Youth Resource Mapping: Partnering with Service Providers and Youth to Understand the Supply and Demand for Youth Services in a Local Context

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ABSTRACT:

Past research has shown that out-of-school time (OST) programs can have substantial benefits for youth, but connecting youth to programs can be challenging for a variety of reasons. To address these challenges, community leaders working with youth in one Silicon Valley community approached the John W. Gardner Center for Youth and Their Communities (JGC) at Stanford University wanting to better understand the availability and use of youth OST opportunities. This community has a high number of youth facing multiple risk factors as well as a deep tradition of community service, resulting in a dense network of youth-serving organizations in a relatively small community. Partners wondered why many youth were disconnected from services when there were so many available. In response, the JGC collaborated with this group of partners to design and implement a local, community participatory case study. Combining detailed information about program availability, survey data collected by youth on their peers' OST activities, and crime and transit location data, we used a combination of GIS and quantitative data analyses to examine the supply and demand of youth programming and barriers to accessing those programs. This paper describes the process, methods, and initial findings of this project.

INTRODUCTION

Several recent reform efforts in education, including community schools, school-based health clinics, and extended school days or years, have focused on the supports and opportunities for growth that youth obtain outside of the regular school day. However, connecting youth to out-of-school time (OST) programs can be challenging for a variety of logistical, political, cultural, and economic reasons. To address these challenges, community leaders working with youth in the City of East Palo Alto (EPA) and the Belle Haven neighborhood in the City of Menlo Park approached the John W. Gardner Center for Youth and Their Communities (JGC) at Stanford University to undertake a joint effort to better understand the availability and use of OST opportunities for youth. The EPA/Belle Haven community is a Silicon Valley community located in San Mateo County, California. Both the city of East Palo Alto and the Belle Haven community of Menlo Park, which are among the poorest areas in San Mateo County, border communities with many upper-income, highly educated families. A history of institutional racism, segregation, and poverty has contributed to a high number of youth facing multiple risk factors as well as a deep tradition of community service (Davies, Sywulka, Saffold, & Jhaveri, 2002). This structure and history have resulted in a dense network of youth-serving organizations—including after-school, recreational, arts and music, and health program providers—in a community that covers approximately three square miles. Despite the large number of available opportunities, community partners observed that relatively few youth access these opportunities. Community partners wondered why many youth seemed to be disconnected from those services in a community with so many youth-serving agencies and programs. In response, the JGC collaborated with this group of partners as well as a group of EPA youth to gather and analyze data as part of a resource mapping project, looking across the opportunities available to community youth. This resource mapping project, which took just over one year to complete, showed gaps in available services and suggested potential explanations for why youth do not access services. These data engaged community members in thinking about how to collaborate across agencies to improve youth access to programs. Our paper describes the collaboration that we built between the JGC and community partners, our process of engaging community youth as researchers on this project, and the initial findings of this project with the intention of informing other communities who may desire to embark on a similar project.

THE RESEARCH PROCESS

Rationale

Research suggests that participation in OST programs is linked with improved academic outcomes (Vandell, Reisner, & Pierce, 2007), enhanced social development (Morrissey & Werner-Wilson, 2005), and increased civic engagement for youth (Kirshner, Strobel, & Fernandez, 2003), among other beneficial outcomes. However, evidence from multiple communities suggests low participation in these activities, particularly as young people move toward adolescence (Fredricks et al., 2002; Hultsman, 1992; Shann, 2001). Saito (2009) examined OST participation in Minneapolis by surveying youth and found that the supply of opportunities decreased for older youth; at the same time, their interest in programs also decreased. In Saito's (2006) study, as well as others, youth consistently cited lack of knowledge about available opportunities as a reason for not accessing OST programs. Although

much of this research on OST participation is generalizable across communities, we wanted to better understand the contributing factors for this decline in participation in one specific local context. To understand why EPA youth in particular are not accessing community OST programs, we adopted a resource mapping approach.

