

Studying Enrichment in African American Adolescents:

A Mixed Methods Study

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Introduction

While childcare centers may provide a support system for caregivers throughout the United States, there is a disparity in the amount of good-quality childcare centers available to families in low-income, marginalized communities. According to Moran (2020), 86% of children from low-income families attend care on a regular basis. Children in non-parental care are usually African American, have lower household incomes, have mothers in the workforce, or mothers with lower levels of education (Moran, 2020). While it is expected of childcare centers to provide exponential opportunities for learning and growth during crucial periods of early development, children from high poverty neighborhoods are less likely to be exposed to high-quality early childhood settings. Additionally, children from low-income, urban communities are at a pre-disposed risk due to a “confluence of economic constraints, under-resourced schools, and exposure to community violence” (Grant et al., 2014). Early childhood is a period of transformation, but can pose serious consequences to at-risk children who are negatively impacted by their learning environment.

The present study and review of literature aim to investigate intervention methods that may promote enrichment and aid in the positive development of African American children attending care centers in low-income areas. The goal of this study is to better understand what more can be done to encourage growth and alleviate the impact of adversity in at-risk populations such as this one.

Literature Review

Despite the number of studies evaluating early learning centers and their proposed benefits, there is a dearth of research on holistic mechanisms that can be implemented in care

centers to provide enrichment for children in low-income, urban areas. This review of literature will synthesize the findings of various interventions targeted at low-income youth in minority populations, in order to establish the framework for the present study.

Promoting Healthy Behaviors

Staiano et al., (2012) used quantitative methods to evaluate the short-term impact of competitive versus cooperative exergame play on the executive function of African American adolescents. The development of executive function skills lay the groundwork for strong academic performance in subjects such as mathematics and science (Staiano et al., 2012). Accordingly, participants chosen for the study were low-income, obese African American youth (age 15-19yrs) due to their predisposed risk of poor academic achievement (Staiano et al., 2012). Following recruitment, participants were divided into three conditions: competitive exergame play, cooperative exergame play, or a no-play control group. In the competitive condition, children were encouraged to get the highest score and burn as many calories as they could. In the cooperative condition, they were told to work alongside their teammate to earn the highest score and collectively burn the most calories. The results of this study demonstrate a significant positive, long-term relationship between weight loss and improved executive functioning. Additionally, youth in the competitive condition scored twice as well on executive functioning in comparison to those in the cooperative condition (Staiano et al., 2012). The implications of this study highlight the positive developmental outcomes that can be associated with competitive physical activities-- such as exergame play-- in at-risk ethnic minority adolescents.

Similarly, a study conducted by Neelon (2013) sought to promote healthy lifestyles through a 4-month long garden-based intervention called *Watch Me Grow*. This holistic intervention included a fruit and vegetable garden planted by the children at each center and a

monthly curriculum about nutrition, to promote fruit and vegetable intake in preschoolers (age 3-5yrs). By giving children access to fresh produce options and engaging them in the cultivation process, care centers can inspire the habitual consumption of healthy food options throughout a child's life (Neelon, 2013). The results of the post-intervention reveal that children in the intervention centers consumed an additional $\frac{1}{4}$ serving of vegetables, while children in the control group decreased their vegetable intake by $\frac{1}{5}$ of a serving. The implications of this research study are supportive of previous findings, which demonstrate the benefits of hands-on experiences in promoting healthy behaviors in young children.

Promoting Academic Readiness

Children in poverty are at an increased risk for “delayed language and emergent literacy skill development” due to a lack of language stimulation and supportive resources in their social environments (Nix et al., 2013). Through the implementation of the Head Start REDI program, Nix et al., (2013) sought to evaluate the effects of a learning intervention aimed at supporting academic achievement in 4-year-old children from low-income families. Most of the children included in the sample were African American (17%) and were from families with annual incomes falling below the federal poverty line (Nix et al., 2013). The goal of the REDI program was to promote social competence, emotional regulation, and competent social problem solving in young children through the implementation of additional curriculum-- such as daily dialogic reading, sound games, hands-on activities promoting print knowledge, and the Preschool PATHS curricula (Nix et al., 2013). Results from the 1-year follow up assessment show that children in the REDI intervention experienced more positive adaptation to kindergarten compared to those in the control group (Nix et al., 2013). Additionally, significant associations were discovered

amongst the intervention group in vocabulary and emergent literacy skills, as well as emotional understanding and prosocial behavior.

