Fostering the resilience of graduate students

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Abstract

This paper originates from research carried out by an international team of university professors interested in protective factors promoting the resilience of graduate students, in particular regarding the student-supervisor relationship. Following a literature review on the subject, the paper presents the resilience factors affecting the student and those relating to the supervisor. The main factors that appear to promote the resilience of graduate students are individual, family and environmental protective factors (as gender, temperament, cultural background, personal history of schooling, motivation, family support, being childless, wealth of the social support network, means offered by the supervisor and the university). For the supervisor, the main protective factors appear to be individual (experience, style and role assumed towards the student, support the student's empowerment as his/her schooling progresses). The reciprocal adjustment throughout the studies between the supervisor and the student appears essential to promote their tuning for the resilience and the success in the graduate studies.

Keywords: graduate studies; resilience; protective factors; supervisor; student.

1. Introduction

We talk more about dropping out of high school students than about the situation of university graduate students. However, in all countries, the dropout rates of master's students and, even more so, of doctoral students are found to be very high (British Council & DAAD, 2018; Conseil supérieur de l'éducation, 2010; Lacroix et Maheu, 2017). Perseverance in graduate studies is therefore a challenge and a major issue.

This paper has its origins in an international research (Grant AUF-FRQ) examining the protective factors that promote the resilience of graduate students, in particular regarding the student-supervisor relationship. The research team developed a two-step research protocol (student questionnaire, then interviews and Study Line test with students and supervisors). The questionnaire was culturally validated by 9 international experts. Due to the pandemic at COVID-19, the project has been delayed and the handing over of the questionnaire will begin at the end of May 2021.

Following a literature review on the subject, we will present the risk and protective factors affecting the student, then those relating to the supervisor. Factors pertaining to the student-supervisor relationship conclude this paper with the presentation of a summary of the factors that appear to be the most influential for the success of graduate studies.

2. Method

A literature review was carried out on February 21, 2021 in the PsycINFO database with the keywords student-supervisor, master or doctoral degree or PhD. The results of this bibliographic search yielded 36 references, 5 of which were not of interest for our paper. These 31 references were added to an article bank built over the past years which now includes a total of 170 articles. Indeed, since the beginning of the research, all team members, contributors to the project, are collecting articles on this topic, including the grey literature. The experience of the faculty members of the international team made it possible to generate this reflection article on the protective factors favoring the success of graduate students, and more especially, those of the student-supervisor relationship. We have categorized the factors according to whether they relate to the student himself, the supervisor, or both. The analysis of these factors is subdivided into individual, family and environmental factors.

3. Resilience factors relating to graduate student

3.1. Individual factors

Among the individual factors identified, some are immutable, such as the student's gender (Ducker, 2011), race or ethnicity (Moore, 2014). Note that women usually finish their studies

faster than men (Ducker, 2011). On the other hand, coming from a minority or a marginalized group (McClure, 2018) or not being from the same ethnic group and the same culture as his supervisor (Moore, 2014) is a risk factor. Certain skills were identified as constituting protective factors: the ability to manage one's time (Albertyne et al., 2008), to organize oneself (Denholm, & Evans, 2006), self-efficacy (Anderson, 2011), autonomy (Devos et al., 2015), critical thinking (Lee, 2007), capacity for autonomous regulation (Nottingham, 2017), use of adapted coping strategies (Sandoval, 2018) and ability to seek help and support when needed (Baness King, 2011). These different personal characteristics constitute very good basic skills for undertaking graduate studies. Wao et al. (2011) also mentioned the great importance of motivation and it is clear that studying must be a continuation of our goals in order to maintain our motivation (Sandoval, 2018).

