CLASS-WIDE BEHAVIOUR MANAGEMENT PRACTICES REPORTED BY PRE-AND ELEMENTARY SCHOOL TEACHERS : RELATIONS WITH INDIVIDUAL AND CONTEXTUAL CHARACTERISTICS.

MARIE-FRANCE NADEAU *Université de Sherbrooke*

LINE MASSÉ, JEANNE LAGACÉ-LEBLANC *Université de Québec à Trois-Rivières*

CLAUDIA VERRET *Université du Québec á Montréal*

NANCY GAUDREAU *Université Laval*

ABSTRACT. This study examined the use of inclusive practices by 1,373 Quebec teachers to promote prosocial behaviour, according to their individual and contextual characteristics. Two questionnaires were used: a sociodemographic and a validated Classroom Behaviour Management Practices Inventory (N = 68 items; 2 dimensions/7 scales α = .70 to .90). Results from descriptive and univariate variance analysis showed that proactive /positive dimension practices (e.g., rules, instructional, reinforcement-based) are used more frequently than reductive dimension practices (e.g., educational consequences), although some of the latter are frequently used. Hierarchical models indicate significant interrelationships with teachers characteristics and the scales of classroom behaviour management practices, but for a small proportion of explained variance.

LES PRATIQUES DE GESTION DES COMPORTEMENT RAPPORTÉES PAR LES ENSEIGNANTS DU PRÉSCOLAIRE ET DU PRIMAIRE: RELATIONS AVEC LEURS CARACTÉRISTIQUES INDIVIDUELLES ET CONTEXTUELLES.

RÉSUMÉ. Cette étude a examiné la fréquence d'utilisation des pratiques promouvant les comportements prosociaux des élèves par 1 373 enseignants québécois. Deux questionnaires ont été utilisés : un questionnaire sociodémographique et un inventaire validé des pratiques de gestion du comportement (N = 68 items ; 2 dimensions/7 échelles α = .70 à .90). Les résultats des analyses descriptives et de variances univariées ont montré que les pratiques proactives/positives (p. ex., règles et routines, félicitations) sont utilisées plus fréquemment que les pratiques réductrice (p. ex., conséquences éducatives), bien que ces dernières soient fréquemment utilisées. Les modèles hiérarchiques indiquent des interrelations significatives entre les caractéristiques des enseignants et les échelles de pratiques, mais pour une faible proportion de la variance expliquée.

Inclusive education (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994, 2009) and Quebec school system prioritizes the schooling of *all* students in the regular classroom (Ministère de l'Éducation et de l'Enseignement supérieur [MEES], 2017). In a regular classroom composed of students with diverse needs, more than a third have difficulty at some point during the year in establishing and maintaining satisfactory interpersonal relationships, following rules, or regulating their emotions or actions (Forness et al., 2012; Hornby & Evans, 2014). For 5-10% of students, these difficulties can result in persistent disruptive and problematic behaviours, such as, disobedience, defiance, motor agitation, or being off-task or inattentive (Ministère de l'Éducation, de l'Enseignement supérieur et de la Recherche [MEESR], 2015), which are likely to interfere with learning or classroom activities (Cooper & Cefai, 2013; Kauffman & Landrum, 2018).

Despite the large number of evidence-based practices known to promote psychosocial adjustment in school (Chaffee et al., 2017; Warmbold-Brann et al., 2017; Waschbusch et al., 2019), managing disruptive behaviour in the regular classroom remains a challenge for many teachers (Boutin et al., 2015). Rather than support the development of social-emotional competence and the acquisition of underlying social skills (Rose-Krasnor, 1997) such as prosocial behaviour (e.g. encouraging, sharing) or self-regulation, some teachers tend to fall back on strategies that focus on coercive / punitive practices to eliminate disruptive behaviours (Clunies-Ross et al., 2008; Michail, 2012). While the former are associated with greater opportunities for development and learning, and greater engagement in activities/task (Eisengerg et al., 2013), the latter are associated with a number of negative effects on students, notably decreased motivation to learn (Payne, 2015), decreased attention to activites/tasks (Leflot et al., 2010) and increased teacher-student conflict (Sellman, 2009). Managing disruptive behaviour is related to an increase in stress that can lead to burnout, (Fernet et al., 2012) professional disengagement and resignation (Kamanzi et al., 2017; Martin et al., 2012). While many teachers attribute their difficulties to a lack of preparation or training (Nadeau et al., 2015; State et al., 2011), few studies (still fewer in Quebec) have identified specific shortcomings or variables that may influence the implementation of behaviour management practices. These challenges experienced by both students and teachers point to the importance of establishing a picture of the use of practices to promote students' psychosocial adaptation in schools. This portrait will make it possible to highlight the needs in initial and in-service teachers' training, in order to provide a school environment conducive to development and learning, and thus positively influence the educational success for all students.

PROMOTING PSYCHOSOCIAL ADJUSTEMENT IN SCHOOL

Evidence-Based Practices

Evidence-based practices can be briefly defined as specific intervention strategies that are shown to be effective through controlled research in a defined population (Chambless & Hollon, 1998; Kratochwill et al., 2013). In the field of psychosocial adjustment in schools — whether for specific students, small groups of students, or class-wide — evidence-based practices largely arise from the behavioural sciences (Nadeau et al., 2020; Cooper et al., 2020; Kazdin, 2019). Practices can be framed in terms of two distinct intentions or expected effects on the student's observable behaviour: proactive / positive practices or reductive practices.

Proactive / positive practices encourage the emergence and maintenance of desired and prosocial behaviour and prevent the occurrence of disruptive behaviour. They may involve actions intended to facilitate the smooth running of an activity, such as organizing the environment and resources (e.g., furniture, space layout, material) (Office of Special Education Programs, 2015), setting and modeling clear rules and expectations (Gable et al., 2009), nurturing positive relationships (Mikulincer & Shaver, 2012), using positive attention and reinforcement (Sugai & Horner, 2009), or supporting self-control and self-regulation of students (Briesch & Chafouleas, 2009). This may also involve observing and describing the student's manifestation of a specific behaviour in different situations and identifying the factors / stimuli potentially related to reasons why it occurs at a specific time or in a specific environment (e.g. functional assessment; Steege et al., 2019).

Reductive practices aim to decrease the occurrence of a (mis)behaviour judged as problematic, difficult, or disruptive. Positive behavioural approaches do not support the use of this type of practice because they are perceived as punitive. However, reductive practices are still used and are not all the same (Drevon & Hixson, 2019). Practices identified as educational consequences involve actions designed to reach educational goals (e.g. social or emotional learning towards the desired behaviour) with the student. Logical and natural consequences, token economy, time-out from reinforcement and overcorrection, are examples intended to discourage the likelihood of a disruptive behaviour. To be consistent with educational consequences, practices must be planned, forewarned to the student, and used in conjunction with proactive and positive practices (Kazdin, 2019) as part of a comprehensive education plan (Kern & Chen, 2019) that supports the learning of an alternative and desired behaviour. For their part, coercive /punitive practices involve actions that occur in reaction to disruptive behaviour and are aimed at suppressing it while reactivating the teacher's authority. Threat or expulsion from school are examples that often negatively influence a student's personal dignity restrict access to meaningful opportunities. Indeed, their use raises ethical issues (Kazdin, 2019) and is considered incompatible with evidence-based practice. They tend to have limited effects in the short term. Most

importantly, they may have counterproductive effects on the teacher/student relationship over the long term, by incidentally creating a reinforcing effet on disruptive behaviour and increasing its occurrence rather than promoting more adaptative behaviour.