Another intervention aimed at supporting early literacy and social integration in low-income adolescents was conducted by Nicolopoulou et al., (2015). This study took place in the preschool classrooms of 6 centers that serve low-income, urban youth from diverse ethnic backgrounds. As low-income and disadvantaged children are more likely to be unprepared for formal schooling, Nicolopoulou et al., (2015) used a storytelling and story-acting intervention to examine the degree to which interpersonal, narrative activities could promote school readiness in preschoolers. The effects of this 2-year intervention were assessed on the basis on three dimensions: narrative/oral-language skills, emergent literacy, and social competence (Nicolopoulou et al., 2015). Children were encouraged to tell stories on a voluntary-basis and later had the opportunity to re-enact the stories with their peers. Compared to the children in the control condition who did not receive the STSA intervention in addition to their regular curriculum, the intervention group demonstrated significant improvement in oral language skills, narrative comprehension, print and word awareness, self-inhibition, and reduced play disruption (Nicolopoulou et al., 2015). Based on the findings of these studies, it can be implied that high-quality curricula can be used to foster early learning, engagement, and social adjustment in preschool aged children as they transition to higher-level schooling.

Resilience in African American Youth

In addition to enrichment provided by stimulating social and learning environments, individual differences and emergent themes accounting for the success of high-achieving African American youth must be acknowledged. In a multi-case study conducted by Williams & Bryan (2013) two qualitative interview processes were utilized to examine trends of resilience amongst

high-achieving African American individuals from high-poverty areas. All participants were members of single-parent households and were determined to be at a predisposed risk based on prior assessment. Based on the interviews, ten main themes emerged: school-related parenting practices, personal stories of hardship, positive mother-child relationships, extended family networks, supportive school-based relationships, school-oriented peer culture, good teaching, extracurricular school activities, social support networks, and out-of-school activities (Williams & Bryan, 2013). These results highlight the importance of community context in supporting achievement through in the cultivation of resilient attitudes and academic success in African American youth who are at-risk. According to the findings of this study, it can be concluded that feelings of positive interpersonal relations and community support can pave way for success in African American youth.

Method

The purpose of the present study is to evaluate factors that encourage enrichment in African American youth at daycare centers in low-income areas. The research questions guiding the study are (a) what type of learning activities promote positive, long-term developmental outcomes in African American youth at daycare centers in low-income areas? (b) what type of environmental dimensions exist at daycare centers in low-income areas? (c) how do parents/guardians perceive the quality of the daycare centers that their children attend? and (d) what developmental benefits/outcomes do parents/guardians expect when sending their children to daycare centers? The research questions will be answered both quantitatively (a and b) and qualitatively (c and d).

Study Design

For my study, I will be implementing a causal comparative mixed methods design in order to assess intervention results between the groups at each center. No randomization will be used since I am working with already in-tact groups at each daycare center. The design of my intervention is based on Vygotsky's sociocultural theory, which posits that caregivers encourage learning through activities that allow for scaffolding. Overall “enrichment” will be analyzed by comparing levels of adaptive skills, behavioral symptoms, externalizing problems, and internalizing problems pre-and post-intervention using the Behavioral Assessment System for Children 3rd Ed (BASC-3). Because the study is focusing on the experiences of minoritized individuals from low-income regions, it is important to employ an ethnographic framework to better understand the experiences of community members. Accordingly, the second portion of the study includes a qualitative interview process to answer research questions (c) and (d) for the parents/guardian of children at each center.

Site of Study

Care centers that meet the criteria for my study must be in low-income, predominantly African American areas in the United States. To participate in the study, centers must have no open cases of abuse or neglect with the state and have at least 15 children between 3-5 years old attending care regularly. An experienced, neighborhood consultant will be hired to assist in the recruitment of eligible centers and the 2-week rapport process of participating centers. Out of the centers willing to participate, 3 of them will be randomly selected and used for the study. Once the centers have been narrowed down, information for the study will be presented through flyers posted in the front office of each center, as well as through word of mouth from caregivers to parents at each center. By participating in the interview process of the study, parents receive a

\$25 gift card. If the child is participating in the study as well, parents will receive an additional \$25 gift card.

