

**Engaging young people in running clubs: Best practices from Marathon Kids' school and community-based coaches**

[Authors removed for blinded review]

## **Abstract**

Current deficiencies in children's leisure-time physical activity participation in the U.S. and globally underscore a pressing and ongoing need to enhance local eco-systems (e.g., school and out-of-school time settings) with physical activity supports and opportunities. Marathon Kids is an international nonprofit organization that promotes children's physical activity via school and community-based running clubs and programs. Building from the importance of indigenous knowledge and co-learning with stakeholders within real-world settings for children's physical activity promotion, we explore best practices for the implementation of children's running clubs based on a national sample of U.S. adult volunteer Marathon Kids (MK) coaches. As a secondary aim, we describe selected implementation characteristics of MK running clubs. Data for the current study were collected from MK coaches during spring 2019 via an online cross-sectional survey that included closed and open-ended items on MK delivery and recommended best practices. Qualitative analyses were based on thematic content analysis; quantitative analyses were based primarily on descriptive statistics. MK coaches (n=478 out of 676 coaches; 70.7% response) from across the United States (n=35 states) participated. Eight thematic categories emerged and encapsulated the best practice recommendations: *running club leadership and support network; general organization and planning; student recruitment; running club implementation; tracking/logging miles; social support; communication and public promotion of running clubs; guiding principles for running clubs*. MK coaches reported an average of 112 weekly minutes scheduled for running/walking. Marathon Kids coach best practice recommendations hold promise to inform and enhance the field of volunteer-led, youth running clubs.

Key Words: physical activity, children, schools, running clubs, best practices

## **Introduction**

Despite the multiple benefits of habitual physical activity for children and adults- including improved cardiorespiratory and muscular fitness, bone health, cardiometabolic outcomes, and a more favorable body composition (DHHS, 2018; Ekblom-Bak et al., 2018), less than half of U.S. elementary school-aged children (42.5%) meet recommendations of sixty minutes or more of daily physical activity (NPAPA, 2018) - prevalence estimates that mirror global trends of low physical activity engagement in young people (Sallis et al, 2016; Guthold et al., 2020). The low prevalence of meeting physical activity guidelines in children as well as the decline of physical activity as children transition to adolescence (NPAPA, 2018; Dumith et al., 2011) highlight an urgent and ongoing need to enhance opportunities within children's eco-system (family, school and community) for supporting children's physical activity.

Running and walking clubs represent a promising approach for engaging young people in physical activity that may also provide a multitude of additional healthy social development benefits. Research with 3<sup>rd</sup> and 4<sup>th</sup> grade students in the U.S., for example, found a before-school running program resulted in increased step counts on the days students participated in the running clubs, with no compensation effect of decreased physical activity occurring later in the day (Stylianou et al., 2016). Participation in running clubs and other types of sports teams have also been found to nurture a sense of belonging and connection through shared experience as well as life skills such as goal-setting and teamwork (Stylianou et al., 2016; Lambiase, 2010; Eime et al., 2013; Lizzo and Liechty, 2020). Given the benefits of running clubs for children's physical activity and positive social development, research is needed on the factors that can help activate and further support positive engagement of young people of diverse athletic abilities in volunteer-led running clubs.

In exploring approaches to further activate and implement running clubs within the school and out-of-school-time settings, the growing fields of human-centered design, implementation research, and improvement science emphasize the importance of stakeholder input from within systems to identify best practices as well as opportunities for system improvement for health promotion (Matheson et al., 2015; Huang et al., 2018; May et al., 2016; Hawe, 2015). In her seminal critique of the pipeline approach to knowledge production- from academia or research institutions to the field, Hawe (2015) underscores the need and value of approaching systems – which may include school and community child eco-systems- with the basic understanding that there are ‘thinking people’ who know their context, population and realities better than outside researchers. In arguing for an alternative approach to the traditional *pipeline approach* to knowledge production, Hawe (2015) recommends that “...community researchers should identify instances of promising practice in local real-world settings and then seek ways to transfer and test them further for wider use.”

