

## Lessons for 4-H Youth Member Recruitment and Retention From the First-Generation College Student Literature

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### Abstract

*4-H is the largest positive youth development organization in the United States and is implemented by the land grant university system. To achieve program expansion, the century-old organization will need to recruit and retain millions more youth that reflect their increasingly diversified communities. Higher education has also worked to recruit and retain youth previously not engaged in college. This paper explores the hypothesis that there are lessons to be learned by the 4-H program from the literature on first-generation college students. Literature on risk factors and retention are presented for both first-generation college students and 4-H youth members. The two literatures are compared for similarities. Parallels existing between the experience of a first-generation college student entering an undergraduate program and the experience of a first-generation 4-H youth member entering the 4-H program were explored. Considerable overlap is found between recruitment and retention challenges in both audiences prior to enrollment/participation and during matriculation/participation providing considerable opportunities for 4-H and positive youth development organizations to identify adaptations to support first-generation youth members.*

Key words: first-generation; access, equity, and belonging; 4-H; member retention; member recruitment



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## Introduction

The 4-H youth development program (4-H) is delivered by 106 land-grant universities and is available in every county, parish, and district in the United States. The mission of 4-H is to provide meaningful opportunities for youth and adults to work together for positive youth development (PYD)—“the intentional, prosocial approach that engages youth” (Youth.gov, n.d.)—which is accomplished through three primary content areas or mission mandates: civic engagement and leadership; healthy living; and science, technology, engineering, and math (STEM) which includes Agriculture (U.S. Department of Agriculture, National Institute of Food and Agriculture [USDA-NIFA], n.d.). A high-quality 4-H PYD program can allow youth to thrive (Arnold, 2018; Smischney et al., 2018). Youth thriving is a dynamic process that goes beyond well-being to include individual growth in grounding and agency (Scales et al., 2010). Access to the program determines who can achieve these transformative positive outcomes (Gonzalez et al., 2020).

4-H formed as an agrarian organization with deep ties to rural communities (Rosenberg, 2015). Throughout the century-long history of the 4-H program, 4-H professionals have implemented programs to target and include underserved and minority youth (i.e., Cano & Bankston, 1993; Elliott-Engel, 2018; Erbstein et al., 2017; Farella, Hauser, et al., 2021; Fields & Nathaniel, 2015). In addition to local grassroots efforts, land grant universities are establishing systemic approaches to support program adaptation and diversification (Farella, Moore, et al., 2021; McKee et al., 2002; Moncloa et al., 2019). One example is the establishment of the Access, Equity, Belonging Committee (AEBC) by the 4-H Program Leaders Working Group (PLWG) to “support the 4-H System to reach its *National 4-H Grows: A Promise to America’s Kids Vision*” (PLWG-AEBC, n.d.; USDA-NIFA, 2017). To continue to improve the lives of youth in all communities, the National 4-H movement composed of USDA-NIFA, National 4-H Council, and the land-grant university system has also undertaken the strategic initiative of growing the organization to engage 10 million 4-H youth members annually by 2027 (National 4-H Council, 2015; PLWG, n.d.). When the strategic plan launched, the 4-H program nationally served approximately six million youth, and it was clear the 4-H movement would need to reach new audiences. The vision of 4-H is that by 2027, “4-H will reflect the population demographics, vulnerable populations, [and the] diverse needs and social conditions of the country” (PLWG-AEBC, n.d.). As 4-H professionals seek to recruit new audiences as part of this national strategic initiative, families without previous 4-H experience will need to be both recruited and retained. Because 4-H is a historic organization, many communities have families that pass 4-H participation from generation to generation (Norrell-Aitch, 2015). This means that grandparents who were active in 4-H enroll their children in 4-H as well, who then grow up to have children

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engaged and active in 4-H. When this happens, youth and their families tend to be very familiar with 4-H systems and overall culture. 4-H youth and families have pride in these deep roots in 4-H and celebrate these life-long affiliations in the program.

However, as 4-H seeks to reach an additional four million youth (National 4-H Council, 2015), there comes a need for 4-H Extension professionals to be introspective and think about how the organization may be perpetuating exclusionary practices at the local level that impede on this cumulative effort to increase engagement of underserved communities (Fields, 2020; Harrington et al., 2018; Nelson, 2020). Thinking about legacy as a potential exclusionary mindset is one way that the organization can support as many youth members as possible to have high-quality 4-H experiences. Though the idea of legacy is ingrained in the organization, 4-H youth development professionals must start to recognize that youth and families without previous experience will require different support during recruitment and retention.

Some work related to the retention of 4-H youth members within the 4-H program has been done, where the researchers concluded that youth who do not reenroll in 4-H do so because they lose interest, are not having enough fun or positive relationships, or because they become involved in other activities (Harrington et al., 2011). However, without understanding retention from a no-previous-4-H-experience lens, it will remain unclear what specifically deters the new populations we are recruiting from reenrolling in a 4-H program. Utilizing this lens also helps identify interventions that could support youth and families who join the organization without previous involvement in 4-H. Youth and families who have no-previous-4-H-experience can be considered a first-generation 4-H youth member.

#### ***What is a First-Generation 4-H Youth Member (FG4-HYM)?***

Russo (2015) defined first-generation 4-H'ers as "youth and families not previously engaged in 4-H" (para. 3). This definition is adequate for vernacular conversation, yet 4-H technically includes all youth programming led by Cooperative Extension. Thus, many 4-H youth participants never realize they have participated in a 4-H program because they complete Cooperative Extension led school-enrichment engagements, such as SNAP-Ed nutrition programs and Project WET. These lower context 4-H experiences are often determined by adults other than the youth and the youth's family and lack the recurring adult and peer relationship building found within higher context 4-H experiences such as those which occur during a youth's membership in a 4-H club. To be more exact, we propose the term First-Generation 4-H Youth Member (FG4-HYM), which refers to those youth members who do not have the previous experience of 4-H club participation in their families. A FG4-HYM's parent,

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guardian, or grand-parent either has not participated in 4-H as a member, or the participation in 4-H or Cooperative Extension programming is not perceived as establishing 4-H alumni status.