Indeed, undertaking graduate studies constitutes a commitment and an investment of time and energy so great that it is essential to have reasons to do so as well as to really want to, otherwise the risk of discouraging and giving up is great (Sandoval, 2018). As students constitute a population vulnerable to problems of exhaustion, physical illness and mental health disorder (Haag, 2018) which constitute high risk of dropping out of studies (Leggat, & Martinez, 2010), it is essential to take care of yourself and maintain a good balance in one's life (Jones, 2013). Obviously, the fact of having had a good previous academic preparation (Wao et al., 2011) and of having already acquired good research skills (during the 1st university cycle for example) and of always seeking to improve them (Ndayambaje, 2018) constitutes a protective factor for the success of master's and doctoral studies (Duke, & Denicolo, 2017). The student who chooses a research topic that is at the same time accessible, feasible and interesting (Bégin, 2018) and who believes in his skills (Denholm, & Evans, 2006) has beautiful protective factors in this. Being more advanced in your student career would generate better self-esteem (Nottingham, 2017), a protective factor recognized as essential. Having a positive perception of your supervisor and his relationship with him would increase the chance of completing his program (Jones, 2013). Finally, the student's satisfaction not only with his supervision, but also with his studies and his program constitutes an important protective factor (Gemme, & Gingras, 2006).

3.2. Family factors

At the level of the student's family risk factors, the main ones are related to family obligations and responsibilities (Parker, 2018). Risk factors are constituted by life events such as having children (Arus, & Vierstraete, 2018), more specifically a newborn baby (Trudgett, 2014), having a separation or a divorce (Wao et al., 2011), etc. In addition, have unmet financial needs, not having strong and supportive family relationships (Terry, & Ghosh, 2015), as well as living at a distance from his family for his studies (Ndayambaje, 2018) are risk factors. These factors further influence the graduation rate of women, this being explained by the fact that still today it is mainly women who take care of the children, manage the household

chores and the medical appointments of the children. The fact of not being confronted with these life events constitutes protective factors: being childless, not going through a separation, enjoying a warm and supportive family, living close to one's family (who can provide support, concrete help and good meals), for example.

3.3. Environmental factors

The first environmental protective factors relate to fellow students who can provide important support (Terry, & Ghosh, 2015), through maintaining good relationships and socializing with them (Jones, 2013) or being part of a slightly more peer support and mentoring group (Denholm, & Evans, 2006). Support from the faculty (other professors than the supervisor; Terry, & Ghosh, 2015), institutional support (information, services and resources provided like the scholarships offered; Albertyn et al., 2008; Aris, & Vierstraerte, 2018) and the quality of the campus climate (Veilleux et al., 2012) are also important. All supportive and mentoring relationships are beneficial, especially if they are numerous and diverse. Some characteristics of the program may (or not) have a supportive role, such as the chosen study program (Lacroix, & Maheu, 2017), whether the program is distance-based or not (Orellana et al., 2016), the format and structure of the program (Wao et al., 2011). Group supervision, compared to traditional individual supervision would have beneficial effects. Integration into the scientific community is recommended, it makes the university course at the graduate level less stressful and more pleasant (Denholm, & Evans, 2006).

4. Resilience factors relating to supervisor

4.1. Individual factors

Individual factors refer to the characteristics and ways in which the supervisor acts in favor of the success of his students. Personal qualities such as being honest, professional, helpful and respectful (Fairbanks, 2016) and a personality as compatible as possible with that of his student (Sambrook et al., 2008). The personal experience of a university student (how he has been supervised; especially important for novice supervisors: Vereijken et al., 2018) plays a role in the way of supervising (Denis, & Lison, 2016). As most supervisors learn on the job how to coach well (experiential learning), skill level is often related to the supervisor's number of years of experience (Denis, & Lison, 2016). A competent supervisor is a supervisor who has good professional knowledge and expertise in his field (Halse, & Malfroy, 2010), who knows how to adapt to his students (ability to adopt different styles of supervision depending on the context and needs of his students; Fernando, & Hulse-Killacky, 2015), and especially who learns from his/her mistakes, can adjust if necessary and questions himself, practice reflective thinking. The style of the supervisor (goal-oriented, very supervising or controlling, disengaged in front of the student) as well as the roles he employs