Marathon Kids is an international, nonprofit organization that promotes young people's physical activity via family, school, and community-based running and walking clubs and programs. Research on the initial model of Marathon Kids found that elementary school children who participated in Marathon Kids reported significantly higher past 7-day physical activity and intrapersonal factors such as athletic identity self-concept compared to students in non-participating schools (Springer et al., 2012). Since this initial research, the Marathon Kids program has undergone several enhancements, including engagement of teachers, parents and other community leaders to serve as volunteer *coaches* in establishing and leading running clubs and programs as well as expansion of this volunteer-led model across the U.S. and the United Kingdom. The network of volunteer coaches who lead running clubs in partnership with

Marathon Kids presents a promising opportunity to learn more about the 'key ingredients' that support the facilitation of children's engagement in running clubs as identified by practitioners on the frontline of working with children.

In contributing to ongoing learning about approaches for establishing and implementing volunteer-run running clubs for young people, we explore best practices for implementation of children's running clubs based on a national sample of U.S. adult volunteer coaches who lead Marathon Kids running clubs. As a secondary aim, we describe implementation characteristics of Marathon Kids running clubs, including average times and days of week running clubs are implemented and average weekly minutes of running/walking provided.

## **Materials and Methods**

### ***Description of Marathon Kids***

Marathon Kids (MK) is a nonprofit organization that was founded in 1995 by Kay Morris, whose initial vision of the program was rooted in the idea that all children- no matter their athletic ability- should have the opportunity to experience 'the lifelong joy of movement'. The simplicity of the initial MK program model, which includes the promotion of children's running and walking through support with goal setting, tracking of miles run/walked, and celebration of miles run/walked, is arguably a key strength of the MK program. Since the establishment of MK, the program has continued to build on Ms. Morris's vision of an easy-to-implement and child-inclusive model through expansion to states across the U.S. as well as the United Kingdom, partnerships with both public (schools) and private organizations such as Nike, and several promising innovations.

As cited above, one of the principal innovations of the current MK model is the activation of local school, parent and community leaders via the establishment of the *Marathon Kids Coach*

role. The *Marathon Kids Coach* provides key leadership for the implementation of the running clubs in the before school, during school, and out-of-school-time settings while providing positive mentoring, social support, and overall inspiration for young people's engagement in physical activity. Other notable enhancements to the model have included: support for children's completion of not one, but up to four marathons over the course of a school year; implementation of MK in a diversity of settings that include school, out-of-school time setting (before and after school), home, and camps; innovations with tracking of miles run or walked; and coach training via the *MK Leadership Academy*.

Lastly, *six core pillars* now provide the foundation for the enhanced model (**Figure 1**). These pillars represent positive behavior change methods rooted in health behavior theories that include Social Cognitive Theory (Bandura, 1986) and Social Support Theory (Holt-Lunstad and Uchino, 2015) - with specific change methods (goal setting, self-monitoring/tracking, and provision of social support) cited in behavior change taxonomies (Bartholomew et al., 2016). Further details about the MK program are provided at <https://marathonkids.org/>.

*[Figure 1 near here]*

### ***Study Partnership, Design, and Population***

This study is guided by a partnership between child health promotion and physical activity researchers at [name removed for blinded review] and the international office of Marathon Kids that aimed to provide a space for ongoing learning about MK running clubs via the lens of MK coaches. For this cross-sectional study, we invited MK coaches based throughout the U.S. to participate in an end-of-year online survey. MK coaches are adult volunteers comprising PE teachers, classroom teachers, parents and other community leaders who organize, facilitate, and lead MK running clubs based within the school and out-of-school

time settings. The study objectives, protocols, and informed consent procedures were reviewed and approved by the Committee for the Protection of Human Subjects at [name removed for blinded review].

### *Study Measures and Procedures*

Data for the current study were collected via the *Marathon Kids Coach Finisher Survey* ("Finisher Survey"), an online survey conducted annually by MK staff with MK coaches that assesses child participation in and accomplishments of MK running clubs. For the current study, we collaborated with MK staff to incorporate additional items regarding time scheduled for running/walking and open-ended questions to explore best practices and recommendations for implementing running clubs. The final Finisher Survey comprised closed and open-ended questions that explored the delivery of the MK program during 2018-2019. All MK coaches participating during the 2018-19 school year from across the U.S. were invited to participate via an email invitation and a link to the online survey. Data were collected between May and June of 2019. Below, we describe the key measures included in the current study.

