Empirical Article

Helping Teens Overcome Anxiety Episodes in Project Work: The Power of Reframing

Journal of Adolescent Research
1–27

DOI: 10.1177/0743558420913480
journals.sagepub.com/home/jar
SAGE

Carolyn N. Orson[1] and Reed W. Larson[1]

Abstract

Overwhelming challenges in youth program projects (e.g., arts, leadership, science, technology, engineering, and mathematics [STEM]) can create intense anxiety for adolescents that disrupts engagement in their work. This study examines how experienced program leaders respond to these episodes to help youth overcome anxiety. We conducted semi-structured interviews with 27 veteran leaders from high-quality youth programs about their experiences with these situations. Programs primarily served Latinx, African American, and European American youth (ages 11–18). We utilized grounded theory analysis to examine leaders' descriptions of the situations, their strategies, and the goals of those strategies. Leaders' most frequent response was *reframing*—providing youth new cognitive frames to understand anxiety-eliciting situations, reduce anxiety, and restore motivation. We identified three types of reframing strategies. First, *reframing youth's understanding of their abilities* entailed providing youth new perspectives for enhancing their conceptions of their competencies in the work. Second, *reframing youth's understanding of challenge* involved suggesting new frameworks for youth to assess and control work challenges. Third, *reframing emotion* involved helping youth understand anxiety as normal and as a tool for problem-solving. The findings also suggest these strategies help youth learn skills for managing situations that create anxiety in future work.

[1]University of Illinois at Urbana–Champaign, USA

Corresponding Author:
Carolyn N. Orson, Department of Human Development & Family Studies, University of Illinois at Urbana–Champaign, 904 W. Nevada St. MC 081, Urbana, IL 61801, USA.
Email: orson2@illinois.edu

Keywords
adolescence, organized activities (after-school, extracurricular), qualitative methods, resilience, mental health/psychopathology

> During a rehearsal for a high school musical, Amanda experienced a swell of anxiety because she doubted she deserved the role, wanted to prove herself, but couldn't get the dance right. She said, "It was just kind of a modge podge of crap," and described experiencing a "breakdown." She left rehearsal and "hid backstage while everyone else was on stage practicing."
>
> —Larson, McGovern, and Orson (2019)

When teenagers like Amanda encounter difficult challenges during activities, it can create intense anxiety that disrupts their engagement in the task and makes it hard for them to reengage (Larson, McGovern, & Orson, 2019; Maloney et al., 2014; Pekrun & Linnenbrink-Garcia, 2012). Evidence suggests that adolescents are more vulnerable to experiencing anxiety than children (Larson & Asmussen, 1991) and that teens' susceptibility to anxiety in response to challenging work has been increasing over the last three decades (Astin et al., 1986; Eagan et al., 2017). During the same age period, however, teens gain capacities to develop knowledge of the abstract and dynamic properties of emotions, which potentially allow them to better manage emotional experiences (Casey et al., 2008; Steinberg, 2014; Zeman et al., 2006). But the development of these emotion-management capacities is likely to depend on the learning experiences afforded to youth (Zelazo, 2013). It is important therefore to understand how educators, coaches, parents, and other mentors can respond to teens' context-driven episodes of anxiety in ways that support youth's work and facilitate their development of emotional knowledge and skills. In this research we ask: What strategies do experienced youth professionals use to respond effectively to adolescents' experiences of disruptive anxiety during challenging activities?

Youth development programs are valuable contexts to examine these anxiety episodes and the strategies used by skilled professionals for responding to them. On the one hand, programs for adolescents often engage them in projects with difficult real-world challenges (e.g., creating videos, planning events, producing a play), which can lead members, like Amanda, to have experiences of being overwhelmed by anxiety (Larson, McGovern, & Orson, 2019). At the same time, these programs can provide favorable conditions and supports for youth's project work and for learning to manage strong emotions (Larson & Brown, 2007; Rusk et al., 2013). Members are typically highly invested in their projects and learning from them; programs

generally have a culture that supports learning from mistakes; and youth often develop positive mentoring relationships with program staff (henceforth: "program leaders") (Smith et al., 2016). Furthermore, these leaders see helping teens overcome obstacles in their projects as part of their job (Larson et al., 2016).

In this study, we interviewed veteran program leaders (with four or more years of experience) about strategies they had used to respond to a specific episode of a teen's anxiety created by their project work. The goal of the study was to examine how these leaders responded to disruptive anxiety in ways that facilitated teen's reengagement in their work. Our analyses identified "reframing" as the most frequent approach employed by leaders, which we defined as providing and supporting youth in using a new perspective for understanding the anxiety episode. The findings elucidate leaders' effective use of three reframing strategies in response to specific types of youth situations.

Literature Review

Anxiety and Disrupted Motivation

To understand adolescents' anxiety episodes and educators' responses, it is valuable to draw on what is known about the causes of anxiety and how anxiety disrupts motivation. Anxiety is part of the everyday ups and downs in complex work. It can occur when attempts to reach a goal are frustrated including from experiences of failure or anticipation of failure (Pekrun et al., 2009; Stoeber et al., 2014). Self-doubt can contribute to anxiety (Thompson & Schlehofer, 2008). In flow theory, anxiety occurs when the challenges a person perceives in an activity are significantly above the person's perceived skills: when they are overwhelmed by challenges (Csikszentmihalyi, 1990). Anxiety also can be influenced by anticipated judgment by others, events in a person's life outside the activity, and by dispositional anxiety; however, the current research focused on proximal conditions in teens' projects that contribute to anxiety episodes.

Although moderate anxiety can be beneficial in motivating work (Sweeny & Dooley, 2017), strong anxiety can disrupt motivation and engagement (Pekrun et al., 2009; Thompson & Schlehofer, 2008). Research points to several disruptive mechanisms. Heightened anxiety can interfere with attention and performance by using up critical cognitive resources, like working memory (Moran, 2016; Qin et al., 2009). Anxiety can also fuel negative thoughts, rumination, and avoidance behavior (Maloney et al., 2014). Scholars have suggested that these mechanisms can create a vicious feedback cycle or "spiral" of anxiety, self-doubt, helplessness, and demotivation (Fisher, 2013).

Research suggests that adolescence may be an important age period for learning to manage this kind of negative emotional experience (Kessler et al., 2005; Steinberg, 2005).

Projects in Youth Programs as Contexts for Episodes of Anxiety

Two seminal articles on project-based learning in school described how projects "can create anxieties for students that are difficult to dispel" (Blumenfeld et al., 1991, p. 380; Blumenfeld et al., 2006). Compared with the schoolwork to which students are accustomed, projects are less structured, more open-ended and "risky"; and they require students to take greater responsibility for directing their work and be creative in solving problems. Students are likely to encounter gaps in their knowledge, ambiguous situations, and unfamiliar, unexpected challenges. Especially when students are novices in a domain of work, they often have inflated expectations and difficulty breaking down tasks. Thus, their work can easily be overwhelming. Under these conditions, the authors suggest, it is almost inevitable that they will make mistakes, encounter setbacks, and have experiences of anxiety and demotivation (Blumenfeld et al., 1991, 2006).

