Making it Work: Pregnant and Parenting Doctoral Students' Attributions of Persistence

Rebecca G. Mirick
Stephanie P. Wladkowski

Abstract: *While doctoral education is growing in the United States, attrition from doctoral programs is high; 40-60% of students who begin doctoral programs do not complete them. Previous research has explored reasons for attrition, but little research has examined persistence, and none have looked at persistence for women during and after pregnancy. This qualitative study explored female doctoral students and graduates' (n=28) attributions of persistence to completion in their professional healthcare doctoral programs (57% social work) after a pregnancy and/or birth. Two primary themes emerged from this study. First, women attributed their persistence in the program to internal resources such as determination, organization, discipline, and the ability to assess needs and shift resources, schedules, plans, or expectations to meet those needs. Second, some women attributed their ability to persist in their program to good luck, in terms of fertility, pregnancy timing, expectations of the student, and family friendly advisors and programs. Dissertation chairs and advisors can use these findings to more effectively support pregnant and parenting students, including helping them build important skills and reflect on implicit messages about caregiving women who are doctoral students.*

Keywords: *Pregnancy, doctoral education, student parents, persistence, attribution theory*

Doctoral education is growing in the United States, with 55,000 doctoral degrees awarded annually (National Science Foundation, 2017), 379 in social work specifically (Council on Social Work education [CSWE], 2018). Yet, many doctoral students leave their programs before graduation. Attrition rates in doctoral programs are between 40-60%, with variation by student demographics, discipline, and university (Bair & Haworth, 1999; Council of Graduate Schools [CGS], 2009; Gardner, 2009a; Sowell, Allum, & Okahana, 2015). Doctoral program completion rates are higher for STEM fields such as engineering and life sciences, compared to physical and mathematical sciences, and social and behavior sciences (CGS, 2015; Sowell et al., 2015). The seven year completion rate for social and behavioral sciences, the field with the lowest rate of completion, was only 36% in 2015 (CGS, 2015).

Those who are underrepresented due to race/ethnicity, gender, or citizenship are at higher risk of leaving their programs before graduation (McBain, 2019). Women with children, who comprise approximately 7-8% of doctoral students (Golde & Dore, 2001; Kulp, 2016, 2019; Mason, Goulden, & Frasch, 2009) are one atrisk group. This is particularly relevant within social work doctoral education, as women comprise 75% of social work doctoral students (CSWE, 2018). Within doctoral education, women with children often encounter additional barriers to program completion, slowing down their

_____

Rebecca G. Mirick, LICSW, PhD, Assistant Professor, Salem State University School of Social Work, Salem, MA 01970; Stephanie P. Wladkowski, LICSW, PhD, Associate Professor, Eastern Michigan University School of Social Work, Ypsilanti, MI, 48197.

progression or leading them to leave programs altogether (Gardner, 2009b; Mason, Wolfinger, & Goulden, 2013). These barriers include the balance of multiple roles and responsibilities (Castelló, Pardo, Sala-Bubaré,, & Suñe-Soler, 2017; Dickerson et al., 2014; McAlpine & Norton, 2006; Smith, Maroney, Nelson, Abel, & Abel, 2006), childcare needs (Brown & Watson, 2010; Spaulding & Rockinson-Szapkiw, 2012), financial challenges (Spaulding & Rockinson-Szapkiw, 2012; Wao & Onwuegbuzie, 2011), and a lack of systemic supports for doctoral student parents (Springer, Parker, & Leviten-Reid, 2009). In addition, Tower and Latimer (2016) describe the disadvantage that women face within the academy, saying "gender plays a role in the type of work that women conduct in the academy as well as how it is devalued, invisible, or unrewarded" (p. 319). Implicit biases against women caregivers are present in many academic programs (Drago et al., 2006), leading to different challenges for mothers than for other students (Carter, Blumenstein, & Cook, 2013).

For all doctoral students, navigating doctoral education can be challenging, isolating, and stressful (Cockrell & Shelley, 2019; Dickerson et al., 2014; Rockinson-Szapkiw, Spaulding, & Bade, 2014; Smith et al., 2006). Women with children must address these typical challenges of doctoral education as well as the additional barriers described above. The majority of the research has focused more on attrition (i.e., students leaving doctoral programs) than persistence (i.e., students remaining in doctoral programs through completion; Rockinson-Szapkiw et al., 2014). Little is known about how women doctoral students understand their ability to persist through doctoral education and the factors to which they attribute their success (McAlpine & Norton, 2006).

Literature Review

Attrition

Attrition is a sizable issue within doctoral education (Bair & Haworth, 1999; Cockrell & Shelley, 2011; MacAlpine & Norton, 2006), especially in fields like social work, which is experiencing an insufficient number of doctoral graduates to fill open academic positions in BSW and MSW programs (Kurzman, 2015). This is problematic for institutions, programs, and students. Programs and institutions may experience a financial impact from decreasing enrollments (McBain, 2019) and be unable to fill open faculty positions with qualified candidates (Kurzman, 2015). Doctoral students may experience a negative emotional impact from leaving their programs (McBain, 2019), and have often committed significant financial resources, made geographic moves, and given up other opportunities for graduate school (Cockrell & Shelley, 2011). Some underrepresented groups are at higher risk of attrition (Gardner & Holley, 2011; McBain, 2019; Sowell et al., 2015), suggesting attrition may be a social justice issue. While a solid body of research has focused on attrition, it is also critical to understand student persistence, especially persistence of individuals within underrepresented groups (Gardner & Holley, 2011; McBain, 2019). In some fields, such as social work, little is known about the experiences of doctoral students (Anastas & Kuerbis, 2009).

Gardner (2009b) argued that attribution theory, particularly Weiner's theory of motivation, is important to consider when exploring doctoral student attrition. Weiner

(1985) examined the ways in which individuals understand and explain the outcomes of opportunities or activities. In other words, it is not clear to what factors an individual attributes their success or failure. In some circumstances, individuals may credit their success to their own actions or traits, while in other situations, individuals may assume their success occurred because of factors outside of their control. When a student leaves a doctoral program, other students try to explain their departure in ways which make sense to them, but which may not include all of the complexities of the student's situation. These explanations, known as attribution narratives, can influence students' beliefs about their own ability to achieve success in doctoral education, and therefore, impact attrition rates (Lovitts, 2001).