Community Engagement

The idea for the resource mapping project was brought to the JGC by a community partner through an informal discussion in November 2008. In April 2009, the UPS Endowment Fund at Stanford issued a call for proposals for a grant that was well-suited to a resource mapping project. Researchers from the JGC then invited a group of community leaders who work with youth to meet and discuss if and how they would like to see a community resource project unfold. Purposely aiming for broad-ranging constituencies, we invited partners representing six community organizations, including three youth OST program providers, one family services provider that focuses on immigrant families, one community advocacy organization, and a convening umbrella agency for youth-focused organizations in EPA. This resource mapping project was a good fit for the JGC, whose mission is to partner with communities to conduct research and develop leadership to effect change in the lives of youth. The JGC's model of research is to engage community organizations that work with youth in a participatory research process where the beneficiaries of the research guide the research agenda and use their on-the-ground expertise to complement our research skills. The JGC was founded specifically to break down the traditional divide between Stanford and its surrounding communities, following in the tradition of its namesake, John W. Gardner, who advocated for universities to engage with communities and for partners to work across organizational boundaries to find solutions to problems (Gardner, 2003). This collaborative approach that infuses our research helps to ensure that the research reflects the experiences of the intended end-users of the findings and is useful to them. Community-based participatory research builds the capacity and leadership of community members to use data in their decision-making processes (Titterton & Smart, 2008) and to organize and advocate for change (Minkler, Vasquez, Tajik, & Petersen, 2008). Based on the JGC's past experiences implementing community participatory research projects (Anyon & Fernandez, 2007), we knew that it was important to build community involvement in the EPA/Belle Haven Youth Resource Mapping Project, which marked our first major involvement in the EPA/Belle Haven community. Although university–community partnerships can be rewarding, they can also be marred by resistance, suspicion, or differences in goals between university and community-based personnel or structural issues related to unclear boundaries or management of cross-agency partnerships (Barnes et al., 2009). We were especially sensitive to this dynamic because the EPA/Belle Haven community has had challenging interactions with researchers in the past. In fact, some community members initially expressed hesitancy about becoming involved in the project until they were convinced that the researchers were committed to producing information that would be useful to the community. At the initial meeting of potential partners that we convened in April 2009, some individuals and organizations expressed concerns about collaborating with a center based at Stanford because of perceived university/community inequities and past challenges. However, the representative of a community organization (a representative with whom the JGC had previously partnered and who had initially brought the project idea to us) reassured his colleagues that the JGC had previously been an excellent community partner and that he genuinely believed our intention was to help the community. This individual's advocacy on our behalf allowed the meeting—and the project—to move forward successfully. The community partners supported and refined the resource mapping project idea at that initial meeting in April 2009 and agreed to be part of an ongoing advisory body that would continue to give direction to the project. The youth resource mapping project proposal received funding in June 2009. Collaboratively, the group decided on three main research questions:

1. What programs are available to youth in the East Palo Alto and Belle Haven communities, and where are there gaps or duplication in available services?
2. How do available services overlap with the availability and interests of youth?
3. What factors inhibit or facilitate accessing the services available to local youth?

The group also conferred regarding the project's scope. We decided to limit the scope to middle and high school-aged youth, both to make the project more manageable and also to focus on the age ranges where youth tend to disengage from school and other structured time activities. The group decided to include both the City of East Palo Alto and the Belle Haven neighborhood of the City of Menlo Park because together the two areas comprise the attendance area for the Ravenswood City School District, and many youth access services on both sides of the city border.

Gathering Data on Youth Programs

Having developed the research questions in collaboration with the community partners, JGC researchers developed the research protocol and methods. Our first task was to gather information on available youth programs. One major challenge that leaders noted was the lack of a single, centralized source of information about the opportunities available to youth. Without this resource, it was difficult, if not impossible, to envision the landscape of youth services in the community. Starting from a partial list of service providers that had been compiled in 2004, we contacted service providers to arrange short interviews to learn about their programs. Data collected included program content, days and times offered, locations, target audience of the programs, and costs for participation. Advisory group members facilitated connections with the service providers, which was key to our making contact with and gathering data from service providers who were not familiar with us. In addition to facilitating initial contacts, advisory group members also organized several opportunities for the research team to share their ideas. For example, invitations to present to the EPA Youth and Young Adult Serving Agency Consortium and the Making it Happen for Our Children Harlem Children Zone Replication Project, two groups convened by our advisory group members, provided a forum to garner both publicity as well as continual feedback as the project progressed. We were also invited to lead a session at a community youth summit in the summer of 2009; this allowed us to talk with a large number of youth and parents to learn about their experiences and needs related to youth programs. These opportunities aided our data gathering by allowing us to continually learn of additional providers and programs that were not on our initial list.

