Running Toward Equity: Socioeconomic Diversity and Parental Perception of a Physical Activity-Based Positive Youth Development Program for Girls

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Abstract

The Girls on the Run (GOTR) is a national positive youth development program to promote self-confidence, resilience, and self-esteem for girls through physical activity. It also includes an opportunity for parental support through involvement in a 5K event at the end of the program. There is significant evidence on the importance of family support and parent role modeling for children's physical activity, but little is known on how children can encourage adult physical activity. This study aimed to explore parents' perceptions of their daughters' participation in GOTR, and their attitudes toward physical activity while exploring variations in these perceptions between parents in different socioeconomic groups. Parents were recruited from high and low-resource sites for participation in online focus group discussions. Questions included perspectives on their daughter's participation in GOTR, their physical activity, and participation in the GOTR 5K event. Discussions were recorded, transcribed, and thematically analyzed from two focus groups with parents from low-resource sites (N=10) and two with parents from high-resource sites (N=15). A common theme across resource groups was that GOTR enhances self-confidence, communication skills, and physical activity. More parents from the high-resource sites reported being physically active and having supportive environments than parents from low-resource group reported barriers to physical activity and participation in the 5K event. There is an opportunity to encourage and facilitate parental 5K participation to create a ripple effect for the benefits of the GOTR program.

Keywords: physical activity, youth, equity, family interventions

Many Americans, both young and old, could benefit from more physical activity. The Physical Activity Guidelines for Americans recommend that children and adolescents ages 6-17 participate in 60 minutes or more of moderate to vigorous intensity physical activity daily (Physical Activity Guidelines Advisory Committee, 2018). Data from the 2018-2019 National Survey of Children's Health indicate only 28% of children 6-11 years of age participated in 60 minutes of physical activity every day (Child and Adolescent Health Measurement Initiative, 2019). There are also significant disparities in youth physical activity by race, ethnicity, income, and gender, with some of the lowest rates of physical activity in lowincome youth and Black, non-Hispanic girls (Child and Adolescent Health Measurement Initiative, 2019). The intersectionality of these characteristics may also heighten inequalities and worsen both current and future health risks from lack of adequate activity (Lim et al., 2021).

There is also room for improvement in the prevalence of physical activity in American adults. In 2020, only 22.7% of adults over age 18 participated in 150 minutes per week of moderate-intensity physical activity, 75 minutes of vigorous-intensity activity, or a combination of these, which is the recommended amount of aerobic activity as outlined in the Physical Activity Guidelines for Americans (Physical Activity Guidelines Advisory Committee, 2018). This rate decreases, particularly for women, older age groups, and those who are non-white (Elgaddal et al., 2022). One strategy to improve physical activity across age groups is through family-based interventions. Parents or caregivers can promote physical activity through role modeling, engagement in physical activity, exercising together with their children, and verbally encouraging children's engagement (Gubbels et al., 2011; Tate et al., 2015). The Community Preventive Services Taskforce recommends family-based interventions to increase physical activity among children. (Physical Activity: Family-Based Interventions | The Community Guide, n.d.) Family interventions to encourage physical activity encompass the constructs of the Social Cognitive Theory (Bandura, 1986), which posits the importance of social context within environments to influence behavior. This context may be bi-directional from parent to child and child to parent through increased capability and observational learning.

There are significant gaps in knowledge about best practices for family-based physical activity interventions, and specific implementation details about this recommendation. (Foster et al., 2018). More research is needed on how children can influence adult physical activity in family-based or parental physical activity interventions, and how to tailor programs for those with different socioeconomic backgrounds (Brockman et al., 2009). Partnering with existing programs that promote physical activity as part of positive youth development can be one way to explore components of effective family-based interventions.

Girls on the Run

Girls in the Run (GOTR) is an international positive youth development program incorporating evidence-based strategies to teach girls in grades 3-5 the important connection between physical and emotional health while building confidence, kindness, and decision-making skills (Girls on the Run International, 2023). There is a growing need for these skills, particularly in light of the increase in mental health concerns in youth post-COVID-19 epidemic (United States Surgeon General's Advisory, 2021). The 10week after-school curriculum culminates in a 5K event for teams, their families, and friends. The St. Louis Council of GOTR began in 2002 and has served over 72,000 girls across 23 counties in Missouri and Illinois. They offer curriculum in spring and fall at over 250 sites (mostly schools) each year, serving all communities in the region with the greatest focus on areas with low access to resources (Girls on the Run St. Louis, 2023). GOTR has a sliding fee scale for participation and offers financial support through scholarships for low-income participants. They also provide additional support (e.g., providing running shoes and socks) through local organizational sponsorship. Over 50% of their sites currently fall in the highest financial need categories.