Faculty and students have different attribution narratives to explain student attrition (Gardner, 2009b). Faculty primarily credit attrition to student characteristics, such as lack of motivation, insufficient academic preparation, or personal problems (e.g., mental health problems). In contrast, students identify specific personal situations (e.g., marriage, children, medical issues), departmental problems (e.g., lack of financial support, problematic advising), and lack of integration into academia or the field (Gardner, 2009b; Lovitts, 2001). Lovitts (2001) found financial challenges were very common, with almost one-third of students attributing attrition to this issue.

Persistence

While much research has explored student attrition, factors impacting student persistence in doctoral education has been less well-studied (Rockinson-Szapkiw et al., 2014). As the doctoral experience can be challenging, isolating, and lonely (Dickerson et al., 2014; Lovitts, 2001; Spaulding & Rockinson-Szapkiw, 2012), it is important to understand the resources and skills which facilitate students overcoming these challenges and persevering through their doctoral programs. These include a strong support network, motivation, organization, and time-management skills (McAlpine & Norton, 2006; Spaulding & Rockinson-Szapkiw, 2012). When program directors understand the factors which facilitate student persistence, they can create and support initiatives to foster student persistence.

A strong support network facilitates doctoral student persistence (Adorno, Cronley, & Smith, 2015; Dickerson et al., 2014; Martinez, Ordu, Della Sala, & McFarlane, 2013; McAlpine & Norton, 2006; Spaulding & Rockinson-Szapkiw, 2012). Personal supports outside of the academic program, such as partners, spouses, family, and friends, support student persistence (Adorno et al., 2015; Dickerson et al., 2014; Rockinson-Szapkiw et al., 2014). One study found that having a spouse increases the likelihood that students graduate from a doctoral program (Lott, Gardner, & Powers, 2009).

Student characteristics, such as discipline, motivation, the ability to work independently, and self-direction are linked with persistence (Gardner, 2009a; Grover, 2007; McAlpine & Norton, 2006; Spaulding & Rockinson-Szapkiw, 2012). In particular, students who are intrinsically motivated for both personal and professional reasons are more likely to remain in doctoral programs (Spaulding & Rockinson-Szapkiw, 2012; Wao & Onwuegbuzie, 2011). Organization and time management skills support student success

and students often credit their ability to persist in doctoral programs to these skills (Martinez et al., 2013; Spaulding & Rockinson-Szapkiw, 2012). In a qualitative study of doctoral students, students described the "purposeful management" of "their time, priorities, and roles and responsibilities" as an important factor in their success as a doctoral student (Martinez et al., 2013, p. 45).

Doctoral Student Mothers

While the process of obtaining a doctoral degree is challenging for all students (Dickerson et al., 2014; Spaulding & Rockinson-Szapkiw, 2012), doctoral student mothers encounter additional barriers to completion. These barriers can include juggling multiple roles (Castelló et al., 2017; McAlpine & Norton, 2006), childcare needs (Brown & Watson, 2010), a system that provides few supports for doctoral student mothers (Springer et al., 2009), a gendered academic culture which propagates gender inequities (Drago et al., 2006; Mason et al., 2013), and guilt or lack of desire to sacrifice family to balance school and family needs (McAlpine & Norton, 2006). Most importantly, the gendered nature of academia (Tower & Latimer, 2016) creates a disincentive for women to openly discuss the challenges of parenting (Armenti, 2004; Drago et al., 2006). Due to caregiver bias, women who openly discuss parenting, share stories of their families, or otherwise make their families more visible (Armenti, 2004; Drago et al., 2006) may experience negative consequences such as assumptions that they are not fully committed to their work or are less serious about their teaching and scholarship, which have a deleterious effect on their careers (Drago et al., 2005). As a result, many women who are parenting choose to keep motherhood invisible, remaining silent about the strategies they use to balance family and academic responsibilities (Armenti, 2004; Drago et al., 2005, 2006).

For all doctoral students, life events such as an illness or the death of a family member can slow or halt a student's progression through the program; the birth of a child and the loss of a pregnancy are both examples of these type of life experiences (Spaulding & Rockinson-Szapkiw, 2012). One of the biggest challenges for doctoral students with children is trying to balance the competing roles of parent and doctoral student (Brown & Watson, 2010; Castelló et al., 2017; Dickerson et al., 2014; Smith et al., 2006; Washburn-Moses, 2008). The time and energy required to meet family responsibilities is frequently given as an explanation for doctoral program attrition (Beer & Lawson, 2017; Castelló et al., 2017; Gardner, 2009b; Lovitts, 2001).

In spite of additional challenges to program completion, many women doctoral students with children overcome these barriers to successfully complete their doctoral work. This success requires sacrifice, commitment, and a lot of hard work (McAlpine & Norton, 2006; Spaulding & Rockinson-Szapkiw, 2012). Little research has explored how doctoral student mothers understand their success. Specifically, to what factors do they attribute their ability to complete their doctoral programs? This qualitative study explored women doctoral students' and graduates' understanding of their ability to persist in health care related doctoral programs during and after a pregnancy.

Methods

Procedures

Data for this study were pulled from a broader study exploring the experiences, challenges, and supports of pregnant and newly parenting doctoral students (see Mirick & Wladkowski, 2018; Wladkowski & Mirick, 2019, 2020). The data analyzed for this smaller study focused on women's explanations of their success with doctoral education while pregnant and/or parenting small children. Study participants were women who had experienced a pregnancy within the past ten years as a doctoral student, in a health care related program (e.g., social work, nursing, clinical psychology, occupational therapy). Following Institutional Review Board (IRB) approval at the researchers' institutions, the research advertisement was shared through the researchers' personal and professional networks. In addition, the advertisement was emailed to social work doctoral program directors belonging to the Group for the Advancement of Doctoral Education (GADE) with a request to share with students and alumnae. Interested participants contacted the researchers via email and were screened for eligibility prior to study enrollment.

Participants

The sample (n=28) identified as White (92.9%, n=26) with one identifying as Asian/Pacific Islander (3.6%) and one as multiracial (3.6%). Participants had a mean age of 35.7 years (*SD* = 3.95). All participants were married during their doctoral program; 89.3% (n=25) to men and 10.7% (n=3) to women. The participants were currently enrolled (46.4%, n=13) or had graduated from (53.6%, n=15) 23 different U.S. doctoral programs. More than half of the programs (60.7%, n=17) were in the Northeast, with 17.9% (n=5) in the Midwest, 14.3% (n=4) in the South, and 7.1% (n=2) in the West. A little over half (57.1%, n=16) attended social work programs, with the others in psychology (14.3%, n=4), nursing (7.1%, n=2), health care communication (7.1%, n=2), and 14.3% (n=4) in other health care fields such as Occupational Therapy and Behavioral Analysis. Most (92.9%, n=26) had experienced both pregnancy and birth during their doctoral studies. Eleven (39.3%) had been pregnant multiple times during their doctoral studies. Three women (10.7%) gave birth to twins. See Table 1 for full list of demographics.