Youth-to-Youth Surveying

To complement data on the supply of programs, partners wanted to learn about the needs and interests of youth, as well as their availability to participate in after-school programming. To this end, we used community resource mapping to address the community's interests and build on the researchers' expertise and interest in mapping, sense of place, and youth engagement. The community was also particularly interested in engaging youth in the research in order to build their skills in the process. This work built on the rising trend of engaging youth in community resource mapping as a way of better understanding what is available to youth and how to connect them to those opportunities. Researchers and community advocates have found that employing youth as data collectors both increases the knowledge and leadership skills of the youth while also improving the quality of data as it provides a youth perspective that would not have been otherwise present (Powers & Tiffany, 2006). In addition, involving youth in community resource mapping can be an effective way of making youth aware of the positive assets within a community and engaging them in the design and marketing of youth programs (Santo, Ferguson, & Trippel, 2010). However, studies have also shown that the benefits for youth and for the research itself are most effectively reaped when the research process engages youth in meaningful ways so that they are leaders of the research process instead of simply a body to consult (Checkoway & Richards-Schuster, 2003). Taking into account these opportunities and constraints, we embarked on a community-based survey process that involved community groups as well as local youth in the design and implementation. JGC researchers led the development of the survey instrument with extensive input from our community partners and youth. The survey included 15 items, including dichotomous yes/no questions, multiple choice, open-ended, and map identification questions. The questionnaire included items related to students' OST program participation, their sources of information for programs, and the program types that they would like to see offered. In addition, the survey asked respondents to describe their activities throughout the previous day while simultaneously indicating on an attached map where they were, allowing us to understand how and where community youth are spending their time (see Figure 1 for a sample question from the questionnaire). We trained ten EPA youth (ages 15 to 19) to implement the survey with their peers. We recruited youth with the help of two community organizations that provide youth programming. The partners provided recommendations of students who might be interested, available, and have the interpersonal skills necessary for this role. We asked those students to complete applications, and, working with our community partner organizations, we reviewed the applications. Over the nine-month active period of the project, we provided the selected youth with $500 stipends to attend weekly meetings and collect data according to the protocol. We trained the youth to administer the survey by first teaching them about survey design and types of survey questions and survey administration techniques, including how to answer respondents' questions and how to record responses. We then had the youth pilot the survey with each other while taking notes on challenges that arose in the administration process. We utilized the feedback that they provided through this process to refine the survey, going through three versions of the survey until the youth felt that the content was correct and the youth were ready to administer it. Before the youth began administration, we taught them about survey sampling techniques, and we set targets for the number of surveys by gender, age, and home neighborhood of survey respondents to ensure that our survey sample reflected the characteristics of youth in the community as much as possible. Engaging the youth researchers was key to our ability to collect quality data. First, the youth researchers provided several rounds of valuable feedback on the survey instrument from a community-based, youth-informed perspective. For example, the youth were able to clarify wording and streamline the survey by eliminating response options that they were confident did not apply to their peers in that community; for example, the youth helped us refine our list of response options of reasons for not participating in OST programs. Most importantly, the students facilitated the collection of reliable data. We suspect the respondents would not have been as open to taking the survey from or providing honest answers to the researchers because of our being both older and outsiders (Powers & Tiffany, 2006).

Finally, the JGC researchers' involvement with training the youth helped to improve the researchers' and the research's credibility with the community because community members perceived that we were providing youth with valuable skills. By contrast, many community members had complained about past researchers who had collected data from the community for their own benefit but never given anything back to the community. However, there were also challenges linked with employing youth researchers. First, we had difficulty with retention. The literature warns that, even though the opportunity to make a difference for their communities can be a strong motivating factor for youth involvement, sustaining youth engagement can be a challenge because of competing priorities for youth (Santo et al., 2010). This was the case for us; although we started with ten, by the project's conclusion we had only six fully engaged youth collecting data. Also, many of the youth researchers' school, job, or family obligations kept them from completing their target number of surveys. Although we had initially desired 200 completed surveys, in the end we obtained 77. Thus, all survey results should be seen as exploratory and not conclusive. A final challenge was in obtaining a representative survey sample. We developed survey response targets to include a diversity of gender, age, and residential characteristics that would be representative of the youth population in the area we were surveying. However, we knew that we would most likely end up with a convenience sample because of the complications of conducting face-to-face surveys, challenges of recruiting youth respondents, and the limited experience of the survey administrators. When we analyzed the data, we found that our sample was indeed skewed. Out of 77 respondents, we had only five who lived in Belle Haven, and we had an overrepresentation of high school youth compared with middle school youth. In addition, 18 surveys did not include data on the sex of the respondents. Among the respondents for whom we did have the sex, there was an overrepresentation of females (63% female and 37% male).