### **Learning From Another First-Generation Experience**

As 4-H youth development professionals seek to expand the program considering the growth goal of 10 million annual 4-H youth members, they will by default be recruiting members who have no familial ties to 4-H. Thus, there is a need to understand these populations, particularly the reasons why they have not heard of or participated in a 4-H program or why they discontinue participation if they decide to leave the 4-H program. Understanding the barriers that FG4-HYMs experience to accessing a 4-H program and continuing to participate in a their 4-H program is key in developing and implementing the most effective recruitment and retention efforts. Because there has not been any prior investigation done into the experiences of FG4-HYMs, we turn to the literature of first-generation college students who we propose have a similar profile to the FG4-HYM. Several parallels can be drawn between the experiences of a first-generation college student (FGCS) entering their undergraduate experience and the experience of a FG4-HYM entering their community club experience (Norrell-Aitch, 2015; Russo, 2015). Neither has familial ties to the institutions that they are newly engaging with, so they enter these spaces with a different cultural understanding of how to navigate them than their counterparts (Ives & Castillo-Montoya, 2020). For example, a FG4-HYM may not have been told how the Cooperative Extension system functions and would perhaps not know that their 4-H agent or club leader would be the person to contact with any questions. Similarly, a first-generation college student may not know that attending office hours with their professors is an essential skill for academic success. In both examples, the FG4-HYM and FGCS are missing institutional knowledge that is essential to successfully navigating the systems to which they are new. Therefore, as 4-H grapples with how to engage and support diverse youth in the program, most, if not all, of whom share a first-generation 4-H experience, it drives the need to explore how other institutions, particularly those of higher education, have assessed and supported first-generation populations.

We propose that the findings and theoretical frameworks used to understand the experiences of FGCS and the risk factors they face in completing a 4-year degree may be effective for understanding the common experiences of FG4-HYM and potential risk factors impeding project completion and retention in the 4-H program. We hypothesize that the theoretical model used to understand the barriers for FGCS is a comparable one to use to begin to understand the

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FG4-HYM population with potentially similar outcomes, such as having a higher likelihood of not completing a project or not re-enrolling in 4-H.

The higher education literature shows a focus on the experiences of FGCS, as they are particularly vulnerable to dropping out of their 4-year undergraduate programs. The research shows a statistically significant higher attrition rate for FGCS than non-FGCS enrolled in undergraduate programs (Berkner & Chavez, 1997; Ishitani, 2006; Pratt et al., 2019). The research also indicates a higher risk of dropping out at certain times during the 4-year undergraduate experience, particularly around the 2<sup>nd</sup> year of college (Ishitani, 2006; Pratt et al., 2019).

Even when FGCS do graduate from a 4-year degree program, they are less likely to complete the program within 4 years and are more likely to take longer to complete their degrees (Ishitani, 2006). These findings have been replicated throughout the literature for FGCS. Our purpose in this paper is to explore the parallels between FGCS and FG4-HYM risks and interventions. After making the case that a first-generation perspective can be effective for thinking about large-scale action, we explore the foci of potential interventions.

#### ***FGCS Risk Factor Types***

The literature on risk factors that face FGCS can be categorized into two types: risk factors prior to enrolling in a higher-education program and risk factors during the college experience. The former are several obstacles that may arise during K-12 schooling that hinder access to higher education, and the latter are obstacles that arise for FGCS during their collegiate experiences that influence the likelihood of dropping out after enrolling in an undergraduate program. Both types of risk factors are important to identify and address to understand FGCS successful graduation (Johnson, 2021; LaPeer, 2021).

#### ***FGCS Risk Factors Prior to Enrollment***

There are many risk factors that exist for FGCS prior to their initial engagement with any undergraduate programs. Students and their families typically focus on college preparation during junior and senior years of high school, but in reality, there exists a pipeline of academic preparedness and education aspirations that can most often dictate which youth will be more likely to enroll in an undergraduate program (Chambers, 2020). For example, high school students who are planning to attend college typically enroll in rigorous courses, which is in line with the high academic expectations of 4-year universities for their prospective students (Oakes, 1990). However, the opportunity to take these advanced courses, in particular

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mathematics and science, is influenced by whether or not youth had access to learning about these subjects in elementary school and middle school (Maltese & Tai, 2011; Oakes, 1990). A study done with eighth graders showed that though taking algebra in middle school is essential to being able to take more advanced math courses in high school, only 14% of eighth grade students whose parents did not attend college took high school-level algebra, whereas their 34% of their non-first-gen peers took high school algebra as eighth graders (Horn & Nuñez, 2000).

The FGCS research suggests that we cannot simply look at the obstacles that FGCS face once in college, but that educational obstacles that they face begin much earlier and have an impact on their college preparation process. This also implies that programming designed to support FGCS must occur prior to high school, and that it is important to supplement their educational experiences to be better prepared in high school, which then would make them more academically prepared for their undergraduate programs.

Another factor to consider for FGCS prior to enrolling in 4-year colleges is the encouragement and social support they receive both from their families and from educators. The same study done on eighth graders taking high school algebra showed that the percentage of eighth graders who received encouragement to enroll in higher math courses increased as the educational attainment of their parents also increased (Horn & Nuñez, 2000). It is inferred that parents who have a college education may be aware of this pipeline of education from having access to these early academic programs themselves, and hence help their children access similar opportunities (Hamilton et al., 2018). When asked about choosing their courses, students whose parents had not attended college were less likely to report selecting their academic courses with their parents than students whose parents had attended college (Horn & Nuñez, 2000).

It is important not to make the implication that parents who do not have a college education do not help their children in the same way that college-educated parents do, but rather focus the lens on the accessibility to academic opportunities that first-generation students have as they navigate institutions and systems that are built on favoring legacy. When it comes to access to college prep counseling, first-generation students are also at a disadvantage. Though they do not have the same backgrounds as their peers with parents who are college educated, there is no evidence that showed that first-generation students received more help from their schools for assistance in applying for undergraduate programs or looking for financial support than their peers whose parents were college graduates (Horn & Nuñez, 2000). Aside from being deterred

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by the high tuition costs, this is particularly concerning because FGCS may then not be aware of the financial aid resources or how to access these resources available to them that could help overcome these barriers. If fees for standardized tests or applications were waived, FGCS might be more encouraged to apply to more colleges (The Executive Office of the President, 2014). This finding is concerning, because some first-generation students may not be receiving the additional support they need to be academically prepared for college.