Data Collection

Semi-structured interviews were conducted over a four-month period. Interviews were conducted face-to-face, by telephone, or via Skype based on participant preference and geographic location. All interviews were audio-recorded and transcribed verbatim. The full interviews focused on the broader experiences of pregnancy and parenting while enrolled in a doctoral program, including challenges, communication, programmatic culture, and supports. The interviews included questions about experiences with pregnancy and the transition to parenting, what made these experiences easy or hard, the supports available to them, and the culture about women caregivers within their programs.

Table 1. *Participant Demographics*

	n (%)
Race/Ethnicity	
White	26 (92.9%)
Asian/Pacific Islander	1 (3.6%)
Multiracial	1 (3.6%)
Current student	
Yes	13 (46.4%)
No	15 (53.6%)
Geographic location of program	
Northeast	17 (60.7%)
Midwest	5 (17.9%)
South	4 (14.3%)
West	2 (7.1%)
Married	
Yes	28 (100%)
No	0 (0%)
Gender of spouse	
Male	25 (89.3%)
Female	3 (10.7%)
Multiple pregnancies in doctoral program	
No	17 (60.7%)
Yes	11 (39.3%)
Number of children while in doctoral program	
0	2 (8.7%)
1	6 (26.1%)
2	12 (52.2%)
3	3 (13.0%)
Twins	
No	25 (89.3%)
Yes	3 (10.7%)
Field of study	
Social Work	16 (57.1%)
Psychology	4 (14.3%)
Nursing	2 (7.1%)
Health Care Communication	2 (7.1%)
Other (e.g. OT, Audiology, Nutrition, Behavioral Analysis)	4 (14.3%)

Data Analysis

The data were analyzed using thematic analysis (Braun & Clarke, 2006). In order to ensure interrater reliability, three transcripts were chosen at random. Each researcher completed an independent line-by-line review of these three transcripts to identify preliminary codes and to establish an initial coding structure for the remaining transcripts. Throughout each step of analysis, definitions of codes were discussed and modified or adjusted as needed. To assess frequency of code use, bias in code assignment, and variability of code applications across transcripts, the evolving coding framework was

reviewed against all of the transcripts. For this specific study, analyses were focused on themes about success attribution for persisting in doctoral degree programs during and after pregnancy. In order to increase trustworthiness and avoid researcher bias, researcher colleagues reviewed and provided feedback on the interview guide. In addition, a thorough audit of field notes and the analysis process was conducted. At the conclusion of each interview, participants were encouraged to contact researchers with any additional thoughts or realizations from the interview, but no feedback or additional data were received.

Findings

Two main themes emerged as participants described their experiences. First, 85.7% of participants identified internal resources which supported their persistence (n=24), such as discipline and organization (75.0%, n=18), determination (66.7%, n=16), and the ability to assess their own needs and mobilize resources to meet these needs (70.8%, n=17). Second, 53.6% of the participants (n=15) attributed at least some of their ability to persist to good luck, which applied to both physical health and their needs as a doctoral student. See Table 2.

Table 2. *Themes in Doctoral Students' Persistence*

Theme	Subthemes	N
Internal Resources	1) Discipline and organization (n=18)	24
	2) Determination (n=16)	
	3) Awareness of needs (n=17)	
Luck		15

Internal Resources

Most participants (n=24) identified internal resources that supported their ability to continue in their doctoral programs during and after pregnancy. These internal resources were organized around the three sub-themes of: a) discipline and organization, b) determination, and c) the ability to continually self-assess needs and mobilize resources to meet these needs.

Discipline and organization. Many participants (n=18) described a high level of internal discipline and organization that helped them to manage the competing demands of pregnancy/parenting and doctoral work. Participants described carefully organizing their responsibilities and their time in order to be able to complete all required doctoral tasks. For many participants, this organization began during—or even before—their pregnancies. In planning pregnancies, participants looked ahead at program milestones to ensure that a pregnancy would not delay their progression. For example, one participant described the calculations that went into timing her pregnancy, saying: "I wanted to make sure I was in a place where getting pregnant again wasn't going to set me back an entire year." From this statement, it appears that this participant began planning before conception. Once they were pregnant, many participants described increasing productivity during pregnancy (e.g., completing assignments, studying for comprehensive exams, collecting data) to create time for a leave post-birth. This careful planning often began in the early stages of pregnancy. For example, one participant described preparing for her comprehensive exam early in her

pregnancy, saying: "I had done a lot of preparation beforehand, knowing what I was going to do in my comps and what the subject was going to be." Planning ahead was an important strategy that participants used to be able to remain productive and successful in their programs after giving birth.

In addition to planning, participants' ability to manage their time, creating time to complete schoolwork, positively impacted persistence. Participants described being strategic, carefully organizing their days and weeks to maximize efficiency. Often, this strategic planning involved the creation of firm boundaries between academic and family life. This strategy created protected time to meet both sets of needs, as one participant described:

> *I had to be very disciplined in terms of how I lived my life. So, when I was at work, I was at work and then I would come home and I would have very dedicated time for being a mom with my son and then he would go to bed and I would have very dedicated time for when I was writing or reading or whatever I had to be doing. So I had a schedule… Monday, Tuesday, Wednesday I worked from 8-10pm and…Saturday mornings I worked for four hours [5am to 9am] and I worked at naptime and on Sundays and I just protected those times. So the things that were hard were: my husband has to go to the grocery store or if my son was not taking a nap, my husband had to be the one who was trying to get him to go to sleep because I really prioritized those times for my scholarship activities…that was time I was not messing with. I was committed to it and I had to fulfill it. And I would log it and that would really help me too because I would look at the log and l needed to complete a certain number of hours and if I did not complete them, I would have to make them up at some point later in the week.*

Participants described being intensely disciplined in their use of child-free time in order to be able to use this time to the fullest.

