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Styles de soutien des superviseurs de recherche : relations avec les attitudes et le bien-être des étudiants gradués

Par

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sous la direction de Robert Haccoun

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Résumé

Le soutien du superviseur de recherche est un facteur clé dans le succès d'un diplôme d'études graduées (Howells, Stafford, Guijt, & Breadmore, 2017). La qualité de la relation entre l'étudiant et son superviseur est liée à l'aboutissement du programme en question, mais également à la satisfaction de l'étudiant durant son parcours. (Schlosser, Knox, Moskovitz, & Hill, 2003). Cependant, l'opérationnalisation du construit du soutien étant variée, il devient difficile de prescrire les comportements que les superviseurs devraient adopter et qui seraient les plus profitables pour les universitaires. Dans cette ligne de pensée, cette étude vise à distinguer la relation entre différents types de soutien perçu et les attitudes envers la recherche, ainsi qu'à la santé psychologique de étudiants. 203 étudiants de cycles supérieurs ont été recrutés pour compléter un questionnaire en ligne traitant des comportements soutenants qu'ils perçoivent de leurs superviseurs et des impacts de ces derniers sur leur cursus. Alors que les hypothèses prédisaient que différents styles de soutien (affectif et instrumental) auraient des liens différentiels avec des résultantes chez les étudiants (satisfaction, engagement, bien-être), les résultats démontrent que le soutien instrumental explique une plus grande partie de la variance de l'ensemble de ces variables. Les résultats montrent également que le non-soutien prenant la forme de micromanagement, explique la majeure partie de la variance des états indésirables tels l'affectivité négative et la perception de débordement liée au travail, parmi les dimensions de soutien. Le micromanagement est lié faiblement aux autres dimensions de soutien, suggérant que ce dernier exerce une influence négative malgré l'expression de comportements soutenants envers les étudiants. Les implications théoriques et pratiques de ces résultats sont discutées.

Mots-clés: Soutien du superviseur, étudiants gradués, satisfaction, engagement, bien-être

Abstract

The research supervisor's support is key to the success in higher-level studies (Howells et al., 2017). The quality of the relationship between a student and his/her advisor is often claimed to foster student satisfaction and to encourage degree completion (Schlosser, Knox, Moskovitz, & Hill, 2003). However, support remains a construct that is operationalized in many different ways. It is thus difficult to prescribe specific behaviours supervisors should adopt to optimize support offered to students. This study examines how different supportive or unsupportive behaviours relate to graduate students' wellbeing and attitudes towards research. 203 graduate students were recruited to complete an online survey measuring their perceptions of the support they received from their supervisor and their own wellbeing and attitudes towards their studies. Whereas the hypotheses predicted that different demonstrations of support (affective and instrumental) would be linked differentially to student outcomes (satisfaction, engagement, wellbeing, etc.), results show that instrumental support explains a larger part of the variance of the outcomes. However, it is micromanagement that best explains undesirable states such as negative affect and work related strains. Supportive behaviours (affective and instrumental) and micromanagement are statistically distinct, suggesting the latter may exert a harmful influence despite other demonstrations of support towards students. Theoretical and practical implications are discussed.

Keywords: Supervisor support, graduate students, satisfaction, engagement, wellbeing

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Liste des abréviations

EJS: Enabling Job Support

IUSMB: Inventory of Unsupportive and Supportive Managerial Behaviours

MM: Micromanagement

PANAS: Positive and Negative Affect Schedule

PES: Personal and Esteem support

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Introduction

Le milieu universitaire soumet des exigences rigoureuses aux étudiants en termes de performance, en plus d'être un lieu de développement et de compétition. Il est démontré que les étudiants universitaires vivent plus de stress que la moyenne de la population (Stallman, 2010). Pour ceux dont le niveau de stress est très élevé, cela peut entraîner une baisse de performance et même de l'épuisement (Hall Murff, 2005). Alors que la charge de travail et le manque de sommeil sont souvent nommés comme facteurs anxiogènes chez des étudiants de premier cycle (Ross, Niebling, & Heckert, 1999), d'autres causes de stress entrent en jeu pour ceux qui décident de poursuivre leur parcours aux cycles supérieurs. Notamment, il leur est parfois difficile de s'intégrer à leur milieu de travail puisqu'une grande partie des tâches sont individuelles (Janta, Lugosi, & Brown, 2014). C'est d'autant plus le cas pour les étudiants en sciences sociales, où le mode de travail collaboratif en laboratoire est moins fréquent que dans les facultés de sciences de la nature. Dans ce contexte, il est primordial pour le milieu académique de fournir des ressources favorisant la réussite et la bonne santé psychologique des étudiants gradués.

Un des éléments les plus importants pour le succès et la satisfaction des étudiants d'un programme de cycles supérieurs est la relation qu'ils entretiennent avec leur superviseur de projet (Clark, Harden, & Johnson, 2000). Dans cette relation, le soutien fourni par le superviseur peut avoir un impact considérable sur leurs étudiants. Le soutien, défini par Cobb (1976) comme toute information menant un individu à se sentir apprécié et faisant partie d'un réseau social incluant des obligations mutuelles, a été démontré comme réduisant le stress perçu dans un milieu de travail (Viswesvaran, Sanchez, & Fisher, 1999). De plus, le soutien d'un superviseur est lié à une plus grande satisfaction et à une meilleure productivité (Baruch-

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Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002). Ainsi, connaître le niveau de soutien

perçu par les étudiants est important pour prédire leur bon fonctionnement dans le milieu

académique.

Cependant, plusieurs dimensions de soutien existent et pourraient avoir un effet différent

sur les attitudes des étudiants. Certains auteurs suggèrent que de mesurer le soutien de manière

multidimensionnelle permet de tirer des conclusions plus poussées que de le mesurer par une

seule dimension. Notamment, Wills & Shinar (2000) avancent que de bien connaître les

relations entre des types de soutien et leurs effets est utile pour connaître quels aspects du

soutien sont à améliorer lors d'une intervention ou d'une formation visant à optimiser le

soutien. Une des conceptions dimensionnelles du soutien fréquemment employée est celle de

Cohen & Wills (1985). Ces derniers répertorient quatre styles de soutien : Le soutien

instrumental (l'aide tangible) Le soutien informationnel (les conseils et paroles aidantes), le

soutien émotionnel (faire en sorte que l'autre se sente apprécié et qu'on prend soin de lui) et le

soutien relationnel (la présence d'un réseau social). Bien que les termes utilisés pour décrire

les dimensions du soutien varient, cette catégorisation est fréquente. Par contre, les dimensions

les plus récurrentes sont les dimensions émotionnelle et instrumentale (Cutrona & Russell,

1990).