Teachers' Uses of Behaviour Management Practices

Due to the heterogeneity of classroom environments and students, teachers need to draw on a variety of evidence-based practices appropriate for students with emotional and behavioural needs. From the perspective of inclusive education and class-wide (universal) intervention, the terms "classroom management" and "behaviour management" are often used interchangeably to refer to "thoughtful, sequential and simultaneous acts performed by teachers to establish, maintain and restore the learning environment" (Gaudreau, 2017). Some studies carried out in the United States have described the frequency of the use of behaviour management practices by teachers. Their findings are summarized here according to teachers' individual characteristics (e.g., amount of teaching experience) or contextual characteristics (e.g., grade level, setting [general; special], training opportunities) known to influence the use of practices (Aarons et al., 2011).

Gable et al. (2012) explored the frequency of reported practices by 1,588 general education teachers and 1,472 special education teachers at the preschool, elementary and high school levels, without support statistical differences according to shool settings or teaching level. Among 20 instructional of behaviour practices, the most frequently used practices were: establishing clear rules and expectations, providing support and adjusting educational requirements, supporting positive behaviour, setting up a behaviour education plan, and using specific instructions to develop learning and study skills. The least used practices included group contingency programs, observational / functional assessment, pre-correction of behaviours, and peer-assisted learning. The qualitative study conducted with 22 elementary and high school teachers (Evans et al., 2012) found that, as compared to general education teachers, special education teachers seems to use a wider range of practices like set clear expectations, positive reinforcement and self-regulation mechanisms. Among all school setting teachers, the most used practices were verbal reinforcement and physical proximity. When observing behaviour management practices, Maggin et al. (2011) noted on their part that general and special education teachers tend to use the same practices, while exhibiting a low ratio of positive practices (e.g., praise) as compared to reductive practices (e.g., reprimands). The ratio was approximately 1:1, compared to the recommended ratio ranging from 3:1 up to 5:1 (Cook et al., 2018; Pfiffner et al., 1985).

At the elementary school level, Reddy et al. (2013) examined 23 behaviour management practices (observations/questionnaires) used by 317 teachers according to teaching experience and grade level. Results suggested that evidence-based practices were used by teachers approximately 60% to 70% of the

time, with a praise-reprimand ratio of 1:1.5. The most observed practices were teaching planning and materials management, whereas the least were controlling antecedents (e.g., displaying the class schedule and lessons) and assessing progress. Hierarchical regression models also demonstrated that preschool and early elementary teachers, as compared to higher levels teachers, use more frequently clear instructions, verbal reinforcement and feedback to redirect behaviours. Higher levels more frequently relied on progress monitoring and metacognitive support. With the exception of the use of praise, Reddy et al. (2013) results did not show interaction between years of experience or teaching level and the use of evidence-based behaviour management practices.

To sum up, previous studies examined the use of a limited number of practices by teachers, and explored the role of somes teacher's characterics (i.e., school setting, years of experience, teaching level) mostly with descriptive and correlational analysis. These results do not clarify the role of a set of teacher's individual and contextual characteristics, and their discrepancies may be explained by the variety of methods and measures (and their psychometric qualities) employed. However, the use of questionnaires or observations seems to lead to results with the same trends (Clunies-Ross et al., 2008; Debnam et al., 2015; Gitomer et al., 2014). In particular, these two types of measurement would be strongly correlated when instrument statements are formulated to represent strategies applied in a specific way, in a specific context (Koziol & Burns, 1986). In the studies reviewed, the wording of the statements presented rather a non-specific use of practices, and their number (examined from questionnaire or observation) was generally small and not representative of the range of practices described above.

Given that several factors may influence whether or not teachers use evidence-based practices to manage behaviour, (Aarons et al., 2011) salient individual and contextual characteristics might be considered to better understand a given situation. For instance, the prevalence of students' presenting disruptive behaviours, and teachers' gender or teaching experience, including their knowledge or training in behaviour management which is likely to influence their degree of confidence in being able to manage such behaviours (Boutin et al., 2015; Rousseau et al., 2014). To our knowledge, a comprehensive picture of the specific practices used by preschool and elementary school teachers has only been established in a very limited number of studies. Of these, it has not been possible to reach a consensus on the interrelationships of practice use to individual or contextual characteristics, since both characteristics are rarely, if ever, considered simultaneously. For example, studies on instructional practices suggest the presence of distinctive associations according to gender; women are more motivated to use the recommended practices (Sabe & Aelterman, 2007; Schiefele, 2017; Schiefele & Schaffner, 2015). Other studies on professional development suggest an influence of teacher support through coaching or behaviour consultation on teacher practices (Nadeau et al., 2012; Holdaway & Owens, 2015; State et al., 2017). Being able to identify which type of characteristic

is most related to the use of which practices would allow for a more targeted effort in supporting teachers to meet the diverse needs of students. Such research would also help to make adjustments to training programs (e.g., individual characteristics) or to working conditions (e.g., contextual variables). The present study aspired to fill an important gap in knowledge by examining the practices of pre- and elementary school teachers in Quebec to promote prosocial behaviour and psychosocial adjustments of students. Specifically, it aimed to describe the use of classroom behaviour management practices and explore their interrelationship to individual and contextual teachers' characteristics, based on the following questions and hypotheses:

1. What is the use frequency of specific proactive / positive and reductive (i.e., educational and coercive) practices by preschool and elementary school teachers to manage disruptive behaviour in their classrooms?

2. What are the relationships between the practices used and individual teacher characteristics?

3. What are the relationships between the practices used and contextual variables?

METHOD

This study falls under the scope of a broader project that aims to pinpoint conditions for the education of students with behavioural difficulties in Quebec (Massé et al., 2018). The study adopts a descriptive-explanatory methodology to describe and to explore the relationships between variables.

PROCEDURE AND PARTICIPANTS

An informational email was sent to 60 Francophone school boards (approximately 12,000 teachers) and 15 Francophone private schools (approximately 300 teachers), requesting that they share the invitation with their teachers. In all, 1,580 teachers clicked on the invitation link, 190 chose not to participate and 207 were excluded from the analysis because they answered the questionnaire more than once ($n = 17$) or answered only a few statements (e.g. less than one tenth) ($n = 190$). The final sample thus consisted of 1,373 preschool and elementary school teachers. The participation rate, estimated at 10.3%, was considered representative of the population when using a non-probabilistic sampling based on the accessibility of the targeted community (William & Protheroe, 2008). Compared to teachers in preschool and elementary education in Quebec (MEES, 2015), the sample included roughly the same proportion of women (92% versus 89.1% respectively). The teachers were aged between 30 to 49 (68%), held a bachelor's degree as their highest level of education (82%) and taught in a public (94%) or private school with an underprivileged (40%), average (37%) or privileged (23%) socioeconomic environment index. Table 1

(see next section) presents the socio-demographic data of the sample used for subsequent analyses. All procedures for this study received ethics committee approval from the responsible university.

MEASURES

Two questionnaires were used for this study. The socio-demographic questionnaire had 11 questions corresponding to independent variables. Individual characteristics (n = 4) refer to age group, level of education, teaching experience, needs for training and consultation. Contextual characteristics (n=7) refer to type of institution (public / private school), the school's socioeconomic index, setting (general / special), grade level, specific training in behaviour management / disruptive behaviour (preservice or in-service; hours), number of students with disruptive behaviour in their group over the last two years, and number of active participations in an individualized (education) plan (IP) for a student with disruptive behaviour within the last two years.