Each participant is required to have a "running buddy" for the end-of-program 5K. While some parents participate as the running buddy, many do not. There is an opportunity to encourage more parents, especially those from low-resource areas, to train for and participate in the event in support of their daughters. Their participation may encourage sustained physical activity for themselves and their families. To inform the planning of an equitable intervention for parents, this study aimed to explore parents' perceptions of their daughters' participation in GOTR and their attitudes toward physical activity while exploring variations in these perceptions between parents in different socioeconomic groups.

Methods

Participants

Participants in this study were parents or caregivers of girls participating in the Spring 2023 season of GOTR. With the help of GOTR staff and working with site coaches, we recruited participants from two sites in low-resource areas and two sites in high-resource areas. GOTR staff recommended sites that best represented the resource needs coupled with sites that had good parent communication and engagement with coaches. The goal of recruitment was at least 6 people per group. This study was approved by the Institutional Review Board at Washington University in St. Louis (IRB # 202303017). Participants were asked to join an online virtual focus group to discuss their thoughts on GOTR. They were offered a \$20 gift card to an online retailer or local grocery store for their involvement in the study.

Focus Groups

The research team developed a focus group interview guide informed by the Social Cognitive Theory (Bandura, 1986) to gain parents' perspectives on their daughter's participation in GOTR, physical activity, and thoughts on participation in the GOTR 5K race. There were three main topics: 1) general information on girls' participation in GOTR; 2) girls' and family physical activity, and 3) parent involvement in the GOTR race. The questions were pilot tested with GOTR staff whose daughter had been enrolled in a past program. Only minor edits were made to the questions after the pilot.

The focus groups were held in the evening to accommodate work schedules and conducted over Zoom video conference software. Members of the research team experienced in qualitative data collection conducted the focus groups, with one moderator and one note-taker per group. The discussion began with an introduction of the topic, participant introductions, an ice-breaker question about their last physical activity, and then a series of study questions. The moderator elicited responses to the questions from all group participants.

Analysis

The recorded focus group discussions were transcribed verbatim, and the transcripts were anonymized before the data analysis. Analysis was guided by the constant comparative method to enable discernment of conceptual similarities and the patterns of codes (Fram, 2013). After reading the four transcripts, three research team members collaborated to develop a draft coding tool based on a priori topics and thematic analysis. They coded one transcript independently and then met to discuss any iterations of the tool. After revising the coding tool, the three research team members coded each transcript to reduce reflexivity. After coding, the team met to discuss constant comparisons of any discrepancies in coding to achieve 100% inter-rater reliability. The text from each code was merged while maintaining the identification of low or high resource group contributions. The text from each code was aggregated and thematically analyzed with any group differences noted.

Results

We conducted two focus groups with parents from low-resource sites (N=10) and two with parents from high-resource sites (N=15). The groups had between 2 and 8 participants and lasted 18-37 minutes. All participants were women and mothers of the girls participating in GOTR, except for one who was a grandmother. (We use the terms "parent and daughter" to encompass all participants). Many parents from both high and low-resource sites were multitasking during the discussion, such as driving to family extracurricular activities, cooking dinner, or caring for other children. Thematic results are presented in Table 1.

Table 1. Major themes from parent focus groups.

Theme	Description	Difference between high- and low-resource groups?
Perception of GOTR Program	 What parents knew about the program prior to and during the sessions. How they received information about the program. 	No
Benefits of GOTR	 Social benefit with friends and peer support Improved self-confidence Improved physical activity Enhanced communication skills 	No
Parent and Family Physical Activity	 Physical activity of parent Physical activity of family Barriers to physical activity 	Yes- low resource parents noted less physical activity than high- resource parents
Physical Activity Environment	Neighborhood and home environment to encourage physical activity	Yes-fewer places and supports for physical activity reported by low-resource parents
Experience with GOTR or 5K	Description of experience with GOTR program or 5K event	Yes- more high-resource parents noted experience with the program and 5K participation
Barriers to 5K participation	Physical activity statusConflicting prioritiesWho girls want to run with	No

Perception of GOTR Program

Parents were asked what they knew about GOTR from their daughters, or the program information received. All parents in both groups recognized and appreciated the program's holistic approach and commented on the physical, emotional, and social benefits. They noted that GOTR fosters friendships among girls and helps build their self-confidence. Most parents knew about the program from their daughters, as they would share activities or lessons from GOTR practice sessions. A few parents from high and low-resource site groups noted they didn't get any information from their daughter.