Part of this organization meant participants took advantage of all childfree time to create opportunities to complete academic work. This included family visits, naptime, weekends, and evenings after a child went to bed. One participant described foregoing sleep during visits from extended family members to make progress on her dissertation:

> *My mother came out for a week and my mother-in-law came out for a week … so that they could watch my son and I could just write write write write write in long stretches, and I would like stay up until 1, 2, 3 in the morning writing and then get up with my son at like 6 in the morning.*

Participants described carefully organizing their lives, even before the birth of their babies, to create time for both school work and parenting, which required high levels of discipline and planning and offered little time for leisure.

Determination. Some participants (n=16) described being driven by an intense determination to complete their doctoral work, which was not diminished by their experiences with pregnancy or transitions to parenthood. In fact, many participants described an increased determination after they had a child, which motivated them to reorganize their lives or give up leisure time to complete the necessary tasks. Participants'

determination to complete their doctoral programs was motivated by diverse factors. For some, the desire to be role models was a powerful motivator, as described by this participant:

> *My focus on finishing is much stronger than it was before, because I have two little ones that need to see this. I want them to see this. I want them to be at graduation next year. I want them to see Mommy walk across the stage. I want them to have a positive female role model in their lives.*

For participants like this one, persisting in the program became not just an individual achievement, but something they were doing for their children as well.

For some participants, the inflexible deadline of a due date motivated them to complete program milestones, such as comprehensive exams, dissertation proposals, data collection, or dissertation defenses. This participant shared:

> *[pregnancy] almost became more motivating because I was doing a study and I wanted to finish data collection before I had [older son].... And my younger son was born two weeks after graduation. ... he was motivation for getting through.*

Negative experiences, such as the stress and loss that accompany infertility and/or pregnancy loss, also had the potential to motivate participants to persist. One participant described her increased focus on the completion of her doctoral work after a difficult second trimester pregnancy loss:

> *I felt like…I can't let this stumbling block [miscarriage] stop me from moving on at least in my career. So to make up for the fact that I lost that opportunity [pregnancy] I felt like I really had to finish my dissertation immediately. And so I just put my nose to the grindstone…My dissertation chair was really supportive…she worked hard, I worked hard. But we made it happen superfast and I attribute that to having had the miscarriage, that it lit a fire.*

While this participant was motivated by the loss of her pregnancy, other participants found negative experiences with caregiver bias increased their motivation to persist in their doctoral programs. For these participants, their anger and frustration were motivating and they were determined to prove biased faculty wrong. One participant described her reaction, saying:

> *Once they told me that they didn't think I could do it [having a baby and doctoral work]… I turned around and told them they could go fuck themselves and raced through…I'm like, "Don't tell me what I can't do. I can do whatever I want to do."*

Another participant describes a similar reaction to an administrator's comment that most women students could not complete the program after having a child, saying, "I think that [doubt] instilled a little bit of fear in me, but also a little bit of drive in some way.… that's not going to be me, I'm going to make it through the program." While encounters with caregiver bias were frustrating, for some participants, they increased their drive to persist.

Awareness of needs and mobilization of resources. Participants (n=17) described continually shifting needs through their pregnancy and transition to parenting. They

credited their ability to persist in their doctoral programs during and after pregnancy to their ability to continually assess their needs as they progressed through the program. Once a need was identified, participants described the ability to access resources, creating an environment in which they were able to successfully meet doctoral program milestones. These needs were diverse and included both physical and logistical challenges, such as pregnancy symptoms, increased workload, and a greater need for financial resources.

For some participants, pregnancy complications such a nausea, high blood pressure, or preterm labor created new physical needs even before the baby arrived. In order to continue to progress through their programs, participants needed to continue their doctoral work while coping with these symptoms. One participant, who struggled with pregnancy-related nausea, described adapting her schedule:

> *I could study from home so if I had to throw up (because I threw up the first few months before I went on medication) I could just go to my bathroom and throw up and then just go back and do work.*

This participant was able to manage her physical needs and continue to meet the academic expectations by adjusting her work location.

Due to the inflexibility of teaching schedules, course schedules, or the timing of comprehensive exams, some participants found they needed childcare for infants still too young for daycare programs. These participants needed to mobilize their personal networks to create safe childcare options for their infant(s). They described using family, doctoral student peers, or available financial resources for infant childcare, which allowed them to continue successfully in their program. One participant said, "I taught that fall…he [new baby] was five weeks old at that point and he stayed with one of my friends when I had to teach classes, because he wasn't old enough for daycare yet." This participant used friends to address childcare needs, but another participant used financial support from her family. She described how she managed to write her comprehensive exams only a few weeks after her daughter was born, saying:

> *My baby gift from my grandmother was she paid for someone to come and hold the baby so I could work … She cooked us some meals and folded some laundry and just held the baby … [baby] was too little [for daycare].*

This participant was able to use mobilize her extended family's financial resources to pay for in-home childcare.

After a needs assessment, some participants identified a need for more time to complete doctoral work. These participants mobilized resources to create that time, by rearranging childcare and schedules, decreasing work hours, or relying on local or visiting family for support. For example, one participant described this process, saying:

> *So this is the first semester where I've been working full-time and trying to juggle school and as a result, I'm going down to part-time at work April 1st because it's just too much. I can't do it all. I need to finish this dissertation and having that extra time off from work will be helpful.*

These needs for extra time tended to fluctuate or change as participants progressed through the program, so flexibility and continued assessment was necessary in order to be able to continue to be successful in the program. This participant described these changing needs, saying:

> *I had set up my schedule so that I would have one day of childcare extra beyond my job, so that day that I had childcare, I would work on my dissertation. But the last year that didn't end up being enough. So my husband would take my son on the weekends both mornings and I would do work.*

Program milestones, comprehensive exams, data collection, or dissertation writing could change time demands significantly. Participants understood their ability to recognize and adjust to these changing needs as pivotal in terms of their ability to continue in their programs.

Some participants described changing financial needs with the birth of their child. As a result, some participants described taking non-academic jobs with higher salaries or access to benefits such as healthcare and maternity leave, which allowed them to remain in their doctoral programs while addressing their current financial needs. This participant described using non-academic skills in order to increase the family income without working more hours, saying:

> *The things that my colleagues were doing like being a research assistant and getting publications and getting paid thirteen dollars an hour…I opted…to take a job…because it paid double…I needed to do that…to do the things I needed to do as a parent.*

Sometimes, participants' most effective response to a thoughtful self-assessment of their needs was to change their own expectations. Some participants described realizing that they needed to change the pace of their progression through the program, as one participant described, "I think we all have to go[at a] pace that's right for us.*"* Sometimes changing these self-imposed expectations involved self-reflection on internal expectations, as this participant described:

> *The biggest challenge was recognizing that I was not going to be able to do any of those things a hundred percent…my expectations of myself had to shift, that it just wasn't reality that I was going to be able to do this big dissertation that I envisioned.*

Participants described having to regularly reflect on their needs if they wanted to be able to continue to successfully progress through their doctoral programs.