TABLE 1. *Socio-Demographic of Participants (Frequencies, Means and Standards Deviation)*

Variables	Frequency (%)	*M (SD)*
Gender		
Female	1263 (92.0)	
Male	110 (8.0)	
Teaching Experience		15.67 (8.6)
0 to 5 years	168 (12.2)	
6 to 15 years	541 (39.4)	
16 to 25 years	480 (35.0)	
26 years and over	184 (13.4)	
Teacher's setting		
General	1213 (88.3)	
Special	160 (11.7)	
Grade level		3.92 (2.0)
Preschool (age 5)	204 (14.9	
1st (age 6)	222 (16.2	
2nd (age 7)	203 (14.8)	
3rd (age 8)	195 (14.0)	
4th (age 9)	160 (11.7)	
5th (age 10)	178 (13.0)	
6th (age 11)	211 (15.4)	

Variables	Frequency (%)	*M (SD)*
Specific training in behaviour management (hours)		
Preservice		51.92 (64.2)
None	219 (16.0)	
1 to 45	782 (57.0)	
46 to 90	255 (18.6)	
91 and over	117 (8.5)	
Inservice		16.40 (43.8)
None	249 (18.1)	
1 to 5	467 (34.0)	
6 to 15	369 (26.9)	
16 and over	288 (21.0)	
Number of students in class with disruptive behaviour		2.54 (3.4)
None	223 (16.2)	
1 to 5	1037 (75.5)	
6 and over	113 (8.2)	
Individualized education plan (number)		3.15 (5.1)
None	307 (22.4)	
1 to 5	872 (63.5)	
6 and over	194 (14.1)	

The second questionnaire, the Classroom Behaviour Management Practices Inventory (*Inventaire des pratiques de gestion de comportements en classe*; Nadeau et al., 2018), listed 68 items of behaviour management practices for both proactive / positive ($n = 49$; α = .91) and reductive ($n = 19$; α = .79) dimensions, which referred to the dependent variables of the study. The proactive / positive dimension was composed of five scales measuring specific practices: 1) instructional teaching planning and time management ($n = 15$; e.g., planning rituals to greet students at the beginning and end of class); 2) establishing rules and instructions ($n = 10$; e.g., regularly reminding students of expected behaviours); 3) positive reinforcement-based ($n = 6$; e.g., giving a student explicit feedback on what they did well); 4) self-regulation support ($n = 15$; e.g., using a signal of some kind to remind students of the instructions or rules to follow); and 5) observational / functional assessment ($n = 3$; e.g., observing a student and taking notes on their

behaviour in order to determine what is causing disruptive behaviour). The reductive dimension was composed of two scales measuring specific practices geared toward: 6) educational consequences (n = 10; e.g., apply the expected consequences when there is a breach of the rules) or 7) coercive / punitive (n = 9; e.g., giving a detention). For each strategy, the participants were to indicate how often they used it on a frequency Likert scale (1 = *never*; 5 = *very often*). Each practice scale score was calculated based on the average score of each strategy item that constitue it. As in the instrument validation process (N = 319; Nadeau et al., 2018), the psychometric characteristics presented in Table 2 (see: *Results*) demonstrate globally good construct validity in spite the large sample size (e.g., goodness of fit indicator; Browne & Cudeck, 1993; Kline, 2016).

DATA ANALYSIS

Statistical analyses were conducted using IBM SPSS Statistics software version 24. Preliminary analyses examined the presence of missing data, normality of distribution for all the dependent variables (practice scales), and extreme values. To establish a picture of the practices used by teachers, descriptive analyses were conducted on averages, standard deviations, correlations, and paired *t*-tests between each of the scales. To diminish the likelihood of a type I error, the *p*-value at .007 is established by the correction of Bonferonni to each test (.05 / number of tests[7]; Tabachnick & Fidell, 2019). To explore the interrelationships between the independent variables related to teacher characteristics and the dependent variables related to practices, a series of seven hierarchical models was carried out (i.e., for each scale of practices). In the first step, the individual variables of gender and years of experience were introduced. Two other control variables were introduced at this step (e.g., source a = discussion group, source b = individual interview). The other independent variables representing contextual characteristics were added in step two. The choice of variables was intended to reduce the model's complexity in order to avoid interpretation-related difficulties (Hox et al., 2018). The premises for this type of analysis, such as normality of error distribution, homoscedasticity and absence of multicollinearity between independent variables, were respectively observed by the Durbin-Watson statistic, the homogeneity of residual variances and the Variance Inflation Factor (VIF).

RESULTS

Preliminary Analysis

The indicators confirming the postulate of the normality of distribution, averages, standard deviations, and correlations are presented in Table 2. The correlations indicate a moderate to strong significant association between the scales of the proactive dimension (Min. = 0.39, Max. = 0.69) and those of the reductive dimension (0.51), and a mild to moderate significant association between the scales of the two dimensions (Min. = 0.07, Max. = 0.43). Table 3

shows the correlations between the dependent and independent variables. The correlations between the independent variables range from -.17 to .62. Univariate variance analyses (*t*-tests and ANOVA) revealed no differences on the dependent variables of the practices for the independent variables 'type of school' (public / private) and 'socioeconomic status index', which were therefore excluded from subsequent analyses. Given the presence of the covariance and to facilitate comparison with other studies, the variable 'teaching experience (years of)' was used rather than 'age of participant'.

Use of Behaviour Management Practices

The scores obtained for each practice scale indicate an average slightly higher than the midpoint. Practices referring to proactive / positive dimension (*M* = 4.25, *SD* = 0.36) were used significantly more than those referring to reactive/reductive dimension: $M = 3.20$, $SD = 0.48$, $t(1.1372) = 76.46$, $p = .000$. Results from *t*-tests indicated that most of the practice scaless differed significantly from each other (*p*-value at .007), with the exception of the self-regulation and educational consequences scales (*p* = .01). The most proactive / positive dimension practices used were: clear rules, instructions and routines; planning and resource management; and positive reinforcement. The least used were: self-regulation and observational / functional assessment. The average scores for the coercive / punitive scale was situated near the midpoint while also indicating that these practices were used less often than the educational consequence practices that were frequently used.

TABLE 2. *Psychometric Statistics, Descriptive Statistics, and Pearson Correlations Between Scale of the Classroom Behaviour Management Practices (n = 1373)*

Dependent Variables	1	2	3	4	5	6	7
1. Teaching planning	–	.69***	.48***	.69***	.54***	.36***	.08**
2. Rules and instructions		–	.50***	.65***	.55***	.37***	.08**
3. Positive reinforcement			–	.54***	.39***	.43***	.17***
4. Self-regulation				–	.63***	.37***	.07*
5. Observation/ assessment					–	.29***	.10***
6. Educational consequence						–	.51***
7. Coercive/ punitive							–

Dependent Variables	1	2	3	4	5	6	7
Mean	4.03	4.32	4.51	4.33	4.00	3.76	2.59
Standard Deviation	0.44	0.39	0.38	0.48	0.67	0.49	0.61
Skewness	-.31	-.56	-.92	-.79	-.43	-.16	.30
Kurtosis	-.25	.16	1.0	.70	-.25	-.16	-.11
Alpha	.84	.84	.85	.71	.90	.70	.80
X2 (df)	443.25 *** (90)	366.21 *** (90)	213.30 *** (35)	31.04 *** (8)	0.01 (1)	165.76 *** (32)	184.46 *** (21)
RMSEA	.05	.05	.06	.05	.00	.06	.08
CFI	.95	.95	.96	.99	1.00	.94	.96

Note Alpha = ordinal coefficient alpha calculated from our sample.