It is clear that there is a pipeline that can determine whether or not youth have access to enrolling in college, meaning the factors that put FGCS at risk of dropping out of college can be traced to much earlier than the point at which they enroll in their undergraduate degrees. The type of academic preparedness that a young person has when they enroll in an undergraduate program and the social support that they receive impact how well they will perform in college.

We chose the term, “constraint” due to similarities between the pre-enrollment decisions for joining or not joining 4-H and pre-participation constraints explored within leisure constraints theory, which seeks to understand the constraints influencing one’s decisions for their leisure activity participation

The leisure constraints theory, which introduced the idea that there are three types of constraints to engaging in leisure, has been used as a framework to study the participation of international undergraduates in different institutional activities (Crawford & Godbey, 1987; Gómez et al., 2014). Thinking about the risk factors that FGCSs face prior to enrolling in an undergraduate degree program can also be conceptualized through the leisure constraints theory. The constraints that FGCs face prior to enrollment mirror the three models of constraints including academic preparedness (*intrapersonal*), social support from educators (*interpersonal*), and financial barriers to standardized testing or college applications (*structural*).

#### *FGCS Risk Factors During the College Experience*

Though it is extremely important to identify the risk factors that may exist for FGCS in their K-12 educational experiences, the first-generation experience does not end once a student is admitted and enrolls in an institution of higher learning. There are various factors that contribute to the likelihood of dropping out of an undergraduate program.

One of the risk factors that begins prior to enrolling and poses increased risk of dropping out for FGCS is poor academic preparation. One study found that 55% of FGCS took remedial courses during their undergraduate studies, compared to 27% of their non-FG peers (Chen & Carroll,

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2005). This is not to make the generalization that all FGCS are less academically prepared or unable to thrive as well as their non-FG peers, but rather to make the point that FGCS have had to navigate institutions of which they do not have the same access to knowledge of doing so. This does not mean that non-FG peers find the college experience to be easy and not challenging. More than academic preparation at face value, this finding speaks to the issue of equity and who has access to generational knowledge that puts them at an advantage in navigating these systems. It is also important to note that in one study FGCS reported experiencing higher doubt in themselves and in their ability to be successful than their non-FG peers and were also more likely to struggle to perform well in their academics (Pratt et al., 2019). It is important to consider the impact on mental health that the FGCS experience may cause, and that feelings of self-doubt as a result do pose a risk for dropping out for many FGCSs. Also related to mental health, research has found that many FGCS feel a sense of disconnectedness for their universities' social scene (Pratt et al., 2019).

It is important to consider the other identities that intersect with that of the first-gen experience, such as racial, class, cultural, and gendered aspects. It is also important to recognize that the first generation and low-income identities do not always intersect. However, there is overlap, and the financial barriers that many first-generation college students experience is a facet of identity that is essential to consider. One study found that students from low-income backgrounds were more likely to drop out of college than students from high income backgrounds, and low-income students were also less likely to graduate within 4 to 6 years (Ishitani, 2006).

Though not all FGCSs come from low-income families, many do experience these financial barriers. Therefore, it is essential to consider this risk factor that may exist for many FGCS and impact their likelihood of graduating from a 4-year institution. The lack of financial resources for many FGCS also requires them to seek employment with a potentially high time commitment, which could create a barrier in becoming as involved in on-campus activities as their peers who do not have to work to support themselves and their families (Lundberg et al., 2007; Pratt et al., 2019). This could further exacerbate feeling "out-of-place" on campus—a disconnect that could increase the likelihood of dropping out of an undergraduate degree program (Pratt et al., 2019).

Another risk factor to consider is that of cultural mismatch. The dissonance created when the environment on college campuses is different than those that a young person coming in has experienced can be a risk for dropping out. As one study explains, "a cultural match between



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students' motives and the norms of the college environment leads students to construe academic tasks as relatively [easy, and this] construal facilitates students' academic performance, whereas a cultural mismatch between students' motives and the norms of the college environment leads students to construe academic tasks as relatively difficult, and this construal undermines students' academic performance" (Stephens et al., 2012, p. 1192). The researchers also give the example of independence, stating that institutions of higher education usually emphasize and pride the idea of independence and working independently, which is an issue for youth, like many FGCS, who come from cultural environments where there is a focus on interdependence and collaboration. Experiencing cultural dissonance affects academic performance and could affect the likelihood of finishing a 4-year degree for FGCSs who enter college unfamiliar with the environment. Though this is a risk factor as it stands, this also poses an opportunity for institutions to reevaluate the environments that are created on their campuses. There is opportunity for change here, in that a campus-wide shift to a focus of interdependence and collaboration could create a more welcoming space for FGCSs.

#### ***Dropout Prevention for FGCS***

A primary focus of the literature on the FGCS experience focuses on risk factors to completing a 4-year undergraduate degree. However, there is also a shift in the literature that explores how to prevent dropouts and increase retention of FGCSs who are already admitted to a 4-year undergraduate degree program. Not only is the type of intervention important but also the timing of when certain interventions are put into place, since research shows that the highest risk of dropping out for FGCS is during the 2<sup>nd</sup> year of the undergraduate studies (Ishitani, 2006).

Many interventions for FGCS have been focused on strengthening the social networks of FGCS once they enter their undergraduate programs by connecting them with faculty and staff on campus (Grace-Odeleye & Santiago, 2019). FGCS typically do not enter their collegiate experiences with the understanding of how to navigate the institution in the same way that their non-FG peers do (Lundberg et al., 2007). However, this lack in cultural capital can be addressed through interventions that help FGCS build relationships with faculty and staff at their institutions, which then allow them access to resources that help them understand how to navigate their undergraduate experiences. It is also important for faculty to validate the experiences that their FGCS bring and reinforce their value, and interventions should focus on training faculty on how to interact and understand the FG experience (Lundberg et al., 2007). Creating prevention interventions to lessen the risk of FGCS dropping out is essential and includes training the faculty and staff who work with FGCSs directly.