have a great influence on the success of the supervised student (Gruzdev et al., 2019; Mhunpiew, 2013). While it is necessary for the supervisor to adapt his style according to the need of his student, he must support his empowerment as his/her schooling progresses (Devos et al., 2015; Fernando, & Huls-Killacky, 2005). The supervisor must offer a minimum of availability and meetings (Bégin, 2018), to ensure rigorous follow-up by meeting, hearing from and taking note of his/her student's progress on a regular basis (Albertyn et al., 2008) and provide adequate and timely feedback (Ndayambaje, 2018). As for the role adopted, the studies mention that is the best protective factor for the student's success is that of mentor (Gadbois, & Grahm, 2009) who supports, supervises, guides and facilitates the student's career development (Kogler Hill et al., 1989). In this sense, the support of the supervisor both in terms of concrete help provided (scientific development, access to resources, opportunities to participate) and psychological support (motivation, encouragement) allows a professionalization of the student (Fullick, 2013; Gremmo, & Gérard, 2008; Pearson, & Kayrooz, 2004). Providing an organization and a supportive structure, with realistic expectations towards his/her student, the supervisor's interest in the research project, as well as his level of commitment to his/her student and their common project are also protective factors. It is important that the supervisor is sensitive to the culture of his student and adapts to it (Glynn, & Berryman, 2015; Pumaccahua, 2017). A supervisor who practices an approach focused on the successes, strengths and dreams of his students (Goyette, & Dubreuil, 2019) and who turns their vulnerabilities into strengths (Rademaker et al., 2016) increases the likelihood of his students being successful, just like when he genuinely cares about his students (Gray, & Costa, 2019; Hodz, 2007).

4.2. Family factors

We did not find any study that addressed the family factors of supervisors. However, we know that any family factor (birth, illness, separation, bereavement, for example) preventing the supervisor from being fully available to his students will have a negative impact on the progress of their studies.

4.3. Environmental factors

The main factors coming from the supervisor's environment are the comments and feedback from the students (which allow them to improve themselves; Maihard et al., 2009), the support of peers (fellow professors; Lee, 2007), the fact of being trained, guided by documents (Fairbanks, 2016) or being supervised by a mentor (Emilsson, & Johnsson, 2007).

5. Conclusion

A positive relationship (tuning) between the supervisor and his student is essential to the success of the student's studies (Barnes, 2009-2010). It is important that this relationship is

based on mutual trust, that both parties develop strategies to increase and maintain it (Robertson, 2017). This trust must go hand in hand with mutual respect (Halse, & Malfroy, 2010), open, effective and positive communication (Hodza, 2007). If there is a problem or discomfort, both parties should be comfortable talking about it constructively. It is essential that expectations and operating methods are clearly expressed and explained at the outset (Masek, 2017). The fact of planning the research stages in advance, establishing the modes of operation, and the reciprocal expectations makes it possible to avoid later tensions and conflicts. Both the student and the supervisor must be able to adapt to the personal and professional circumstances of the other and maintain a firm and reciprocal commitment to collaborate in obtaining a graduate degree (master or PhD) otherwise the risk of abandonment increases (Halse, & Malfroy, 2010). Gratitude is also emphasized as being essential between the student and the supervisor (Howells et al., 2017). Finally, it is necessary that their relationship be more collaborative than a power one (Hemer, 2012) and that their level of proximity and affiliation be high (de Kleijn et al., 2012).

The main factors that appear to promote the resilience of graduate students are individual, family and environmental protective factors (gender, temperament, cultural background, personal history of schooling, motivation, family support, wealth of the social support network, means offered by the supervisor and the university). For the supervisor, the main protective factors are individual (experience, style and role assumed towards the student, support the student's empowerment as his/her schooling progresses). The reciprocal adjustment throughout the studies between the supervisor and the student appears essential to promote their tuning for the resilience and the success in the graduate studies. Our reflection on published research results, as well as the results of ongoing research, will help us to propose measures to be implemented to promote better student-supervisor tuning, and thus facilitate graduate success. Among the spin-offs of the project, we anticipate a "toolbox" with advice and training content, considering also cultural differences, to offer to new supervisors.

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