Différencier les effets soutien instrumental du soutien émotionnel pourrait donc permettre

de faire des prédictions différentielles sur les attitudes des étudiants. Peu d'études se sont

penchées sur l'effet unique de différents styles de soutien envers des étudiants. Ces prédictions

seraient utiles pour comprendre comment s'articulent les relations entre les directeurs de

recherche et les étudiants, ainsi que pour déterminer quels comportements soutenants ou non

soutenants sont les plus liés aux attitudes des étudiants. Il a notamment été démontré que le

soutien instrumental d'un mentor était utile pour prédire la productivité d'un étudiant gradué,

alors que l'aide relationnelle, incluant le counseling et la démonstration d'empathie, prédisait

mieux la satisfaction (Tenenbaum, Crosby, & Gliner, 2001). Parallèlement, les milieux qui

suscitent l'autonomie et le sentiment de contrôle sur les tâches à effectuer sont plus propices à

susciter l'engagement (Bakker, Demerouti, & Xanthopoulou, 2012). Ainsi, un comportement

du superviseur ayant une approche plus collaborative, en étant disponible sans être contrôlant

ou limitant pour l'étudiant, favorise un sentiment d'engagement plus élevé chez leurs

étudiants.

Toutefois, selon Rooney et Gottlieb (2007), les instruments existant mesurant le soutien

sont trop généraux pour mesurer des comportements précis à partir desquels une intervention

visant à améliorer la relation superviseur-étudiant peut être conçue. De plus, ces auteurs

mettent de l'avant une critique fondamentale quant aux questionnaires existants : ceux-ci ne

mesurent pas les comportements non soutenants. Les comportements non soutenants ne

correspondent pas à l'absence de soutien et seraient donc impossibles à mesurer à travers les

instruments couramment utilisés. De plus, ils constitueraient un aspect important de la

perception que des subordonnés ont de leur superviseur. En effet, les comportements non

soutenants peuvent discréditer la personne les subissant et pourraient significativement

diminuer la perception de soutien qu'ils ont de leur superviseur, malgré la présence de d'autres

comportements soutenants (Zhu, Woo, Porter, & Brzezinski, 2013). De plus, tel que Rooney,

Gottlieb et Newbty-Clark (2009) le prédisent, les comportements non soutenants sont un

meilleur prédicteur du sentiment de débordement que peuvent vivre des personnes en milieu

de travail. Ces raisons ont poussé Rooney et Gottlieb à créer un nouvel instrument de soutien

perçu du superviseur, en se basant sur un grand éventail de comportements des supérieurs

perçus comme soutenants ou non (Rooney, 2004). Le questionnaire en résultant comprend trois dimensions. La première comprend au le soutien affectif, la deuxième correspond au soutien instrumental et la troisième dimension mesure la perception de comportements non soutenants de la part du supérieur.

Ainsi, le questionnaire de Rooney et Gottlieb (2007) peut être utile pour évaluer les liens entre différents types de soutien perçu et les attitudes des étudiants gradués. Le but de cette étude est de mesurer comment le la perception de soutien émotionnel, instrumental et de non-soutien est lié à la satisfaction, à l'engagement, et au bien-être des étudiants. Également, le lien entre les dimensions de soutien et des attitudes négatives, soit le sentiment de débordement à l'université, l'affectivité négative et les intentions de quitter est étudié. Par la suite, des propositions sont mises de l'avant selon les styles de soutien les plus bénéfiques ou les plus dommageables pour les étudiants.

Article 1

Support style of the research supervisor: Links with graduate student attitudes and wellbeing

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Abstract

The research supervisor's support is key to the success in higher-level studies (Howells et al., 2017). The quality of the relationship between a student and his/her advisor is often claimed to foster student satisfaction and to encourage degree completion (Schlosser, Knox, Moskovitz, & Hill, 2003). However, support remains a construct that is operationalized in many different ways. It is thus difficult to prescribe specific behaviours supervisors should adopt to optimize support offered to students. This study examines how different supportive or unsupportive behaviours relate to graduate students' wellbeing and attitudes towards research. 203 graduate students were recruited to complete an online survey measuring their perceptions of the support they received from their supervisor and their own wellbeing and attitudes towards their studies. Whereas the hypotheses predicted that different demonstrations of support (affective and instrumental) would be linked differentially to student outcomes (satisfaction, engagement, wellbeing, etc.), results show that instrumental support explains a larger part of the variance of the outcomes. However, it is micromanagement that best explains undesirable states such as negative affect and work related strains. Supportive behaviours (affective and instrumental) and micromanagement are statistically distinct, suggesting the latter may exert a harmful influence despite other demonstrations of support towards students. Theoretical and practical implications are discussed.

Keywords: Supervisor support, graduate students, satisfaction, engagement, wellbeing

Academic strains and social support

In the present occidental context, university students are known to have higher stress levels than the general population, high stress levels also being linked to reduced academic performance (Stallman, 2010). Loneliness leading to distress is another problem affecting some graduates, many reporting long hours spent working alone and difficulties connecting with fellow researchers despite efforts to socialize (Janta et al., 2014). Individual factors like resilience and coping style are useful in dealing with the stress levels students experience in their work environment (Dolbier, Smith, & Steinhardt, 2007). The environment plays a key role in work related strains. Social support is often put forth as an important buffer for work related stress. Notably, a meta-analysis by Viswesvaran, Sanchez, & Fisher (1999) shows that social support reduces perceived stress and strains.

Social support has been the subject of numerous studies in the past forty years. Cobb (1976) defines support as any information leading one to feel liked, respected and being part of a social network having multiple obligations. Over time, the way support was theorised has been refined. Cohen, Gottlieb, & Underwood (2000) describe how different schools of thought moved the theorisation of support forward. At first, support was described as having an effect on stress through social networks. This theorisation of support is derived from sociology, following demonstrations that people who are less socially integrated present greater risk of psychological distress, and even physical illness. Social integration is optimal when the subject is engaged in a diversified range of activities and relationships, but the number of relations is not a significant factor. The cognitivist tradition, emerging in the 1970s, goes a bit further in the explanation of the mechanics of social support. This approach insists on the fact that the extent and diversity of one's social network are only as meaningful as the person

allows them to be. In fact, emphasis is put on the perceptions of the support one receives instead of other more objective indicators of support. Perceived support is viewed in this perspective as a buffer against stress, notably by fostering self-regulation and the conservation of self-esteem. It is at this time that support scales were vastly used in social and industrial psychology research, identifying the impact of perceived support on workplace attitudes. Finally, the third perspective that emerged emanated from a need to classify support depending on its nature, and to identify the interactional contexts in which support unfolds. In this paradigm, researchers focus on questions such as what behaviours are perceived as effectively supportive in a given situation or for a given individual.

One conceptualization of workplace support that has received considerable attention is the model developed by Cohen and Wills (1985). Their theory includes four types of support: affective or esteem support (offering a feeling of being accepted and cared for); informational support (advice or guidance); instrumental support (material assistance); and social companionship (having people to do things with; a social network). Although different typologies have been used to classify types of support, all include similar categories. (Cutrona & Russell, 1990). Of the four parameters mentioned, two – emotional and instrumental support – are dominant, though some prefer reorganising them into a "tangible" category and an "intangible" one.

