**Students’ achievement goal orientations during the COVID-19 pandemic: Are they mediated by their own competence beliefs and their teachers’ support?**

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**Abstract**

Due to the COVID-19 pandemic, children and adolescents have experienced limitations in their everyday activities. Consequently, the status of their mental health has become an area of concern. However, there has been much less of a focus on the way in which children and adolescents have approached their various academic activities during the pandemic and why. The current study fills this gap by investigating adolescents’ achievement goals (mastery, performance, and work avoidance) as a function of their own competence beliefs and perception of teacher support. Participants were 90 Canadian high school adolescents in grades 9 and 10. They were surveyed before and during the pandemic (January and November of 2020). Data were analyzed using multiple regression and multiple mediation analyses. Results showed that, during the pandemic, competence beliefs were a significant positive predictor of a mastery orientation among adolescents. Competence beliefs were a marginal positive predictor of a performance orientation and a marginal negative predictor of a work avoidance orientation. Results of the mediation analysis indicated that teachers’ support was a marginal negative predictor of a performance orientation, and that this association was mediated through competence beliefs. These findings are discussed in light of relevant, pre-pandemic literature about the contribution of competence beliefs and teacher support on achievement goal orientations.

*Keywords*: COVID-19 pandemic, achievement goal orientations, sense of competence, teacher support, regression and mediation analyses

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**Introduction**

The COVID-19 pandemic is an unprecedented health and social crisis. In an attempt to contain the spread of infection and mitigate its negative effects, countries adopted a wide range of measures. One key strategy that had been used on a global scale was to limit social contacts. Consequently, only essential services were allowed to operate, schools were closed, people were instructed to stay home, and activities involving social interactions were suspended. As a result of the measures, children and adolescents were directly impacted. Decision makers, researchers, health and educational professionals, as well as parents, became increasingly concerned with the mental health of this subpopulation as they were deprived of activities that are essential to their development. Their concerns were revealed to be well-founded; many recent studies have demonstrated the very high levels of stress, anxiety, depression and loneliness that children and adolescents have experienced throughout the pandemic (Rogers et al., 2021; Rothe et al., 2021; Tang et al., 2021).

In light of such evidence, it is worth examining how children and adolescents approach learning under these circumstances. In fact, it is well known that social interactions play a critical role in learning and development, and that young people attach particular importance to these interactions. Therefore, questions have emerged such as, “*Is the COVID-19 pandemic affecting how children and adolescents approach their learning?*” and“*How do children’s and adolescents’ perceptions of themselves and their relationships with others influence their intentions toward learning during these stressful times?*” In circumstances in which youth are not deprived of any support, we would expect them to easily remain focused on their achievement goals (Li et al., 2019). However, it is important to remember that it is crucial for youth to form and maintain significant social relationships and that these relationships can have a profound influence on both their learning intentions and actions (Deci & Ryan, 2000; Korpershoek et al., 2019). These intentions have received little attention in the context of the COVID-19 pandemic. The present study thus fills an important gap by investigating the achievement goal orientations of a sample of adolescents. We examined both the main and mediating effects of adolescents’ own competence beliefs and perceptions of teacher support on their achievement goal orientations.

**Theoretical framework**

Achievement goals is a major perspective that has been used to study the reasons why children and adolescents choose to *approach* and *adapt to* academic activities (Maehr & Zusho, 2009). In reviewing the literature, two very common reasons that quickly captured our attention included: (1) valuing the process of learning, attempting to gain understanding and insight, and seeking to acquire and improve knowledge; and (2) publicly demonstrating competence in a learning activity, a desire to attain high-level knowledge and abilities, and/or a desire to outperform others. These two orientations are respectively referred to as mastery and performance orientation (Linnenbrink & Pintrich, 2000; Maehr & Zusho, 2009). It is worth highlighting that these two orientations are not mutually exclusive, and that children and adolescents may seek to both master and exhibit their knowledge and abilities (Barron & Harackiewicz, 2001). Additionally, there are also youth who do not endorse either of these two orientations. These youth may avoid engaging in academic activities or may choose to invest a minimum amount of effort; these attributes reflect a work avoidance orientation (Bouffard et al., 1998; Chouinard et al., 2007; King & McInerney, 2014).

These three orientations comprise a trichotomous conceptualization (Harackiewicz et al., 1997), which has served as the framework for multiple studies and is also used in the current study. We apply this conceptualization to determine whether the children and adolescents in our study were inclined to either approach or avoid learning, particularly in a context in which students faced uncertainty which may have diverted them from their original learning intentions.

It is important to note that children and adolescents consider their levels of existing knowledge and abilities when it comes to setting goals (Elliot & Hulleman, 2017). When youth show confidence in their capacities, they indeed pursue more ambitious goals and take more risks (Chouinard et al., 2007; Putwain & Daniels, 2010; Seaton et al., 2014). In contrast, when they doubt their capabilities, they hesitate to approach their goals (Putwain & Daniels, 2010) and even seek to avoid them (Chouinard et al., 2007). In considering the broader context of the pandemic, it is clear that it has led to a disruption in the course of school activities; in turn, it is very likely that children’s and adolescents’ achievement goals, and corresponding competence beliefs, have been negative impacted. However, it is important to keep in mind that support from teachers is known to exert a positive influence on both achievement goals and competence beliefs and, as such, it may have served a protective function.