Although Blumenfeld and colleagues focused on school projects, these same circumstances—complex, open-ended challenges leading to anxiety—can present in teens' projects in youth programs (Heath, 1999). Teens often conduct projects in domains in which they are novices, and novices are more likely to encounter challenges above their skill level (Endsley, 2018). Adolescents' enhanced future time perspective might also raise their anxiety about things that can go wrong on their projects (Larson & Asmussen, 1991). Indeed, in two studies of high-quality programs, quite a number of youth described episodes in which challenges in their work led to anxiety, self-doubt, and demotivation (Larson, McGovern, & Orson, 2019). The teens' accounts of the causes of these episodes included overestimating their abilities, experiences of failure, lack of control, loss of self-confidence, and being in situations they did not understand.

But youth development programs can also provide favorable conditions for adolescents' project work and social-emotional learning from this work (Lerner et al., 2009; Smith et al., 2016). First, teens choose programs focused on a domain related to their interests (e.g., painting, gardening, service activities; Akiva & Horner, 2016) and typically become personally invested in their projects (Dawes & Larson, 2011). So they may be motivated to overcome obstacles. Second, programs intentionally create a low pressure and supportive interpersonal environment. Staff of high-quality programs tend to cultivate a culture in which teens feel comfortable and safe asking questions,

learning from trying new things, and making mistakes (Halpern, 2009; Smith et al., 2016). Teens can also form positive collaborative relationships and help each other, which may reduce feelings of self-consciousness and help them recover from anxiety experiences (Larson, Raffaelli, et al., 2019; Markowitz et al., 2014). Third, leaders have the time and flexibility to develop positive relationships with youth (Deutsch & Jones, 2008; Rhodes, 2004) and teens often come to trust leaders as sources of support and advice (Griffith & Larson, 2016; Walker, 2011). Youth report valuing leaders because they provide truthful feedback and care about them and their projects (Griffith et al., 2018; Larson & Angus, 2011). These conditions provide important context for our inquiry.

We must note that some adolescents recount experiences of anxiety in projects that do not lead to a breakdown in motivation like Amanda's; furthermore, some youth in past research appeared to be able to get themselves out of a spiral of negative thoughts and emotions on their own (Larson, McGovern, & Orson, 2019). However, in some cases, adult intervention appears to be warranted.

Program Leaders' Role in Helping Adolescents Overcome Episodes of Anxiety

There are multiple reasons why an adult might decide to step in to help teens reduce their anxiety in these situations. A youth's limited experience in the project domain, knowledge of emotions, and metacognitive skills for managing complex work may constrain their ability to navigate the situation on their own (Blumenfeld et al., 1991). Some teens may employ counterproductive coping strategies like rumination and avoidance that make it difficult for them to break the cycle of anxiety and self-doubt. Furthermore, if a youth is so demotivated that they quit the project, it terminates a valuable learning opportunity, including learning to manage anxiety.

Program leaders are well-positioned to play a role in supporting youth during episodes of anxiety during their projects. They often have expertise in the domain of teens' work, and veteran leaders may have useful knowledge from prior experiences with teens' anxiety episodes. Because youth trust program leaders, they may be more willing to talk with them about sensitive issues like self-doubt, anxiety, and feelings of failure. Several studies suggest that youth programs are contexts in which adolescents learn about emotions that arise in their projects (e.g., excitement, anger), and that staff sometimes play a coaching role in supporting emotional learning (Larson, 2011; Rusk et al., 2013; Smith et al., 2016), but these studies did not focus on how staff support teens who are experiencing disruptive anxiety.

To understand experienced leaders' strategies for helping adolescents with anxiety episodes, in the current study we interviewed a sample of veteran leaders from diverse types of programs. We obtained data through interviews with leaders because we wanted to understand their thoughts, goals, and actions in responding to youth. Leaders were asked to recount responses to actual situations of youth anxiety because we believed their accounts of specific decision-making situations would provide the most useful information for practitioners and other adults working with adolescents (Larson et al., 2015).

Method

Sample of Leaders and Programs

Data for this article come from interviews with 27 adult program leaders from a larger study who had provided accounts of responses to a teen's anxiety episode (Orson, 2018). All were experienced leaders. They had a median of 12 years working with youth (range: 4–42 years) and a median age of 29 (range: 24–62), and 21 (78%) were female. Leaders were 52% European American, 19% African American, and 11% Latinx, 11% mixed ethnicity, and 7% did not answer. Seventeen leaders worked in programs for high-school-aged youth (14–18 years old) and 10 in programs for middle-school-aged youth (11–14 years old). In some cases, two leaders came from the same program; as a result, the final sample represents 11 programs for older youth and nine for younger youth.

The larger study focused on how programs support positive developmental processes and included 27 diverse leadership, technology, arts, and science, technology, engineering, and mathematics (STEM) programs. Program selection criteria included features of high-quality programs, such as prioritizing positive development, having experienced leaders, and having a low youth dropout rate. Program recruitment aimed to achieve approximately matched programs for high-school-aged and middle-school-aged youth from three locations: two cities and one rural area in the Midwest. Youth in these programs were primarily Latinx, African American, and European American. In some programs, youth worked alone on parallel projects (e.g., creating films, building robots); in others, youth worked collaboratively but often had distinct roles.

Procedures

The interviews were semi-structured, utilizing open-ended questions to elicit leaders' accounts of their practices related to youth development. We obtained

leader consent following institutional review board (IRB)-approved procedures. Interviewers were trained graduate students, staff, and faculty members. At the end of each interview, we paid leaders an honorarium of $30. Interviews were audio-recorded and transcribed verbatim. At each program, we conducted interviews with one to three primary program leaders at four points over a full program cycle (typically a school year).

Leaders' accounts of their responses to youth anxiety and demotivation were obtained in the fourth interview, at the end of the program cycle. Leaders were first asked to think of a situation in which "A youth's anxiety or worries about a project interfered with making progress." Then they were asked,

- "What did you do, if anything, to help them deal with feeling anxiety?"
- "Do you have any personal guidelines for when and how you deal with this kind of situation?"[1]

We asked for a specific example to understand leaders' specific practices in context. The question about guidelines aimed to get leaders descriptions of their general practices.

The 27 leaders in the final sample were those who provided complete information in response to these questions. Forty-four leaders were interviewed at Time 4, but we excluded leaders who did not answer the question ($n = 1$), said that youth in their program did not experience anxiety ($n = 6$), described a source of anxiety but not their response ($n = 3$), and described ways they tried to prevent youth's anxiety, but not a response ($n = 7$).

Analysis

Our goal was understanding how leaders responded to episodes of disruptive anxiety in youth's projects. The analyses were conducted by the first author, with periodic reviews of coding decisions with the second author. They involved multiple iterative cycles that progressed from open to inductive and deductive coding, leading to three hierarchical levels of coding categories (Corbin & Strauss, 2008). The unit of analysis for this process was a leaders' response to one anxiety episode, what we called a response case. Each case included all transcribed text that described the youth's experience and leaders' actions toward and dialogue with the youth about that experience. Across the 27 leaders, we identified 51 response cases.