Participant Population

Inclusion criteria for participating children include being of African American descent, aged between 3-5 years old, and a regular member at the day care center. The sample should be no less than 45 children total (15 at each center, 5 at each age) in order to ensure a large enough sample size for the statistical analysis process of the BASC-3. The target sample size for parents in the interview portion should be 12 total (4 at each center).

Measures and Data Sources

In order to answer research question (b), the existence of environmental dimensions (indoor playground, outdoor playground, garden, bookshelves/library books, video games, media room, active play indoor rooms (ex: basketball hoops, soccer nets, etc.)) at each individual center will be recorded through a nominal scale as (1) present or (0) absent.

Recording Enrichment. The pre- and post- intervention ratings will measure “enrichment” quantitatively using the composite scale from the Behavioral Assessment for Children 3rd Ed (BASC-3). The composite scale from the BASC-3 Teaching Rating Scales (TRS) is used to measure adaptive skills, behavioral symptoms, externalizing problems, and internalizing problems in preschool children (aged 3-5). Completion of the assessment prior to and following the intervention will be conducted by researchers via online scoring and should take 10-20 minutes to complete. Researchers will have participating children engage in a task and measure the frequency of certain behaviors through the completion of ranking scales. The assessment consists of frequency scoring using a four -point scale (e. g. never to almost always) and contains 105-165 items.

Interview Portion

The second portion of the study contains an optional semi-structured interview process for the parents and guardians of children at the center. The goal of this interview process is to capture the developmental goals of each parent regarding their children attending the center, as well as their individual experiences. The interview will follow an interview guide but have an open-ended format, led by the interviewee. Each interview will be audio recorded for later transcription and should last from 60-75 minutes. The questions in the interview guide will start off broad (e. g. “how long have you been bringing your child to this center?”) and gradually become narrower (e. g. what do you like about this center? what would you change?”).

Data Analysis

Quantitative Analysis. BASC-3 assessment scores pre- and post- intervention will be coded separately using T-scores and percentiles after the 2-week intervention period through a computer scoring process. Data from the BASC-3 assessment will be compared to find differences between adaptive skills, behavioral symptoms, externalizing problems, and internalizing problems in participating youth pre-and post-intervention. The scores for the environmental dimensions of each participating center will be processed alongside data from the pre-assessment in order to account for pre-existing differences at each center. Following the post-intervention assessment, the data will be cross compared between each of the 3 participating centers to analyze the presence of any significant similarities and differences in overall enrichment. The analyzation of both the environmental dimensions and completion of the BASC-3 assessments will allow for a better understanding of activities that may bolster enrichment and encourage positive developmental outcomes for children in low-income areas.

Qualitative Analysis. All interviews will be recorded and transcribed into text in an archive. Interviewee confidentiality and protection will be maintained by having a separate file with the code linked to the unique identifying information of the participant, which will be destroyed after the data collection is completed (Mertens, 2020). Once the data is collected, thematic analysis will be used in order to find emergent themes for individual research questions (c) and (d). For research question (c) we will code themes based on guardian experience as very poor, poor, average, great, and excellent. For research question (d), themes will be coded to understand the factors that prompt parents to use childcare services (e. g. non-parental support, education, socialization, etc.). Emerging themes from the interview processes at each center will be compared for similarities and differences.

Enrichment Packages

Each daycare center will be sent an “enrichment package” containing 4 books to be used for storytelling, 3 different fruit/vegetable infographics (tomato, strawberry, broccoli), 1 prepackaged recipe, and a paper containing instructions for how to implement the intervention. On the paper, there will also be a link to 2 Zumba for kids’ videos. A camera will also be included for care centers to document any issues they may come across with the garden or recipes, as well as a phone number to call if they have any questions, issues, or concerns. The implementation of the intervention will be conducted over the course of 2 weeks.