The cultural mismatch theory is another way of beginning to think about the needs of FGCSs that can be addressed in dropout prevention intervention. The research shows that when university culture is reimagined and “reframed to include the interdependent norms prevalent in the American working-class contexts that first-generation students often inhabit prior to college, first-generation students [perform] just as well as their [non-FG] peers” (Stephens et al., 2012, pp. 1192-1193). The norms that are in place at institutions of higher education are not stationary, though not having discussion around the status quo renders them as such. These norms and culture are malleable and there are ways to increase the performance of FGCS and lessen their risks of dropping out by reframing the norms that equitably benefit non-FG peers with generational understanding of these systems.

#### **4-H Risk Factors for Non-Participation**

Specific references to first-generation 4-H youth experiences are absent from the 4-H literature. However, we can compare findings in the literature on enrollment, retention, and completion barriers for general 4-H youth from around the country, and we can join those findings with what we know about the specific challenges of program recruitment, retention, and engaging non-traditional 4-H youth (youth of color and youth in at-risk youth categories) with the issues, barriers, and interventions associated with FGCS. Much like the issues facing FGCS, 4-H youth participation issues can be categorized into pre-enrollment risk factors and risk factors during participation.

Literature in this area has sought to understand the issues, barriers, and interventions of initial participation for youth in underserved populations (Free, 2015; Worker et al., 2020) and youth of differing ages. For decades 4-H researchers have been producing literature covering the retention and completion of 4-H program (Alston & Crutchfield, 2009; Astroth, 1985; Defore et al., 2011; Ferrari & Turner, 2006; Harder et al, 2005; R. S. Hartley, 1983; Hobbs, 1999; Homan et al, 2007; Norland & Bennett, 1993; Ritchie & Ressler, 1993). Many of these studies look at factors impacting youth within a county, state, program area or youth of a particular background.

Taken as a whole, we can see parallels with the FGCS literature and create a new lens for viewing these challenges and create a new model for achieving the long-standing goals of diversifying 4-H and providing an equal high quality 4-H experience for a demographically representative youth population. Initial participation in 4-H, regardless of the program mode (i.e., community club, camp, school enrichment), is a first step to gaining the benefits of PYD.

### ***FG4-HYM Constraints Prior to Enrollment***

Recruitment is both a process of marketing and initial engagement. For the 4-H program, there are several key constraints that could inform youth and/or family participation. We chose the term constraint due to similarities between the pre-enrollment decisions for joining or not joining 4-H and pre-participation constraints explored within leisure constraints theory, which seeks to understand the constraints influencing one's decisions for their leisure activity participation (Hinch et al., 2005). As seen through the lens of the leisure constraints theory, the key areas of FG4-HYM pre-enrollment constraints mirror the three models of constraints and include awareness gap (intrapersonal), cultural dissonance with 4-H stereotypes (interpersonal), and dissonance with resource needs (structural; Crawford & Godbey, 1987).

#### *Awareness Gap*

Simply knowing of the opportunity to participate in 4-H and about the program is a key constraint against participation. If non-traditional youth and families do not encounter recruitment materials and outreach, there is little hope they will know about the opportunities and thus be faced with an awareness gap. One of the largest contributing factors to the awareness gap is little to access to recruitment materials. Outside of the network of 4-H members, youth from underserved populations lack the friends and family access to program awareness. T. R. Free (2015) stresses the importance of recruiting in spaces where youth and families are active already. For example, displaying materials in library facilities that serve Spanish-speaking communities is a promising strategy for recruiting Spanish speaking youth and families (Erbstein et al., 2017).

Family-based recruitment efforts may inform the whole family of the opportunities and entry mechanisms. If we accept that family influence is an important factor in youth initial participation (Hobbs, 1999) and continuance (Radhakrishna et al., 2013) in 4-H programs, we should consider the family in the recruitment process.

#### *Cultural Dissonance With 4-H Stereotypes*

A lack of connection between the youth and the program can occur even if access to recruitment materials and outreach exists. Free (2015) suggests that the stereotype of 4-H as rural, White, and agriculture-based view portrayed in media and reinforced through 4-H itself can reduce a possible connection with non-traditional youth. Alston and Crutchfield (2009) identified a negative view of agriculture in urban populations that serves as a barrier.

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Additionally, for some populations, language is a barrier whether for the youth themselves or families who would normally support entry into the program.

Related interventions stress creating media and promotional materials that de-emphasize the historic 4-H image by highlighting non-traditional 4-H activities and program modes, and explaining the acronyms and jargon associated with legacy programs and experiences. For communities with youth and family who speak multiple languages, 4-H should communicate in the language of targeted youth populations. Worker et al. (2020) went so far as to hire full-time bilingual program staff and recruit bilingual volunteers and teen mentors.

#### *Resource Needs*

Misconceptions about the organization's purpose or a misunderstanding about the requirements keep youth and families from enrolling in 4-H. Anyone who has ever introduced 4-H to new families has heard the statement from a potential 4-H family member say "Oh, we don't have space for [insert name of a livestock project animal]." When a potential new family makes this statement, they are communicating their misconception of both the purpose of the organization (i.e., youth participate only in animal projects) and the requirements of the organization (i.e., a youth must purchase and raise an animal project).

Even if recruitment efforts for 4-H are able to engage a youth to get beyond the first two barriers, there are some basic resources that all 4-H youth need in order to participate. Transportation to and from program experiences, program fees, and equipment expenses all get in the way of initial participation. Usual interventions include waiving fees and, at times, special interventions by staff and volunteers to assist youth to participate. However, in order to access that support, youth need to be engaged and understand the processes.

#### *Parallels between FGCS and 4-H Enrollment and Recruitment Constraints*

FGCS and 4-H youth experience a variety of barriers to enrollment into their respective program. False assumption about student resources is a barrier shared across both populations. For individuals to make an informed decision to participate or not to participate in either program, they need knowledge about the program and to be able to envision themselves in it. Educational attainment is a unique barrier to FGCS because of the selective process of college entry. Table 1 summarizes the parallels between constraints encountered by potential FGCS and those encountered by potential FG4-HYM.

