout history in United States the degree of disadvantage varies significantly and has a direct impact on barriers to business development. For example, differences in the rate of business ownership and survival for Black, Latinx, and Asian Americans are well documented (9,53) and collapsing these populations into one group (inclusive of recent immigrant and non-immigrant populations), “minority-owned business,” does not adequately illustrate inequalities or do justice to the variation in the “American experience” for different groups. It’s also important to take cultural differences in business ownership patterns into account when assessing disaggregated data for racial and ethnic minority populations. Applying the standard measures of business growth such as the number of employees, revenue, and expansion is likely to understate the positive outcomes for minority populations whose goals may vary from the traditional high-growth model often used among for-profit businesses. For example, social entrepreneurship, defined as creating businesses that support common good, is more popular among Black entrepreneurs than white entrepreneurs (46,54,55). This mimics known cultural differences between these groups with white populations favoring individualism while Black and Latinx populations favor collectivism and direct contributions to their community (56,57).

Evidence for a social determinants framework for health outcomes has increased interest in non-medical interventions to promote population health and prevent poor health outcomes among racial and ethnic minority populations (2,58–60). Among the driving forces in the social determinants of health framework, economic inequalities and systemic racism are leading contributors to the gross inequalities in health and opportunity for minority populations in the United States. Promoting equitable access to entrepreneurship for underserved racial and ethnic minorities is often heralded as one way to reduce both economic inequalities and improve health outcomes. Without evidence from the gold standard of randomized controlled trials, the body of evidence in the peer reviewed literature in this field of equitable entrepreneurship is in its infancy compared to medical interventions.

Some of the methodological limitations of the evaluations presented in this review are worthy of note in order to encourage improved methods and reporting in future program evaluations. Programs were most often assessed without a control group using pre and post intervention assessments with many limited to short term outcomes. For some evaluations, the papers were structured in an exploratory manner with a large number of statistics presented

without a clear evaluation strategy for the primary outcomes of program effectiveness. To enhance transparency and strengthen an argument for the internal validity of the research presented, program evaluations would benefit from the standardized reporting approach used in the field of medical and public health interventions.

The CONSORT (Consolidated Standards of Reporting Trials) statement provides guidance to facilitate “clarity, completeness, and transparency of reporting” in randomized clinical trials (61). Even in the absence of randomized trials of program effectiveness, application of reporting standards would assist evaluators in their implementation of a rigorous evaluation design, help readers in their assessment of the potential for bias in the results, and allow others to replicate effective interventions. The CONSORT statement has been extended to a range of study designs including observation studies, pilot and program feasibility studies, and within person assessments (pre/post design). Aspects of CONSORT that are immediately applicable in the evaluation of entrepreneurship programs include, but are not limited to, the following:

- A description of participant eligibility criteria
- A participant flow diagram
- A table presenting participant sociodemographic characteristics and, in the field of entrepreneurship, business characteristics
- A description of the intervention with sufficient information for replication
- A description of the primary and secondary outcomes measured
- A statement on the financial support received for the study

Application of these rigorous methods for reporting evaluations would be a significant step in the development of this body of literature. As medical and public health communities continue to shift efforts to reduce health disparities through interventions for economic inequities, evidence presented with this level of methodological rigor is imperative to garner investment in interventions in equitable entrepreneurship.

Some of the studies in this review included short term outcomes such as program satisfaction and immediate gains in knowledge measured after the program was completed. Understanding the effectiveness of programs for long term impact will build support for replication. Studies that assessed the effects of preferred procurement policies provide examples of pertinent outcomes at the business level as well as the funder and ecosystem

level. Business-level outcomes include business survival, changes in revenue, changes in number of employees. Funder-level outcomes include percent of contracts and percent of contract dollars going to minority owned businesses. At the ecosystem-level, outcomes include rate of self-employment and business ownership for minority populations. Consistency in measures across studies can allow comparisons between programs and policies across studies.

Conclusion

A large and growing body of evidence on the impact of social determinants, economic inequities and systemic racism in particular, on disparities in health and life opportunities has increased the pressure to consider health in all policies - including business development. Meanwhile, more and more institutions and public programs are looking for ways to shift their impact to improve access to opportunity, including access to self-employment and business ownership, rather than further perpetuate systemic inequality by continuing operations in business-as-usual fashion.

The peer-reviewed evidence for programs encouraging entrepreneurship among underserved populations is limited in volume and a lack of replication of specific, well defined, programs. Further development of the literature supporting programs to improve equitable access entrepreneurship is needed to support investments in programs. Evidence for the impacts of entrepreneurship policy, specifically preferential procurement programming, is stronger and provides guidance to refine existing efforts. The literature on effectiveness of interventions to increase equity entrepreneurship *as a means to* decrease economic inequities is lacking due to the absence of long-term studies.

As public programs shift efforts to increase equity in upstream determinants, rigorous evaluation of programs to increase equity in entrepreneurship deserve the same attention as other population health promotion efforts. To address the unequal burden of the COVID-19 pandemic on minority-owned businesses, direct action to redress the systemic issues at play is an imperative necessity in the immediate future; otherwise, the systemic economic inequities that were both extensive and growing pre-pandemic, will continue to be compounded and dramatically intensified.

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