Social support measurement

With the evolution of theories about social support, scales measuring this construct have evolved accordingly. Lakey & Cohen (2000) stress that an appropriate measure should be chosen depending on the context. These authors suggest that the paradigm used and outcome variables should guide the researcher's choice of measure. If support needs to be assessed

following a particular stressful event in the subject's life, for instance to determine how supportive actions incite coping, measures directly linking the supportive responses to that situation or interactions following the event are preferred to global evaluations of perceived support. The study of social psychology at the end of the 20th century was marked by a great influence of social cognitive approaches, such as Beck's (1979) cognitive therapy. Beck theorised that a negative perception of relationships can have a direct impact on how the self is perceived, leading to negative affect. In this case, support is not associated with particular behaviours or dimensions, but a generalized perception of the support that is given. In fact, how a person perceives another's actions is not necessarily representative of the intentions of the other person. However, these perceptions compose the lens through which people see life, and therefore have a direct impact on their attitudes and behaviours. This is why Lakey and Cohen (2000) suggest the use of a general perceived support scale in this case. Many studies in social psychology opt for investigating the perception of the person receiving support. However, support can originate from different sources and can take different forms, making it a complex concept to operationalize.

In the present study, the main concern was to differentiate the perceptions graduate students have of their studies according to the supervision they receive from their advisor. This article raises the question: are certain supportive styles more predictive of graduate student attitudes and wellbeing than others? This is a first step in determining how advisors can improve students' satisfaction, engagement, and eventually their wellbeing. Traditional social support scales generally concentrate on social sources such as friends and family. As graduate students are in a work context where friends and family are not significantly relevant, a scale coming from the organisational context was preferred. In fact, work based measures

can isolate support directly coming from the workplace of students. Many studies pinpoint that support from a work supervisor is essential for positive outcomes. Findings by Kovach Clark, Murdoch & Koetting (2008), for instance, demonstrate that advisor support is a negative predictor of burnout in counselling psychology students. Importantly, support coming from friends, family or other students did not have an effect when general stress levels and role conflict were taken into account. As this suggests, support from the research supervisor, just like support shown by a work supervisor, can show strong links with a student's attitudes and wellbeing. Measures of support developed in the organisational context should thus find relevance in the study of support in the academic environment.

The Inventory of Unsupportive and Supportive Managerial Behaviours

Rooney & Gottlieb (2007) have criticised existing support questionnaires on a number of aspects. First, they claim that measures of support at work were too generic. Specific supportive supervisory behaviours –such as smiling, giving clear instructions or answering questions in a timely manner – should be measured instead. Secondly, and more importantly, Rooney and Gottlieb highlight a crucial lack in currently used measures: they do not include questions that focus on the display of unsupportive behaviours. Unsupportive behaviours, however, are not equivalent to the absence of support, and they constitute an important aspect of perceived support. These reasons pushed Rooney to create an alternative perceived support questionnaire, the Inventory of Supportive and Unsupportive Managerial Behaviours (IUSMB). They created this measure using a vast range of managerial critical incidents perceived as supportive or unsupportive (Rooney, 2004). It consists of three dimensions. The first, Personal and Esteem Support, encompasses items linked to positive feedback and emotional support. The second, Enabling Job Support, comprises verbal encouragements and

concrete help, and can be seen as an instrumental support dimension. Finally, the third dimension measures Micromanagement, namely unsupportive behaviours where the supervisor controls their subordinate's actions and often focuses on negative details. The IUSMB shows that it predicts 37% of the variance of work satisfaction, 45% of turnover intentions, and 15% of job strains, through other variables (job autonomy and perceived manager sentiment) (Rooney, Gottlieb, & Newby-Clark, 2009)

Usefulness of support dimensions in predicting academic outcomes

Differentiating the effects of different types of support could allow more accurate predictions and better understanding of graduate students' attitudes by isolating the unique effect of each dimension on outcome variables. Additionally, Wills & Shinar (2000) suggest that multidimensional measures of support can be useful as they can help pinpoint aspects of support that should be improved in an intervention aimed for instance at improving support skills.

Support dimensions and satisfaction. Wilcox, Winn, & Fyvie-Gauld (2005), in a study conducted with undergraduates, found that support given by mentors and colleagues is perceived mostly as instrumental and informational, whereas support from friends is seen as mostly emotional. The need to receive both types of support is nevertheless significant to these students. Hence, the source of support is important, because it also indicates type of support that is received and perceived. For graduate students, however, the relationship with research supervisors is generally more significant than for undergraduates, because thesis projects and the reduced number of students in classes allows for more frequent encounters. Tenenbaum, Crosby, & Gliner (2001), show that instrumental support from a mentor is useful in predicting students' productivity, whereas relational aid, including counselling and demonstrations of

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empathy, predicted satisfaction with the advisor better. Based on this information, it appears that satisfaction could be best predicted by an affective demonstration of support. Other data supports this supposition. In fact, Bloom, Propst Cuevas, Hall, & Evans (2007) identified the characteristics that were put forward in nominations for outstanding graduate advisors, and the most named quality was that supervisors that stand out show that they care about their students and their success. Moreover, a review by Cutrona & Russell (1990) shows that emotional support is without a doubt the supportive style that helps lower work stress the most. Since academic stress is negatively related to satisfaction (Weinstein & Laverghetta, 2009), affective support should buffer stress, resulting in a higher reported satisfaction from students.

Hypothesis 1. Affective support will be more predictive of academic satisfaction than other dimensions of support (instrumental support and micromanagement).

Support dimensions and engagement. Kuh & Hu (2001, p.3) define engagement at university as "the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes". It is thus an indicator of how involved students are in their academic success. Krause & Coates (2008) proposed some levels of engagement that are particularly relevant in the graduate school context. Intellectual engagement, namely being stimulated by learning and by the subjects studied, is primordial in graduate school, as it reveals how immersed and curious graduates are about their field of expertise. Moreover, beyond-class engagement, or the way a student takes part in the life surrounding -but not directly related to- the curriculum, demonstrates the extent to which students feel a sense of belonging in their university's environment. In this perspective, authors like London (1993) showed that providing adequate and continuous feedback on performance and assisting the student in the achievement of their goals are notable actions that

foster career identity. Career identity is conceptually related to engagement in the way that it involves immersion into work and motivation in this domain. Moreover, people evolving in environments promoting autonomy and a sense of control over tasks to be completed are more inclined to be engaged in their work (Bakker et al., 2012). Consequently, a supervisor behaving in a collaborative way by being available without controlling or limiting the student's actions, can encourage higher engagement in their supervisees. In this case, affective support could help students feel more accepted, but would not provide them with any direction on the actions they should take at work. Through this lens, a questionnaire measuring collaboration and support to autonomy from supervisors could allow a better prediction of intellectual and beyond-class engagement. In the IUSMB, the instrumental dimension is composed of items pointing in this direction, like "works with me on things using a collaborative style" or "When a problem comes up and I need help, he or she provides me with suggestions but leaves the final decision to me" (Rooney & Gottlieb, 2007). It is hence hypothesised that this subscale should be better able to predict engagement.