The primary analyses focused on what leaders described doing and communicating in each response case. Following Glaser and Strauss' (1967) constant comparison method, we created and revised coding categories based on

careful examination of conceptual similarity of cases. This included evaluation of similarity and differences in leaders' perception of youth's psychological state and the youth's thoughts and situations in youth's projects that created that state. It also included evaluation of leaders' actions and dialogue with youth in response to youth's state and situation, and leaders' stated goals for their actions and dialogue (e.g., new ways of thinking they suggested to the youth). The resulting coding hierarchy included three levels of codes for leaders' responses to disruptive youth anxiety: overarching categories, strategies, and subforms of the strategies.

We categorized the majority of response cases ($n = 29$) into one overarching category: *reframing youth's perspective on their work.* This category became the focus of the remaining analysis. The second, less frequent approach ($n = 8$ response cases) was *facilitating peer support* for the anxious youth. Although there is evidence that mobilizing peer support may be a valuable leader practice (Orson et al., 2020), leaders' descriptions for these cases provided limited specific information about their techniques, for example, how they recruited peers and whether they coached them on how to support the anxious youth. The remaining cases included *impelling youth* ($n = 4$), *breaking down tasks* ($n = 2$), and *other* ($n = 8$). The information provided for these less frequent categories was insufficient for meaningful analysis.

Within the reframing category, we identified three leader strategies that represented distinct leader assessments of the youth's situation and distinct frames and perspectives they provided to youth. These included reframing youth's understanding of: their abilities, the tasks in their work, and their emotional experience. For the first strategy, reframing youth's abilities, the coding process also yielded two subforms.

To increase the trustworthiness of this coding, a research assistant was trained to independently code all the leader response cases ($n = 51$) using the full codebook, including categories beyond reframing. Using constant comparison (Glaser & Strauss, 1967), they coded the responses and evaluated fit at each level of the coding hierarchy. They met with the first author after coding half of leader responses and after finishing the second half. During these meetings, the research assistant and first author compared their coding, identified discrepancies, established consensus, and refined definitions for the codes (Hill et al., 2005). The research assistant was encouraged to provide their own perspectives, and their coding and revised code definitions were incorporated into the final codebook.

Below we describe the findings for each category. We use pseudonyms for school names, program names, program leaders, and youth throughout the article. Since our objective was to understand leaders' responses in context, for each strategy and subform we provide one in-depth example and

one or more shorter examples that illustrate variations in the use of that strategy. It is important to acknowledge that although many leaders indicated that their responses were successful in helping reduce the youth's anxiety and helping them resume work on their projects, this outcome was not verified by youth. Some leaders reported that they were not sure if their response helped. Nevertheless, these are all experienced program leaders from high-quality programs, and there is much to learn from their expertise (Larson et al., 2015).

Findings

Leaders in the study described responding to situations in which youth's anxiety was substantial. One leader recounted a youth's emotional state: "She turns bright red, gets really nervous . . . just stares [you] back in the face . . . she's just stressed out of her mind." This anxiety significantly disrupted their work. They felt overwhelmed, helpless, and unmotivated: "I can't do it," "I just want to give up."

The main approach leaders reported using with these youth, *reframing*, was aimed at enhancing their understanding and control over factors contributing to their anxiety and demotivation. Based on our analyses of 29 response cases from 20 leaders, we defined reframing as (a) providing youth with new perspectives or conceptual tools for understanding the situation in their project that created the anxiety and (b) helping youth apply this perspective in ways that quelled the anxiety and restored their motivation. The youth's "situation" we are referring to here includes not just their objective situation (e.g., the specific task a youth is working on), but their subjective perceptions of it: their interpretation of the task, assessments of their skills, and expectations about future trajectories of their work. The goal of reframing was typically to change subjective misperceptions.

Leaders provided this reframing within two-way conversations in which they listened to youth's accounts of their situations and how they perceived them. Leaders then sought to "share some of [my] thinking" and get youth to "look at things in [a new] perspective." Reframing focused on giving youth tools and helping them reinterpret, redefine, and incorporate new information into how they viewed their situation. The three reframing strategies we identified aimed to help youth reconceptualize three different contributors to youth's anxiety and demotivation: their understanding of their abilities in the work, the challenges of the work, and their emotion. Most leaders (20 out of 27) used at least one of these three reframing strategies. Six leaders used more than one reframing strategy, and four described using at least two strategies for the same situation.

Strategy 1: Reframing Youth's Understanding of Their Abilities

In many cases, leaders' response to youth's anxiety aimed to enhance youth's conceptions of their abilities ($n = 13$ leaders, 15 response cases). Leaders provided youth new perspectives for understanding their competencies in the project work. This strategy was often used for youth whose anxiety was related to a drop in confidence and perceived skills, due to feeling overwhelmed or experiencing setbacks in their work. Leaders provided youth with stronger frameworks for evaluating their skills, frameworks that helped broaden and build their understanding of their abilities. This strategy took two subforms, one focused on reframing youth's evaluations of their current level of skills, the other on helping youth understand how they can raise their skill level.

Broadening and building youth's evaluation of their current abilities. Cathy, the program leader for the Douglas Middle School theater program, reported using the first form. The troupe was preparing the show *Annie* for their annual spring musical; and Katara, a new program participant, was taking on the principal role. Cathy described Katara as "a phenomenal performer . . . She'd never done a show—she came out of nowhere with this beautiful voice." The show was 2 weeks away and the youth would be performing for the whole school; Cathy thought everything was going well—"It was great, it was good." But Katara was not at rehearsal. Cathy found her in the bathroom with tears streaming down her face. "She was freaking out" and was unable to go out on stage. She told Cathy, "I'm not good enough. I can't do it. Why did you pick me?" Katara had been doing well so far, but with the show approaching, she had experienced a spiral of anxiety and self-doubt.

Cathy responded to the situation by coaching Katara in using a new perspective for evaluating her abilities. She sat down with Katara, explained why they had chosen her for the role, and reviewed the many instances in which her performances at rehearsals had demonstrated particular skills. She used her knowledge as an experienced theater director to "rebuild" Katara's assessment of her abilities based on established criteria in theater. Cathy had dealt with similar episodes of anxiety before, "It happens every year." She further explained,

> Because in their head they got these ideas where they've torn themselves down, and you have to be very explicit, like, "Here are these good things you've done and we—I put you in this role for these reasons."

Cathy attributed the anxiety episodes to self-deprecating "inner voices" that undermine youth's confidence in their abilities. Research in sports psychology

describes how negative self-talk can undermine motivation (Hardy, 2006). Cathy's response aimed to counteract those voices with a broader framework based on explicit evidence and established criteria. She introduced a perspective for self-evaluation that employs grounded appraisals of competencies, based on a youth's record of previously demonstrated skills across many occasions. Cathy reported that after their talk, Katara was "no longer crying and feeling a little bit better." Katara was able to return to rehearsal and continue her work. She performed well in *Annie* and in subsequent Douglas spring musicals. Cathy's reframing appeared to have helped Katara build a stronger and more robust perspective of her skills.

Leaders in other programs described using this strategy of broadening and building youth's evaluations of their abilities. Bill at Unified Youth reported that members of their leadership program had experiences of anxiety and demotivation when they took on a large project. Like Cathy, he responded by telling them, "'Look what you've done. You can do this, just like we've done in the past,' and [I] remind them that they've been able to achieve things that they never thought they could before." Bill countered youth's anxiety by systematically reviewing the record of their past experiences and "feeding that thought process" of evaluating their capabilities based on evidence.