Procedures

Each care center will be visited by the neighborhood consultant 2 weeks prior to the intervention, in order to build rapport and collect data about the pre-existing environmental dimensions present at each center. Next, each center will receive a care package containing all necessary intervention material.

The process for the intervention is as follows. Story telling led by caregivers at the center will take place on Mondays and Fridays, and after each story telling session children will have a chance to tell their own stories as well. Tuesdays and Thursdays will be used for fruit/vegetable learning with infographics. On the final Thursday of the second week, rather than doing a lesson with the infographic, caregivers will make a recipe with the kids using one of the meal kits. Every Wednesday, children at the daycare center will participate in a Zumba for kids' video led by a caregiver at each site. After the 2-week period is over, the BASC-3 will be used again by a researcher to assess and compare enrichment levels (based on adaptive skills, behavioral symptoms, externalizing problems, and internalizing problems) following the intervention. The intervention activities are optional for the children, and data from non-participating children will not be included in the study. There will also be a researcher present each day of the intervention, in order to assist with any issues as well as conduct observations.

For the second portion of the study, participating parent/guardian figures will complete a 60-75-minute interview. Members of the research team or the neighborhood consultant who spent time building rapport at each respective center will serve as an interviewer, and the interview process will take place in a separate room at each center following the intervention. If this does not work, another interview time and location will be decided on by the researcher and participant. Participants have the right to withdraw themselves or their children from the study at any time.

When working with vulnerable populations, such as African American youth and their families, it is necessary to establish rapport to build trust and gain a coherent understanding of their community values and culture. Additionally, adhering to ethical guidelines will allow me to better gauge the effectiveness of the intervention and increase the likelihood of positive

outcomes for my specific population (Mertens, 2020). Each “enrichment package” will also include a camera for care centers to document any issues they may come across with the garden or recipes, as well as a phone number to call if they have any questions, issues, or concerns. Potential risks and corrective measures will be identified prior to conducting the intervention, and participants will be aware that harm will be corrected and compensated for (Mertens, 2020). Informed, voluntary parental and child consent (if possible) will be attained in person by parents at the center prior to the study. Participants have the right to withdraw themselves and/or their child from the study at any time. Again, all intervention activities are optional for the child/guardian to participate in. The research design will be reviewed by the institutional review board (IRB) prior to conducting any research.

Potential Implications

The implications of this research study may offer profound insight to parents, caregivers, and educators around the world. By having a better understanding of activities and environmental dimensions that promote enrichment in vulnerable populations, our societies can slowly begin to work against the negative outcomes associated with adversity in African American communities. Not only that, but the information yielded by this study may inspire childcare centers, early learning centers, and schools to re-evaluate the basis of their curricula and learning environment in order to better promote enrichment and holistic growth in low-income, minoritized, preschool aged children. The insight gained through this intervention will also allow for educators and caregivers to better understand what types of activities can be implemented to promote positive development prior to formal schooling.

Limitations

One of the limitations within the quantitative portion of the study may include researcher bias in measurement during pre- and post-assessments. This type of bias may impact the reliability of the results if replicated by future researchers. Additionally, if children are aware they are being observed it may cause changes in behavior-- potentially altering the results of the study. Other threats to validity during the quantitative process include history and experimental morality, which may also cause changes in the data collected. Furthermore, the ecological validity of the study is limited due to the unique environment of each care center, as well as specific intervention resources provided in the “enrichment package”.

During the qualitative interview process, limitations include experimental morality as well as fallibility of the human memory. During the recount of past experiences, interviewees may share information that is not entirely accurate or representative of their experiences. This could potentially lead to changes in emergent themes. If the interviewer does not follow the interview guide correctly, this could lead to confirmation bias which can be corrected by taking notes and reviewing information for accuracy during the interview process.

Because the intervention is only 2-weeks long, one of the greatest limitations of the study is that it cannot predict nor ensure long-term developmental outcomes. This can be corrected in future studies by conducting a longer intervention and measuring kindergarten outcomes during the following year. However, this type of study would consume more time and the additional provision of resources may be costly. Nonetheless, the present research design has the potential to transition childcare back to its holistic, interpersonal, experience-driven roots; to better establish a secure foundation for early learning and development in low-income, African American adolescents.

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