Hypothesis 2. Instrumental support will be more predictive of intellectual and beyond-class engagement rather than other dimensions of support (emotional support and micromanagement).

The role of unsupportive behaviours. In Rooney's scale, unsupportive behaviours, as perceived by supervisees, fell under one dimension that was given the label of micromanagement. White (2010) defines micromanagement as "the control of an enterprise in every particular and to the smallest detail, with the effect of obstructing progress and neglecting broader, higher-level policy issues" (p. 71). For instance, a research supervisor could second-guess every decision made by their student and impose their point of view,

therefore keeping control of the research project led by the student. The case of micromanagement has been described as an organisational disease and has been proved to reduce productivity and satisfaction in the working environment (White, 2010). Gilbreath (2006) also suggests that supervisors who micromanage increase stress and strains in supervisees, making them feel like they cannot handle the tasks they are required to perform. This type of supervisory style, often demeaning for the person enduring it, could also lower the perception that support is received, even if the supervisor behaves supportively in other ways. Measuring unsupportive behaviours therefore seems like an effective way to refine information obtained from perceived support scales, as it is usually not included in studies on support.

Hypothesis 3. Students reporting more micromanaging behaviours from their advisor will perceive less emotional and instrumental support.

Hypothesis 4. Micromanaging behaviours from an advisor will be linked to negative perceptions of the program, role overload and turnover intentions in students.

Impact of supportive and unsupportive dimensions on general wellbeing. If advisor support is linked to students' attitudes, it is also probable that it will be reflected in their reported wellbeing. According to the Self-Determination Theory (Ryan & Deci, 2000), three basic needs are stated that help positive growth in a person and foster wellbeing: the need for competence; the need for relatedness; and the need for autonomy. Support that can make a person feel like they are accepted (affective support) and that their work and professional development is important and appreciated for what it is worth (informational/instrumental support) should have a positive impact on wellbeing by helping fulfill these basic needs. For that matter, Zhu et al. (2013) demonstrate that perceived supervisor support has a strong

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relationship with subjective wellbeing when considering these two types of support. Conversely, unsupportive micromanaging behaviours, that can be directly diminishing a person's feeling of competence and autonomy (Rooney et al., 2009), should have an adverse effect on wellbeing.

> *Hypothesis 5.* Affective support and instrumental support will be positively related to wellbeing in students, whereas micromanagement will be negatively related to graduate wellbeing. All three dimensions will be significant predictors of wellbeing.

Method

Participants and procedure

All the participants are graduate students, at a master's (69%), doctoral (30%) or post-doctoral (1%) level. They were contacted through *Prolific,* an online questionnaire platform. A pre-screening on the platform allowed selection of only potential participants who were graduate students working with a research supervisor, and having a good understanding of the English language. Participants fulfilling these criteria and who had subscribed to the platform for free had access to the questionnaire and could decide whether to complete it or not. People who completed the questionnaire received a minimal compensation of .85£ for the full completion of the scale. A total of 203 participants corresponded to all required criteria and filled in the questionnaire online. Completion of the scale took about ten minutes. 56% of the sample was male, 43% female and 1% did not identify as these genders. 67% reported working with a male supervisor. The mean age of participants was 26 years old (SD = 5.9). 43% were studying in the United Kingdom or Ireland and 37% in North America, others mostly studying in other European countries. 21% identified as part of a cultural or visible minority in their country. About two thirds (64%) of the subjects started working with their

supervisor in the year before answering the questionnaire, whereas 11% had been working with their advisor for at least three years. The participants came from various research fields; social sciences (25%), engineering (15%), arts and humanities (12%), health sciences (11%) and natural and physical sciences (11%).

Measures

All the scales used in this study are presented in the Appendix. Some of the items have been modified to fit the academic context, such as replacing "work" with "research" or "university". All changes are indicated where appropriate.

Inventory of Unsupportive and Supportive Managerial Behaviours. The Inventory of Unsupportive and Supportive Managerial Behaviours (Rooney & Gottlieb, 2007) was used to measure research advisors' supportive style. Its three subscales comprise 27 items measuring the frequency of supportive and unsupportive behaviours from a supervisor on a five-point Likert scale (1 = almost never / 5 = always). The reported internal consistencies of the scales are all satisfactory

General Affect. The Positive and Negative Affect Schedule (PANAS) by Watson, Clark, & Tellegen (1988) was used. This scale evaluates the strength of one's affects during the preceding weeks on a five-point Likert scale (1 = very slightly or not at all / 5 = extremely).

Wellbeing. To measure students' wellbeing, a short version of the Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS), consisting of seven items on a five-point Likert scale (1 = none of the time / 5 = all of the time), has been used (Tennant et al., 2007).

Student Engagement. To assess research program engagement, two scales from Krause & Coates (2008), used to measure undergraduates' engagement were adapted to the

postgraduate context. The Intellectual Engagement and Beyond-class Engagement scales were used, both consisting of four items. They consisted of five-point Likert scales (1 = strongly disagree / 5 = strongly disagree).

Academic satisfaction. To measure academic satisfaction, questions were adapted from Douglas, Douglas, & Barnes' items (2006) and the scale used by Rooney (2004), totalling 5 satisfaction items, measured with a five-point Likert scale (1 = strongly disagree / 5 = strongly disagree).

Academic role overload (strains). This construct was measured with three items adapted from Rooney's validation study (2004), measured with a five-point Likert scale (1 = strongly disagree / 5 = strongly disagree).

Turnover intentions. This scale consisted of seven items measured with a five-point Likert scale (1 = strongly disagree / 5 = strongly disagree), adapted partly from Roodt's Turnover Intentions Scale (2004) including items measuring intentions of quitting the program as well as changing thesis topics and advisors.

Results

Preliminary analyses

Principal components analysis. As the Inventory of Unsupportive and Supportive Managerial Behaviours was slightly modified to refer to the academic context instead of the organisational one, it was validated with a principal components analysis with varimax rotation to verify the scale's dimensionality. The factor analysis produced a four-factor solution, as shown in Table 1. However, simple structure was not achieved. Items that loaded strongly (> .40) on a factor and that loaded weakly on other factors (< .40) were included in each new factor. The first factor, accounting for 37.60% of the common variance, included

most of the items from the Personal and Esteem Support dimension of the IUSMB. This factor was labelled *affective support*. The second factor, accounting for 10.95% of the common variance, included most of the items from the Enabling Job Support dimension of Rooney's instrument. This factor was labelled *instrumental support*. The third factor, accounting for 5.94% of the common variance, included all of the six items from the original Micromanagement dimension. The factor kept the original label, *micromanagement*. Finally, the fourth factor, which didn't correspond to a dimension of the IUSMB, accounted for 4.25% of the common variance. This factor was deleted, however, as only one item met the inclusion criteria. Factor scores were then computed using the regression tool in SPSS for the three dimensions retained. These factor scores were then used as independent variables in the regression analyses on outcome variables. This procedure minimises collinearity, making it possible to interpret the regression weights with dimensions that are likely closely related.