Leaders using this first form of reframing youth's abilities employed their greater experience with the project domain to help youth shift their framework for evaluating their skills: from an approach that appeared to be based on subjective impressions and feelings to a framework using more objective evidence.

Broadening and building youth's understanding of what they could learn. The second form of reframing abilities involved helping youth understand how they could overcome their anxiety by raising their skills. Jonathan at the STEM program, Urban Farmers, experienced anxiety and demotivation as he was trying to tie knots to trellis tomato plants. He would try to tie a knot over and over again, but it was not working. The leader, Chase, described how Jonathan's confidence fell each time he failed until "he just didn't believe he could do it."

Chase responded to Jonathan's anxiety-eliciting perception of the situation, by reframing failure as an opportunity to develop his skills. He explained to Jonathan, "If [trellising tomatoes] doesn't go right, it's fine. [You] can keep doing it until [you] get it right." Chase helped Jonathan recognize that this was a situation in which learning was possible. He used his gardening experience to show Jonathan that he was learning and making progress. Jonathan's original approach reflected what Dweck (2006)

has described as a "fixed mindset," in which failure is evidence that one cannot do something. Chase's reframing conveyed a "growth mindset"—a belief that one's abilities are malleable and sustained, deliberate effort can lead to mastery.

Jade at Reel Makers used a similar approach to reframing youth's abilities. Ariel, who was making one of her first short films, had a disruptive anxiety episode when she saw a more experienced youth's film. She concluded, "My video is not as good," which created a spiral of anxiety and self-doubt. This use of social comparison to evaluate one's abilities is a characteristic of a fixed mindset (Dweck, 2006). To counteract it, Jade told Ariel,

> Well, you know that this person's been doing video for a long time. That doesn't mean you're not capable of doing it . . . It's about practicing your skills set and figuring all that stuff out. But that doesn't mean what you're doing is bad.

Like Chase, Jade provided Ariel the perspective of a growth mindset. She helped Ariel understand that she had already been learning quite a lot; and through practice, she could continue to learn and make better videos. She helped Arial shift the focus of her self-assessment from social comparison to evaluation of how her own skills were increasing and would continue to increase with learning. These leaders helped youth address their self-doubt and anxiety by expanding their view of their skills to include a future horizon of learning.

Conclusion. A key to these leaders' success in helping youth overcome their anxiety appeared to be listening to youth and responding to youth's experience of self-doubt. It appeared that, because youth were often trying things for the first time, they did not have a stable perception of their abilities, which made them liable to be overwhelmed and to question their abilities and potentials. Novices in a domain have a limited knowledge base and often do not even know what information is important (Endsley, 2018), which could make it hard for them to assess their abilities. Leaders used their experience and knowledge of the domain to help youth use a perspective to broaden and build their understanding of their skills. This included helping them to more reliably assess their skills using evidence and to recognize how they can expand these abilities. Leaders' strategy was to change youth's perspective from one based on subjective impressions, often based on youth's most recent experiences, to a perspective that includes both the past and future—a record of what one had achieved before and in the future with hard work.

Strategy 2: Reframing Youth's Understanding of the Challenges in Their Work

Whereas the first strategy focused on youth's perceptions of their abilities, the second aimed to reframe youth's perception of the tasks they were working on. Leaders using this strategy ($n = 8$ leaders, 8 response cases) responded to an episode of anxiety by providing youth with new frameworks for understanding and controlling the challenges in their projects. As with the first strategy, youth felt overwhelmed, but with this strategy, leaders focused on the challenges rather than youth's skills. Their goals with the second reframing strategy were to provide youth new ways of evaluating the difficulty of their work and adjusting their expectations and goals to make the work more manageable.

Desiree was a program leader for Toltecat Muralists, a graffiti arts program. Program members were starting to fill in their sections of a community mural they had sketched out on the wall of a building. Delphi, a 16-year-old youth was an experienced artist but was new to spray painting. In her section of the mural, she was painting a man pushing an ice cream cart. As Delphi tried to outline the eyes of the man with spray paint, she could not get them the way she wanted and her frustration and anxiety grew. She tried to paint the eyes again and again, but the imprecise spray paint stroke did not match what she was accustomed to achieving with a pencil or paintbrush. Desiree described Delphi's situation. "She spent a whole two days just working on the eyes and getting really distressed . . . She wanted to have the detail perfect."

Desiree stood with Delphi in front of the mural and demonstrated the use of a new way to conceptualize and evaluate her artistic work.

> I showed her. "This is spray-paint—it's not going to be perfect. Walk away from it, step back, look at it. Take a picture of it and look at it . . . It's a little bit different. When you are this close to it, you can see all the imperfections, but when you take that picture when it is displayed, its perfect." . . . I let her know that is the thing with spray-paint—you kind of have to be okay with imperfection . . . As long as you learn how to control and manipulate the paint, you are fine.

Desiree coached Delphi in assessing spray-painting from a different perspective: the criteria used by graffiti artists. Delphi needed to change her expectations, be comfortable with imperfection, and focus on what she could control—how the man looked from a distance. By re-orienting Delphi, Desiree helped her refocus on goals for painting the ice cream man that were both within reach and aligned with craft standards. With this reframing, Delphi's anxiety dissipated, and she reengaged with painting the mural.

Similarly, Larry at On Target, a 4-H STEM archery and riflery program, helped a youth refocus on more realistic and manageable challenges. Ericka had become skilled with a bow and done well at local competitions, but she became extremely anxious when she was accepted to compete at the State level. "All those people will be staring at me," she told Larry. He reassured her that this anxiety was normal. Indeed, he described a number of new situational challenges she will face:

> When you go to the State Shoot, look at it this way . . . I would [set your goals] a little lower than your 260 average, and go that route because you have different weather conditions, you have different backstops, you have different people around you, your comfort level's down a little bit.

Larry employed his knowledge of archery to help Ericka recognize and anticipate real-world possibilities experienced by archers at high stakes events. These included things she could not control, like weather; also, the likelihood that her comfort level would be "down a little bit." The message appeared to be that she should expect some anxiety, but it is part of the challenges to which archers need to adjust. Within this new framework, Ericka could set more realistic goals, making the challenges less overwhelming. Larry reported that with these new expectations, Ericka was able to manage her anxiety and compete successfully. Both Desiree and Larry provided a perspective that incorporated craft knowledge from the project domain, which helped the youth set reachable goals that allowed them to reengage with their work.

Juanita at Unified Youth described using another example of this strategy. Nicolás and Celia were excited about their plan to organize an International Day for their community that would involve getting representatives from different parts of the world to talk about their countries. But they started feeling anxious as they started to realize how difficult it would be to recruit those representatives. Juanita quoted them: "Oh my goodness, this is really big! We're really gonna have to get a lot of people to help us." Several leaders of youth leadership programs reported that youth often created plans that were too big, not recognizing how much work was required. Juanita described the perspective she provided Nicolás and Celia:

> I let them know that we can always change course and nothing is set in stone . . . "[I]t's our group and we're the bosses and we decide. So, we have the power and control to say, 'Okay, let's don't do that now.'" And . . . I think when they realize that they can have that choice to say, "This is too much," or "We want to go in a different direction" . . . [It] helps reduce the anxiety.