"Well, she tells me nothing, but I know, from the emails, that the program is a combination of physical activity and also self-esteem, empowerment, competence, being a good person type of messaging." (High-Resource Group)

Parents in both groups mentioned various influences on their daughter's motivation to join GOTR. Friends, older girls from their schools, teachers, coaches, after-school program leaders, and parents all played a role in encouraging enrollment in GOTR. Parents in both groups noted their girls joined the program for various reasons, but many joined because they genuinely enjoyed running and being physically active. Several parents in both groups mentioned that their daughter joined GOTR because they were seeking a safe space that was inclusive to girls who may not identify as "competitive" or "sporty", providing opportunities to engage in physical activity in a supportive environment.

"Our school is very sport heavy. It doesn't necessarily need a space for girls to have access to sports. However, it absolutely needs a space for girls to have access to physical fitness, who are not sporty, if you will." (High-Resource Group)

"When my oldest daughter was three she told me that she was the fastest runner in the world. And I was like, "Okay, well I'm going to have to do something to make sure she thinks that she could actually continue to think that way." (Low-Resource Group)

Parents across groups perceived that GOTR positively impacted their daughters due to the program's beneficial social and emotional curriculum. They discussed that GOTR emphasizes physical activity, self-respect, empowerment, and moral values. Parents in both groups talked about "worksheets" or activities the girls do to promote these skills that are part of the program. Parents also noted the mental health benefits of learning these skills.

"Besides the exercising, she said it teaches her to be more confident, kind, respectful. And she's met new friends, so it's a lot for her." (Low-Resource Group)

Parents in both groups noted that their daughters were proud of the worksheets and papers that they would bring home from GOTR practices, which served as reminders of the empowering discussions made through the program. Both groups of parents mentioned hearing about bracelet lap counters that the girls were given during practices, and that they were important rewards that were kept even after the program ended.

"I think she always comes home with these specific papers and she's really proud of them. Worksheets just sort of remind her of what they talked about and she puts them up on the

refrigerator for herself and she's never done that before about anything that she's been involved in and just sort of little poems or mantras that they're supposed to remember." (High-Resource Group)

Benefits of their daughter's participation in GOTR

There were few differences between the parent groups on the program's benefits. Parents from the high and low resource groups reported very similar benefits, falling into three major themes. First, the most frequently noted was the social benefit, which was noted as both friendships and peer support. Parents highlighted the social aspect of GOTR as something their daughter appreciated about the program. Engaging in the activities helps the girls get to know one another better. One parent mentioned how their daughter struggled to make friends, and GOTR helped her connect with others. Others reported that involvement in GOTR helped their daughter branch out and expand their social circle.

"The biggest thing she's got out of it is the buddies, like the friendships that she's formed, like I'm running with this person every time or I want to practice with this person or we have similar styles. And so that's been usually what we talk about after practice." (High -Resource Group)

"So she's been enjoying going and building relationships with other girls, that she wouldn't interact with. So I enjoy seeing her branch out." (Low-Resource Group)

Another aspect of the social benefits of GOTR was peer support or encouragement that the girls received and gave to each other. Parents across groups noted that the girls "worked together" and built relationships throughout the program, which was a definite benefit. Several parents noted their girls talked about how they "build each other up".

"My daughter, she explained that her favorite part is where they build each other up. It's some type of bonding class or something that they do. I'm not sure if I'm saying this correctly, but it's associated with the young ladies building each other up and things like that." (Low-Resource Group)

The second major theme reported by both groups of parents was improved self-confidence. Parents noted how important self-confidence is for young girls and how glad they are that this is a benefit of the program. They mentioned how GOTR builds confidence for running and can be transferred to other activities, such as goal setting and preparing for the 5K, to build the girl's confidence in themselves.