Luck

While many participants cited specific examples of their own internal resources, a majority (n=15) attributed some of their ability to persist to factors outside of their control; they had just gotten lucky. Participants felt lucky about pregnancy timing, fertility, physical health, and the presence of specific people as supports, such as faculty, mentors, or chairs.

Participants discussed the impact of pregnancy timing within an academic calendar, which could allow for a leave after a child's birth and the completion of program milestones. Some participants intentionally timed pregnancies for early summer babies, but many acknowledged that this type of control over pregnancy timing is not always possible and really due simply to good luck in terms of fertility and full-term pregnancies. Participants expressed gratitude for their good luck when their pregnancy was timed well, as this participant described, "It was lucky that I just happened to get pregnant in August because it coincided with the schedule for the school year so that I would be able to finish my classes." This participant recognized the role that her well-timed pregnancy made in her ability to complete that semester's coursework and avoid falling behind her peers.

The ability to become pregnant easily, without any or much medical intervention, was seen as helping students persist in their program. Participants recognized fertility was simply due to chance, versus something that was within their control, as this participant described, "My husband and I were very lucky and I was young, so we had statistically a much surer shot of getting pregnant quickly but that is not always the case." Participants who did use fertility treatments thought they were better able to continue in their program through that process when the interventions worked quickly. One participant described her experience as lucky, saying:

> The reason [getting pregnant] didn't really impact my functioning in the doctoral program is that we had a very fortunate and a not typical infertility experience… at no point did we try an intervention that wasn't successful…And our insurance paid for it so financially was not that stressful so for us…our infertility experience is not typical.

Participants understood fertility as due to random chance, but perceived easy conception as helpful in terms of success in the program, as they did not have to manage many medical appointments or cope with a significant financial burden due to multiple interventions.

Participants believed an uncomplicated pregnancy supported their ability to progress through their programs during pregnancy. For example, an easy pregnancy allowed participants to continue working productively, remain present and active on campus longer, focus on school work versus being distracted by anxiety or physical symptoms, and keep their pregnancy secret. They acknowledged that the presence or absence of pregnancy complications was out of their control. One participant remarked, "I was very lucky…I had a relatively easy pregnancy. I didn't have a lot of morning sickness…and I actually didn't share with my advisors or my mentors until I was five months." Another participant echoed this, saying, "I think I was lucky. My pregnancy was pretty uneventful. He was born a little bit early, but by and large, uneventful, and I really was able to work up until the end." An uncomplicated pregnancy allowed participants to be more productive, setting themselves up for an easy transition back to work after the birth of their baby. Participants were vocal in attributing their success to these factors (fertility, timing, health), while also acknowledging these factors were out of their control.

Participants perceived the availability of a supportive culture for mothers in their program as based entirely on luck. One participant described the administrators and faculty in her program, saying, "I think I lucked out. The program director for the PhD

program…My supervisors at my assistantship…And the faculty that I had in my immediate circle…were [all] really supportive." Some participants described themselves as lucky to have been assigned a certain dissertation chair who was supportive of their parenting journey, as this participant said, "I was lucky to have found him [advisor]." Participants perceived the creation of supportive networks within doctoral programs as outside of their control. These relationships were attributed to chance.

Discussion

Participants identified individual characteristics such as discipline, organization, and work ethic as integral to their ability to continue in their doctoral programs, reflecting some of the existing research on doctoral student persistence (Dickerson et al., 2014; Rockinson-Szapkiw et al., 2014; Spalding & Rockinson-Szapkiw, 2012). A high level of discipline and time management allowed women to create necessary work time for themselves. This is similar to Dickerson et al.'s (2014) findings, which highlight the importance of organization and time management skills for persistence. Research on persistence has identified internal motivation as integral to persistence (Spaulding & Rockinson-Szapkiw, 2012). While participants in this study agreed with this, they described their motivation for completion as changing in the process of pregnancy and early parenting. Some women found new reasons to be motivated to continue in their program, such as the desire to be a positive role model for their child. Others were motivated by anger and frustration and wanted to be successful to disprove the caregiver bias they encountered from faculty and administrators. The importance of motivation and determination was clearly reflected in the narrative data (Castelló et al., 2017; Grover, 2007; Rockinson-Szapkiw et al., 2014).

Spalding and Rockinson-Szapkiw (2012) found that the ability to reassess needs and make necessary structural changes was a critical component of persistence for doctoral students. The participants in this study described similar continual assessment of needs, and identified the importance of adjusting their schedule, study plan, and expectations of themselves to meet these changing needs. For participants in this study, in comparison to non-parenting doctoral students, these needs tended to focus on the intersection of school and child-related issues, such as maternity leave and childcare. Students' needs could change as their children entered a new developmental stage, such as becoming mobile or entering preschool, or as they entered a new stage in their program (e.g., data collection or dissertation writing). Participants often described accessing their social network to address some of these needs. Although much of the existing research does not explicitly look at the experiences of doctoral student mothers, studies have found that a strong social network is an important factor for doctoral program persistence (Adorno et al., 2015; McAlpine & Norton, 2006; Spaulding & Rockinson-Szapkiw, 2012).

The findings of this study suggest that many women have the internal resources and strong support network to manage pregnancy and parenting while continuing to successfully progress through a doctoral program. These characteristics have been identified as critical for persistence in doctoral programs for all students, not just women who are pregnant or parenting (McAlpine & Norton, 2006; Rockinson-Szapkiw et al., 2014; Spaulding & Rockinson-Szapkiw, 2012). Women who are pregnant and/or parenting without a strong support system, either socially or financially, may struggle to remain in a

doctoral program. Financial needs were often greater than before a child was born, due to the cost of childcare. Participants gave examples of relying on family members, especially parents and in-laws, for necessary childcare which mitigated these financial pressures. Women without financial resources such as a working spouse or opportunities to work outside of her doctoral program, had increased financial needs that might make doctoral education infeasible. Doctoral students can find their study timeline lengthened by life events, such as the birth of a child or a pregnancy loss (McAlpine & Norton, 2006; Spaulding & Rockinson-Szapkiw, 2012), but for women without sufficient financial resources or support network, these life events may have the potential to halt progression completely.