[Insert Table 1 about here]

Use of factor scores. To confirm that the factor scores computed are comparable to Rooney's original dimensions (Personal and Esteem Support, Enabling Job Support and Micromanagement), correlations were established. Table 2 shows that factor scores are very closely related to the original dimensions. The first dimension, Personal and Esteem support, was strongly correlated to the affective support factor (r_{xy} = .91; $p < 0{,}01$). The second, Enabling Job Support, was strongly linked to the instrumental support factor (r_{xy} = .80; $p < 0{,}01$). Finally, the third factor, Micromanagement, was strongly linked to the new micromanagement factor (r_{xy} = .98; $p < 0{,}01$). Since the factor scores are very strongly correlated to their respective dimension and are not correlated to one another (r_{xy} = .00; *n.s.*),

they can be used in multiple regression analyses that will show the independent contribution of each dimension on the outcome variable.

[Insert Table 2 about here]

Main analyses

Table 3 shows the correlations between all variables used in this study. Cronbach's alphas were all acceptable, ranging between $\alpha = .72$ and $\alpha = .91$.

[Insert Table 3 about here]

Test of the hypotheses. Hypothesis 1 stated that affective support would be more predictive of academic satisfaction than other dimensions of support. To test this prediction, a multiple regression was used to predict graduate satisfaction with the three factor scores of the Inventory of Unsupportive and Supportive Managerial Behaviours. If affective support is the most predictive of satisfaction, its β will be higher than the β for instrumental support and micromanagement. A significant regression predicting satisfaction with the three support dimensions was found ($F_{(3,181)} = 29.10, 7; p < 0,001$), with an R^2 of .33. Instrumental support is most predictive of students' satisfaction ($\beta = .43; p < 0,001$), but affective support ($\beta = .31; p < 0,001$) and micromanagement ($\beta = -.18; p < 0,001$) are also significant predictors. The results of the multiple regressions are shown in Table 4. This result does not support the hypothesis.

Hypothesis 2 predicted that instrumental would be more predictive of intellectual and beyond-class engagement. A multiple regression was also used to test this prediction, using the dimensions of support to predict graduate engagement. If instrumental support is the most predictive of engagement, its β will be higher than the β for affective support and micromanagement. A significant regression predicting intellectual engagement with the three

support dimensions was found ($F_{(3,181)}$ = 6.73; $p < 0,001$), with an R^2 of .10. Instrumental

support is most predictive of intellectual engagement (β = .24; $p < 0,01$), but affective support

is also a significant predictor (β = .17; $p < 0,05$). Micromanagement was not a predictor of

intellectual engagement (β = -.10; *n.s.*). A significant regression predicting beyond-class

engagement with the three support dimensions was also found ($F_{(3,181)}$ = 7.08; $p < 0,001$), with

an R^2 of .11. Affective support is most predictive of beyond-class engagement (β = .26; $p <$

0,001), but instrumental support (β = .17; $p < 0,05$) is also a significant predictor (β = .18; $p <$

0,05). Micromanagement was not predicting beyond-class engagement (β = .01; *n.s.*). These

results only partly support the hypothesis, instrumental support being the strongest predictor of

intellectual engagement, but not of beyond-class engagement.

Hypothesis 3 predicted negative links between Micromanagement and the other

dimensions of support. Correlations show that this is the case (see table 2), both with Personal

and Esteem Support (r_{xy} = -.20; $p < 0,01$) and Enabling Job Support (r_{xy} = -.19; $p < 0,01$). This

supports the hypothesis.

Hypothesis 4 stated that Micromanagement would be related to negative attitudinal

outcomes. Medium to large correlations between Micromanagement and negative emotions

(r_{xy} = .25; $p < 0,01$), role strains (r_{xy} = .40; $p < 0,01$), and turnover intentions (r_{xy} = .41; $p <$

0,01) were found. These result support the hypothesis. However, instead of micromanagement

(β = .36; $p < 0,001$), instrumental support (β = -.41; $p < 0,001$) was the most important factor

negatively predicting turnover intentions (see table 4). Both factors however seem to be

strongly related to graduates' desire to either quit their current position with their current

supervisor, their thesis subject or their program.

Hypothesis 5 predicted positive relationships between instrumental and affective

support and reported wellbeing, as well as a negative relationship between micromanagement and wellbeing, with all three dimensions being significant predictors of the outcome variable. A multiple regression was used to test this prediction, using the dimensions of support to predict graduate engagement. The relationship between emotional support and wellbeing was positive ($\beta = .29$; $p < 0,001$), as was the correlation between instrumental support and wellbeing ($\beta = .33$; $p < 0,001$). The relationship between micromanagement and wellbeing was non significant ($\beta = .08$; $n.s.$), although the overall regression was significant ($F_{(3,181)} = 15.20$; $p < 0,001$), with an R^2 of .20 . This only partially confirms this hypothesis.

[Insert Table 4 about here]

Improving attitudes by improving support. A question this article raises is whether providing better support can help improve student attitudes. The extent to which attitudes can be improved by augmenting perceived supervisor support can be estimated with the regression line, comparing attitudinal scores with mean levels of support, and when support is one standard deviation over the mean (one SD under in the case of micromanagement). For instance, comparing satisfaction with mean support scores and results one SD over the mean level show that affective support increased satisfaction by 5.2% instrumental support by 8.7%, and micromanagement by 3%. This means that reported satisfaction could increase by roughly 17% if an intervention allowed advisors to increase levels of support by the equivalent of one SD. Similar results can be found for turnover intentions, where a difference of one SD from the mean support scores creates a variation of 3.4% for affective support, 6.4% for instrumental support, and 5.4% for micromanagement. This means turnover intentions could be reduced by a bit more than 15% solely by changing support demonstrations from the supervisor.

Discussion

In the academic context, it is known that the relationship between a student and their advisor is primordial for graduate's success (Grant & Graham, 1999), but the relative impact of supportive styles on attitudinal outcomes, particularly the contribution of counter supportive behaviours, demanded to be clarified. The purpose of this study was therefore to identify how affective and instrumental supports, as well as micromanagement, relate to students' positive and negative attitudes towards their degree.

The results show that affective and instrumental supports are strongly related. In practice, this implies that supervisors who demonstrate friendly behaviours and take interest in their students' life also tend to provide a structuring environment. Moreover, theses two support dimensions were both predictive of academic outcomes, suggesting they are both helpful to students. However, different types of supportive or unsupportive behaviours were more or less predictive depending on the outcome variable. Instrumental support is the best predictor of academic satisfaction, which is contrary to what was hypothesised. Results by Zhao, Golde, & McCormick (2007) point in this direction, as they found structuring and instrumental advising to explain the greater part of satisfaction in students. It thus seems that although affective support is important for students, providing tangible aid is essential. As a matter of fact, instrumental support was also the best predictor of intellectual engagement.