Data Analysis

We created two separate databases from our collected data. First, for the data collected through interviews with program providers, we created a program-level data base with one record per program. When individual service providers administered more than one program, we created a separate record in the database for each program. Each program also provided: an address for the service location where the program occurred (except in cases where the program did not have a set meeting place); start and end times for each day of the week; fee per participant; maximum and minimum ages served; a dichotomous variable for whether the program

was restricted only to students from a certain school; and dichotomous variables for each of six program content categories that we developed based on the open-ended interview information we obtained.1 (We used dichotomous variables for each of these to allow individual programs to be flagged for multiple content areas.) Second, for the data collected through the youth surveys, we created a database with one record per survey respondent. One of the items on the survey asked youth to use a map to indicate the location of their activities on the previous day, including their home, morning, afternoon, evening, and night locations. For each of these pieces of data, we entered into the database the nearest intersection to the spot indicated on the map. We also conducted basic frequency analyses of the youth data. For data from both sources (provider interviews and youth surveys), we then used ArcGIS software to geocode and analyze all spatial data, including program locations as well as the locations that youth reported from their previous day's activities. The resulting maps allowed us to examine the locations of programs at various times of the day in relation to youth survey respondents' locations. Joining census tract shapefiles to the geocoded data allowed us to produce summary statistics on survey respondents and programs by neighborhood. In addition, we mapped the public transit lines that serve EPA and Belle Haven. We also obtained publicly available data on crimes for the six months prior to our survey period (January to June 2010), including only violent crimes and drug or alcohol offenses, hypothesizing that these would be the types of crimes that give parents or youth the perception that an area is unsafe. We mapped the areas of highest crime concentration in the community using the ArcGIS kernel density function. We joined this feature to the home locations provided by youth to compare survey responses based on whether their home locations were in a crime hotspot or within a quarter mile of a program location or transportation line.

RESEARCH FINDINGS

Program Availability
The standout finding from this research was the high number of available programs. We uncovered 93 providers that administered over 150 programs or services to the approximately 6,250 middle- to high-school-aged youth within this community, a finding that surprised even partners who had been working in the community for many years. Despite the large number of available programs and services, there still were some areas of need. For example, fewer programs operated on Fridays or weekends than during the week (12 average per day on Fridays and weekends as compared with 36 on average days during the week), and very few programs were available after 8:00 pm on any day of the week (an average of six among all weekdays). Also, there were fewer sports opportunities and more academic programs available for high school-aged youth compared with middle school-aged youth. (There were two sports programs and 13 academic programs for high school students compared with 15 sports and 12 academic for middle school-age students.) For all age groups, there were relatively few arts and music opportunities (13 total programs). Considering youth survey data in relation to program availability illuminates some potentially important gaps between supply and demand of programming. Many youth reported having free time at night, corroborating the finding from the program data that indicate a lack of night programs. In addition, when asked what programs they would like to have but do not, nearly half of the respondents (46%) indicated that they would like arts and music programs.

Barriers to Program Access
The most frequently cited reasons that youth gave for not participating in programs during their free time were family responsibilities (31%), such as chores at home or taking care of siblings, and not knowing about any available programs (30%). Both are commonly cited challenges from the literature (Saito, 2006). The fact that such a high percentage of youth indicated that they did not know about available programs (which was a more frequent response than youth saying that they were not interested in programs that were available [21%]), suggests a potential information gap when considered in light of the large number of programs available. Informal discussions with both adults and youth indicated that they were not aware of most of the programs that were available, and our survey data supports this assertion. One potentially important mediating factor is how youth learn about the programs. Our survey data indicate that youth most frequently heard about programs through their social networks, such as from friends (66%), family (57%), and teachers (55%). They less frequently heard about the programs through broadcast media, including flyers (11%), the internet (2%), or newspapers (0%). Although the reliance on social networks could be particularly opportunistic for youth deeply involved in those communities, it could also be especially limiting to youth whose families do not have established roots in the community, such as the large number of immigrants for whom EPA has increasingly become a gateway community.

Logistical Factors and Program Access
One important consideration in understanding the alignment between program availability and youth access is the location of programs. As Figure 2 shows, the Village and Gardens neighborhoods of EPA had the most programs. By contrast, there were two main areas with few services: the area of EPA west of Freeway 101 and the border area around Willow Road between EPA and Belle Haven. The data illustrated in Figure 2 suggest that the geographical spread of programs in relation to transit and high crime areas could be a barrier for youth living in those neighborhoods because they would have to pass through a high crime area to access either transit or a program. In addition, our survey results indicate that youth tended to stay within their home neighborhood during after school time; 52% were in their home neighborhood between 4:00 and 7:00 pm and 89% after 7:00 pm. We cannot know from our data whether this was because of transportation, safety, or some other factor, but if this trend holds beyond the survey sample, it is potentially most problematic for youth who live in the areas with the fewest number of youth services.