*Descriptive characteristics:* In describing our sample, we asked coaches to report their *gender* (male/female), the *state* where their program is based, and- as a proxy indicator of economic status of the population of the club, *Title 1 school status*, a federal designation for schools that serve children from low-income families.

*Delivery of Marathon Kids Running Clubs & Minutes Scheduled.* In exploring the delivery of MK running clubs and physical activity minutes provided, we asked MK coaches to specify the average number of weekly minutes scheduled for their running clubs, using the following response options: *First thing in the morning, before classes begin; During class time;*

*During recess time; During lunch time; After school as a 'stand alone' Marathon Kids club; After school as a Marathon Kids club within an existing afterschool program; and "other".*

*Best Practice Recommendations.* We explored best practice recommendations for implementing MK running clubs based on a single open-ended question that asked coaches to: "Please share with us your three best practices for implementing Marathon Kids. What works for your school/Marathon Kids club that might be helpful for other Marathon Kids' coaches?"

### ***Analysis***

Quantitative *data* analysis was based primarily on descriptive statistics (frequencies and percentages). In addition, we conducted independent t-tests using SPSS Statistics for Windows, version 25 (SPSS Inc., Chicago, IL) to explore possible subgroup differences in average weekly minutes scheduled for running clubs between coaches from Texas and coaches from other states, as Marathon Kids was established in Texas, as well as between running clubs serving Title I students versus non-Title I students. Qualitative analysis of the open-ended best practice question was based on thematic content analysis (Zhang and Wildemuth, 2009) using NVivo qualitative data analysis software (QSR International Pty Ltd. Version 11). Analysis consisted of uploading open-ended data to NVivo and conducting content analysis by attaching a descriptor (code) to the qualitative data, grouping into categories, and then identifying themes to generate insights about running club best practices. Qualitative analyses were conducted by two research team members, which included co-development of coding approach, and review and confirmation of final thematic categories.



## **Results**

### ***Descriptive Characteristics of Sample & Running Clubs***

A total of n=478 MK coaches participated in the survey out of a universe of n=676 who were sent the survey, representing a 70.7% response rate. Just over two-thirds of respondents were female (68.5%), with a similar proportion (71.3%) representing Title I schools (schools serving children from low-income families). MK coaches include PE teachers, classroom teachers, parents, and other community leaders as reported by MK staff (percent breakdown not available). Survey respondents represented 35 states from across the U.S., with Texas representing the largest number of respondents (n=262 or 54.8% of sample), followed by California (n=55), Oregon (n=21), Ohio (n=15), and New York (n=13). The remaining states had less than 10 respondents each. Among children participating in MK running clubs as reported by MK coach respondents, the majority were elementary school-age (91.9%), followed by middle school (7.2%) and high school (.9%).

*Running Club Delivery Characteristics.* MK coaches reported implementing MK clubs across diverse times of the school day. The most popular times of day for scheduling walking and running were during PE (62.1% of coaches), followed by recess time (42.3%), after school as part of an existing program (37.9%), and before school (32.4%) (Note: percentages do not sum to 100% as some coaches implement during more than one time of day).

*Physical Activity Minutes Delivered.* In exploring the minutes provided of running and walking time, MK coaches reported an average of 112 minutes provided during the school week, representing an average of 22.4 daily minutes of running/walking delivered via the MK program (**Figure 2**). No significant differences were found in the provision of weekly minutes of running/walking by Texas vs. other states ( $p=.093$ ) or by Title 1 school status ( $p=.14$ ). While PE

class was identified as the most common time of day for scheduling running/walking for MK, delivery of MK in the afterschool setting resulted in the most time scheduled for running/walking during the school week. Approximately 66 total weekly minutes of running/walking were provided in either a 'stand-alone' or existing afterschool program compared to 38 minutes in PE class and 35 minutes in the before school setting- settings with the next highest number of running/walking minutes provided.