Like Desiree and Larry, Juanita's reframing helped youth reset expectations in ways that reduced anxiety and increased youth's control. She communicated to Nicolás and Celia that it is perfectly acceptable for them to cut back on their plans.

Conclusion. These youth often were not skilled judges of the difficulty of work they were trying to achieve in their projects. As with novices in other domains (Endsley, 2018; Ross et al., 2006), lack of experience made it hard for them to anticipate all the obstacles and twists and turns associated with a course of action they had chosen. Leaders provided perspectives that helped youth incorporate new information, understand what they can control, and better evaluate their goals (e.g., standards used by graffiti artists; conditions that would make archery performance as State more difficult). With this conceptual tool, they helped youth adjust their goals and self-expectations based on the broader perspective; this included giving youth permission to scale back a major event they were planning. Across situations, this second strategy was aimed at helping youth better understand and manage unfamiliar challenges so that they felt in control and that success was within reach.

Strategy 3: Reframing Youth's Emotion

Leader's third strategy focused on reframing youth's experience of strong emotion ($n = 6$ leaders, 6 response cases). It aimed to help youth understand that although their anxiety may be distressing, it is not a reason to give up: Anxiety is a normal experience in difficult work. Furthermore, leaders communicated that anxiety and worry can provide important information—discussing the causes of anxiety can be a valuable entry point for identifying and problem-solving. When used, this third strategy typically came before other strategies.

Vivian from Robotronics described using this emotion-focused strategy. The 11- to 14-year-olds in the program were designing and building catapults. Mateo was struggling with his catapult and become so frustrated that he stopped working—and hid his catapult so no one would see it. Observing his distress, Vivian found a private spot to talk with Mateo where he could feel safe discussing what he was experiencing:

> I want to be sure to let the student know that I'm there for them, and that I'm not there to judge them . . . I try to stay calm, keep the student calm, and just be patient and work slowly with them.

She conveyed that his anxiety about his work was normal. Vivian employed the anxiety as an entry point for this problem-solving: "I sat down and talked

[with him] about why he was feeling that way." Like other leaders, she aimed to help Mateo use his anxiety to focus his attention on specifics of the situation causing it. Research in psychology finds that emotions (e.g., guilt, joy, anger, anxiety) alert people to valuable information about situations, information that can be used constructively (Baumeister et al., 2007; Reyna & Farley, 2006). Mateo opened up and talked through his frustrations with his catapult. Then, Vivian "helped to show him different steps and give an example of how to complete the project." She helped Mateo reframe his anxiety as normal and as a useful tool for problem-solving.

Angela, at the leadership program Project Connect, described how she helped her younger youth use their anxiety for problem-solving.

> Usually, if you dig deep and say . . . "What part of this is bugging you? What part of this seems hard or what worries you about this?" And based on what the response is . . . see if there is something can realistically be done . . . Sometimes just talking about things, they work out their own solutions.

She primed youth to think through their worries. This and other examples suggest that when leaders provide this priming youth often took over problem-solving on their own. Research on emotions recognizes that different emotions have distinct functional effects on arousal, motivation, attentional, and thought processes (Fischer & Manstead, 2016). Studies indicate that people can "harness" anxiety to reflect constructively on possible negative outcomes from a course of action and develop plans that avoid those actions (Norem, 2001, p. 80).

The third example illustrates emotion reframing in a situation where an older youth experienced an intense anxiety episode. Members of Reel Makers were making their own films. Allie was highly engaged, but one of her actors quit after they shot hours of footage but before they had finished. Tyler reported that since Allie could not complete her story, her motivation collapsed: "I just want to give up. I want to scrap the whole thing." Tyler responded by first normalizing and validating her distress: "This is not the end of the world. This is serious, but you are physically okay, so let's work on the emotional place you are in." He described helping Allie "de-escalate emotionally . . . to get to a place where [she could] access those rational, more creative problem-solving skills."

As Allie recovered from the intense emotion from the setback, Tyler began to help her focus on the causes of anxiety if she reengaged with her film. He explained to her that, "because there are so many different variables . . . there's a need for really active problem-solving skills." As they talked about options for going forward, he drew on the two other reframing strategies. He

helped reframe her perception of her abilities, showing her that she had the needed "problem-solving skills" by reviewing her previous filmmaking achievements. He helped her reframe the challenges in her work, showing her how she could use the footage she had to attain a reachable goal with her film, reassuring her that "there's absolutely a way to work with what you have and create something in the spirit of that story." Through these different frames, Tyler introduced ways for Allie to regain control and manage her anxiety.

Allie completed the film. Using her own frames, she had carried on the problem-solving on her own, long after her discussion with Tyler. Allie reported that this experience was "a good thing because the next time [it happens] I'll be able to control it, and I won't be too nervous." This suggests she had learned how she could manage similar situations in the future.

Intense anxiety can create avoidance (Maloney et al., 2014) or maximize attention on threats to a goal but usually with the loss of control over one's attention (Eysenck et al., 2007). The loss in efficiency of the goal-directed attentional system may be difficult to overcome. Leaders' approaches included normalizing the experience, helping youth calm intense distress, and mobilizing problem-solving skills. When youth are ready, leaders help them capitalize on the potential for focused attention—to use the anxiety and worry for problem-solving on the challenges in their work. In an analysis of a similar case example of anxiety, Rusk et al. (2013), suggested that a program leader's strategy was to shift a youth's attention from an initial reaction—in which attention may focus on fear of failure and avoidance—to a process of challenge appraisal, in which attention is focused on problem-solving. Not every youth in this subset experienced extreme disruptive anxiety; many seemed to benefit from leaders helping them to use anxiety for problem-solving.

Discussion

Anxiety can be a significant problem that disrupts youth's motivation and threatens youth's completion of projects. The anxiety episodes youth experience in projects are partly due to encounters with difficult tasks, setbacks, and unknowns in their work (Larson, McGovern, & Orson, 2019). The anxiety appears to be exacerbated by subjective processes: exaggerated fears of failure, self-deprecating "inner voices," social comparisons, and unrealistic goals. The objective of this exploratory study was to identify how experienced youth program leaders help teens overcome these anxiety episodes. We studied retrospective accounts from 27 veteran program leaders supervising youth-led projects. Analysis of these accounts suggests effective strategies that leaders employ. In the discussion section, we review these strategies,

discuss what makes them effective in addressing anxiety episodes, and suggest how they may support youth's learning of skills for self-management of challenging work.

Reframing Youth's Experience of Being Overwhelmed by Emotion

A central finding was that leaders' main strategy for assisting youth was "reframing"—providing youth with new perspectives for understanding the anxiety and gaining control over it. Reframing appeared to occur within two-way conversations that included leaders' listening to youth's experiences, diagnosing its sources, and responding accordingly. Reframing entailed offering youth knowledgeable frameworks and conceptual tools to help them reinterpret how they viewed their situation. Leaders gave youth perspectives for understanding their work in more useful ways: that were evidence-based, employed craft knowledge, and provided new means to evaluate their skills and the challenges in the work. In most cases, these perspectives helped youth overcome their anxiety.