DISCUSSION, LIMITATIONS, AND IMPLICATIONS

Although only a first step in understanding opportunities to connect youth to OST resources, the process and initial insights from the East Palo Alto/Belle Haven Youth Resource Mapping Project provide an important basis for ongoing efforts. The process of engaging the community in this project is something that we believe made it most valuable and that provides a model for similar work in other communities. By engaging community partners from the start and putting them in charge of the research agenda, we were able to design a study that most directly met the needs of the community and produced usable data for community-based service providers. Moreover, the addition of data gathered by youth helped us better understand the relationship between program availability and program access. As noted earlier, our data have several limitations. First, our youth survey sample was small and not representative of the larger youth population in EPA/Belle Haven. We also were not able to obtain data on all available programs and services in the community. Thus, our study should be regarded as exploratory and results reflective only of our survey respondents and providers interviewed. Second, in addition to limitations in the scope of data, one very important limitation to our overall approach is that simply counting programs and participants does not provide a robust perspective on program quality or depth of engagement. Weiss, Little, and Bouffard (2005) importantly differentiate between enrollment, attendance, and engagement in understanding how OST opportunities relate to outcomes for youth. That level of detail was beyond the scope of this project but will be an important issue to examine as the work continues. Despite these limitations, we do believe that this study's findings are useful both for the EPA/Belle Haven community as well as for other communities. For community partners in EPA/Belle Haven, the process spurred discussions on how service providers could collaborate and make better data-informed programmatic decisions. The findings have seeded discussions at several community meetings even in the six months since the study has been completed. Participants at these meetings have discussed how to address gaps in available programming, improve outreach to youth to inform them of available opportunities, and identify strategies for helping youth access programs. The data gathered have also helped to inform a community group interested in replicating the Harlem Children's Zone model (Whitehurst & Croft, 2010) in one EPA neighborhood. Another group interested in funding arts programming used the mapping project results to inform their efforts by identifying specific topics of need related to arts programming. They used our study's findings related to factors limiting participation to inform their planning on target audiences and location of programming. Moreover, further collaborations and community-empowerment tools have arisen from the project. Although not an original aim of this project, several people in the community asked the researchers to make available the program data that we gathered so that the community would have a centralized list of all the available opportunities for youth. In response to this request, we collaborated with a professor from the Stanford computer science department to develop an online mapping tool that allows users to search for programs by criteria such as program content, target audience, and days and times offered. (A beta version of this tool is available online at http://jgcnet.stanford.edu [2].) This provides an example of how a community–university partnership can leverage the specialized expertise of a university to meet a community need and, concurrently, how community interests can help university personnel find venues to develop useful innovations. At the same time, we encountered a few challenges in our process of community engagement that could be potential pitfalls to be avoided by similar efforts elsewhere. As is true in any community with many people working toward similar goals, we encountered community politics, alliances, and animosities amongst the providers that we encountered in this project. It was important for us, and an important lesson for those interested in conducting similar work in other communities, to be mindful of those dynamics. To overcome this challenge, we were deliberate in our efforts to garner multiple points of view on any issue that arose so as not to align ourselves with any particular group. For example, some advisory group members were concerned when we were asked to present at one convening because they feared that the conveners would try to co-opt the project. To address the issue, we worked with both the convener and the advisory group members to craft our presentation in a way that would represent the project true to its original intent. In another case, several community members wanted to use this project as a way of evaluating and making public the record of providers that they did not feel were doing the work that they claimed to be doing. Although we wanted to be responsive to the community, we knew that singling out or criticizing individual agencies could risk our position as a neutral third party, which was vital to complete this work. Again, having our advisory group of community partners to communicate consistent messaging about the shared research agenda helped us to stay true to the original intent and scope of the project. One of the most important lessons learned from this project is the need to collect data at the grassroots level. Thoughtfully engaging the community opened up the possibility to look at the community of youth service providers in a way that a Google search for "youth programs East Palo Alto" would not have. Working through existing community coalitions provided a valuable and unprecedented opportunity to gain access to the grassroots network of service providers, especially for university-based researchers who are often seen as outsiders. We believe that being able to produce such detailed data, analyzing them from a cross-agency perspective, and integrating them with other relevant data using GIS tools provided a comprehensive way of considering the factors that relate to youth access to programs. In our experience, both here and in other community-based research projects, being responsive to community providers' needs is critical to gaining credibility and having community buy-in. This helps ensure that the data and research findings are utilized to make programmatic and policy decisions in the community that the research was intended to serve.

ENDNOTE

1. The program content categories included: Academic, Arts and Music, Sports, Recreational, Technology/Vocational, Health Services or Education, Faith-based, Youth Leadership, Mentorship, and Community Service.

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