These findings demonstrate a unique narrative of doctoral program persistence for women with children. Research on attrition is primarily deficits-based, focusing on individual and departmental factors (Gardner, 2009b; Golde, 2005). Doctoral faculty tend to attribute attrition to individual student characteristics, highlighting the ways in which students are lacking the personality characteristics, motivation, or preparation necessary for doctoral level work (Gardner, 2009b; Lovitts, 2001). These findings suggest a more nuanced attribution of persistence. The narrative the participants shared is one of determination and perseverance—this narrative declares that it will be hard work, but many women have what it takes to successfully be both doctoral students and mothers. Women may find this persistence narrative more empowering than narratives about attrition, which tend to be more focused on deficits (Gardner, 2009b; Lovitts, 2001). While this is an inspiring narrative, academic culture often does not support open discussion of women parenting within academic institutions; instead, women can be penalized if they are perceived as less committed or less productive due to caregiving responsibilities (Drago et al., 2006). To avoid this caregiving bias, many women in academia choose to perpetuate the narrative that women can parent within academia without any impact on productivity or stress, instead of having transparent and open conversations about strategies for effectively managing family and academic responsibilities simultaneously (Drago et al., 2006). This cultural context may limit women's ability to openly share their own narrative about attributions of success.

In contrast, a second attribution narrative also emerged from these findings. In this narrative, women downplayed the difficult work they put into remaining in their doctoral programs. Instead, some women attributed part or all of their success to factors outside of their control, referring to it as "good luck". Good luck took many forms, including healthy, well-timed pregnancies, supportive advisors and programs, and family-friendly administrators. This attribution narrative may be harder for women to use to mobilize factors that facilitate persistence, as it suggests that at least some of their ability to continue in a doctoral program was due to factors they could not control, such as physical health or faculty and programmatic supportiveness of doctoral students with children. In light of continual silence in academia about the difficulty of managing parenting and work responsibilities for women (Drago et al., 2006; Young & Wright, 2001), this narrative of persistence based on good luck may have more traction as competing narratives of hard work and intense discipline may not be publicly shared.

While research on persistence is important, future research should also explore the experiences of women who left their doctoral programs during and after a pregnancy. It is critical to understand the reasons that women leave programs, differentiating between negative experiences, such as when students "drop out" because they felt they could not keep up or meet the expectations of the program, and positive experiences, such as when priorities or motivation changes and students leave the program because they felt this was a better choice for them and/or their families (Willis & Carmichael, 2011). Women in this study recognized the importance of reflecting on their own needs through their pregnancy and during the transition to parenthood, suggesting that for some women, leaving their doctoral program may not be a negative thing, but instead, a response to an assessment of their current needs and priorities (Golde, 2000, 2005; McAlpine & Norton, 2006). In the same vein, conceptualizing "success" post-graduation needs to be reconsidered, as choosing a less prestigious academic position or leaving academia altogether may be an intentional decision on the part of women who do not perceive academia as a workplace that fits their needs (Mason et al., 2013). Social workers, along with other health care professionals, have practice-focused career opportunities available to them, perhaps making this shift from an academic career trajectory easier than those in fields with fewer non-academic options. Anastas and Kuerbis (2009) reported that only 50-60% of social work doctoral graduates had obtained academic positions by graduation.

Limitations

As with all research, this research study has limitations. First, although research clearly demonstrates the fact that women of color tend to have different, more challenging experiences in graduate education (Brown & Amankawaa, 2007; Brunsma, Embrick, & Shin 2017), this sample was primarily white and therefore, the experiences of women of color were not included. In fact, participants in the study were similar in not just race, but also age and marital status. This excludes the voices of single mothers and those pursuing a doctorate who are younger. Though this study focused on women who experienced a pregnancy, there might be some key similarities or differences for women who pursue parenthood in other ways, such as a partner's pregnancy, surrogacy, or adoption and the narrative of persistence available to them. These questions were not explicitly explored in this study. While participants described many similar experiences, this research does not allow for differences by field to be determined. In fact, almost half of the participants were social workers, so these findings may more accurately represent the experiences and culture of social work doctoral programs than those in other fields. For example, attrition rates in mathematics and computer science fields tend to be much lower than in the social sciences (Bair & Haworth, 1999).

Implications

These findings can be used by doctoral programs interested in supporting pregnant and parenting women doctoral students. The student's relationship with their advisor or dissertation chair is often seen as a critical component of doctoral student persistence (McBain, 2019; Springer et al., 2009). McBain (2019) says, "A student's connection with his or her chair/advisor is arguably the most important relationship they will develop

through the course of their study. This relationship has a profound effect on whether the student successfully completes the doctoral degree" (p. 2). Chairs/advisors have a unique opportunity to support pregnant and parenting doctoral students. For some, this may require training in order to develop effective skills for supporting this group of students (Springer et al., 2009; Young, Vanwye, Shafer, Robertson, & Poore, 2019). Chairs/advisors can incorporate the factors identified by this study, including time management skills, reflection and assessment of needs, and mobilization of resources, and encourage students to engage in these practices. As with any professional skill, some students may need more resources or skill development in order to be successful and chairs/advisors should be knowledgeable about the on-campus resources available to support students (Springer et al., 2009). Chairs/advisors should consider the implicit messages within their guidance and advice. In addition, they should be aware of prevalent attribution narratives of persistence and attrition and adopt narratives which empower students and offer stories of hope and success, as attribution narratives impact students' beliefs about their own self-efficacy and outcomes (Lovitts, 2001). Mentors who are mothers can serve as role models. When role models decide to be transparent about the challenges experienced and the strategies used to navigate them, they send the message that students can balance both the role of student and parent. By breaking the silence about these challenges (Drago et al., 2006; Young & Wright, 2001), mentors can create a space for frank, useful conversations about barriers such as role conflict, caregiver bias, and work-life balance.