Three Strategies for Enhancing Youth's Control

Although reframing emotions (Strategy 3) was the least mentioned reframing strategy, it often came before the other two, as a response to youth's experience of disruptive project-driven anxiety. This strategy framed youth's anxiety as a "normal" feeling—as a psychological state that is a natural response to certain types of situations. As intense distress dissipated, these leaders then framed anxiety as a tool youth can use for problem-solving. Leaders coached youth on harnessing their anxiety to think about why they are anxious: What is "bugging you?" What seems hard? And how can you address that issue? Reframing youth's anxiety appeared to empower youth by helping them, first, to reinterpret anxiety as an informative cue in difficult work and, second, to reappropriate it as a functional state-of-mind that can help one direct attention to constructive worry and problem-solving the unknowns.

The reframing in Strategies 1 and 2 provided youth with cognitive frames and tools for gaining a more *realistic* understanding of the work itself, specifically of their skills and the challenges in their work. Leaders offered perspectives grounded in appraisals of youth's past accomplishments and informed by craft knowledge and standards. Strategy 1 involved providing youth with tools for broadening and building their understanding of their skills: either by evaluating their skills based on a systematic assessment of past achievements or by adopting a growth mindset for learning. Strategy 2 involved providing youth

with frames and tools to adjust—often lower—goals so that the challenges a youth is facing are realistically fit to their skills.

By "realistic" we do not mean to suggest that these assessments and fitting were precise. Evaluating a person's skills for addressing challenges in work ahead involves estimates. There are uncertainties that leaders need to take into account. Will Katara have the mettle to perform in front of a live audience? How easy will it be for members of United Youth to recruit the speakers they want? Ideally, these assessments also recognize subjective sources of bias that distort estimates (e.g., inflated expectations, fear of failure that erodes confidence)? We suggest these experienced leaders were coaching youth on these abstract metacognitive concepts because they have proven valuable in the past to helping youth overcome and avoid anxiety episodes. Applying grounded "realistic" assessments is likely to be more effective than relying on ungrounded assessments. These grounded assessments, we believe, are helpful tools for youth to address causes of their anxiety. Let us take this further.

Importantly, both Strategies 1 and 2 often appeared to be aimed at creating a situation in which youth experience their skills as matched to the challenges they are working on. Many motivation theories recognize that experiencing challenges matched to skills creates an experiential "sweet spot" that not only reduces disruptive anxiety but also creates favorable conditions for sustained motivation (Kaplan et al., 2012). Research on flow theory indicates that this matching creates a "channel" in which people are likely to experience the psychological state of "flow," which includes the experience of self-rewarding engagement, deep attention, and optimal functioning in challenging work (Csikszentmihalyi, 1990; Fong et al., 2015; Keller et al., 2011). By helping youth raise and more realistically assess their skills (Strategy 1) and adjust challenges to be reachable (Strategy 2), our leaders were helping youth achieve conditions for experiencing sustained intrinsically motivated engagement. Leaders' reframing involved coaching youth on the use of a metacognitive framework (matching skills to challenges) that is empirically related to sustained motivation and engagement.

Helping Youth Learn to Regulate Their Anxiety and Motivation

By coaching youth on the use of these frameworks, we further suggest, leaders were helping them practice and learn skills to regulate their emotion and motivation in complex work. Leaders were providing assistance that leveraged adolescents' new executive capacities for conceptualizing abstract emotional processes and for integrating multi-dimensional representations of the self and complex situations (Dumontheil, 2014; Nook et al., 2018; Pasupathi

& McLean, 2010). Reframing by leaders helped at least some youth learn to reframe for themselves. As already described, Tyler's reframing conversation with Allie helped her overcome her anxiety about her film and complete it. She reported learning from the experience that "next time . . . I'll be able to control it, and I won't be too nervous." Some leaders indicated that their coaching helped youth learn skills to manage anxiety and reengage with their work. Given limits on these findings, further evaluation and testing is needed.

Limits and Future Research

We highlight several research directions for understanding youth's project-driven anxiety episodes and leaders' role. The current study is limited by its use of retrospective data, obtained from leaders' point of view. Future studies should include observations in real-time and accounts from youth. Additional information that could contribute to understanding anxiety episodes include data on how youth experience anxiety and how episodes are influenced by other factors (e.g., youth trait anxiety, risk-taking, prior experience with the work). Future research should also examine how the nature of anxiety episodes and appropriate response strategies may differ for youth whose anxiety episode is related to a mental health condition. Future studies should also gather data on youth outcomes in response to specific leader reframing strategies. Further research is needed to understand differences in anxiety episodes for younger and older teens, leaders' adaptation of reframing strategies to the two groups, and what the two groups are able to learn.

There is also more to learn about leaders' responses to youth's emotional experiences. Leaders reported that it was often difficult to diagnose youth's anxiety because they did not directly express it. Future research should focus on identifying cues, signs, and symptoms that can help adult leaders detect youth's anxiety and respond appropriately. Another issue is when and how leaders should respond when youth's emotions are so intense that they shut-down. Furthermore, as youth's strong emotions subside, how do leaders help youth transition to problem-solving? An additional question is, how do leaders know when to use a skills-focused (Strategy 1) versus a challenge-focused approach (Strategy 2)? Finally, although reframing was the most frequent response to youth's anxiety episodes, it was not the only one; other strategies, such as facilitating peer support, need to be studied.

Implications for Practice

Although these findings are incomplete, they suggest several preliminary recommendations for practice:

1. Youth's encounters with disruptive project-driven anxiety present program leaders with complex situations. Staff can benefit from training that gives them a toolbox for responding flexibly to intense emotion and the many different factors shaping the situation.
2. Project-Based Programs should cultivate a program culture in which emotions are expected, validated, and discussed—in which youth's episodes of frustration, anxiety, and self-doubt are seen as learning opportunities.
3. Anxiety is often created by youth experiencing overwhelming challenges in their projects. A key point is that youth's anxiety may stem from assessments of the challenges—and their abilities—that are not well-grounded. Important tasks of leaders are helping youth reframe challenges to make them manageable and to be realistic in appraising their abilities, including recognizing that they can learn new skills.
4. Cultivating leaders' strategies for responding to anxiety can contribute to a larger goal of helping youth develop an awareness of emotional processes and self-regulation strategies.

Conclusion

Rates of anxiety have been increasing among U.S. teens. From 1986 to 2017, their reports of feeling overwhelmed by work have increased from 17.5% to 40.8% (Astin et al., 1986; Eagan et al., 2017). The findings of the current study show how, through sensitive conversations, program leaders coach youth in using metacognitive frameworks for understanding and controlling project-driven anxiety. As novices in their work, youth are often not able to look beyond their immediate failure, break out of rigid perceptions of their challenges, and step back from their experience of anxiety. The frames leaders help youth use contextualize failure as a step in a trajectory to success, increase flexibility in how they could view challenges, and connect the experience of anxiety to causes and solutions. Leaders also can help youth recognize anxiety as information, make more realistic assessments of their skill levels, and adjust challenges in the activity to match their skills. These findings suggest ways in which adults in other roles (e.g., educators, parents) can help youth who are engaged in difficult work learn capacities for managing their anxiety and motivation.