*[Figure 2 near here]*

### ***Practitioner Best Practices for Implementing Youth Running Clubs***

In exploring *best practices* for implementation of MK running clubs, MK coaches (n=478) were asked to share three best practice recommendations for implementing MK. **Table 1** presents a summary of the eight thematic categories identified, followed by a summary description of these categories and key subthemes.

*[Table 1 near here]*

*Running Club Leadership and Support Network.* An important initial recommendation for implementing one's running club was to recruit dedicated individuals to serve as the running club coach, with one MK coach recommending: "*Recruiting Coaches that you know will make a great impact and know that they are passionate about impacting the community and youth.*" A key related theme was the importance of creating a support network for implementing one's MK running club, including involvement of teachers, parents, and students to help motivate, facilitate and spread the word about MK and support running club implementation. One MK coach shared: "*Having a few parents definitely helped at practice. They were there to support the kids as well as help log miles and encourage growth.*" Key themes for involving parents included:

- ✓ *Parent Meetings:* Schedule meetings with parents to promote involvement, which may include scheduling a meeting with parents, implementing a “*parent kick-off meeting*”, and “*planning events at school to encourage parents to come out.*”
- ✓ *Communication platforms:* “... use an app like ClassDojo...I was amazed how many parents use it and really changed how I communicate with them.”
- ✓ *Involve parents in running:* “Having parents come walk/run too,” with one coach sharing that s/he created a separate walking club for parents.

*General Organization and Planning.* A key theme cited across MK coach respondents was the need to invest in proactive organization and planning of one's running club, with one MK coach underscoring the importance of: “*Setting up all things running club prior to the start of the school year – this would help with a diversified interest in running club.*” Key recommendations for organization and planning included considerations of:

- ✓ *Scheduling running clubs:* Coaches emphasized the importance of having a set schedule for one's running club, with recommendations that included having designated days and times for the club. MK coaches also shared various recommendations for the best time to schedule running clubs, which included: before, during (in PE class, recess and/or during class time), after school, on weekends, at home, and on multiple days, times and settings). Related to this theme, coaches emphasized the importance of *continuity and routine* with one's MK running sessions, as well as “*tell[ing] the children which of the days of the week are going to be running days so they dress appropriately.*” Importantly, one coach emphasized: “*Make sure your schedule is flexible enough for parents, students, and school.*”

- ✓ *Contingency planning:* In addition to scheduling one's club, some coaches recommended contingency planning: *"Having a rain/mud plan,"* with recommendations that included providing running-type activities and games for inside the gym, cafeteria or classroom.
- ✓ *Contact Information:* Developing a contact information spreadsheet was a key organizational best practice recommendation: *"Having the contact info and pick up info on a spreadsheet for when there are new volunteers."*
- ✓ *Transportation:* Related to having parent and student contact information, some MK coaches recommended the importance of developing transportation plans, such as providing *"Car pool transportation for after school."*

*Student Recruitment for Running Clubs.* MK coach respondents provided helpful

recommendations for recruiting students to participate in the running clubs, including:

- ✓ *Promoting MK running clubs via classrooms and PE class,* such as *"Going to classroom and hyping the club."* One innovative MK coach shared the following approach for her/his recruitment strategy: *"I started by making a video that I asked all the teachers to share to all the classes and then I personally went into each classroom and spoke about the club. Then I got staff members that were interested in being part of the club to join to help run it."*
- ✓ *Providing informational meetings* before the season starts for parents and students, including promotion of the club during back-to-school nights and other school events.