Nevertheless, affective support was the strongest predictor of beyond-class engagement. This may be because emotional support makes students feel included and appreciated, and that their contribution isn't only valued in terms of work. Emotional support is indeed known to help create a sense of belonging towards individuals providing it (i.e. Skaalvik & Skaalvik, 2011). If students feel like they belong in their research group based on

the way their advisor treats them, they should thus be more inclined to get involved in social and academic activities with members of this group.

Micromanaging behaviours are not strongly linked to positive support behaviours, suggesting that a supervisor who demonstrates otherwise supportive behaviours could engage in micromanaging actions, and vice-versa. Micromanagement helps to explain students' dissatisfaction towards their program as well as more detrimental attitudes. It is the strongest predictor of strains and negative affect between all the support dimensions assessed. A supervisor should thus be aware that even if they are generally supportive, showing unconstructive criticism and focusing on negative aspects without mentioning the positive points can be harmful. However, lack of instrumental support predicts turnover intentions better than unsupportive behaviours. This is consistent with some explanations of why graduates quit. In fact, Lovitts (1996) states that students, when entering graduate school, are propelled to a status in which they depend on faculty members, including their advisor, to clarify their role. If clear expectations are not given, students may feel a sense of inadequacy in their position, eventually leading them to quit. Lovitts mentions that students who quit their program often felt inadequate, because they think they should have known about the information that was not given to them. This data, once again, suggests that instrumental support is primordial for student success.

An interesting finding was the absence of influence of micromanagement on wellbeing. A possible explanation for this is that factors outside of the supervisor-supervisee relationship, like a fulfilling social and personal life have a strong protective impact on wellbeing, whereas work-related strains are more directly dependent on unsupportive advisor behaviours. It is also possible that people who experience micromanagement experience negative affect, but still

consider their psychological wellbeing to be generally positive. The fact that micromanagement is related positively to negative affect, but is not related to other variables with a positive valence (positive affect, wellbeing) could also be, for instance, the symptom of a priming effect that incites some participants to answer to most negative measures in a similar way. It is possible that common method biases influenced the results, creating a psychological proximity between the support sources, or prompting a response pattern in students. Podsakoff, MacKenzie, Lee, & Podsakoff (2003) identify positive and negative wording as a source of bias, mentioning that the relationship between two variables can be inflated solely by the fact that they are both worded positively or negatively. More measures should be taken in further studies to reduce this probable source of bias. For example, scales could include both negatively and positively worded items.

Practical implications

In a training and betterment perspective, the present findings show that establishing guidelines for supervisors to enhance support and reduce micromanagement can improve satisfaction and engagement among students. Training programs for supervisors would be relevant if they can significantly promote positive outcomes for students.

It is certain that individual preferences play a role in graduates' appreciation of the support their advisor provides. Grant & Graham (1999) suggest that a favourable working relationship depends on the needs and working style of both the graduate student and the advisor. Some students wish to work autonomously on their research, whereas others require either or both emotional and academic (instrumental) support (Deuchar, 2008). Hence, it is important for the supervisor to discuss their student's working style in order to try and provide the type of support that is most appropriate for the students' needs. If compatibility is not

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found, the relationship can become problematic. As Deuchar (2008) shows, students who demand a high level of support can feel neglected and distressed if a supervisor has a hands-off approach and focuses on autonomy. Conversely, it can be hypothesised that students who work well by themselves and know how to direct their research would feel stifled by excessive guidance and structure. This means that advisors should be able to provide support, but also to try to align their behaviours with the student's preferences.

With this information in mind, specific supportive behaviours can be learned, but a training program directed at research advisors should also allow them to be adaptive. In a meta-analysis, Keith & Frese (2008) showed that error-management training was effective when the tasks that need to be learned are adaptive. Essentially, adaptive tasks are not directly transferable from the training context, and the trainees must learn to readjust their behaviours depending on the situation faced on the job (Ivancic & Hesketh, 2000). Error-management training is a form of learning that encourages trainees to make errors in order to learn from them before getting back to the work setting (Keith & Frese, 2008). This type of training could be beneficial to help supervisors become more aware of when they micromanage, and use more useful supportive behaviours in their interactions with students. In the particular case of micromanagement, other measures can be proposed at the faculty level to help reduce controlling behaviours. Notably, clearly defining that the role of research advisor is exempt from micromanagement and promoting a working culture where mistakes are tolerated can be helpful (White, 2010).

Limitations

Some limitations can be put forth in the present study. Primarily, the main scale used for data collection was adapted from the organisational context to the academic one, which

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means some aspects of support specific to the academic context may have been overlooked. Indeed, the academic context has particularities that are rarely present in usual work environments. For instance, students are not always paid for academic work, and if they are, the funds do not necessarily come from the university itself. Moreover, a graduate degree is often a step towards a job and thus is not a final outcome as many jobs can be. In this context, further validation would be necessary.

Recognisably, the correlational design of this study cannot allow inferences on the causality of the collected data. For instance, it is possible that students' lack of engagement and demonstrations of satisfaction are causing their advisor to engage in less supportive behaviours. On this subject, having the advisor's point of view on their students' behaviours and on their own perception of the support they provide would enrich the conclusions that can be drawn from this study.

Suggestions for further research

An interesting research avenue would be to determine if academics' perception of their advisor's support changes over time, and how support has an impact on thesis completion time and graduation rates. In fact, one's attitudes towards research and their supervisor are bound to evolve over time. In fact, graduates' expectations may adjust according to the amount of support they actually receive from their supervisor, and consider this as the norm. People who are at the end of their course would also be less likely to want to change subject or supervisor, although they still may have negative perceptions of their research or of the amount of support they receive from their advisor. A longitudinal design would be interesting on this subject, measuring the changing expectations of both students and supervisors.

Other supportive resources in the academic context can also have a considerable

impact on students. Improving peer support could in fact be quite beneficial in reducing academic loneliness and stress. Janta et al. (2014) report that students coming from the social sciences field declare feeling more lonely than academics in the natural sciences fields, because they are more likely to work on an individual project instead of being in a research lab where collaboration is encouraged. These authors also report that international graduates may experience more loneliness at university, generally having greater difficulties than their peers fitting in with their research group. This goes to show that if universities want to have a complete support system, support from colleagues should also be emphasized. An interesting research avenue would be to explore the most beneficial peer support methods that can be used in academic settings to help students feel more at ease.

 It must also be kept in mind that various elements have an influence on the outcome of a graduate program. Cultural differences, such as the preference for a more directive supervising style in some Asian cultures (Evans & Stevenson, 2010), could, minimise the influence of support for autonomy and possibly mitigate the negative effect of micromanagement. It would thus be valuable to determine whether the results of the present study are universally pertinent.