Acknowledgments

We are grateful to the program leaders in this study for their willingness to contribute their time and share their experiences for this research. We appreciate the hard work

Vanida Vesuntia, Kristen Herdegen, and other members of the Pathways Project team did to support this article. We also thank Dr. Natalie Rusk, who played a leading role in data collection, and Dr. Marcela Raffaelli, who gave valuable feedback on drafts of this article.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was generously supported by the William T. Grant Foundation. Additional funding was provided by the USDA National Institute of Food and Agriculture, Hatch Project ILLU-793-314, awarded to Dr. Reed Larson.

ORCID iD

Carolyn N. Orson https://orcid.org/0000-0002-0435-790X

Note

1. For leaders in the first four programs in the study (all programs for older youth), leaders were asked to think of a situation in which "A youth is anxious or lacks the confidence to do what he or she needs to do." They were then asked to describe what they did. The revised wording reported in the text was used for the remaining 23 programs.

References

Akiva, T., & Horner, C. G. (2016). Adolescent motivation to attend youth programs: A mixed-methods investigation. *Applied Developmental Science*, *20*(4), 278–293. https://doi.org/10.1080/10888691.2015.1127162

Astin, A. W., Green, K. C., Korn, W. S., & Schalit, M. (1986). *The American freshman: National norms for fall 1986*. Higher Education Research Institute, UCLA. https://www.heri.ucla.edu/PDFs/pubs/TFS/Norms/Monographs/TheAmericanFreshman1986.pdf

Baumeister, R., Vohs, J., DeWall, C., & Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review*, *11*(2), 167–203. https://doi.org/10.1177/1088868307301033

Blumenfeld, P. C., Kempler, T. M., & Krajcik, J. S. (2006). Motivation and cognitive engagement in learning environments. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 475–488). Cambridge University Press. https://doi.org/10.1017/cbo9780511816833.029

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, *26*(3–4), 369–398. https://doi.org/10.1080/00461520.1991.9653139

Casey, B. J., Jones, R. N., & Hare, T. A. (2008). The adolescent brain. *Annals of the New York Academy of Sciences*, *1124*(1), 111–126. https://doi.org/10.1196/annals.1440.010

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). SAGE.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper Perennial.

Dawes, N. P., & Larson, R. W. (2011). How youth get engaged: Grounded-theory research on motivational development in organized youth programs. *Developmental Psychology*, *47*(1), 259–269. https://doi.org/10.1037/a0020729

Deutsch, N., & Jones, J. (2008). "Show me an ounce of respect": Respect and authority in adult-youth relationships in after-school programs. *Journal of Adolescent Research*, *23*(6), 667–688. https://doi.org/101177/0743558408322250.

Dumontheil, I. (2014). Development of abstract thinking during childhood and adolescence: The role of rostrolateral prefrontal cortex. *Developmental Cognitive Neuroscience*, *10*, 57–76. https://doi.org/10.1016/j.dcn.2014.07.009

Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.

Eagan, M. K., Stolzenberg, E. B., Zimmerman, H. B., Aragon, M. C., Whang Sayson, H., & Rios-Aguilar, C. (2017). *The American freshman: National norms fall 2016*. Higher Education Research Institute, UCLA. https://www.heri.ucla.edu/monographs/TheAmericanFreshman2016.pdf

Endsley, M. R. (2018). Expertise and situational awareness. In K. A. Ericsson, R. R. Hoffman, A. Kozbelt, & A. M. Williams (Eds.), *Cambridge handbook of expertise and expert performance* (2nd ed., pp. 714–741). Cambridge University Press.

Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion*, *7*(2), 336–353. https://doi.org/10.1037/1528-3542.7.2.336

Fischer, A. H., & Manstead, A. S. R. (2016). Social functions of emotion and emotion regulation. In L. F. Barrett, M. Lewis, & J. M. Haviland-Jones (Eds.), *Handbook of emotion* (4th ed., pp. 424–439). Guilford Press.

Fisher, L. J. (2013). Motivational spiral models (MSM): Common and distinct motivations in context. *SpringerPlus*, *2*(1), Article 565. https://doi.org/10.1186/2193-1801-2-565

Fong, C. J., Zaleski, D. J., & Leach, J. K. (2015). The challenge-skill balance and antecedents of flow: A meta-analytic investigation. *The Journal of Positive Psychology*, *10*(5), 425–446. https://doi.org/10.1080/17439760.2014.967799

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine Publishing.

Griffith, A. N., & Larson, R. W. (2016). Why trust matters: How confidence in leaders transforms what adolescents gain from youth programs. *Journal of Research on Adolescence*, *26*(4), 790–804. https://doi.org/10.1111/jora.12230

Griffith, A. N., Larson, R. W., & Johnson, H. E. (2018). How trust grows: Teenagers' accounts of forming trust in youth program staff. *Qualitative Psychology*, *5*(3), 340–357. https://doi.org/10.1037/qup0000090

Halpern, R. (2009). *The means to grow up: Reinventing apprenticeship as a developmental support in adolescence*. Routledge. https://doi.org/10.4324/9780203885970

Hardy, J. (2006). Speaking clearly: A critical review of the self-talk literature. *Psychology of Sport and Exercise*, *7*(1), 81–97. https://doi.org/10.1016/j.psychsport.2005.04.002

Heath, S. B. (1999). Dimensions of language development: Lessons from older children. In A. S. Masten (Ed.), *Cultural processes in child development: The Minnesota symposia on child psychology* (Vol. 29, pp. 59–75). Lawrence Erlbaum.

Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology*, *52*(2), 196–205. https://doi.org/10.1037/0022-0167.52.2.196

Kaplan, A., Katz, I., & Flum, H. (2012). Motivation theory in educational practice: Knowledge claims, challenges, and future directions. In K. R. Harris, S. Graham, & T. Urdan (Eds.), *APA educational psychology handbook* (pp. 165–194). American Psychological Association. https://doi.org/10.1037/13274-007

Keller, J., Ringelhan, S., & Blomann, F. (2011). Does skills-demands compatability result in intrinsic motivation? Experimental test of a basic notion proposed in the theory of flow-experiences. *The Journal of Positive Psychology*, *6*(5), 408–417. https://doi.org/10.1080/17439760.2011.604041

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*(6), 593–602. https://doi.org/10.1001/archpsyc.62.6.593

Larson, R., & Asmussen, L. (1991). Anger, worry, and hurt in early adolescence: An enlarging world of negative emotions. In M. E. Colton & S. Gore (Eds.), *Adolescent stress: Causes and consequences* (pp. 21–41). Aldine de Gruyter.

Larson, R. W. (2011). Positive development in a disorderly world. *Journal of Research on Adolescence*, *21*(2), 317–334. https://doi.org/10.1111/j.1532-7795.2010.00707.x

Larson, R. W., & Angus, R. M. (2011). Adolescents' development of skills for agency in youth programs: Learning to think strategically. *Child Development*, *82*(1), 277–294. https://doi.org/10.1111/j.1467-8624.2010.01555.x

Larson, R. W., & Brown, J. R. (2007). Emotional development in adolescence: What can be learned from a high school theater program. *Child Development*, *78*(4), 1083–1099. https://doi.org/10.1111/j.1467-8624.2007.01054.x

Larson, R. W., Izenstark, D., Rodriguez, G., & Perry, S. C. (2016). The art of restraint: How experienced program leaders use their authority to support youth agency. *Journal of Research on Adolescence*, *26*(4), 845–863. https://doi.org/10.1111/jora.12234

Larson, R. W., McGovern, G., & Orson, C. (2019). Youth development programs: Supporting self-motivation in project-based learning. In K. A. Renninger & S.