*The present study*

The COVID-19 pandemic has been going on for over a year. Given prior theory and literature, there is a real possibility that many children and adolescents are struggling to pursue goals that support both their learning and success. To the best of our knowledge, an examination of youth’s goals in relation to learning has only been addressed in a very limited number of studies (Daniels et al., 2021; Lin, 2021), just like factors that may exert an influence on them. The present study seeks to fill an important gap in knowledge by investigating adolescents’ achievement goals, specifically the predictive influence of adolescents’ own competence beliefs and their perceptions of teacher support.

**Method**

*Design and sample*

The present study is based on a convenience sample of 90 French Canadian adolescents from two public high schools, both located in Quebec City suburbs. Fifty-one of the adolescents were in 9th grade (43 girls, 8 boys, *Mage* = 14.69, *SD* = .34) and 39 were in 10th grade (26 girls, 13 boys, *Mage* = 15.79, *SD* = .26).

Across two different waves of data collection, participants completed a questionnaire which allowed us to determine their achievement goal orientations, as well as their level of competence beliefs and perceptions of teacher support. Students were also asked to report their grades in French and mathematics. The first wave of data collection (T1) took place in mid-January 2020, which was a few weeks prior to the first confirmed case of COVID-19 in Canada. The second wave of data collection (T2) was carried out in November of the subsequent school year (2020), a time in which students had returned to in-person activities after months of distance education.

*Measures*

*Mastery goal orientation*. Participants rated their orientation toward mastery goals by answering a three-item subscale designed and validated by Bouchard and colleagues (1998). The items were: “I want to learn as much as possible at school”; “It’s important for me to understand what we’re learning at school”; and “Understanding as much as possible is the most important thing for me at school.” Participants rated each item on a scale from 1 (strongly disagree) to 6 (strongly agree) by circling the number that corresponded to their level of agreement. Responses were averaged to generate an overall score that reflected the extent of mastery orientation before (*M* = 4.76, *SD* = .86, Cronbach’s alpha = .81) and during (*M* = 4.89, *SD* = .81, Cronbach’s alpha = .78) the pandemic.

*Performance goal orientation*. Participants rated their orientation toward performance goals by responding to a four-item subscale. The items were: “My main goal in school is to get good grades”; “It’s important to me to be one of the best in my class”; “It’s important to me to be better than other students”; and “My main goal in school is to be the best.” Responses were averaged to generate an overall score that reflected the extent to which the participant held a performance orientation before (*M* = 3.43, *SD* = 1.27, Cronbach’s alpha = .86) and during (*M* = 3.35, *SD* = 1.20, Cronbach’s alpha = .87) the pandemic.

*Work avoidance goal orientation*. Participants rated their orientation toward avoidance goals by answering a three-item subscale: “In class, I work as little as possible”; “I always try to do as little work as possible at school”; and “In class, I only do what is required.” Responses were averaged to create an overall performance orientation score before (*M* = 1.75, *SD* = .84, Cronbach’s alpha = .83) and during (*M* = 1.97, *SD* = .91, Cronbach’s alpha = .77) the pandemic.

*Teacher support*.Participants rated the support provided by their teachers by answering a three-item subscale Items include: “My teacher thinks I am good at school”; “Usually, my teacher is interested in my progress”; and “My teacher makes me feel like I’m good.” Responses were averaged to generate an overall score that reflected participants’ perception of being supported by their teacher before (*M* = 4.61, *SD* = 1.03, Cronbach’s alpha= .91) and during (*M* = 4.53, *SD* = .82, Cronbach’s alpha = .82) the pandemic.

*Grade point average*. Participants reported their most recent grades in French and mathematics. Participants were asked: “What was your score in French on your last grade report?” and “What was your score in Mathematics on your last grade report?” The scores were averaged and represented, in the current study, participants’ grade point average before (*M* = 79.96, *SD* = 8.72) and during (*M* = 82.89, *SD* = 6.91) the pandemic.

*Competence beliefs*. Participants rated their self-perceptions of school competence by answering a four-item subscale: “I am proud of my grades at school”; “I’m as good as others at school”; “I am not very good at school”; and “I’m not as good as others at school.” This scale was adapted from the work of Ntamakiliro and his colleagues (2000). The last two items were reverse-coded and then responses across all items were averaged to generate an overall scorer that reflected participants’ sense of competence before (*M* = 4.61, *SD* = .94, Cronbach’s alpha = .85) and during (*M* = 4.66, *SD* = .92) the pandemic.