*$p<.05$ **$p <.01.$ ***$p<.001$

TABLE 3: *Pearson Correlation Between Sociodemographic (Independent Variables) and Classroom Behaviour Management Practices (Dependent Variables)*

Sociodemographic (IV) / Practices (DV)	Gender	Teaching experience	Educational setting	Grade level	Training preservice	Training inservice	Student in class	IP participation
1. Teaching planning	-.14***	.16***	-.07*	-.03	.01	.07*	.01	.09**
2. Rules and instructions	-.13***	.16***	.04	-.03	-.01	.06	.01	.06*
3. Positive reinforcement	-.14***	.08**	-.11***	-.15***	.06*	.04	.02	.10***
4. Self-regulation	-.13***	.15***	-.11***	-.11***	.05	.07**	.06*	.12***
5. Observational/ Assessment	-.04	.18***	-.08**	-.07**	.03	.08**	.06*	.08**
6. Educational consequence	-.05	.09***	-.03	-.08**	-.04	.01	.01	.07*

Sociode-mograph-ic (IV) Practices (DV)	Gender	Teach-ing experi-ence	Educa-tional setting	Grade level	Train-ing preser-vice	Train-ing inser-vice	Stu-dent in class	IP partici-pation
7. Coer-cive/puni-tive	*.05*	*.07***	*–.02*	*.15****	*–.06**	*.01*	*.09 ****	*.11****

Note: Gender coded as *male* = 0, *female* = 1. Teacher's setting coded as *general* = 0 , *special* = 1. Grade level coded as *Preschool* = 1 to *6th grade* = 7. Training Preservice and Inservice (on behaviour management) = *hours*. Student with disruptive behaviour in class and IP Participation = *number*.

*p < .05. **p < .01. *** <.001

RELATIONSHIP OF PRACTICES TO TEACHERS CHARACTERISTICS

For all hierarchical models, the total proportion of explained variance of behaviour management practices ranged from 2% to 16%. The main effects are reported by step and by independent variable, according to their decreasing relations to the dependent variables.

Individual Characteristics

Among the variables introduced in step one, teaching experience was significantly associated with all the dependent variables; the longer teachers had taught, the more they used all the practices. Gender was associated with four scales in the proactive dimension; more than men, women reported using instructional teaching planning and resource management, establishment of rules, instructions and routines, positive reinforcement and self-regulation. The variables introduced in the first step were significantly related to each of the dependent variables, for a proportion of explained variance ranging from 1% to 5%.

Contextual Characteristics

Among the independent variables introduced in the second step, teaching level was significantly associated with three scales of the proactive / positive dimension: the higher the teaching level in elementary school, the less teachers reported using positive reinforcement, self-regulation, and observational / functional assessment. Teaching level was also significantly associated with both scales of the reductive dimension: the higher the teaching level in elementary school, the less teachers reported using educational consequence practices and the more they reported using the coercive / punitive practices. The variable of participation in an individualized education plan was also significantly associated with five scales of practices: the more teachers reported having participated in the development of an individualized educational plan, the more frequently they reported using instructional planning and resource management, positive reinforcement, self-regulation, and both scales of reductive practices.

School setting was significantly associated with four practices: general education teachers reported using less frequently the practices of teaching planning, positive reinforcement, self-regulation, observational / functional assessment. Among the training variables, the preservice training was the only one associated with coercive / punitive practices scale: the more hours of training received, the less teachers used these practices. For all the hierarchical models verified on the practices, no significant association was found with the number of students with behaviour difficulties in the classroom.

Taken together, the independent variables introduced in step two were significantly related to six dependent variables, in proportions ranging from 1% to 13%.

TABLE 4. *Hierarchical regression models predicting classroom behaviour management practices (n = 1373)*

Predictors (IV)	1. Teaching planning		2. Rules and instructions		3. Positive reinforcement		4. Self-regulation		5. Observation/ assessment		6. Educational consequence		7. Coercive punitive	
	B	β	B	β	B	β	B	β	B	β	B	β	B	β
Source (a)	.02	.02	.05	.04	.05	.03	.05	.03	.04	.02	.05	.03	.00	.00
Source (b)	.00	.00	-.07	-.04	-.10	-.04	-.17***	-.08	-.09	-.03	-.13*	-.06	-.12	-.04
Step 1														
Gender	-.19***	-.14	-.18***	-.13	-.20***	-.11	-.18***	-.11	-.06	-.03	-.06	-.03	.05	.02
Teaching experience	.01***	.16	.01***	.16	.00**	.08	.01***	.15	.01***	.18	.00**	-.08	.00*	.06
ΔR^2	.05***		.05***		.04***		.05***		.04***		.02***		.01*	
Δ F-value df (4, 1368)	F = 15.97***		F = 16.70***		F = 6.71***		F = 17.17***		F = 12.81***		F = 5.58***		F = 3.07*	
Step 2														
Educational setting	-.07*	-.06	.06	.05	-.12**	-.08	-.11**	-.08	-.14*	-.07	-.02	-.01	-.02	-.01
Grade level	.00	-.00	-.00	-.01	-.03***	-.13	-.02**	-.08	-.02*	-.06	-.02**	-.07	.04***	.14
Training-preservice	.00	.00	.00	.01	.00	.05	.00	.04	.00	.02	.00	-.04	-.00*	-.06
Training-inservice	.00*	.06	.00	.05	.00	.02	.00	.05	.00*	.06	.00	.01	.00	.01
Student in class	-.00	-.01	.00	.00	-.00	-.01	.00	.03	.00	.03	.00	-.00	.01	.05
IEP participation	.00*	.06	.00	.05	.01**	.08	.01*	.07	.00	.04	.01*	.06	.01*	.07
ΔR^2	.01**		.01		.13***		.03***		.02***		.01*		.04***	
Δ F-value df (6, 1362)	F = 3.07**		F = 1.56		F = 28.73***		F = 7.62***		F = 4.61***		F = 2.26*		F = 8.36***	
Total Adjusted R2	.05**		.05		.16***		.07***		.05***		.02*		.04***	
F-value total df (10, 1362)	F = 8.29***		F = 7.63***		F = 9.62***		F = 11.64***		F = 7.97***		F = 3.60***		F = 6.29***	

NOTE. IEP = Individualized education plan. Gender coded as **male** = 0, **female** = 1. Teacher's setting coded as **general** = 0, **special** = 1. Grade level coded as **Preschool** = 1 to 6th grade = 7. Training Preservice and Inservice = **hours**. Student with disruptive behaviour in class and PI Participation = **number**.

*p < .05. **p < .01. ***p < .001.

DISCUSSION

This article set out to examine the practices used by pre- and elementary school teachers to manage difficult behaviours in the regular classroom in Quebec. The portrait of teaching practices is first discussed, followed by the relationships that emerged between individual and contextual variables.