*Running Club Implementation Recommendations.* In addition to recommendations for

organizing one's running club, MK coaches provided rich recommendations for implementing

one's MK running club, with themes that included:

- ✓ *Safety first:* MK coaches emphasized the importance of safety, as articulated well by one coach: *"Safety first; you want to push kids to do their best, but don't over exert them as they know their bodies best and know their limits."*
- ✓ *Water/Hydration:* Related to safety, MK coaches cited the importance of providing water and emphasizing hydration practices throughout the running experience, including having each runner have their own water bottle and having volunteers monitor water stations on the course.
- ✓ *Attendance:* Key recommendations related to attendance included *"Take attendance each week"*, *"Hold runner[s] accountable for attendance,"* as well as *"Have the parents and students sign a form that has the attendance and discipline policies."*
- ✓ *Running club session recommendations:* MK coaches provided thoughtful recommendations for the content and approach for one's running club sessions, as presented in **Table 2**.

*[Table 2 near here]*

- ✓ *Support structures, student roles, and group contingencies:* MK coaches emphasized the importance of creating support structures for implementing the running sessions, which included general organizational structures discussed above, as well as the creation of student ownership and leadership roles for implementing the sessions. One MK coach shared: *"I have student leaders who push, motivate, and support their peers"*, while another recommended: *"Have students partner with teammates to motivate, challenge and keep them accountable."* The importance of the overall group experience was a common theme, as illustrated by the following quote: *"Getting the kids pumped up to run, exercise and have fun as a group or class while doing it. Allowing the kids to motivate themselves and others to keep going the distance."*

Tracking and Logging Miles. A common best practice cited by MK coaches was the importance of setting up a reliable tracking system to help students track miles run and walked. **Table 3** presents the recommended best practices for supporting student participants with tracking of their miles.

*[Table 3 near here]*

Social Support for Student Runners

*“Figure out a way to praise all kids, not just the one who ran the most that day. I have a small running club, but I always try to give each child some type of compliment that makes them want to keep coming back.”* –MK Coach.

Another common best practice emphasized by MK coach respondents was the importance of providing positive social support for student runners, including positive encouragement, instrumental support, and role modeling – key dimensions of social support theory (Holt-Lunstad and Uchino, 2015). Specific recommendations for providing social support for student runners are presented in **Table 4**.

*[Table 4 near here]*

Public Promotion and Communication of Running Clubs.

*“Communication to students, parents and school staff is essential.”* – MK Coach

A common theme from MK coaches was the importance of public promotion of one's MK running club with the broader community to recognize student participant achievements and provide motivation for student runners as well as consistent communication with club stakeholders. A common best practice recommended by MK coaches was to create a public display to track miles run/walked and to highlight and celebrate the student runners. Specific recommendations included: hanging MK posters and logs in the classroom; displaying logs in

the gyms and public hallways; creating a 'wall of fame' of runners and a 'top 20 leaderboard'; "announcing progress and achievements [of students];" "shar[ing] photos of happy runners with parents;" "presenting the benefits of running at a faculty meeting;" and "designating a day of the week or month that all students wear their MK shirts". MK coaches also shared communication channel recommendations that included: school announcements; Facebook; Instagram; Class Dojo; Remind 101; and Google Classroom.

Guiding Principles for Implementing Running Clubs. Lastly, MK coach respondents shared a range of guiding principles, positive program philosophies, and words of wisdom for implementing an MK running club, with key subthemes presented in **Table 5**.

*[Table 5 near here]*

## **Discussion**

Current deficiencies in children's leisure-time physical activity participation in the U.S. (NPAPA, 2018) and globally (Sallis et al., 2016; Guthold et al., 2020) underscore a pressing and ongoing need to enhance local child eco-systems with physical activity supports and opportunities. This study aimed to identify best practices for establishing and implementing children's running clubs based on the perspectives of adult volunteer coach practitioners from across the U.S. who form part of the MK network of school and community-based clubs. As running clubs represent a promising vehicle for increasing opportunities for supporting children in fun physical activity while providing multiple other healthy social development benefits (Stylianou et al., 2016; Lamiase, Barry, and Roemmich, 2010; Eime et al., 2013; Lizzo and Liechty, 2020) the rich best practices identified in this study hold promise for guiding both the establishment of volunteer-led running clubs and programs as well as enhancing their delivery among physical activity practitioners via the school and community setting.