E. Hidi (Eds.), *Cambridge handbook of motivation and learning* (pp. 111–138). Cambridge University Press.

Larson, R. W., Raffaelli, M., Salusky, I., Orson, C. N., & Kenzer, A. (2019). The important (but neglected) developmental value of roles: Findings from youth programs. *Developmental Psychology*, *55*(5), 1019–1033. https://doi.org/10.1037/dev0000674

Larson, R. W., Walker, K. C., Rusk, N., & Diaz, L. B. (2015). Understanding youth development from the practitioner's point of view: A call for research on effective practice. *Applied Developmental Science*, *19*(2), 74–86. https://doi.org/10.1080/10888691.2014.972558

Lerner, J. V., Phelps, E., Forman, Y., & Bowers, E. (2009). Positive youth development. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd ed., Vol. 1, pp. 524–558). John Wiley. https://doi.org/10.1002/9780470479193.adlpsy001016

Maloney, E. A., Sattizahn, J. R., & Beilock, S. L. (2014). Anxiety and cognition. *Wiley Interdisciplinary Reviews: Cognitive Science*, *5*(4), 403–411. https://doi.org/10.1002/wcs.1299

Markowitz, E. S., Deutsch, N. L., & Lawrence, E. (2014). Balancing skills and challenges: Exploring the concept of relational engagement in combined group and one-on-one mentoring for adolescent girls. *Teachers College Record*, *116*(3), 146–165.

Moran, T. P. (2016). Anxiety and working memory capacity: A meta-analysis and narrative review. *Psychological Bulletin*, *142*(8), 831–864. https://doi.org/10.1037/bul0000051.supp

Nook, E. C., Sasse, S. F., Lambert, H. K., McLaughlin, K. A., & Somerville, L. H. (2018). The nonlinear development of emotion differentiation: Granular emotional experience is low in adolescence. *Psychological Science*, *29*(8), 1346–1357. https://doi.org/10.1177/0956797618773357

Norem, J. K. (2001). Defensive pessimism, optimism, and pessimism. In E. C. Chang (Ed.), *Optimism & pessimism: Implication for theory, research, and practice* (pp. 77–100). American Psychological Association. https://doi.org/10.1037/10385-004

Orson, C. (2018). *Reframing: How staff help youth overcome episodes of anxiety in youth programs* [Master's thesis]. University of Illinois Urbana–Champaign IDEALS Database. http://hdl.handle.net/2142/101145

Orson, N. C., McGovern, G., & Larson, R. W. (2020). How challenges and peers contribute to social-emotional learning in outdoor adventure education programs. *Journal of Adolescence*, *81*, 7–81.

Pasupathi, M., & McLean, K. C. (2010). Introduction. In K. C. McLean & M. Pasupathi (Eds.), *Narrative development in adolescence: Creating the storied self* (pp. xix-xxxiii). Springer Science+Business Media, LLC. https://doi.org/10.1007/978-0-387-89825-4

Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance.

Journal of Educational Psychology, *101*(1), 115–135. https://doi.org/10.1037/a0013383

Pekrun, R., & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 259–282). Springer. https://doi.org/10.1007/978-1-4614-2018-7_12

Qin, S., Hermans, E. J., van Marle, H. J. F., Luo, J., & Fernández, G. (2009). Acute psychological stress reduces working memory-related activity in the dorsolateral prefrontal cortex. *Biological Psychiatry*, *66*(1), 25–32. https://doi.org/10.1016/j.biopsych.2009.03.006

Reyna, V., & Farley, F. (2006). Risk and rationality in adolescent decision making: Implications for theory, practice, and public policy. *Psychological Science in the Public Interest*, *7*(1), 1–44. https://doi.org/10.1111/j.1529-1006.2006.00026.x

Rhodes, J. (2004). The critical ingredient: Caring youth-staff relationships in after-school settings. *New Directions for Youth Development*, *2004*(101), 145–161. https://doi.org/10.1002/yd.75

Ross, K., Shafer, J. L., & Klein, G. (2006). Professional judgments and "naturalistic decision making." In K. A. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman (Eds.), *Cambridge handbook of expertise and expert performance: Its development, organization and content* (pp. 403–419). Cambridge University Press. https://doi.org/10.1017/cbo9780511816796.023.

Rusk, N., Larson, R. W., Raffaelli, M., Walker, K., Washington, L., Gutierrez, V., & Cole Perry, S. (2013). Positive youth development in organized programs: How teens learn to manage emotions. In C. Proctor & P. A. Linley (Eds.), *Research, applications, and interventions for children and adolescents: A positive psychology perspective* (pp. 247–261). Springer Netherlands. https://doi.org/10.1007/978-94-007-6398-2_15

Smith, C., McGovern, G., Larson, R. W., Hillaker, B., & Peck, S. C. (2016). *Preparing youth to thrive: Promising practices for social and emotional learning*. David P. Weikart Center for Youth Program Quality at the Forum for Youth Investment. http://selpractices.org

Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Sciences*, *9*(2), 69–74. https://doi.org/10.1016/j.tics.2004.12.005

Steinberg, L. (2014). *Age of opportunity: Lessons from the new science of adolescence*. Houghton Mifflin Harcourt.

Stoeber, J., Schneider, N., Hussain, R., & Matthews, K. (2014). Perfectionism and negative affect after repeated failure. *Journal of Individual Differences*, *35*(2), 87–94. https://doi.org/10.1027/1614-0001/a000130

Sweeny, K., & Dooley, M. D. (2017). The surprising upsides of worry. *Social and Personality Psychology Compass*, *11*(4), Article e12311. https://doi.org/10.1111/spc3.12311

Thompson, S. C., & Schlehofer, M. M. (2008). The many sides of control motivation. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 41–56). Guilford Press.

Walker, K. C. (2011). The multiple roles that youth development program leaders adopt with youth. *Youth & Society*, *43*(2), 635–655. https://doi.org/10.1177/0044118X10364346

Zelazo, P. D. (2013). Developmental psychology: A new synthesis. In P. D. Zelazo (Ed.), *Oxford handbook of developmental psychology* (pp. 3–12). Oxford University Press.

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental & Behavioral Pediatrics*, *27*(2), 155–168. https://doi.org/10.1097/00004703-200604000-00014

Author Biographies

Carolyn N. Orson is a graduate student in the Human Development and Family Studies Department at the University of Illinois, Urbana–Champaign. Her research is focused on understanding how adolescents develop motivation and skills for resilience within the context of youth programs, and how adult leaders support youth learning processes. The aim of her work is to help improve staff practices in youth programs and inform pedagogical methods and structures.

Reed W. Larson is a professor of Human Development and Family Studies, Psychology, and Educational Psychology at the University of Illinois, Urbana–Champaign. His research is aimed at understanding the developmental experiences of youth in afterschool programs and how staff facilitate these experiences. He has served as the president of the Society for Research on Adolescence and as editor-in-chief of New Directions for Child and Adolescent Development.