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**Table 1. Parallels Between First-Generation Constraints Prior to Enrollment**

	<b>Issue</b>	<b>Barrier</b>	<b>Potential intervention</b>
<b>FGCS</b>	<ul style="list-style-type: none"> <li>• Access to information on college/universities</li> </ul>	<ul style="list-style-type: none"> <li>• Access to materials and information about how to apply to collegiate programs</li> </ul>	<ul style="list-style-type: none"> <li>• Increase college counselor access for FGCS</li> </ul>
	<ul style="list-style-type: none"> <li>• Academic preparation</li> </ul>	<ul style="list-style-type: none"> <li>• Academic pipeline</li> </ul>	<ul style="list-style-type: none"> <li>• Programming that occurs prior to high school</li> <li>• Inform families about pipeline to higher education so they can encourage their children to take more rigorous courses</li> </ul>
	<ul style="list-style-type: none"> <li>• False assumption of student resources</li> </ul>	<ul style="list-style-type: none"> <li>• High application cost</li> <li>• High cost of standardized tests</li> <li>• High tuition costs</li> </ul>	<ul style="list-style-type: none"> <li>• Increase knowledge on financial aid resources</li> <li>• Waive application fees</li> <li>• Waive test fees</li> </ul>
<b>FG4-HYM</b>	<ul style="list-style-type: none"> <li>• Exclusion from traditional recruitment and program entry</li> </ul>	<ul style="list-style-type: none"> <li>• No access to the recruiting materials or language barriers</li> <li>• No friend or family engagement is a barrier to traditional recruitment pathway</li> </ul>	<ul style="list-style-type: none"> <li>• Translation of materials</li> <li>• Bilingual staff, vols, and ambassadors</li> <li>• Promotion in communities where target audience lives</li> <li>• Family recruitment</li> </ul>
	<ul style="list-style-type: none"> <li>• Disconnection with recruiting materials</li> </ul>	<ul style="list-style-type: none"> <li>• Stereotyped 4-H program in materials and common representative</li> </ul>	<ul style="list-style-type: none"> <li>• Translate/diversify recruitment materials</li> </ul>
	<ul style="list-style-type: none"> <li>• False assumption of participant resources</li> </ul>	<ul style="list-style-type: none"> <li>• Transportation and funding for program fees and equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Scholarships</li> <li>• Special outreach by staff</li> </ul>

### ***FG4-HYM Risk Factors During Participation***

Retention and completion are about valued engagement and belonging by the participants. For the 4-H program, there are many risk factors that could inform a youth's and/or family's decision to drop out of the 4-H program. These risk factors include cultural dissonance with the content, challenges with the project, and lack of resources and time.

#### *Cultural Dissonance With Content*

The traditional content of programs and the stereotype of 4-H serves as a barrier for youth if they move beyond the initial engagement hurdles. A sense of belonging is a key indicator of PYD and a celebrated part of 4-H (DeCulbellis & Barrick, 2020). However, Astroth (1985) pointed to the sense of not being welcome as a key indicator of discontinuance in the 4-H program. While Astroth's study did not focus specifically on underserved youth, the challenges of fitting in as a minority member may suggest that they are more likely to be stopped by a feeling of not being welcome. Friends and family engagement are established motivators for continuance in the 4-H program (Lewis et al., 2018; Maurer & Bokerneier, 1984; Norland & Bennett, 1993). Not being welcome is a barrier for any 4-H members and non-traditional 4-H youth likely experience it to a greater degree. Integrating non-4-H friends into 4-H programs could reduce the tension youth feel between 4-H and non-4-H friends.

Interventions can reduce the cultural dissonance between 4-H individuals and the program. The 4-H Latino Initiative addressed this issue by including culturally relevant content chosen in part by members and their families (Worker et.al., 2020). D. C. Hartley (2005), Homan et.al. (2007), and Ferrari and Turner (2007) also suggested changing content to strengthen the retention ability of 4-H program participants. Astroth (1985) suggests member and family support within the 1<sup>st</sup> and 2<sup>nd</sup> years of experience as well as deliberate belonging programs to build a connection. Similarly, R. S. Hartley (1983) and Norland and Bennett (1993) highlighted a need for family-based programming. The integration of more intrinsic motivations through more promotion of PYD outcomes achieved over the past decades (e.g., the thriving model; Arnold, 2018) may address the concern of Forbes (1988) that competition can erode positive social bonds between the 4-H member and their peers.

#### *Content and Project Challenges*

Lack of help from leaders was identified as a motivation to leave 4-H (Harder et al., 2005; Ritchie & Resler, 1993). Given the cultural dissonance present among some 4-H youth and the sense of not belonging mentioned above, FG4-HYM may be at a higher risk for this feeling. This suggests that non-traditional 4-H youth will need additional support while participating. Hobbs

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(2004) recognized the importance of the special attention given by staff as important for youth who may not have the same preparation for completion as others.

*Lack of Resources and Time*

Family obligations and limitations can interfere with complete participation. Defore et al. (2011) recognized the importance of parental involvement in youth program completion. Any lack of transportation or financial resources can put pressure on families and reduce the potential for family engagement. Family-based programming (Newby & Sallee, 2011) and special attention from staff are suggested interventions to address these barriers as well.

*Retention and Completion Parallels Between FGCS and 4-H Experiences*

Experiences of FGCS and FG4-HYM have significant parallels (Table 2) in retention and completion. Both first-generation populations experience cultural dissonance, constraints on time and resources, and educational barriers, even though they reflect the different educational objectives. Interventions focus on organizational change at the interpersonal level with an emphasis on promoting belonging and changing the program design.