While community stakeholder input and partnership have been central features of community-engaged research orientations that include Community-Based Participatory Research (Wallerstein et al., 2018), the value of stakeholders within settings and systems has gained increased attention in recent years via fields that include human-centered design, implementation science, and improvement science (Matheson et al., 2015; Huang et al., 2018; May, Johnson, and Finch, 2016; Hawe, 2015) given their potential to enhance understanding of both the delivery of a given health promotion practice or initiative as well as the context within which health promotion takes place. As noted by Miller and Shinn (2005) and cited in Hawe (2015), advantages of exploring indigenous knowledge of stakeholders within systems, and in our case, on the frontline of the delivery of child running clubs, include the opportunity to learn from interventions that have been implemented within local resource capacity limits and that reflect values of local practitioners and host organizations, which may reduce challenges of interventions meticulously designed and tested by external agencies that rarely enjoy widespread diffusion. Our study builds from the importance of indigenous knowledge and stakeholder input by identifying rich insights and best practices for implementing child running clubs based on volunteer coaches working on the frontline with children.

Several of our key best practice themes identified in this U.S.-based study support previous qualitative research on facilitating factors for the delivery of Marathon Kids running clubs based in the United Kingdom by Chalkley et al (2018). Key facilitating factors for the delivery of Marathon Kids in the U.K. identified by Chalkley et al (2018) based on interviews with twenty U.K.-based Marathon Kids champions (school staff responsible for implementing Marathon Kids) and nine focus groups with elementary school students that align with best practices reported in this current study of U.S.-based MK coaches included the importance of a



*running program ethos* based on inclusivity; the value of *goal setting and development of 'personal best'*-cited by U.K. students as a motivating factor for their participation in running; the value of *a variety of methods for tracking miles*; and the importance of *stakeholder engagement and buy-in* in the delivery of programs- including the incorporation teachers, parents and students in the delivery of the program. Of note, a key best practice identified in this U.S.-based study that was cited as a facilitating factor for program delivery with U.K. running clubs (Chalkley et al, 2018) was the importance of flexibility with program implementation, including the opportunity to tailor elements of the program to a given school's context such as times of day in which running was incorporated within the school setting. The importance of flexibility and tailoring of program elements is supported within the fields of complex adaptive systems by the concept of *function versus form*, a new conceptualization of program fidelity in which emphasis is placed on the function of a given intervention (e.g., providing opportunities for running time) while allowing the form to vary based on the setting (Hawe et al., 2009; Hawe, 2015).

A common theme found across the best practice domains in our research was the importance of providing social support and positive reinforcement for student runners. Best practice recommendations were identified related to the provision of encouragement, instrumental, and role modeling support, with specific recommendations that included the creation of *peer support group structures*; the provision of positive social reinforcement and motivation of runners through *displaying of running logs, highlighting and recognizing student progress across various communication channels and school events*, and the provision of *extrinsic reinforcement via the provision of awards*; and *promoting a sense of community via school events* and activities such as *MK t-shirt wearing days*. Chalkley et al (2018), in their qualitative research on school-based running clubs in the U.K., found that the provision of

positive reinforcement was an important motivator for running based on child input, and identified a sense of cohesion as an important outcome of running clubs based on teacher input, especially when students from multiple year groups participated concurrently. In supporting the importance of creating a social support network of school stakeholders, a systematic review of social support in youth sport by Sheridan and colleagues (Sheridan, Coffee, and Lavalley, 2014) found that coaches were the most prevalent provider of social support, while coach, parent and peer support all played a significant role in shaping the youth sports experience. The promising practices reported in this study for providing social support via children's running clubs merit further investigation to understand their potential impact on various individual-level and community-level outcomes, including children's athletic identity (Anderson et al., 2009) and student-school connectedness and sense of community, which have been found to be protective against health risk behaviors such as substance use and bullying (Battistich and Hom, 1997; Springer et al., 2016; Spanemberg et al., 2020).