Portrait of Preschool and Elementary Teachers' Practices in Quebec

Overall, the results suggest that the gap between the frequency of the teachers' use of recommended practices and the frequencies found in other studies is not as large as anticipated (Evans et al., 2012; Gable et al., 2012; State et al., 2017). Globally speaking, teachers often reported using practices that fell under the proactive dimension. The most used practices were: the establishment of clear rules, instructions and routines; teaching planning and resource management; and positive reinforcement. These results are consistent with other studies (Gable et al., 2012; Reddy et al., 2013; State et al., 2017) and support the assumption that classroom-wide practices requiring less individual time or effort are more commonly used (Sugai & Horner, 2009; Warmbold-Brann et al., 2017; Waschbusch et al., 2019). This would also explain the fact that self-regulation practices are less often used because they are perceived as more demanding, suggesting at the same time that students with disruptive behaviour are less likely to experience opportunities to develop or learn self-regulation skills (Carter et al., 2011), like (re-) focus on a task, calm down after something exciting or upsetting, regulate reactions to strong emotions like frustation. In the same trend, observing and identifying environmental cues in relation to the disruptive behaviour are practices that are less often used by teachers. This finding could be related to the fact that teachers are not necessarily trained to obtain a comprehensive understanding of the transaction between the student and his environment (including teacher practices). Alternatively, it could point to teacher misconception about observation and assessment of student behaviour, which may be mistakenly associated with intensive or demanding practices that require a more systematic follow-up with a specific student or additional intervention.

It is nevertheless encouraging to note that unlike in other studies, the frequency of use of practices in the proactive dimension was higher than the reductive dimension, and that the coercive / punitive practices were reported to be used the least often. It is possible that the use of a wider range of practices helped yield a more comprehensive and positive profile of actual classroom practices. Still, the reported frequency of use of reductive practices such as educational consequences remain close to some proactive practices, and suggests that the praise-reprimand ratio may be similar to the one found in previous studies (Evans et al., 2012; Reddy et al., 2013).

Practices in Relation to Teachers' Characteristics

The results highlight the interrelationship between teachers' self-reported practices and their individual and contextual characteristics, in addition to clarifying the distinct contribution of these characteristics. Teaching experience, teaching level, and participation in an individualized education plan are the variables related to a higher number of practices. The results obtained and discussed above are based on an explained variance that can be qualified as marginal and thus needs to be carefully interpreted.

Individual Characteristics

The results indicate that as teachers' years of teaching experience increase, the more likely teachers would slightly increase the frequency of use of the practice set. These results are in contrast to a study by Reddy and colleagues (2013), but consistent with the study by State and colleagues (2017) that show an increase in practice implementation as a function of teachers' years of experience following training. Nonetheless, the fact that more years of teaching experience is also associated with more frequent use of reductive practices is concerning. Indeed, it may suggest issues with processes of professional integration concerning classroom management of the kind that fosters prosocial behaviours and a positive learning climate (State et al., 2011). Awareness should be raised about the proactive / positive-reductive dimensions ratio in relation to the recommended praise-reprimand ratio mentioned earlier (Cook et al., 2018; Pfiffner et al., 1985). Engagement in supportive and positive practices needs to be encouraged at a rate of three to five times more often than reductive practices.

The results also provide information on the relationship between teacher gender and practices used. To some extent, women reported more frequent use of practices geared toward planning and resource management, positive reinforcement, and self-regulation support. It may be, following on studies of instructional practices (Sabbe & Aelterman, 2007; Schiefele, 2017), that women are more inclined to use recommended practices than men.

Contextual Characteristics

Among all the contextual variables studied in this research, grade level appears to be influential in relation to the practices reported by the teachers. Overall, the more teachers teach at an upper level, the more likely they are to use coercive / punitive practices and the less likely they are to use proactive practices. These results are in line with Reddy and colleagues (2013), who noted that teachers at higher levels used more practices aiming to support students' metacognitive thinking and monitor their progress. Rather, it appears that the higher grade level at which teachers teach, the less likely teachers are to promote the learning of appropriate behaviours and prevent problematic ones, and the more likely they are to try to eliminate disruptive behaviours.

Encouragingly, these results indicate that participation in an individualized education plan significantly contributes to increasing the frequency of use of certain proactive practices albeit also reductive ones. In the absence of prior studies verifying the contribution of this participation, it is reasonable to anticipate that, similar to the effects of a consultation process (Nadeau et al., 2012; Holdaway & Owens, 2015), multidisciplinary team discussions and the support provided to teachers will help them better understand the nature of students' needs and difficulties, and consequently to implement the practices effectively.

In line with previous studies examining influence according to school settings (Evans et al., 2012; Floress et al., 2017; Gable et al., 2012), the results indicate that special education teachers use practices belonging to the proactive dimension, such as self-regulation, positive reinforcement and observation / functional assessment, slightly more often in comparison to general teachers. This small but significant difference may be explained by the compositions of the teachers' classrooms. General education teachers must manage the learning and behaviour of students with diverse needs, which may make their task more complex and leave fewer opportunities or less time for individualized practices. For their part, special education teachers are more likely to have classrooms with a higher number of students exhibiting self-control problems, thus prompting them to use individualized practices more often. Moreover, the differences according to setting may also be tied to the higher number hours of training completed on behaviour difficulties. A study by Gable and colleagues (2012) suggests that general education teachers may feel less equipped to use positive reinforcement and observational / functional assessment systems than special education teachers. Notably, the results from the current study indicate that except for preservice training in relation with coercice / punitive practices, there is no association between the number of training hours and others practices. Thus, the fewer hours of training teachers received during their preservice training, the more they used coercive / punitive practices, and conversely, the more hours of in-service training they completed, the more they used observational / functional assessment. Finally, the number of students with behaviour difficulties included in a group is not related to the frequency with which teachers use the practices.

Certain limitations of this study should nuance the interpretation of the results. The self-report questionnaire may have contributed to drawing a more positive picture of the practices used by teachers (Hogan, 2019). However, the validity of our results is supported by studies suggesting that self-reported practices and classroom observations are strongly correlated when the items are linked to specific goals and represent the same trends (Clunies-Ross et al., 2008; Debnam et al., 2015; Gitomer et al., 2014). Regarding the measurement instrument, it could be helpful in some situations to add a timeline within which teachers are asked to evaluate their frequency of use of each practice (e.g., in the last 2 weeks). Further, the study might benefit from including a scale specifically addressing collaboration practices with families, which is upheld by the scholarly literature

as a way to promote academic performance (Cox, 2005).

About the analysis used, other associations between variables (e.g. between independent or dependant variables) could help better adjust the model evaluated. Along the same lines, the low variance explained by the model's suggests that investigation of other variables is needed to better understand what can influence the use of the practices bu the teachers. This result is surprising considering that the variables introduced in the present study are those that were primarily identified in previous studies (e.g., Evans et al., 2012; Reddy et al., 2013) or in studies assessing the effects of in-service training on teachers' practices (Aarons et al., 2011). Compared to these studies, the more robust methods of analysis used by the present study suggest instead that relative importance be given to the characteristics examined. Indeed, the most previous studies did not report results that identified the percentage of variance explained for each variable. In short, although the present study was intended to be exploratory, it contributes to the advancement of knowledge by specifying the relative influence of these variables on the use of practices by teachers.

