

# Evaluation Of Practice-based Programs To Increase Use Of Trails Among Youth From Under-resourced Communities

David R. Brown, FACSM<sup>1</sup>, David Berrigan<sup>2</sup>, Van Do<sup>3</sup>, Michael A. Hill<sup>4</sup>, Julian A. Reed<sup>5</sup>.

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<sup>4</sup>USDA Forest Service, Washington, DC. <sup>5</sup>Furman University, Greenville, SC.

**ABSTRACT** Racial and ethnic disparities exist in physical activity (PA) among youth. Trail use can help children and youth get PA and confer additional health benefits. US Forest Service data shows disparities in trail use by race/ethnicity. The National Collaborative on Childhood Obesity Research set out to address disparities in trail use (and thereby related disparities in PA and obesity). **PURPOSE:** Originally, this project was twofold: to review the scientific published peer reviewed literature (findings published previously), and non-published “grey” literature (findings reported here) to identify effective programs to increase use of trails among youth from under-resourced communities. Youth trails use programs that were evaluated using experimental methods were not located.

**METHODS:** A review of grey literature for youth trail use programs was conducted searching websites, government/organizational reports, success stories, conference proceedings, and leads from subject matter experts. Internet search terms included trails, programs, youth, low income, under-resourced, race/ethnic groups). Inclusion criteria were that a program must 1. be US based and ongoing ≥3yrs., 2. focused on youth ≤18 yrs., 3. designed to reach youth from diverse racial/ethnic groups or whose families are low-income, 4. include trail use (walking, hiking, or biking), and 5. have evaluation data (e.g., participation rates by demographic characteristics, program satisfaction, psychosocial outcomes (e.g., self-esteem)).

**RESULTS:** Of 39 programs located, 9 met inclusion criteria. These 9 programs were implemented in diverse communities (low income, under-resourced, some with no parks). Two of the 9 programs were school based (predominantly Title 1) programs. However, 2 are 1-week programs only, 1 was offered during the summer only and 2 during the school year only. Although, all programs included some type of evaluation data, only 1 program that estimated calories burned per bike miles ridden, evaluated health outcomes directly relevant to childhood obesity.

**CONCLUSIONS:** Programs exist for increasing trail use among youth from diverse and under-resourced communities. Research is needed to document program effectiveness, so health professionals can more effectively advance trail use as a health enhancing behavior among youth.

## I. INTRODUCCION

- Currently, 25 million American children are overweight or obese.<sup>(1)</sup>
- Trail use and enjoyment of nature and outdoor recreation can increase physical activity and improve physical and mental health among youth.<sup>(2)</sup>
- The demographics of users of trails does not represent the growing diversity within the U.S.; members of under-resourced communities are underrepresented among trail users.<sup>(3)</sup>
- Youth should have access to safe trails and supportive programs that are welcoming and inclusive of youth from low income and under-resourced communities and of different racial/ethnic groups.
- An aim of the National Collaborative on Childhood Obesity Research (NCCOR) with federal partners is to address disparities in trail use by identifying what is known in the scientific- and practiced-based literature (aka Grey literature).

## II. PURPOSE

Review the literature to identify effective programs to increase use of trails among youth from under-resourced neighborhoods and communities

- including the non-published practice-based literature with evaluation data (findings reported here), and
- the published peer reviewed literature (findings already published)<sup>(3)</sup>

**III. Methods** Under-resourced refers to those who are from communities that typically lack the access to health care, economic, financial, and social benefits accruing to people from more affluent backgrounds and communities. These communities are often predominantly made up of residents from diverse racial, ethnic, and cultural backgrounds.

A search of the non-published Practice-Based evidence was conducted. *Search criteria included:*

A program

1. must be highlighted on the internet/web site, published in state or federal government reports, or described in meetings or conference presentations
2. should have some evaluation data documenting efficacy or effectiveness (e.g., participation rates (reach), program adherence, potential to be sustained over time (e.g., date of program initiation identified to the present. other)
3. should be ongoing, U.S. based
4. should be focused on youth ≤18 years old
5. demonstrates an effort to reach participants from diverse racial/ethnic groups and/or of low-income status.
6. should include trail use, pedestrian or bicycle, regardless of location.

**Note: Select Results from a Scientific Literature Review we Published Previously<sup>(3)</sup>**

No studies were located that evaluated programs to promote and increase trail use among youth, including youth from under-resourced communities.<sup>(3)</sup> Thus, there is currently a lack of evaluation of health metrics in trail programs to inform childhood obesity researchers and practitioners.

Eight studies evaluated correlates of physical activity and neighborhood characteristics that may support the planning and implementation of programs to increase trail use among youth. These include:

- trail access (connecting trails to destinations) or proximity to trails,
- traffic congestion or speed,
- lack of sidewalks, lighting and perceptions of safety,

Barriers to trail use include:

- costs
- crime (actual or perceived)
- lack of transportation
- lack of role models using trails (representation, “people who look like me”, and
- institutional discrimination.