Conclusion

Dissecting support into three dimensions revealed that improving each supportive or unsupportive style from research advisors impacted graduates' attitudes to varying extents. Results show that instrumental support is the best predictor of satisfaction and intellectual engagement, as well as wellbeing, whereas affective support can predict if the student will get involved in the social life of their program. Micromanagement, for its part, is detrimental and is related to higher perceived strains and negative affect in students. Consequently, measures

can be taken train advisors to express a certain type of support, depending on the outcome

variable that needs to be improved on the supervisee's side.

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Table 1: Inventory of Unsupportive and Supportive Managerial Behaviours: Items and factor loading from the principal components analysis

	Factor loading			
	1	2	3	4
Thanks me for things I do.	,778			
When I am experiencing difficulties, he or she sympathizes with me.	,737			
Shows interest in what's going on in my life outside of university.	,735			
Smiles/Appears happy to see me.	,713			
Asks me how I'm doing and means it.	,697			
Praises my work in front of others.	,674			
Gives me positive feedback when deserved.	,662	,464		
Goes to bat for me when I need it.	,641			
Encourages me to take on work that will help me to develop professionally.	,623	,478		
Explains the reasoning behind decisions that affect me.	,521	,492		
Works with me on things using a collaborative style.	,508	,447		
Grants time off work when I need it.	,449			,423
When a problem comes up and I need help, he or she provides me with suggestions but leaves the final decision to me.	,432			
Gives clear instructions.		,784		
Provides me with clear expectations of my responsibilities.		,762		
Ensures I have everything I need to get my work done efficiently.		,724		
Makes himself or herself easily accessible to me.		,692		
Communicates with me in an open and direct manner.		,680		
Answers questions I ask in a timely manner.		,652		
Keeps me informed about things going on in the program.		,614		
When I make decisions or perform tasks, he or she second guesses them.			,737	
Gets visibly upset when I don't do things correctly.			,735	
Limits my participation in meetings.			,703	
Tells me that he or she would have handled university-related tasks differently.			,677	
Overrides decisions I make.			,663	
When reviewing my work, focuses more on negative things than positive things.			,607	
Allows me to decide my work schedule as much as possible.				,809

Note : Extraction method : varimax rotation with Kaiser normalisation ; only factor loadings >.40 are presented

Table 2: Descriptive statistics and correlation matrix between IUSMB initial dimensions and factorial scores

Variable	M	SD	1	2	3	4	5
1. Personal and Esteem Support[a]	3.28	.90					
2. Enabling Job Support[a]	3.63	.77	.67**				
3. Micromanagement[a]	2.03	.71	-.19**	-.24**			
4. Affective Support[b]	0.00	1.00	**.91****	.50**	-.08		
5. Instrumental Support[b]	0.00	1.00	.37**	**.80****	-.06	.00	
6. Micromanagement[b]	0.00	1.00	-06	-.11	**.98****	.00	.00

[a] Original factors of the IUSMB
[b] Factor scores
$N = 187$
**$p < .01$

Table 3: Descriptive statistics and correlation matrix of variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Affective support	3.24	.88	(0.89)										
2. Instrumental support	3.65	.85	.65**	(0.88)									
3. Micromanagement	2.03	.71	-.20**	-.19**	(.78)								
4. Satisfaction	3.86	.88	.45**	.55**	-.23**	(.88)							
5. Intellectual Engagement	4.04	.83	.29*	.36**	-.18*	.62**	(.86)						
6. Beyond Class Engagement	3.49	.96	.29**	.31**	-.02	.51**	.21**	(.80)					
7. PANAS (positive)	32.80	7.31	.39**	.48**	.06	.51**	.51**	.40**	(.90)				
8. PANAS (negative)	20.38	7.45	-.08	-.16*	.25**	-.28**	-.19**	-.15*	-.27**	(.89)			
9. Strain	2.49	.90	-.36**	-.38**	.40**	-.39**	-.26**	-.09	-.24**	.27**	(0.72)		
10. Turnover intentions	1.84	.77	-.41**	-.52**	.41**	-.67**	-.48**	-.30**	-.37**	.34**	.44**	(.82)	
11. Wellbeing	22.27	4.09	.37**	.42**	.03	.52**	.39**	.36**	.69**	-.47**	-.33**	-.42**	(.88)

Note: PANAS = Positive and Negative Affect Scale. Internal consistencies are presented on the diagonal. The mean score for each dimension of the IUSMB (affective support, instrumental support and micromanagement) are presented in this table instead of the regression scores, to show internal consistencies and correlations between dimensions.
$N = 203$
*p < .05; ** p <.01

Table 4: Multiple regression analyses for perceived supervisor support as a predictor of students' attitudes

Predictors	Standardised beta weights by outcome variable (β)						
	Satisfaction	Intellectual engagement	Beyond-class Engagement	Strain	Turnover intentions	Negative affect	Wellbeing
Affective support	.31***	.17*	.26***	-.27***	-.21***	.02	.29***
Instrumental support	.43***	.24**	.18*	-.25***	-.41***	-.16*	.33***
Micromanagement	-.18***	-.10	.01	.37***	.36***	.23**	.08
R^2	.33***	.10***	.11***	.28***	-.35***	.08**	.20***

N = 187
p <.05; **p* <.01 ; ***p* <.001

Appendix

List of scales and items used for the present study

1. Inventory of Unsupportive and Supportive Managerial Behaviours (Rooney et al., 2009)

1. When I am experiencing difficulties, he or she sympathizes with me. (PES)
2. Smiles/Appears happy to see me. (PES)
3. Overrides decisions I make. (MM)
4. Gives me positive feedback when deserved. (PES)
5. Encourages me to take on work that will help me to develop professionally. (PES)
6. Thanks me for things I do. (PES)
7. Goes to bat for me at work when I need it. (PES)
8. Keeps me informed about things going on in the program.* (EJS)
9. Communicates with me in an open and direct manner. (EJS)
10. When reviewing my work, focuses more on negative things than positive things. (MM)

11. Asks me how I'm doing and means it. (PES)
12. Explains the reasoning behind decisions that affect me. (EJS)
13. Makes himself or herself easily accessible to me. (EJS)
14. Grants time off work when I need it. (EJS)
15. Tells me that he or she would have handled university-related tasks differently.*(MM)
16. Provides me with clear expectations of my work responsibilities. (EJS)
17. Praises my work in front of others. (PES)
18. Answers questions I ask in a timely manner. (EJS)
19. Ensures I have everything I need to get my work done efficiently. (EJS)
20. Allows me to decide my work schedule as much as possible. (EJS)
21. When a problem comes up and I need help, he or she provides me with suggestions but leaves the final decision to me. (EJS)
22. Works with me on things using a collaborative style. (EJS)
23. When I make decisions or perform tasks, he or she second guesses them. (MM)
24. Gives clear instructions. (EJS)
25. Shows interest in what's going on in my life outside of university.* (PES)
26. Limits my participation in meetings. (MM)
27. Gets visibly upset when I don't do things correctly. (MM)

2. Attitudes towards research and academic life

Beyond-class Engagement Scale (BES) (Krause & Coates, 2008)