To account for the small proportion of the variance in the practices explained by the characteristics examined, other avenues must be explored through research and the school community. In this sense, pre-service teacher training programs or schools offering in-service training can't only rely on the characteristics examined to identify teachers' needs. For instance, an interesting avenue would be to investigate the role of teacher beliefs (Ajzen, 2012). In particular, the links between the use of teaching practices and the beliefs that teachers have toward students with disruptive behaviours, such as their attitudes toward the students' integration in regular classrooms or feelings of self-efficacy to teach those students (MacFarlane & Woolfson, 2013). In addition, the representations that teachers may have regarding the achievement of the objectives established by the curriculum/pedagogical framework or the educational setting (general or special), as well as the expectations perceived on the part of their management or school team, deserve to be studied. It could also be relevant to study the role of support or accompaniment received by teachers in facilitating the school inclusion of those students. Further, a mixed methodology approach including observations or interviews with teachers would help build on the goals of the present study and confirm the fidelity of implementation of practices.

CONCLUSION

In a context of inclusive education, teacher is called to support the heterogenous needs of their students and to promote their psychosocial adjustement by the use of differentiated (various) practices. The present study has, for the first time, established a portrait of a range of class-wide behavioural management practices by surveying a large numer of pre- and elementary school teachers. The results have documented the most and least used practices in a classroom setting and help

guide efforts to close the gap between evidence-based and implemented practices. Compared to previous studies conducted in other nations with a similar research focus, this study also undelines the relative influence of teacher characteristics and the need to take greater account of certain contextual characteristics, such as teacher support and consultation. Given that teaching experience seems to be negatively associated with the use of coercive / punitive practices, better understanding the reasons behind their use appears to be a relevant theme to explore. These could provide solutions likely to guide the modalities and content of teacher training programs (initial and in-service), and thus better support better support teachers in using practices that promote the development and acquisition of students' social and emotional competence and skills.

REFERENCES

Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*(1), 4-23. https://doi.org/10.1007/s10488-010-0327-7

Ajzen, I. (2012). The theory of planned behaviour. In P. A. M. Van Lange, A. M. Kruglanski & E. T. Higgins (Eds.), *Handbook of theories of social psychology*, (pp. 438-459). Sage Publications. https://doi.org/10.4135/9781446249215.n22

Boutin, G., Bessette, L., & Dridi, H. (2015). *L'intégration scolaire telle que vécue par des enseignants dans des écoles du Québec (ISVEQ).* Université du Québec à Montréal. https://www.lafae.qc.ca/wp-content/uploads/2016/04/20160419_Rapport-integration-UQAM_recherche_Boutin-Bessette.pdf

Briesch, A. M., & Chafouleas, S. M. (2009). Review and analysis of literature on self-management interventions to promote appropriate classroom behaviors (1988–2008). *School Psychology Quarterly*, *24(2)*, 106-118. https://doi.org/10.1037/a0016159

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models*,154, 136-162. Sage Focus Editions.

Carter, E. W., Lane, K. L., Crnobori, M., Bruhn, A. L., & Oakes, W. P. (2011). Self-determination interventions for students with and at risk for emotional and behavioral disorders: Mapping the knowledge base. *Behavioral Disorders*, *36*(2), 100-116. https://doi.org/10.1177/019874291103600202

Chaffee, R. K., Briesch, A. M., Johnson, A. H., & Volpe, R. J. (2017). A meta-analysis of class-wide interventions for supporting student behavior. *School Psychology Review*, *46*(2), 149-164. https://doi.org/10.17105/spr-2017-0015.v46-2

Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66*(1), 7-18. https://doi.org/10.1037/0022-006X.66.1.7

Clunies-Ross, P., Little, E., & Kienhuis, M. (2008). Self-reported and actual use of proactive and reactive classroom management strategies and their relationship with teacher stress and student behaviour. *Educational Psychology, 28*(6), 693-710. https://doi.org/10.1080/01443410802206700

Cook, C. R., Coco, S., Zhang, Y., Fiat, A. E., Duong, M. T., Renshaw, T. L., Long, A. C., & Frank, S. (2018). Cultivating positive teacher-student relationships: Preliminary evaluation of the Establish-Maintain-Restore (EMR) method. *School Psychology Review, 47*(3), 226-243. https://doi.org/10.17105/SPR-2017-0025.V47-3

Cooper, J. O., Heron, T. E., & Heward, W. L. (2020). *Applied behavior analysis* (3rd ed.). Pearson.

Cooper, P., & Cefai, C. (2013). Evidence-based approaches to social, emotional and behaviour difficulties in schools [Special issue]. *KEDI Journal of Educational Policy, 10*(3), 81-101.

Cox, D. D. (2005). Evidence-based interventions using home-school collaboration. *School Psychology Quarterly, 20*(4), 473-497. https://doi.org/10.1521/scpq.2005.20.4.473

Debnam, K. J., Pas, E. T., Bottiani, J., Cash, A. H., & Bradshaw, C. P. (2015). An examination of the association between observed and self-reported culturally proficient teaching practices. *Psychology in the Schools, 52*(6), 533-548. https://doi.org/10.1002/pits.21845

Drevon, D. D., & Hixson, M. D. (2019). Reductive interventions. In K. C. Radley & E. H. Dart. (Eds), *Handbook of behavioral interventions in schools: Multi-tiered systems of support*, 286-307. Oxford University Press. https://doi.org/10.1093/med-psych/9780190843229.003.0015

Eisenberg, N., Spinrad, T. L., & Morris, A. S. (2013). Prosocial development. In P. D. Zelazo (Dir.), *The Oxford Handbook of Developmental Psychology*, Vol. 2, 300-325. Oxford University Press.

Evans, C., Weiss, S. L., & Cullinan, D. (2012). Teacher perceptions and behavioral strategies for students with emotional disturbance across educational environments. *Preventing School Failure: Alternative Education for Children and Youth*, *56*(2), 82-90. https://doi.org/10.1080/1045988X.2011.574170

Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education, 28*(4), 514-525. https://doi.org/10.1016/j.tate.2011.11.013

Floress, M. T., Berlinghof, J. R., Rader, R. A., & Riedesel, E. K. (2017). Preschool teachers' use of praise in general, at-risk, and special education classrooms. *Psychology in the Schools, 54*(5), 519-531. https://doi.org/10.1002/pits.22014

Forness, S. R., Kim, J., & Walker, H. M. (2012). Prevalence of students with EBD: Impact on general education. *Beyond Behaviour, 21*(2), 3-10.

Gable, R. A., Hester, P. H., Rock, M. L., & Hughes, K. G. (2009). Back to basics: Rules, praise, ignoring, and reprimands revisited. *Intervention in School and Clinic, 44*(4), 195-205. https://doi.org/10.1177/1053451208328831

Gable, R. A., Tonelson, S. W., Sheth, M., Wilson, C., & Park, K. L. (2012). Importance, usage, and preparedness to implement evidence-based practices for students with emotional disabilities: A comparison of knowledge and skills of special education and general education teachers. *Education and Treatment of Children, 35*(4), 499-520. https://doi.org/10.1353/etc.2012.0030

Gaudreau, N. (2017). Gérer efficacement sa classe: les cinq ingrédients essentiels. PUQ.

Gitomer, D., Bell, C., Qi, Y., McCaffrey, D., Hamre, B. K., & Pianta, R. C. (2014). The instructional challenge in improving teaching quality: Lessons from a classroom observation protocol. *Teachers College Record, 116*(6), 1-32.

Hogan, T. P. (2019). Psychological testing: A practical introduction (4th ed.). Wiley.