*Plan of analyses*

A two-step analytical approach was utilized. In the first step, three multiple regressions were performed to investigate the predictive effects of competence beliefs (T2) and teacher support (T2) during the COVID-19 pandemic on mastery, performance and work avoidance goal orientations (T2) during the COVID-19 pandemic. Each analysis controlled for pre-pandemic Time 1 scores, specifically scores on the corresponding goal orientation, as well as competence beliefs, grade point average and teacher support. In the second step, the mediating effect of competence beliefs during the COVID-19 pandemic (T2) on the association between teacher support and goal orientations during the COVID-19 pandemic (T2) was examined; T1 pre-pandemic corresponding orientations, grade point average and teacher support were held constant. Both sets of analyses were conducted using the Statistical Package for the Social Sciences (SPSS) software, version 26. Mediation analyses were examined with the PROCESS macro developed by Hayes (2013).

**Results**

The regression analyses allowed to determine the respective contributions of adolescents’ competence beliefs and perception of teacher support during the pandemic (T2) on mastery, performance, and work avoidance goal orientations during the pandemic (T2). As shown in Table 1, competence beliefs at T2 emerged as a significant positive predictor of a mastery orientation at T2. Competence beliefs at T2 also appeared to be a marginal positive predictor of a performance orientation at T2 and a marginal negative predictor of an avoidance orientation at T2. Further, teacher support at T2 was found to be a marginal positive predictor of a mastery orientation and a marginal negative predictor of a performance orientation.

**Insert table 1 here**

The mediation analyses allowed us to examine if adolescents’ sense of support from their teachers – which was shown to be weakly associated with the measured goal orientations – was more strongly linked to these orientations through competence beliefs. Thus, when using this latter variable as a mediator, teacher support at T2 was a marginal negative predictor of performance orientation at T2 (see Table 2). Further, a closer look at the correlation between teacher support at T2 and competence beliefs at T2 demonstrated that these were positively associated, and that the correlation between competence beliefs at T2 and performance orientation at T2 were marginally positively associated (see Figure 1).

**Insert table 2 here**

**Insert figure 1 here**

**Discussion**

This study investigated adolescents’ achievement goal orientations (i.e., mastery, performance, and work avoidance) during the COVID-19 pandemic as a function of both their own competence beliefs and their perception of teacher support. The results are interpreted on the basis of pre-pandemic literature on the topic.

Competence beliefs emerged as an important predictor of goal orientations during the pandemic. In particular, competence beliefs were shown to significantly contribute to a mastery orientation and to marginally contribute to a performance orientation among adolescents. In addition, competence beliefs, to a certain extent, appeared to prevent students from endorsing a work avoidance orientation. These findings are in line with previous evidence indicating that goal orientations are strongly influenced by competence beliefs. Indeed, when adolescents display confidence in their academic abilities, they are much more likely to seek ways to develop their knowledge and skills and to gain recognition for them (Seaton et al., 2014; Skaalvik, 2002). Accordingly, they are much less at risk for adopting learning avoidance strategies (Law et al., 2012; Skaalvik, 2002).

Teacher support also appeared to influence goal orientations during the pandemic, specifically the adoption of a performance orientation; however, this association was (marginally) negative, which was unexpected. When examining this relationship more closely in the mediation analysis with competence beliefs – which is a positive predictor of a performance orientation – we found that there were positive associations between teacher support and competence beliefs and between competence beliefs and a performance orientation. These results are easier to explain. In fact, the scientific literature suggests that when teachers take interest in their students’ progress and develop and hold positive expectations for them (Wentzel, 2002; Wentzel et al., 2012) – the two underlying dimensions behind our construct of teacher support – students are more likely to set ambitious goals for themselves.

**Strengths, Limitations and Conclusions**

It is important that the current study’s results be considered with caution as they may not be directly related to the pandemic, and because this study has some limitations. As previously mentioned, our sample was very small and was not representative of the entire student population. Thus, our findings cannot be generalized to students from other schools. Further, because of the small sample size, we did not include gender and age as control variables in our analyses. In addition, we cannot claim causality in our results since they are correlational in nature. Regardless of these limitations, the current study has merit, such that it includes an estimation of the association of both competence beliefs and perceptions of teacher support with several achievement goal orientations. It appears that these relationships have been extensively discussed from a theoretical point of view, but had not been systematically tested, at least not in the context of the ongoing pandemic. Therefore, the emerging results improve our understanding of the influence of competence and support perceptions on students’ approach to learning.

Our results identify adolescents’ own competence beliefs as an adequate predictor of their goal orientations. Further, the extent of these beliefs was shown to be a better predictor of goal orientations than the level of perceived teacher support. Indeed, teacher support ultimately appeared to have a very limited influence. This result is somewhat surprising as both of these dimensions have been previously considered to serve a reassuring function (Schunk & Mullen, 2012) and we would have expected them to play such a role in a period of uncertainty, such as during the COVID-19 pandemic. Nonetheless, it is promising that a resource that resides within adolescents (beliefs about one’s own competence) plays an important role in how they approach learning in such unique and challenging circumstances.