In a recent commentary by Lima and Soares (2020), the authors note the challenges of scaling up physical activity interventions for young people, with the lack of cooperation between researchers and policy makers as one such barrier to scaling up interventions. The rich best practice recommendations reported in this paper underscore the opportunity for broadening a traditional pipeline to knowledge approach for physical activity in which interventions are developed 'in the lab,' to an approach that fosters partnerships between researchers *and practitioners* (in addition to policy makers)- in which innovative and *indigenous* best practices are driven by practitioners. The importance of co-learning and co-creating health promotion interventions with stakeholders from within a given setting [has](#) been advocated as a key strategy for advancing population health in response to the limited effects of interventions guided by

individual-level theories that often fail to consider the context through which a given intervention is delivered (Moore and Evans, 2017).

In supporting best practices for running clubs, Marathon Kids has actively embraced practitioner input and best practices via approaches that include their Leadership Academy, Facebook community, and annual survey, among other approaches that recognize and value the contributions of their volunteer coaches, parents, students and community leaders. Their approach of nurturing and supporting grassroots-led running clubs and programs represents a promising model for both establishment and dissemination of school and community-driven opportunities for children's leisure-time physical activity engagement as well as incubation and coach-led identification of innovative strategies for children's running clubs. The MK model for running clubs provides a robust framework for guiding practitioner-led physical activity tailored to context, while also providing a space for networking of practitioners, recognition of practitioner efforts, and further dissemination of clubs across communities.

In addition to exploring best practices for the implementation of running clubs, this study documented the average weekly minutes scheduled for each club as well as the times of day that MK coaches implement their clubs. We found a high number of minutes delivered of physical activity via MK running clubs (an average of 112 minutes scheduled for walking and running during the school week), representing an average of 22.4 daily minutes of walking/running delivered via the MK program. While PE class was identified as a common time of day for scheduling running/walking for MK, delivery of MK in the afterschool setting resulted in the most time scheduled for running/walking during the school week. Of note, our findings indicate that MK running clubs can help provide over 100 additional weekly minutes of scheduled running/walking time outside of PE class via implementation of MK in the before and

afterschool settings. Given the limited research on the before-school setting for children's physical activity engagement as well as our findings that this was a less popular time for implementation of running clubs, further research is merited to understand the promise or barriers of before-school physical activity clubs for the elementary school-aged population.

### ***Limitations***

As with all studies, specific limitations of our study merit mention. First, this study is based on insights on running clubs from diverse running club coaches that include both school-based and out-of-school-time based coaches as well as coaches of diverse backgrounds, from PE teachers to classroom teachers to parents and other community leaders. Our lack of data on coach background prohibits our ability to explore deeper possible differences in recommendations by coach profiles. We also note that just over half of coach respondents were from Texas, which limits the generalizability of our findings. These limitations notwithstanding, we achieved a high response rate of MK coaches, providing further foundation for the generalizability of responses across school and out-of-school-time setting-based volunteer coaches within the MK running club network. Second, as common within the field of qualitative research, we did not attempt to quantify the prevalence of a given best practice recommendation, as we aimed to identify general best practice themes along with specific recommendations-which include exploration of more innovative practices from a given coach. While the best practices cited here for running clubs are rooted in practitioner experience, further research is warranted to assess the specific impact of a given recommendation. Third, the amount of time provided for running/walking was self-reported by MK coach participants, which may be subject to social desirability bias, and scheduled time for running/walking may not equate to total time engaged in running/walking. Future research on the average time spent in moderate and

vigorous physical activity via children's running clubs based on objective measures can provide helpful insights into the contributions of running clubs for children's daily physical activity.

### **Conclusion**

This study provides practice-based and practical recommendations for implementation of children's running clubs via the lens of MK volunteer coaches that can help to inspire, enhance and further disseminate the establishment of volunteer-led running clubs for young people. As communities worldwide are currently challenged with the COVID-19 pandemic, a practitioner-driven approach for creating support systems for children's running, which may include virtual clubs for running [e.g., Lizzo and Liechty (2020)] as well as digital and online tracking of miles run/walked, holds promise for accelerating the identification and dissemination of best practices. We look forward to ongoing co-learning between practitioners and researchers with the aim of growing an eco-system of supports for children's physical activity, both in the U.S. and globally.

### **Acknowledgements**

[Removed for blinded review]

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