Holdaway, A. S., & Owens, J. S. (2015). The effect of training and consultation condition on teachers' self-reported likelihood of adoption of a daily report card. *Journal of Educational Psychology, 107*(1), 222-235. https://doi.org/10.1037/a0037466

Hornby, G., & Evans, B. (2014). Including students with significant social, emotional and behavioral difficulties in mainstream school settings. In P. Garner, J. Kauffman, & J. Elliot (Eds.), *The Sage handbook of emotional and behavioral difficulties* (2nd ed., pp. 335-348). Sage Publications.

Hox, J. J., Moerbeek, M., & van de Schoot, R. (2018). *Multilevel analysis: Techniques and applications* (3rd ed.). Routledge.

Kamanzi, P. C., Barroso da Costa, C. & Ndinga, P. (2017). Désengagement professionnel des enseignants canadiens : de la vocation à la désillusion. Une analyse à partir d'une modélisation par équations structurelles [Professional disengagement of canadian teachers: From vocation to disillusion. A structural equation modeling analysis]. *McGill Journal of Education, 52*(1), 115-134. https://doi.org/10.7202/1040807ar

Kauffman, J. M. et Landrum, T. J. (2018). *Characteristics of emotional and behavioral disorders of children and youth* (11th ed.). Pearson.

Kazdin, A. E. (2019). *Behaviour modification in applied settings* (8th ed.). Waveland Press.

Kern, L., & Chen, R. (2019). Antecedent interventions. In K. C. Radley & E. H Dart. (Eds.), *Handbook of behavioral interventions in schools: Multi-tiered systems of support* (pp. 250-267). Oxford University Press. https://doi.org/10.1093/med-psych/9780190843229.003.0013

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Koziol Jr, S. M., & Burns, P. (1986). Teachers' accuracy in self-reporting about instructional practices using a focused self-report inventory. *The Journal of Educational Research, 79*(4), 205-209.

Kratochwill, T. R., Hitchcock, J. H., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2013). Single-case intervention research design standards. *Remedial and Special Education, 34*(1), 26-38. https://doi.org/10.1177/0741932512452794

Leflot, G., van Lier, P. A. C., Onghena, P., & Colpin, H. (2010). The role of teacher behaviour management in the development of disruptive behaviors: An intervention study with the good behaviour game. *Journal of Abnormal Child Psychology, 38*(6), 869-882. https://doi.org/10.1007/s10802-010-9411-4

MacFarlane, K., & Woolfson, L. M. (2013). Teacher attitudes and behavior toward the inclusion of children with social, emotional and behavioral difficulties in mainstream schools: An application of the theory of planned behavior. *Teaching and teacher education*, 29, 46-52.

Maggin, D. M., Wehby, J. H., Moore Partin, T. C., Robertson, R., & Oliver, R. M. (2011). A comparison of the instructional context for students with behavioral issues enrolled in self-contained and general education classrooms. *Behavioral Disorders, 36*(2), 84-99. https://doi.org/10.1177/019874291103600201

Martin, N. K., Sass, D. A., & Schmitt, T. A. (2012). Teacher efficacy in student engagement, instructional management, student stressors, and burnout: A theoretical model using in-class variables to predict teachers' intent-to-leave. *Teaching and Teacher Education, 28*(4), 546-559. https://doi.org/10.1016/j.tate.2011.12.003

Massé, L., Verret, C., Gaudreau, N., & Nadeau, M.-F. (2018, août). *Portrait des pratiques éducatives utilisées pour les élèves présentant des troubles du comportement et conditions de mise en place. Rapport scientifique intégral.* Projet : *2014-RP-179132* Fonds de recherche du Québec Société et Culture.

http://www.frqsc.gouv.qc.ca/documents/11326/2801941/PRS_rapport_L.Masse_troubles-comportement.pdf/c3885d6c-c342-4cb0-af23-14c3de0d803f

Michail, S. (2012). *"...Becouse suspension dosent teatch you anything"[sic]: What students with challenging behaviours say about school suspension* [Paper presentation]. AARE/APERA Conference, Sydney, NSW, Australia. https://www.aare.edu.au/data/publications/2012/Michail12.pdf

Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry, 11*(1), 11-15. https://doi.org/10.1016/j.wpsyc.2012.01.003

Ministère de l'Éducation et de l'Enseignement supérieur (MEES). (2015). *Statistique de l'éducation : éducation préscolaire, enseignement primaire et secondaire.* Gouvernement du Québec. http://www.education.gouv.qc.ca/fileadmin/site_web/documents/PSG/statistiques_info_decisionnelle/15-00503_statistiques_2015_edition_v25oct.pdf

Ministère de l'Éducation et de l'Enseignement supérieur (MEES). (2017). *Politique de la réussite éducative : le plaisir d'apprendre, la chance de réussir.* Gouvernement du Québec. http://www.education.gouv.qc.ca/fileadmin/site_web/documents/PSG/politiques_orientations/politique_reussite_educative_10juillet_F_1.pdf

Ministère de l'Éducation, de l'Enseignement supérieur et de la Recherche (MEESR). (2015). *Cadre de référence et guide à l'intention du milieu scolaire : l'intervention auprès des élèves ayant des difficultés de comportement* [Reference framework and guide for schools: Intervention with students with behavioral difficulties]. Gouvernement du Québec. http://www.education.gouv.qc.ca/fileadmin/site_web/documents/education/adaptation-scolaire-services-comp/14_00479_cadre_intervention_eleves_difficultes_comportement.pdf

Nadeau, M. F., Couture, C., & Gaudreau, N. (2020). *Les interventions comportementales: promouvoir l'adaptation scolaire et sociale.* In L. Massé, N. Desbiens et C. Lanaris (dir.), *Les troubles du comportement à l'école* (3, p261-288). Chenelière Éducation.

Nadeau, M.-F., Massé, L., Verret, C., Gaudreau, N., Couture, C., Lemieux, A., Bégin, J.-Y., & Lagacé-Leblanc, J. (2018). Développement et validation de l'*Inventaire des pratiques de gestion des comportements en classe.* In M. Lapalme, A.-M. Tougas et M.-J. Letarte (eds), *Recherches qualitatives et quantitatives en sciences humaines et sociales : Pour une formation théorique et pratique appuyée empiriquement* (p 67-88). Éditions JFB.

Office of Special Education Programs. (2015). *Supporting and responding to behaviour: Evidence-based classroom strategies for teachers.* https://osepideasthatwork.org/sites/default/files/ClassroomPBIS_508.pdf

Nadeau, M.-F., Normandeau, S., & Massé, L. (2012). Efficacité d'un programme de consultation pour les enseignants du primaire visant à favoriser l'inclusion scolaire des enfants ayant un TDAH *Canadian Journal of Behavioural Science, 44*(2), 146-157. https://doi.org/10.1037/a0024655

Nadeau, M.-F., Normandeau, S., & Massé, L. (2015). TDAH et interventions scolaires efficaces: fondements et principes d'un programme de consultation individuelle. *Revue de psychoéducation,* 44(1), 1-23. https://doi.org/10.7202/1039268ar

Payne, R. (2015). Using rewards and sanctions in the classroom: Pupils' perceptions of their own responses to current behaviour management strategies. *Educational Review, 67*(4), 483-504. https://doi.org/10.1080/00131911.2015.1008407

Pfiffner, L. J., Rosén, L. A., & O'Leary, S. G. (1985). The efficacy of an all-positive approach to classroom management. *Journal of Applied Behaviour Analysis, 18*(3), 257-261. https://doi.org/10.1901/jaba.1985.18-257