"And so, since then, it has been a good thing for her. And I will say that, for the first time ever, last fall, she wanted to be involved in an organized sport. And I do wonder if some of that was because Girls on the Run gave her that ability to feel okay in that space." (High-Resource Group)

"Besides the exercising, she said it teaches her to be more confident, kind, respectful." (Low-Resource Group)

A third benefit reported by parents was physical activity. Some parents in both groups reported increased physical activity for their daughters. They were happy to see their daughter getting more exercise and learning to enjoy activities they may have yet to like or try before GOTR. Other parents in both high and low-resource groups noted GOTR did not enhance their daughter's physical activity because they were already very active.

"I wouldn't say that I see a big difference in her activity outside of the program, but I'm just grateful that, twice a week, she's being active. That's more than she was before, so it's not a complaint. I'm very happy with the extra activity she's getting at the program, for sure." (High-Resource Group)

The last theme within perceived benefits of GOTR for both groups, was enhanced communication skills. They knew the GOTR curriculum emphasizes skills on how to communicate with kindness and respect. Parents in the focus groups noted that their daughters could demonstrate this, and those with past GOTR experience carried these skills with them beyond the program. In addition to helping with problem-solving, they described how their daughters spoke about verbally encouraging their teammates.

Parent and Family Physical Activity

The groups had differences in how parents reported their physical activity levels. Most parents from high-resource sites reported being physically active. A few mentioned participating in marathons or triathlons. Two parents said GOTR helped them become more physically active by training with their daughter or preparing for the 5K event. Some noted they preferred non-running activities but were still regularly physically active.

"And then I just did an Ironman in September so they got to witness a whole lot of the training last year for me and they were poolside counting and in the lanes with me on training, swims and with me in the basement while I trained on my bike. So it's been really important to me to do that for myself but also nice to have them witness it as well and see that this is just what we do." (High-Resource Group)

Most parents from the low-resource sites reported barriers to being physically active outside of everyday work or caregiving activities. Examples of primary physical activity mentioned were walking up their apartment steps, bringing in groceries, and being active while at work. "I do a lot of walking. And then the three flights of steps every day. I think yeah, I think that's good enough. Because we stay on the third floor, so going down them in the morning to take her to school, and coming up-"(Low-Resource Group)

Additionally, time was the most noted barrier to being more active.

"There ain't enough hours in the day. That is my biggest hiccup, time." (Low-Resource Group)

We also explored family physical activity. Parents in both groups mentioned many organized sports, including soccer, hockey, basketball, and dance. Some parents from the high-resource sites mentioned participating in fitness challenges, going on walks and riding bikes together as a family. This was not mentioned by parents from the low-resource sites.

Physical Activity Environment

There were differences between groups on aspects of their home or neighborhood that could impact physical activity for themselves or their family. Several parents from high-resource sites stated their family lives in an environment that allows their family multiple ways to be active. Examples of resources mentioned were living near parks or having access to bicycles, rollerblades, basketball hoops, and gymnastic mats. They also noted the safety of these areas for outdoor sports and play, while only one parent from the low-resource sites mentioned neighborhood outdoor spaces.

"I definitely think access to the materials, and we have a bicycle for her, we have helmets for her, we have rollerblades for her. We just have the things in our basement. We have a gymnastics bar, we have mats, so we have a basketball hoop, you know what I mean? It's kind of in your face no matter where you go in our house or garage that there are things like that. And fortunately, we do have streets that don't have a lot of cars and we have sidewalks." (High-Resource Group)

"I mean, she active, as far as willing to go outside. We'd go the park, or we have a complex in our apartment where it's like an open field, so I take her out there. (Low-Resource Group)

Past Experience with GOTR and 5K Event

There were also differences in past experiences with GOTR and the 5K event. Most parents in the high-resource sites discussed past involvement with GOTR and the 5K event from prior seasons with their daughter, roles as coaches, or with older siblings who participated in the program. Parents shared stories of their daughter's development as individuals, self-empowerment, and a sense of solidarity that creates a sisterhood among the girls in the program that culminates in the 5K. More participants from the high-resource sites said they would be running with

their girls or walking in the event to support them than parents in the scholarship groups. In a few instances, two parents ran for extra support or to accommodate two daughters running. Parents from both resource groups who were not participating in the 5K mentioned others who would be the running buddies, such as siblings, cousins, grandparents, aunts, godparents, and teachers. Many were not planning to run or walk at the event but were still planning to go for "cheerleading" or "supporting all the girls".