**Table 2. Retention and Completion Parallels Between FGCS and 4-H Experiences**

	<b>Issue</b>	<b>Barrier</b>	<b>Potential intervention</b>
<b>FGCS</b>	Cultural dissonance	Exclusion from traditional higher education social networks	Focus on building social networks Reframe collegiate culture to interdependent and collaborative norms
	Academic challenges	Need for remediation	Skills on building relationships with faculty and navigating undergraduate experiences
	Resources and time constraints	Financial commitments or obligations	Fostering belongingness and social connections on campus

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**Table 2. (continued)**

	<b>Issue</b>	<b>Barrier</b>	<b>Potential intervention</b>
<b>FG4-HYM</b>	Cultural dissonance	Disconnected with content Feel unwelcome (from either adults or peers) Disconnected from traditional extrinsic motivations Missing social connections in club and project work	Culturally relevant content Intentional belonging programs Intrinsic and extrinsic motivations Integrate non-4-H friends in programming
	Content and project challenges	Lack of help from leaders	Special attention from staff, leaders, and volunteers
	Resources and time constraints	Family obligations and limitations can interfere with complete participation	Family-based programming

**Discussion**

The correlation between challenges and interventions of 4-H youth and those of FGCS suggests that 4-H can learn from the efforts of higher education to mitigate the challenges their first-generation youth face. We strongly argue that what is needed in 4-H is a change in perspective, calling for culture change that ensures prospective youth receive support that addresses the challenges they face, sufficient support acting on the full landscape of influence for those youth, and that these changes inform program quality for all youth no matter if a youth is or is not FG4-HYM

Potential interventions should be intentional about assessing access, equity, and belonging in recruitment and retention efforts of first-generation populations in several capacities. When it comes to policies and procedures, building policies rooted in diversity and inclusion at the national, state, county, and program levels sets a standard of behavior. The formal acknowledgment of the experiences of FG4-HYM builds a culture towards inclusion for the overall 4-H programs by explicitly stating the intentionality behind understanding the barriers and challenges of prospective youth members.



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Regarding volunteer engagement, interventions for caring adults already in the program should focus on inclusive and welcoming practices, including knowledge of the FG4-HYM experience and the skills in cultural competence and recruitment (Vega et al., 2016). When working directly with youth, peers play an important role in creating welcoming environments (DeCubellis & Barrick, 2020) and youth should be prepared with knowledge of their FG4-HYMs' experiences because they serve as important recruiters (Harder et al., 2005). When youth are prepared to focus on and apply inclusive and welcoming practices, the club program can serve to address intentional or accidental exclusionary perceptions by new youth participants.

Lastly, when working with families, efforts should focus on those actions that impact the youth directly, factors that include the ability to get to a program, support from family, and the parent awareness of the value of 4-H. Efforts may include family-based experiences to provide a welcome entry to 4-H for the youth and family by wrap-around supports like a new family mentoring program (Webster & Smith, 2018).

Exploring the FGCS literature as a way of beginning to understand the FG4-HYM experience clearly makes the argument that this lens should be reflected in policy and procedures, training curriculum for volunteers and professional staff, and the direct engagement with families and communities. Design of programs, educational support of adults, and the framing of relationships among peers may each require adaptation. To effect real change, the interventions for FG4-HYM should be implemented across the entire landscape of influence to support youth thriving through youth development. This framework is in the context of the 4-H organization but has implications for all youth development organizations recruiting youth and families from new audiences.

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## References

- Alston, A. J., & Crutchfield, C. M. (2009). A descriptive analysis of the perceptions of North Carolina 4-H agents toward minority youth participation in agricultural-related activities. *Journal of Extension*, 47(5), Article 21. <https://tigerprints.clemson.edu/joe/vol47/iss5/21>
- Arnold, M. E. (2018). From context to outcomes: A thriving model for 4-H youth development. *Journal of Human Sciences and Extension*, 6(1), 141-160. <https://www.jhseonline.com/article/view/653>
- Astroth, K. A. (1985). The challenge of retaining 4-H members. *The Journal of Extension*, 23(3), Article 3FEA4. <https://archives.joe.org/joe/1985fall/sa4.php>
- Berkner, L., & Chavez, L. (1997). *Access to postsecondary education for the 1992 high school graduates*. (Statistical Analysis Report, October 1997). National Center for Education Statistics. <https://nces.ed.gov/pubs98/98105.pdf>
- Cano, J., & Bankston, J. (1993). Involving minority youth in 4-H. *Journal of Extension*, 31(1), Article 1RIB4. <https://archives.joe.org/joe/1993spring/rb4.php>
- Chambers, C. R. (2020). Rural pathways to higher education: The role of mathematics achievement and self-efficacy for Black students. In C. R. Chambers & L. Crumb (Eds), *African American rural education* (Vol. 7, pp. 103-118). Emerald Publishing.
- Chen, X., & Carroll, C. D. (2005). *First-generation students in postsecondary education: A look at their college transcripts*. (Postsecondary Education Descriptive Analysis Report. NCES 2005-171.) National Center for Education Statistics. <https://nces.ed.gov/pubs2005/2005171.pdf>
- Crawford, D., & Godbey, G. (1987) Reconceptualizing barriers to family leisure. *Leisure Sciences*, 9(2), 119-127. <https://doi.org/10.1080/01490408709512151>
- DeCubellis, C., & Barrick, K. (2021). Sense of belonging as perceived by youths who continue participation in 4-H. *Journal of Extension*, 58(3), Article 19. <https://tigerprints.clemson.edu/joe/vol58/iss3/19>
- Defore, A. B., Fuhrman, N. E., Peake, J. B., & Duncan, D. W. (2011). Factors influencing 4-H club enrollment and retention in Georgia. *Journal of Youth Development*, 6(2), 58-71. <https://doi.org/10.5195/jyd.2011.188>
- Elliott-Engel, J. (2018). *State administrators' perceptions of the environmental challenges of Cooperative Extension and the 4-H program and their resulting adaptive leadership behaviors* [Doctoral dissertation, Virginia Tech]. <https://vtechworks.lib.vt.edu/handle/10919/98002>
- Erbstein, N., Moncloa, F., Olagundoye, S. S., Diaz-Carrasco, C., & Hill, R. (2017). Engaging Latino communities from the ground up: Three tools. *Journal of Extension*, 55(4), Article 2. <https://tigerprints.clemson.edu/joe/vol55/iss4/2>
- Farella, J., Hauser, M., Parrott, A., Moore, J. D., Penrod, M., & Elliott-Engel, J. (2021). 4-H youth development programming in Indigenous communities: A critical review of the Cooperative Extension literature. *Journal of Extension*, 59(3), Article 7. <https://doi.org/10.34068/joe.59.03.07>