Reddy, L. A., Fabiano, G. A., Dudek, C. M., & Hsu, L. (2013). Instructional and behaviour management practices implemented by elementary general education teachers. *Journal of School Psychology, 51*(6), 683-700. https://doi.org/10.1016/j.jsp.2013.10.001

Rousseau, N., Point, M., Vienneau, R., Blais, S., Desmarais, K., Maunier, S., Renaud, M., Riddell, K. & Tétreault, K. (2014). *Les enjeux de l'intégration et de l'inclusion scolaire des élèves à risque du primaire et du secondaire : méta-analyse et méta-synthèse.* Ministère de l'Éducation, de l'Enseignement supérieur et de la Recherche; Fonds de recherche du Québec - Société et culture (FRQSC). http://www.frqsc.gouv.qc.ca/documents/11326/448958/PC_RousseauN_rapport_integration-inclusion.pdf/65f4f932-3595-448a-a8d8-db22b1df32b9

Sabbe, E., & Aelterman, A. (2007). Gender in teaching: A literature review. *Teachers and Teaching: Theory and Practice, 13*(5), 521-538. https://doi.org/10.1080/13540600701561729

Schiefele, U. (2017). Classroom management and mastery-oriented instruction as mediators of the effects of teacher motivation on student motivation. *Teaching and Teacher Education, 64*(2017), 115-126. https://doi.org/10.1016/j.tate.2017.02.004

Schiefele, U., & Schaffner, E. (2015). Teacher interests, mastery goals, and self-efficacy as predictors of instructional practices and student motivation. *Contemporary Educational Psychology, 42*, 159-171. https://doi.org/10.1016/j.cedpsych.2015.06.005.

Sellman, E. (2009). Lessons learned: Student voice at a school for pupils experiencing social, emotional and behavioural difficulties. *Emotional and Behavioural Difficulties, 14*(1), 33-48. https://doi.org/10.1080/13632750802655687

State, T. M., Harrison, J. R., Kern, L., & Lewis, T. J. (2017). Feasibility and acceptability of classroom-based interventions for students with emotional/behavioral challenges at the high school level. *Journal of Positive Behaviour Interventions, 19*(1), 26-36. https://doi.org/10.1177/1098300716648459

State, T. M., Kern, L., Starosta, K. M., & Mukherjee, A. D. (2011). Elementary pre-service teacher preparation in the area of social, emotional, and behavioral problems. *School Mental Health, 3*(1), 13-23. https://doi.org/10.1007/s12310-010-9044-3

Steege, M. W., Pratt, J. L., Wickerd, G., Guare, R., & Watson, T. S. (2019). *Conducting school-based functional behavioral assessments: A practitioner's guide* (3rd ed.). Guilford Press.

Sugai, G., & Horner, R. H. (2009). Responsiveness-to-intervention and school-wide positive behaviour supports: Integration of multi-tiered system approaches. *Exceptionality, 17*(4), 223-237. https://doi.org/10.1080/09362830903235375

Rose-Krasnor, L., & Denham, S. (2009). Social-emotional competence in early childhood. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Dir.), *Handbook of peer interactions, relationships, and groups* (p. 162-179). Guilford Press.

Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson.

United Nations Educational, Scientific and Cultural Organization (UNESCO). (1994). *The Salamanca statement and framework for action on special needs education* [Paper presentation]. World Conference on Special Needs Education: Access and Quality, Salamanca, SLM, Spain. https://unesdoc.unesco.org/ark:/48223/pf0000098427

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2009). *Policy guidelines on inclusion in education.* https://unesdoc.unesco.org/ark:/48223/pf0000177849?posInSet=1&queryId=ecd01391-8d88-4548-80ab-01c4e434fa37

Warmbold-Brann, K., Burns, M. K., Preast, J. L., Taylor, C. N., & Aguilar, L. N. (2017). Meta-analysis of the effects of academic interventions and modifications on student behaviour outcomes. *School Psychology Quarterly, 32*(3), 291-305. https://doi.org/10.1037/spq0000207

Waschbusch, D. A., Breaux, R. P., & Babinski, D. E. (2019). School-based interventions for aggression and defiance in youth: A framework for evidence-based practice. *School Mental Health, 11*(1), 92-105. https://doi.org/10.1007/s12310-018-9269-0

Williams, A., & Protheroe, N. (2008). *How to conduct survey research: A guide for schools*. Educational Research Service.

MARIE-FRANCE NADEAU M.ps, Ph.D., psychology, Is a full professor in the Faculty of Education at Université de Sherbrooke. Her research mainly focuses on practices conducive to inclusive classroom interactions and meeting the diverse needs of all students. m-f.nadeau@usherbrooke.ca

LINE MASSÉ, Ph.D., Is a full professor in the department of psychoeducation at the University of Quebec at Trois-Rivières. Her research focuses mainly on practices with regard to children or adolescents with externalized or internalized behavioral disorders, and the education of gifted children. line.masse@uqtr.ca

CLAUDIA VERRET Ph.D., Is a professor in the Department of physical activity at Université du Québec à Montréal. Her research interests concern inclusive education, especially in physical activity context. verret.claudia@uqam.ca

NANCY GUADREAU Ph.D., is a full professor in department of studies on teaching and learning of the faculty of education sciences of Université Laval. Her research focuses on intervention with students with social-emotional and behavioral difficulties and the professional development of school staff in this area. nancy.gaudreau@fse.ulaval.ca

JEANNE LAGACÉ-LEBLANC Got her Ph.D. in psychoeducation at Université du Québec à Trois-Rivières. Her research interests include the experiences of students with disabilities, reasonable accommodations and inclusive education for postsecondary instructors. jeanne.lagace.leblanc@uqtr.ca

MARIE-FRANCE NADEAU M.ps Ph.D., psychologue, est professeure titulaire à la Faculté des sciences de l'éducation de l'Université de Sherbrooke. Ses recherches portent sur les pratiques favorisant les interactions inclusives en classe et la réponse aux besoins diversifiés de tous les élèves. m-f.nadeau@usherbrooke.ca

LINE MASSÉ Ph.D., est professeure titulaire au département de psychoéducation de l'Université du Québec à Trois-Rivières. Ses intérêts de recherche portent principalement sur les interventions adressées aux élèves présentant des difficultés de comportement intériorisées ou extériorisées et sur l'éducation des élèves doués. line.masse@uqtr.ca

CLAUDIA VERRET Ph.D., est professeure titulaire au département d'activité physique de l'Université du Québec à Montréal. Ses recherches portent sur l'éducation inclusive, en particulier dans le contexte de l'activité physique. verret.claudia@uqam.ca

NANCY GUADREAU Ph.D., est professeure titulaire est département d'études sur l'enseignement et l'apprentissage de la faculté des sciences de l'éducation de l'Université Laval. Ses recherches portent sur l'intervention auprès des élèves présentant des difficultés socioémotionnelles et comportementales ainsi que sur le développement professionnel du personnel scolaire dans ce domaine. nancy.gaudreau@fse.ulaval.ca

JEANNE LAGACÉ-LEBLANC Ph.D., a obtenu son doctorat en psychoéducation à l'Université du Québec à Trois-Rivières. Ses recherches portent sur l'expérience des étudiants en situation de handicap, les accommodements raisonnables et l'éducation inclusive pour les enseignants du postsecondaire. jeanne.lagace.leblanc@uqtr.ca