"I'll be on the sidelines." (Low-Resource Group)

"My husband's the runner of our family. I used to run, but my knees are not great right now. So, I'll be the cheerleader with my other two kids. And yeah, my daughter's really excited to run with her dad." (High-Resource Group)

Barriers: Physical Activity Status

A few parents in both groups were still deciding about their participation in the 5K. Two parents noted that the training needed to successfully complete it was being factored in their decision.

> "Well, I'm at a crossroads, because at first I was just going to support, but I actually have a coworker whose daughter is in Girls on the Run also, and she keeps trying to talk me into joining the 5K with her." (Low-Resource Group)

Some parents in both groups perceived themselves as "not being very athletic" and were worried about "not keeping up" due to their current fitness level. One participant used the race as a training goal but remained less enthusiastic about running than others.

And I thought, "Okay, my husband's going to run just like he usually does with our older daughter." So I'm now going out every other day and trying. I'm making progress. I'm not going to say I'm enjoying it any more than I ever have before, but I'm committed to doing it because I don't want to be the one who slows her down. (High-Resource Group)

Barriers: Conflicting priorities

Parents in both groups noted having other family responsibilities, such as caregiving for other children or attending other sporting practices/events that prohibit them from participating in the 5K.

"I would love to participate, but I don't think I would be able to because of my other kids". (High-Resource Group)

"I'm not going to run or walk with her. Her other granny's going to run with her this time because I have to get the boys to track meet at eight o'clock." (Low-Resource Group)

Barriers: Who the girls want to run with

Some parents in both groups mentioned their daughter did not want them to run with them, even though they would have liked to be involved.

"I am not cool, because I'm mom, so the ladies always invite one of their aunts to run as their running partner. So I get actively passed over, but the agreement that we've made is, "But I'm going to train with you." And then, while they run the 5k, I run through Forest Park also, I do my own 5K." (High-Resource Group)

"So she said I not did want to participate. I wanted to participate, but she wanted her brother and her cousin to do it with her. So my daughter had her own plans, pretty much. Not my choice, but I thought it would've been fun for me to do it. And I'm assuming that she thought that Mom wouldn't be able to keep up and everything. I probably wouldn't have time, but she had her own idea of who she wanted to attend this event with her. So I'm just going with what she wants. (Low-Resource Group)

Discussion

This study sheds light on how parents perceive their daughters' involvement in GOTR as a vehicle to promote their own or their family's physical activity. This may have a bi-directional positive impact. First, increasing parent physical activity can be an important influence on their children. There is significant evidence to show the importance of parental influence on child success and health behaviors (Wang & Sheikh-Khalil, 2013; Gubbels et al, 2011; Tate et al., 2015). The combination of parental influence plus the positive impact of a program such as GOTR may have cumulative benefits on behaviors such as physical activity for young girls, creating a springboard for a healthy lifestyle as they age (Harwood & Knight, 2015; Holt et al., 2011). Parental influence is especially important in elementary school children, and this need may be moderated by socioeconomic status (Deng et al., 2016). However, data show lower parental involvement in school and other programs occurs more often among economically disadvantaged families (Wang et al., 2016). Understanding parents' perceptions of high and low-resource areas is the first step to developing equitable interventions to encourage parental and family physical activity. Second, there is the opportunity to leverage a physical activity-based positive youth development program to influence physical activity behavior in parents. Although programs focus on child behavior, they can provide knowledge, motivation, and support for adult physical activity. This aligns with the theoretical constructs of the Social Cognitive Theory, which posits the importance of the connection between the individual, social context, and behavior through observational learning, capability, reinforcements, and selfefficacy (Bandura, 1986).

Results from this study indicate some important similarities and differences between groups of parents.

Both groups of parents expressed many positive perceptions regarding their daughter's motivation, positive attitudes, and self-empowerment ignited through GOTR. This supports results from a study on GOTR by Weiss et. al., who conducted focus groups with stakeholders such as caregivers and coaches. They reported stakeholder perception of improved social and emotional behaviors, supporting their quantitative data for GOTR girls (Weiss et al., 2019).