Lessons for 4-H From First-Generation College Students

- Farella, J., Moore, J., Arias, J., & Elliott-Engel, J. (2021). Framing indigenous identity inclusion in positive youth development: Proclaimed ignorance, partial vacuum, and the peoplehood model. *Journal of Youth Development*, 16(4), 1-25. <https://doi.org/10.5195/jyd.2021.1059>
- Ferrari, T. M., & Turner, C. L. (2006). An exploratory study of adolescents' motivations for joining and continued participation in a 4-H afterschool program. *The Journal of Extension*, 44(4), Article 4RIB3. <http://www.joe.org/joe/2006august/rb3.php>
- Fields, N. (2020). Exploring the 4-H Thriving Model: A commentary through an equity lens. *Journal of Youth Development*, 15(6), 171-194. <https://doi.org/10.5195/jyd.2020.1058>
- Fields, N. I., & Nathaniel, K. C. (2015). Our role in and responsibility toward social justice. *Journal of Extension*, 53(5), Article 15. <https://tigerprints.clemson.edu/joe/vol53/iss5/15>
- Forbes, S. H. (1988). *Influence of the 4-H incentive system on the development and retention of 4-H members* [Unpublished doctoral dissertation]. Oklahoma State University.
- Free, T. R. (2015). *Transforming 4-H pedagogy: Equity, access, and opportunity for students of color* [Doctoral dissertation, University of North Carolina Greensboro]. <http://libres.uncg.edu/ir/uncg/listing.aspx?id=18130>
- Gómez, E., Urzúa, A., & Glass, C. R. (2014). International student adjustment to college: social networks, acculturation, and leisure. *Journal of Park & Recreation Administration*, 32(1), 7-25. <https://js.sagamorepub.com/jpra/article/view/2972/4218>
- Gonzalez, M., Kokozos, M., Byrd, C., & McKee, K. (2020). Critical positive youth development: A framework for centering critical consciousness. *Journal of Youth Development*, 15(6), 24-43. <https://doi.org/10.5195/jyd.2020.859>
- Grace-Odeleye, B., & Santiago, J. (2019). A review of some diverse models of summer bridge programs for first-generation and at-risk college students. *Administrative Issues Journal: Connecting Education, Practice, and Research*, 9(1), 35-47. <https://doi.org/10.5929/9.1.2>
- Hamilton, L., Roksa, J., & Nielsen, K. (2018). Providing a "Leg up": Parental involvement and opportunity hoarding in college. *Sociology of Education*, 91(2), 111-131. <https://doi.org/10.1177/0038040718759557>
- Harder, A., Lamm, A., Lamm, D., Rose, H., & Rask, G. (2005). An in-depth look at 4-H enrollment and retention. *Journal of Extension*, 43(5), Article 5RIB4. <http://www.joe.org/joe/2005october/rb4.php>
- Harrington, R., Russo, J. P., Stevenson, A., Ecklund, K., & Derdowski, J. (2018). *Diversity and first generation 4-H Lens*. University of Minnesota. <https://drive.google.com/file/d/1GHgBn2J3MPt4Tpts4NyBZLsBnTGFMix/view>
- Harrington, R., Sheehan, T., & Blyth, D. A. (2011). Examining the reasons and relationships between why youth join, stay in, and leave 4-H. *Journal of Youth Development*, 6(2), 39-47. <https://doi.org/10.5195/jyd.2011.186>

Lessons for 4-H From First-Generation College Students

- Hartley, D. C. (2005). *Factors that influence 4-H club membership retention in West Virginia* [Doctoral dissertation, West Virginia University]. The Research Repository @ WVU. <https://researchrepository.wvu.edu/cgi/viewcontent.cgi?article=3203&context=etd>
- Hartley, R. S. (1983). Keeping 4-H members. *Journal of Extension*, 21(4). <https://archives.joe.org/joe/1983july/a4.php>
- Hinch, T., Jackson, E., Hudson, S., & Walker, G. (2005) Leisure constraint theory and sport tourism. *Sport in Society*, 8(2), 142-163. <https://doi.org/10.1080/17430430500087435>
- Hobbs, B. B. (2004). Latino outreach programs: Why they need to be different. *Journal of Extension*, 42(4), Article 4COM1. <https://archives.joe.org/joe/2004august/comm1.php>
- Hobbs, B. B. (1999). Increasing the 4-H participation of youth from high-risk environments. *Journal of Extension*, 37(4), Article 4RIB1. <https://archives.joe.org/joe/1999august/rb1.php>
- Homan, G., Dick, J., & Hedrick, J. (2007). Youth perceptions of Ohio 4-H. *Journal of Extension*, 45(4), Article 4RIB3. <https://archives.joe.org/joe/2007august/rb3.php>
- Horn, L., & Nuñez, A. (2000). Mapping the road to college: First-generation students' math track, planning strategies, and context of support. *Education Statistics Quarterly*, 2(1), 81-86.
- Ives, J., & Castillo-Montoya, M. (2020). First-generation college students as academic learners: A systematic review. *Review of Educational Research*, 90(2), 139-178. <https://doi.org/10.3102/0034654319899707>
- The Executive Office of the President. (2014). *Increasing college opportunity for low-income students: Promising models and a call to action*. [https://obamawhitehouse.archives.gov/sites/default/files/docs/increasing\\_college\\_opportunity\\_for\\_low-income\\_students\\_report.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/increasing_college_opportunity_for_low-income_students_report.pdf)
- Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher Education*, (77)5. 861-885. <https://doi.org/10.1080/00221546.2006.11778947>
- Johnson, H. (2021). *Examining the differences in perceived stress, academic success, and potential protective factors between first-generation college students and continuing-generation college students* [Doctoral dissertation, Middle Tennessee State University]. ProQuest. <https://www.proquest.com/pagepdf/2518994851?accountid=14586>
- LaPeer, D. (2020). "We were all kind of by ourselves." Understanding the challenges faced by first-generation college students in Fentress County. *McNair Scholars Research Journal*, 3(12), 153-194. <https://www.leeuniversity.edu/wp-content/uploads/2020-2021-McNair-Academic-Journal.pdf#page=154>
- Lewis, K. M., Ewers, T., Miller, J. C., Bird, M., Borba, J., Hill, R. D., Rea-Keywood, J., Shelstad, N., & Trzesniewski, K. (2018). Addressing retention in youth programs: A survey for understanding families' experiences. *The Journal of Extension*, 56(3), Article 5. <https://tigerprints.clemson.edu/joe/vol56/iss3/5>