I feel I belong to my research group *
I tend to mix with other students in my graduate program *
I have made at least one or two close friends in my program *
I am actively involved in my program's extra-curricular activities*
Intellectual Engagement Scale (IES) (Krause & Coates, 2008)
I enjoy the intellectual challenge of subjects I am researching *
I get a lot of satisfaction from research*
I am finding my course intellectually stimulating

I am usually motivated to work on my research project*

Satisfaction at university (Douglas et al., 2006; Rooney, 2004)

I am satisfied with my research or thesis project *

My program's environment makes me feel confortable*

If I had to decide all over again whether to enter my actual degree, I would enter*

I would recommend this program to a friend *

I am satisfied with my graduate program in general*

Turnover intentions (Roodt, 2004; Rooney, 2004)

I often think about quitting my university program*

I would change my thesis subject if I could*

I wish I were working with a different supervisor*

My current graduate program is not addressing my important personal needs.*

I intend to search for a position with another supervisor.*

I am not thinking of quitting my current program.*

I am planning on changing my thesis subject.*

Role overload (Rooney, 2004)

My supervisor gives me too much work to do everything well

The amount of work my supervisor asks me to do is fair

I never seem to have enough time to get everything done

Note: Items marked with a * were adapted to match the graduate context. Original items are found in cited sources.

3. PANAS list of affects (Watson et al., 1988)

Interested	Irritable
Distressed	Alert
Excited	Ashamed
Upset	Inspired
Strong	Nervous
Guilty	Determined
Scared	Attentive
Hostile	Jittery
Enthusiastic	Active
Proud	Afraid

4. Short Warwick-Edinburgh Mental Wellbeing Scale (Tennant et al., 2007)

1. I've been feeling optimistic about the future.
2. I've been feeling useful.
3. I've been feeling relaxed.
4. I've been dealing with problems well.
5. I've been thinking clearly.
6. I've been feeling close to other people.
7. I've been able to make up my own mind about things.

Conclusion

La documentation sur le soutien révèle que cette variable influe grandement sur les comportements au travail, notamment la performance (i.e. Rhoades & Eisenberger, 2002). Dans le milieu académique, il est effectivement connu que le soutien du superviseur de recherche est primordial pour le succès des étudiants gradués (Grant & Graham, 1990). Cependant, les conceptualisations variées du soutien ne permettaient pas de déterminer nettement quels styles de soutien, particulièrement les comportements non soutenants, sont les plus déterminants pour les étudiants et leur bien-être. La visée de ce projet était donc d'identifier les liens entre différents styles de soutien et de non soutien des superviseurs de recherche sur les attitudes des étudiants gradués.

Selon les résultats obtenus, il semble que si un soutien positif est offert, il est souvent de nature à la fois affective et instrumentale. De plus, ces deux styles de soutien sont de bons prédicteurs des attitudes positives des étudiants par rapport à leur vie académique. Toutefois, les dimensions de soutien ne sont pas également reliées aux attitudes que les étudiants rapportent. L'élément qui le plus prédictif de la satisfaction et de l'engagement intellectuel des étudiants est le soutien instrumental. Le fait d'être disponible pour les étudiants et de conférer de l'aide tangible et en lien avec les tâches académiques a effectivement déjà été cité comme un important facteur de satisfaction envers un mentor (Zhao, Golde & McCormick, 2007). Il en serait donc de même avec la satisfaction générale face aux études supérieures. La présence d'un environnement structurant se présente également comme un facteur protecteur face aux intentions de quitter le programme ou de changer de directeur de recherche. En effet, la présence d'une trop grande ambigüité dans le rôle d'étudiant gradué pourrait créer chez une

personne nouvellement admise un sentiment d'inadéquation, qui lui ferait remettre en question sa capacité à demeurer dans un programme de maîtrise ou de doctorat (Lovitts, 1996).

Du côté du soutien affectif, ce dernier serait particulièrement utile afin de susciter un l'engagement de l'étudiant en dehors des tâches académiques, notamment à socialiser avec d'autres étudiants. En ce sens, il le soutien émotionnel est connu comme aidant les personnes envers qui il est dirigé à développer un sentiment d'appartenance dans un milieu donné (Skaalvik & Skaalvik, 2011). Ce type de soutien contribuerait donc à éviter que certains étudiants se sentent isolés et esseulés dans des programmes d'études demandant une grande charge de travail individuel.

Enfin, les comportements non soutenants sont liés au sentiment de débordement que les étudiants peuvent ressentir en lien avec leur travail universitaire, ainsi qu'à un affect plus négatif. De plus, ils contribuent négativement à la satisfaction des étudiants. Il va donc sans dire que des comportements de contrôle excessif ou d'insistance disproportionnée sur les aspects négatifs du travail de l'étudiant sont à proscrire. Il est possible de réduire la propension à ce genre de comportements pour des personnes en poste. White (2010) suggère entre autres de clarifier les rôles du superviseur de recherche auprès de ce dernier, en insistant sur les comportements qui sont acceptables ou non. De plus, cet auteur suggère de promouvoir un environnement de travail où les erreurs sont permises, ce qui permettrait notamment de rectifier les attentes du superviseur.

En termes pratiques, la présente étude a démontré qu'il serait bénéfique pour les étudiants que les directeurs de recherche soient formés afin de donner un soutien optimal à leurs étudiants. Bien entendu, des différences individuelles entrent en jeu quant au style de supervision préféré par les étudiants. En effet, certains étudiants travaillent de manière très

autonome sur leur projet, alors que d'autres nécessitent plus d'encadrement (Deuchar, 2008). Certains étudiants sont également plus portés à vouloir développer une relation conviviale avec leur directeur alors que d'autres se contentent d'un rapport plus cordial avec ce dernier.

Malgré certaines limites, dont le devis transversal ne permettant pas de se prononcer sur la causalité des relations trouvées et le fait que l'instrument utilisé provienne du milieu organisationnel, omettant possiblement des aspects importants du soutien en milieu académique, cette étude ouvre la voie pour des recherches futures. Notamment, il serait pertinent d'évaluer la perception des étudiants à divers moment durant leur parcours. En effet, il se peut que des événements ponctuels de leur parcours académique, notamment des remises importantes, suscitent un niveau de stress plus élevé et demandent requièrent un style de soutien particulier durant ces périodes. De plus, d'autres facteurs situationnels pourraient influer sur les attitudes des étudiants. Par exemple, un finissant sera probablement moins désireux de quitter son programme d'étude ou son sujet de recherche après y avoir consacré plusieurs années qu'un étudiant en début de parcours, et ce peu importe le niveau de soutien reçu. Par ailleurs, d'autres sources de soutien disponibles dans le milieu universitaire peuvent être bénéfiques pour un étudiant gradué, notamment les collègues ou divers services dédiés à la réussite des membres d'une faculté. Outre les différentes dimensions de soutien, il serait avantageux de comprendre comment ces sources de soutien contribuent au fonctionnement optimal des jeunes chercheurs.

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