There were two noteworthy differences between parental groups in this study. First, there was a difference in how parents described their environment for supporting physical activity. Parents from the high-resource sites described many supports in their homes or neighborhoods to enable physical activity. These resources and safe spaces for activity are key for encouraging and maintaining physical activity for children (Carver et al., 2008; Timperio et al., 2015). Only one parent from the low-resource sites talked about neighborhood physical environment supports (a park and an open field). Evidence shows the disparity in neighborhood support for physical activity among lowincome neighborhoods (Sallis et al., 2011; Watson et al., 2016). Having greater accessibility to safe parks, open spaces, and green spaces correlates to increasing physical activity among different communities (Henderson et al. 2015). In addition to physical attributes of neighborhoods, parental perceptions of their neighborhood environment are associated with child and adolescent physical activity (Tappe et al., 2013; Kepper et al., 2016). GOTR may play an important role in mediating the potential negative impacts of girls who live in low-resourced neighborhoods by creating an opportunity to participate in and enjoy physical activity. This program can also benefit parents by enhancing perceptions of their physical activity and creating support for this behavior.

Another difference between parents was their description of their physical activity status. Fewer parents from the low-resource sites noted their physical activity compared with almost all from the high-resource sites. This aligns with national surveillance data on physical activity, which shows adults with a family income of 200% of the federal poverty level (FPL) or more were more likely to meet both physical activity guidelines than those with a family income of less than 200% of FPL (Elgaddal et al., 2022). The activities noted by parents from high-resource sites included marathons, ironman events, triathlons, biking, and gyms. These activities require equipment, facilities/environment, and time for training. When parents from the low-resource sites mentioned physical activity, it was not considered leisure-time, but as part of work or household chores. Time was the most frequently stated barrier to being more physically active for the low-resource parents due to competing priorities such as work or caregiving. This finding is consistent with the literature (Moreno & Johnston, 2014; Segar et al., 2017). Enhancing knowledge about "every minute counts" may be one way to encourage physical activity among parents without overburdening them (Katzmarzyk & Jakicic, 2023). Promoting family physical activity, such as participation with their girls in the GOTR 5K and addressing caregiving

barriers, may also be effective strategies for increasing physical activity among parents from low-resource sites.

While parents in both groups talked about going to the race to support their daughters, more parents from the high-resource sites mentioned they would be running or walking with their girls on race day than parents from low-resource sites. Some parents in both groups were reluctant to participate because they felt they were inactive. This presents an opportunity for parents to use the 5K event as a training goal and a potential opportunity to encourage group training (e.g., with friends or other GOTR parents) to enhance social support, which is a known correlate of physical activity for women (Baruth et al., 2014).

Limitations

This qualitative study provides important insights into the perceptions, attitudes, and experiences of parents of the participants of GOTR, but qualitative research has its limitations and may not be generalizable to other groups (Moore et al, 2015). This study was conducted with a small convenience sample of parents and may not represent all low- and high-resource parents of GOTR participants. Even though we used trained facilitators and encouraged participation from everyone, participant bias is possible because of the group setting dynamics of focus groups, particularly when conducted using a video conferencing platform. Conducting a virtual focus group made it more convenient for participants, but many parents were multitasking, such as cooking dinner, driving, or caregiving for young children during the discussion, which may have impacted their ability to engage in the conversation fully. Despite the potential limitations of this study design, the information collected can inform larger studies and family physical activity interventions.

Conclusion

Overall, parents shared positive perceptions of their daughters' participation in GOTR. Results also provided insight into parent and family physical activity. Low-resource parents reported more barriers to their physical activity and the ability to participate with their daughters in the 5K. GOTR allows girls of all socioeconomic backgrounds access to a safe and supportive environment for physical activity-based positive youth development. Encouraging and facilitating parental participation in the GOTR 5K event is an opportunity to promote equitable parent and family physical activity and should be a topic for future research.

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Conflict of Interest Statement:

We have no conflicts of interest to disclose.

Author Contributions

Conceptualization A.E., Methodology A.E., L.P., R.G., Data Collection, A.E., L.P., R.G., Analysis A.E., L.P., R.G., Writing and Review A.E., L.P., R.G., Editing and Supervision A.E.

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