Conclusion

The topic of persistence within doctoral education has received little research attention, and no research has explored persistence for pregnant and parenting women doctoral students. This is particularly true in social work, where there is a dearth of research on the experiences of doctoral students (Anastas & Kuerbis, 2009). Social work doctoral programs should focus on supporting all students in their programs, including mothers, reflecting the social justice values of the profession. The attrition of social work doctorate student mothers from doctoral programs and from academic positions post-graduation decreases the diversity of BSW and MSW faculty, and adds to the problem of insufficient social work doctoral program graduates to fill open faculty positions (Kurzman, 2015). These findings provide a window into how some women doctoral students experience their own success, accessing internal resources, and also highlight their attributions of success. Schools of social work, and chairs/advisors of women doctoral students with children, can use these findings to support and guide pregnant and parenting students to successful completion of their doctoral programs.

References

Adorno, G., Cronley, C., & Smith, K. S. (2015). A different kind of animal: Liminal experiences of social work doctoral students. *Innovations in Education and Teaching International*, *52*(6), 632-641. doi: https://doi.org/10.1080/14703297.2013.833130

Anastas, J. W., & Kuerbis, A. N. (2009). Doctoral education in social work: What we know and what we need to know. *Social Work*, *54*(1), 71-81. doi: https://doi.org/10.1093/sw/54.1.71

Armenti, C. (2004). Women faculty seeking tenure and parenthood: Lessons from previous generations. *Cambridge Journal of Education, 34*(1), 65-83. doi: https://doi.org/10.1080/0305764042000183133

Bair, C. R., & Haworth, J. G. (1999). Doctoral student attrition and persistence: A meta-synthesis of research (ED437008). Retrieved from https://files.eric.ed.gov/fulltext/ED437008.pdf

Beer, C., & Lawson, C. (2017). The problem of student attrition in higher education: An alternative perspective. *Journal of Further and Higher Education*, *41*(6), 773-784. doi: https://doi.org/10.1080/0309877x.2016.1177171

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. doi: https://doi.org/10.1191/1478088706qp063oa

Brown, L., & Watson, P. (2010). Understanding the experiences of female doctoral students. *Journal of Further and Higher Education*, *34*(3), 385-404. doi: https://doi.org/10.1080/0309877x.2010.484056

Brown, R. L., & Amankawaa, A. A. (2007). College females as mothers: Balancing the roles of student and motherhood. *Association of Black Nursing Faculty Journal*, *Winter*, *18*(1), 25-29.

Brunsma, D. L., Embrick, D. G., & Shin, J. H. (2017). Graduate students of color: Race, racism, and mentoring in the white waters of academia. *Sociology of Race and Ethnicity*, *3*(1), 1-13. doi: https://doi.org/10.1177/2332649216681565

Carter, S., Blumenstein, M., & Cook, C. (2013). Different for women? The challenges of doctoral studies. *Teaching in Higher Education*, *18*(4), 339-351. doi: https://doi.org/10.1080/13562517.2012.719159

Castelló, M., Pardo, M., Sala-Bubaré, A., & Suñe-Soler, N. (2017). Why do students consider dropping out of doctoral degrees? Institutional and personal factors. *Higher Education*, *74*(6), 1053-1068. doi: https://doi.org/10.1007/s10734-016-0106-9

Cockrell, C. N., & Shelley, K. (2011). The relationship between academic support systems and intended persistence in doctoral education. *Journal of College Student Retention: Research, Theory & Practice*, *12*(4), 469-484. doi: https://doi.org/10.2190/cs.12.4.e

Cockrell, C. N., & Shelley, K. (2019). The relationship between academic support systems and intended persistence in doctoral education. *Journal of College Student Retention: Research, Theory, and Practice, 12*(4), 469-484. doi: https://doi.org/10.2190/cs.12.4.e

Council of Graduate Schools [CGS]. (2009). *Ph.D. completion and attrition: Analysis of baseline demographic data from the Ph.D. Completion Project.* Washington, DC: Author.

CGS. (2015). *Seven-year URM doctoral completion and attrition rates by academic-year groups and selected student characteristics, DIMAC project*. Retrieved from

https://cgsnet.org/seven-year-urm-doctoral-completion-and-attrition-rates-academic-year-groups-and-selected-student

Council on Social Work Education. (2018). 2017 statistics on social work education in the United States: Summary of the CSWE annual survey of social work programs. Retrieved from https://www.cswe.org/CMSPages/GetFile.aspx?guid=44f2c1de-65bc-41fb-be38-f05a5abae96d

Dickerson, S. H., Byers, V. T., Smith, R. N., Hwang, E., Angrove, K. E., Chandler, J. I., …Onwuegbuzie, A. J. (2014). Survival strategies: Doctoral students' perceptions of challenges and coping methods. *International Journal of Doctoral Studies, 9*(2014), 109-136. doi: https://doi.org/10.28945/2034

Drago, R., Colbeck, C. L., Stauffer, K. D., Pirretti, A., Burkum, K., Fazioli, J., Lazzaro, G., & Hasbasevich, T. (2006). The avoidance of bias against caregiving: The case of academic faculty. *American Behavioral Scientist, 19*(9), 1222-1247. doi: https://doi.org/10.1177/0002764206286387

Drago, R., Colbeck, C., Stauffer, K. D., Pirretti, A., Burkum, K., Fazioli, J., Lazarro, G., & Habasevich, T. (2005). Bias against caregiving. *Academe, 91*(5), 22-25. doi: https://doi.org/10.2307/40252829

Gardner, S. K. (2009a). Conceptualizing success in doctoral education: Perspectives of faculty in seven disciplines. *Review of Higher Education*, *32*(3), 383-406. doi: https://doi.org/10.1353/rhe.0.0075

Gardner, S. K. (2009b). Student and faculty attributions of attrition in high and low-competing doctoral programs in the United States. *Higher Education, 58*, 97-112. doi: https://doi.org/10.1007/s10734-008-9184-7

Gardner, S. K., & Holley, K. A. (2011). "Those invisible barriers are real": The progression of first-generation students through doctoral education. *Equity & Excellence in Education*, *44*(1), 77-92. doi: https://doi.org/10.1080/10665684.2011.529791

Golde, C. M. (2000). Should I stay or should I go? Student descriptions of the doctoral attrition process. *Review of Higher Education*, *23*(2), 199-227. doi: https://doi.org/10.1353/rhe.2000.0004

Golde, C. M. (2005). The role of the department and discipline in doctoral student attrition: Lessons from four departments. *Journal of Higher Education, 76*(6), 669-700. doi: https://doi.org/10.1353/jhe.2005.0039