Lessons for 4-H From First-Generation College Students

- Lundberg, C. A., Schreiner, L. A., Hovaguimian, K., & Slavin Miller, S. (2007). First-generation status and student race/ethnicity as distinct predictors of student involvement and learning. *NASPA Journal*, 44(1), 57-83. <https://doi.org/10.2202/1949-6605.1755>
- Maltese, A. V., & Tai, R. H. (2011). Pipeline persistence: Examining the association of educational experiences with earned degrees in STEM among US students. *Science education*, 95(5), 877-907. <https://doi.org/10.1002/sce.20441>
- Maurer, R. C., & Bokerneier, J. L. (1984). How mom and dad influence youth participation. *Journal of Extension*, 22(2), Article 2FEA3. <https://archives.joe.org/joe/1984march/a3.php>
- Moncloa, F., Horrillo, S. J., Espinoza, D., & Hill, R. (2019). Embracing diversity and inclusion: An organizational change model to increase intercultural competence. *Journal of Extension*, 57(6), Article 25. <https://tigerprints.clemson.edu/joe/vol57/iss6/25>
- McKee, R. K., Talbert, B. A., & Barkman, S. J. (2002). The Challenges Associated with Change in 4-H/Youth Development. *Journal of Extension*, 40(2), n2. <https://archives.joe.org/joe/2002april/a5.php>
- National 4-H Council (2015). *Strategic plan FY 2016-2018*. <https://4-h.org/wp-content/uploads/2019/01/4H-FY-2016-2018-Strategic-Plan.pdf>
- Nelson, L. M. (2020). *Minnesota 4-H youth development: Capacity for diversity and inclusion* [Master's thesis, University of Minnesota]. ResearchGate. <https://z.umn.edu/MN4-H-capacityDI>
- Newby, L., & Sallee, J. (2011). 4-H membership recruitment/retention problems: A meta-analysis of possible causes and solutions. *Journal of Youth Development*, 6(4), 37-46. <https://doi.org/10.5195/jyd.2011.163>
- Norland, E., & Bennett, M. (1993). Youth participation. *Journal of Extension*, 31(1), Article 1FEA5. <https://archives.joe.org/joe/1993spring/a5.php>
- Norrell-Aitch, K. (2015, March 26). *Traditional versus first generational 4-Hers*. Michigan State University Extension. <https://www.canr.msu.edu/news/traditional-versus-first-generational-4-hers>
- Oakes, J. (1990). *Lost talent: The under participation of women, minorities, and disabled persons in science*. Rand Corp. <https://www.rand.org/pubs/reports/R3774.html>
- Pratt, I. S., Harwood, H. B., Cavazos, J. T., & Ditzfeld, C. P. (2019). Should I stay or should I go? Retention in first-generation college students. *Journal of College Student Retention: Research, Theory & Practice*, 21(1), 105-118. <https://doi.org/10.1177/1521025117690868>
- Program Leaders Working Group Access, Equity and Belonging Committee (PLWG-AEBC) (n.d.). Committee Purpose. <https://access-equity-belonging.extension.org/>
- Russo, J. P. (2015, November 25). Let's talk about the first-generation experience. *University of Minnesota Extension Youth Development Insight*. <https://blog-youth-development-insight.extension.umn.edu/2015/11/lets-talk-about-first-generation.html>

Lessons for 4-H From First-Generation College Students

- Radhakrishna, R., Foley, C., Ingam, P., & Ewing, J. C. (2013). Effectiveness of the 4-H program as perceived by parents of 4-h participants. *Journal of Extension*, 51(4), Article 35. <https://tigerprints.clemson.edu/joe/vol51/iss4/35>
- Ritchie, R. M., & Resler, K. M. (1993). Why youth drop out of 4-H. *Journal of Extension*, 31(1), Article 1RIB3. <https://archives.joe.org/joe/1993spring/rb3.php>
- Rosenberg, G. N. (2015). *The 4-H harvest: Sexuality and the state in rural America*. University of Pennsylvania Press.
- Scales, P. C., Benson, P. L., & Roehlkepartain, E. C. (2010). Adolescent thriving: The role of sparks, relationships, and empowerment. *Journal of Youth and Adolescence*, 40(3), 263-277. <https://doi.org/10.1007/s10964-010-9578-6>
- Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: how American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of personality and social psychology*, 102(6), 1178-1197. <https://doi.org/10.1037/a0027143>
- Smischney, T. M., Roberts, M. A., Gliske, K., Borden, L. M., & Perkins, D. F. (2018). Developing youth competencies: The impact of program quality. *Journal of Youth Development*, 13(4), 29-48. <https://doi.org/10.5195/jyd.2018.587>
- U.S. Department of Agriculture, National Institute for Food and Agriculture. (2017). Strategic plan: 4-H youth development a 2025 vision. <https://nifa.usda.gov/sites/default/files/resources/National%204-H%20Strategic%20Plan%202017.pdf>
- U.S. Department of Agriculture, National Institute for Food and Agriculture. (n.d.). 4-H & positive youth development. <https://nifa.usda.gov/program/4-h-positive-youth-development>
- Vega, L., Brody, B., & Cummins, M. (2016). Best practices for outreach and engagement to latino audiences using community-based programs. *Journal of Human Sciences and Extension*, 4(2), 148-166. <https://www.jhseonline.com/article/view/704>
- Webster, N., & Smith, M. (2018). Strategies for 4-H program planning and recruitment relative to African American male youths. *Journal of Extension*, 56(4), Article 6. <https://tigerprints.clemson.edu/joe/vol56/iss4/6>
- Worker, S., Janiero, M. F., & Lewis, K. (2020). Youth in 4-H Latino Initiative programs achieve similar outcomes to youth in 4-H community clubs. *California Agriculture*, 74(1), 40-45. <https://doi.org/10.3733/ca.2019a0027>
- Youth.gov (n.d.). *Positive youth development*. <https://youth.gov/youth-topics/positive-youth-development>