## IV. Results of this Practice-Based Literature Review

Of 39 programs located, 9 met inclusion criteria (see Table 1)

- 7 are walking and hiking programs,
- 2 biking trail programs, and
- 3 of the 9 programs offer overnight opportunities (detailed information is available in a brief at NCCOR.org)<sup>(5)</sup>

Program characteristics included:

- **A Focus on Under-Resourced Communities.** Several programs demonstrated exemplary efforts to reach children facing barriers to trails due to limited resources (# 1, 7, 8, and 9 see Table 1)
- **Program Reach/Scalability.** Several programs demonstrated extensive program reach and scalability (the potential to expand more broadly as a public health intervention) (# 1, 6, and 8 see Table 1)
- **Program Evaluation.** All programs included some evaluation data (e.g., process, pre- and post-test surveys). The strongest trail programs collect data to evaluate the programs’ impact and access (# 2, 6, and 8 see Table 1)



## V. Conclusion

- As highlighted here, programs with evaluation data exist for increasing trail use among youth from diverse and under-resourced communities (see also 4).
- As highlighted in a review study, research is needed to document program effectiveness, so researchers and practitioners can more effectively advance trail use as a health enhancing behavior among youth<sup>(3)</sup>.
- Subject matter experts
  - who are practitioners conducting trail use programs and
  - researchers evaluating physical activity, built environment and neighborhood characteristics may benefit from meeting together to:
    - consider what is known based on scientific-based<sup>(3)</sup> and practice-based reviews<sup>(4)</sup> to
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## REFERENCES

1. Hales, C.M.; Carroll, M.D.; Fryar, C.D.; Ogden, C.L. *Prevalence of Obesity among Adults and Youth: United States, 2015–2016*; NCHS Data Brief, No. 288; National Center for Health Statistics: Hyattsville, MD, USA, 2017; 288, pp. 1–8.
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## IV. RESULTS OF THIS PRACTICE-BASED LITERATURE REVIEW

Of 39 programs located, 9 met inclusion criteria (see Table 1).

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- 3 of the 9 programs offer overnight opportunities (detailed information is available in a brief at NCCOR.org)<sup>(5)</sup>

Program characteristics included:

- **A Focus on Under-Resourced Communities.** Several programs demonstrated exemplary efforts to reach children facing barriers to trails due to limited resources (# 1, 7, 8, and 9 see Table 1)
- **Program Reach/Scalability.** Several programs demonstrated extensive program reach and scalability (the potential to expand more broadly as a public health intervention) (# 1, 6, and 8 see Table 1)
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Barriers to trail use include costs, crime (actual or perceived), lack of transportation, lack of role models using trails (representation, “people who look like me”, and institutional discrimination.

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Of 39 programs located, 9 met inclusion criteria (see Table 1).

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- 7 are walking and hiking programs,
- 2 biking trail programs, and
- 3 of the 9 programs offer overnight opportunities (detailed information is available in a brief at NCCOR.org)<sup>(5)</sup>

Program characteristics included:

- **A Focus on Under-Resourced Communities.** Several programs demonstrated exemplary efforts to reach children facing barriers to trails due to limited resources (# 1, 7, 8, and 9 see Table 1)
- **Program Reach/Scalability.** Several programs demonstrated extensive program reach and scalability (the potential to expand more broadly as a public health intervention) (# 1, 6, and 8 see Table 1)
- **Program Evaluation.** All programs included some evaluation data (e.g., process, pre- and post-test surveys). The strongest trail programs collect data to evaluate the programs’ impact and access (# 2, 6, and 8 see Table 1)

## Table 1. 9 successful programs with evaluation data supporting youth physically activity on trails

1. Adventure Clubs – Trips for Kids (Bike)
2. Gateway to the Great outdoors (Walk/Hike)*
3. Momentum Bike Clubs – Institute on Family and Neighborhood Life at Clemson University (Bike)
4. Schools on Trails – Anchorage Park Foundation (Walk/Hike)
5. Teens on Trails – Golden Gate National Parks Walk/Hike)
6. TRACK Trails – Kids in Parks (Walk/Hike)
7. Transit to Parks and Trails – LA in Nature (Walk/Hike)
8. Week-long Expedition – Big City Mountaineers (Walk/Hike)*
9. Youth Volunteer Vacations – Washington Trail Association (Walk/Hike)*

\* Overnight activities offered

## V. CONCLUSION

- As highlighted here, programs with evaluation data exist for increasing trail use among youth from diverse and under-resourced communities (see also 4).
- As highlighted in a review study, research is needed to document program effectiveness, so researchers and practitioners can more effectively advance trail use as a health enhancing behavior among youth<sup>(3)</sup>.
- Subject matter experts who are practitioners conducting trail use programs and researchers evaluating physical activity, built environment and neighborhood characteristics may benefit from meeting together to:
  - consider what is known based on scientific-based<sup>(3)</sup> and practice-based reviews<sup>(4)</sup> to
  - identify “what next” to advance efforts to increase use of trails among youth from under-resourced neighborhoods and communities.

## REFERENCES

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