Golde, C. M., & Dore, T. M. (2001). At cross purposes: What the experiences of today's doctoral students reveal about doctoral education. Retrieved from https://files.eric.ed.gov/fulltext/ED450628.pdf

Grover, V. (2007). Successfully navigating the stages of doctoral study. *International Journal of Doctoral Studies, 2*, 9-21. doi: https://doi.org/10.28945/54

Kulp, A. M. (2016). The effects of parenthood during graduate school on PhD recipients' paths to the professoriate: A focus on motherhood. *New Directions for Higher Education, 2016*(176), 81-95. doi: https://doi.org/10.1002/he.20211

Kulp, A. M. (2019). Parenting on the path to the professoriate: A focus on graduate student mothers. *Research in Higher Education*, published online. doi: https://doi.org/10.1007/s11162-019-09561-z

Kurzman, P. A. (2015). The evolution of social work doctoral education. *Journal of Teaching in Social Work*, *35*(1-2), 1-13. doi: https://doi.org/10.1080/08841233.2015.1007832

Lott, J., Gardner, S. K., & Powers, D. A. (2009). Doctoral student attrition in the STEM fields: An exploration of event history analysis. *Journal of College Student Retention, 11*, 247-266. doi: https://doi.org/10.2190/cs.11.2.e

Lovitts, B. E. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. Lanham, UK: Rowman & Littlefield. doi: https://doi.org/10.1017/s0018268000025759

Martinez, E., Ordu, C., Della Sala, M. R., & McFarlane, A. (2013). Striving to obtain a school-work-life balance: The full-time doctoral student. *International Journal of Doctoral Studies*, *8*, 39-59. doi: https://doi.org/10.28945/1765

Mason, M. A., Goulden, M., & Frasch, K. (2009). Why graduate students reject the fast track. *Academe*, *95*(1), 11-16.

Mason, M. A., Wolfinger, N. H., & Goulden, M. (2013). *Do babies matter? Gender and family in the ivory tower.* New Brunswick, NJ: Rutgers University Press. doi: https://doi.org/10.1111/jacc.12316

McAlpine, L., & Norton, J. (2006). Reframing our approach to doctoral programs: An integrative framework for action and research. *Higher Education Research & Development*, *25*(1), 3-17. doi: https://doi.org/10.1080/07294360500453012

McBain, T. (2019). Resiliency and doctoral student attrition in counselor education. *Journal of Behavioural Science and Psychology, 2*(2), 1-9. Retrieved from https://pdfs.semanticscholar.org/f418/f1418fc5167ce8aae5fba87a41f5cc92c803.pdf

Mirick, R. G., & Wladkowski, S. P. (2018). Pregnancy, motherhood, and academic career goals: Doctoral students' perspectives. *Affilia*, *33*(2), 253-269. doi: https://doi.org/10.1177/0886109917753835

National Science Foundation. (2017). *Doctoral recipients from US universities.* Retrieved from https://www.nsf.gov/statistics/2017/nsf17306/static/report/nsf17306.pdf

Rockinson-Szapkiw, A. J., Spaulding, L. S., & Bade, B. (2014). Completion of educational doctorates: How universities can foster persistence. *International Journal of Doctoral Studies*, *9*, 293-308. doi: https://doi.org/10.28945/2072

Smith, R. L., Maroney, K., Nelson, K. W., Abel, A. L., & Abel, H. S. (2006). Doctoral programs: Changing high rates of attrition. *Humanistic Counseling, Education, and Development, 45*, 17-31. doi: https://doi.org/10.1002/j.2161-1939.2006.tb00002.x

Sowell, R., Allum, J., & Okahana, H. (2015). *Doctoral initiative on minority attrition and completion*. Washington, DC: Council of Graduate Schools. Retrieved from

https://cgsnet.org/ckfinder/userfiles/files/Doctoral_Initiative_on_Minority_Attrition_and_Completion_2015.pdf

Spaulding, L. S., & Rockinson-Szapkiw, A. J. (2012). Hearing their voices: Factors doctoral candidates attribute to their persistence. *International Journal of Doctoral Studies*, *7*(1), 199-219. doi: https://doi.org/10.28945/1589

Springer, K. W., Parker, B. K., Leviten-Reid, C. (2009). Making space for graduate student parents: Practice and politics. *Journal of Family Issues*, *30*(4), 435-457. doi: https://doi.org/10.1177/0192513x08329293

Tower, L. E., & Latimer, M. (2016). Cumulative disadvantage: Effects of early career childcare issues on faculty research travel. *Affilia, 31*(3), 317-330. doi: https://doi.org/10.1177/0886109915622527

Wao, H. O., & Onwuegbuzie, A. J. (2011). A mixed research investigation of factors related to time to the doctorate in education. *International Journal of Doctoral Studies*, *6*, 115-134. doi: https://doi.org/10.28945/1505

Washburn-Moses, L. (2008). Satisfaction among current doctoral students in special education. *Remedial and Special Education, 29*(5), 259-268. doi: https://doi.org/10.1177/0741932507312014

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*(4), 548-573. doi: https://doi.org/10.1037/0033-295X.92.4.548

Willis, B., & Carmichael, K. D. (2011). The lived experience of late-stage doctoral student attrition in counselor education. *Qualitative Report*, *16*(1), 192-207. Retrieved from https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1046&context=tqr

Wladkowski, S. P., & Mirick, R. G. (2019). Mentorship in doctoral education for pregnant and newly parenting doctoral students. *Journal of Women and Gender in Higher Education, 12*(3), 299-318. doi: https://doi.org/10.1080/26379112.2019.1654394

Wladkowski, S. P., & Mirick, R. G. (2020). Supports and recommendations for pregnant and newly parenting doctoral students in health professions. *Journal of Social Work Education, 56*(2), 312-326. doi: https://doi.org/10.1080/10437797.2019.1656580

Young, D. S., & Wright, E. M. (2001). Mothers making tenure. *Journal of Social Work Education*, *37*(3), 555-568. doi: https://doi.org/10.1080/10437797.2001.10779074

Young, S. N., Vanwye, W. R., Schafer, M. A., Robertson, T. A., & Poore, A. V. (2019). Factors affecting PhD student success. *International Journal of Exercise Science*, *12*(1), 34-45. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6355122/

Author note: Address correspondence to: Rebecca G. Mirick, LICSW, PhD, Assistant Professor, Salem State University School of Social Work, Salem, MA 01970; Email: rmirick@salemstate.edu