

Université de Montréal

Difficultés intériorisées et extériorisées d'adolescents de milieux défavorisés : contribution des caractéristiques individuelles et familiales

Par  
Sarah Shortridge

École de Psychoéducation  
Faculté des arts et sciences

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*Cette thèse intitulée*

**Difficultés intériorisées et extériorisées d'adolescents de milieux défavorisés : contribution des caractéristiques individuelles et familiales**

*Présentée par*

**Sarah Shortridge**

*A été évaluée par un jury composé des personnes suivantes*

**Stéphane Cantin**  
Président-rapporteur

**Isabelle Archambault**  
Directrice de recherche

**Elizabeth Olivier**  
Membre du jury

**Mélanie Lapalme**  
Examinatrice externe

## RESUMÉ

Les difficultés intériorisées et extériorisées sont bien documentées pour leur impact négatif sur le développement des adolescents au secondaire. Les effets nuisibles de ces dernières sont d'autant plus marqués chez les jeunes de milieux défavorisés. Certains auteurs se sont donc penchés sur les facteurs qui peuvent contribuer à l'augmentation et au maintien des difficultés intériorisées et extériorisées chez les adolescents. Parmi ces facteurs, on identifie certaines caractéristiques individuelles et caractéristiques familiales qui présentent des associations bien documentées avec les difficultés intériorisées et extériorisées. Plus spécifiquement, les caractéristiques individuelles mises de l'avant sont l'estime de soi et l'engagement scolaire comportemental. Du côté des caractéristiques familiales, on reconnaît l'implication scolaire parentale. Toutefois, à ce jour, aucune étude longitudinale n'a exploré l'apport respectif des ces caractéristiques individuelles et familiales au développement des difficultés intériorisées et extériorisées. Conséquemment, la présente thèse vise l'approfondissement de la compréhension de ces liens chez les adolescents de milieux défavorisés.

Ainsi, un premier article (Chapitre II) a permis d'explorer caractéristiques individuelles des adolescents d'écoles défavorisées comme précurseur aux les comportements intériorisés et extériorisés. Les résultats ont permis d'identifier que les difficultés intériorisées et extériorisées, soit la violence relationnelle et la dépression agissent comme médiateur dans la relation entre l'estime de soi et l'engagement scolaire comportemental. De plus, cette étude établit que ce constat s'applique de manière identique aux adolescents et aux adolescentes.

Ensuite, le second article (Chapitre III) a permis d'explorer les comportements intériorisés et extériorisés comme résultat du contexte de vie, soit des caractéristiques familiales. Cette étude se penche aussi sur la stabilité homotypique et hétérotypique des comportement intériorisés et extériorisés. Globalement, les résultats montrent que les symptômes dépressifs agissent comme mécanisme explicatif du lien entre l'implication scolaire des parents et les difficultés extériorisées telles que la délinquance et la violence relationnelle. De plus, nos conclusions soulignent que la dépression et la délinquance montrent toutes deux une stabilité hétérotypique et hétérotypique chez les adolescents au secondaire. Finalement, on observe que ces résultats s'appliquent de la même manière tant chez les garçons que chez les filles.

En somme, l'exploration de la contribution respective des caractéristiques individuelles et familiales mènent à la conclusion que dans les deux cas, les difficultés intériorisées et

extériorisées sont un mécanisme central en secondaire 3. En effet, cela permet de dégager que les difficultés intériorisées et extériorisées sont au cœur des processus individuels chez les adolescents de milieux défavorisés. De plus, les deux études mettent de l'avant que ces mécanismes sont identiques chez les garçons et chez les filles.

**Mots-clés :** violence relationnelle, délinquance, dépression ; estime de soi ; engagement scolaire ; implication scolaire parentale

## ABSTRACT

Internalizing and externalizing difficulties are well documented for their impact on adolescent development in high school. The harmful effects of the latter are known for their greater impact in youth from disadvantaged backgrounds. Some authors have therefore focused on the factors that can contribute to the emergence or maintenance of internalizing and externalizing difficulties in adolescents. Among these factors, some individual and family characteristics have been identified for their well-documented associations with internalizing and externalizing difficulties. More specifically, the individual characteristics highlighted are self-esteem and behavioral school engagement. In terms of family characteristics, parental school involvement was given prominence. However, to date, no longitudinal study has explored the respective contribution of these individual and family characteristics to the development of internalizing and externalizing difficulties. Consequently, this thesis aims to deepen the understanding of these links among adolescents from disadvantaged backgrounds.

Thus, the first article (Chapter II) made it possible to explore internalizing and externalizing behaviors as a precursor to individual characteristics of adolescents from disadvantaged schools. The results identified that internalizing and externalizing difficulties, namely relational violence, and depression, mediate the relationship between self-esteem and behavioral school engagement. Moreover, this study establishes that this finding applies equally to boys and girls.

Then, the second article (Chapter III) explored internalizing and externalizing behaviors as a result of the life context, i.e., family characteristics. This study also examines the homotypic and heterotypic stability of internalizing and externalizing behaviors. Overall, the results show that depressive symptoms act as an explanatory mechanism for the link between parental school involvement and externalizing difficulties such as delinquency and relational violence. Moreover, our findings highlight that both depression and delinquency show heterotypic and homotypic stability in high school adolescents. Finally, we observe that these results apply the same way to boys and girls.

In short, the exploration of the respective contribution of individual and family characteristics leads to the conclusion that in both cases, internalizing and externalizing difficulties are a central mechanism in grade 9. Indeed, this allows us to put forward that internalizing and

externalizing difficulties are central to individual processes in adolescents from disadvantaged backgrounds. In addition, both studies show that these mechanisms are identical in boys and girls.

**Keywords:** Relational violence; delinquency; depression; self-esteem; school engagement; parental school involvement

## Table des matières

<b>Résumé.....</b>	<b>3</b>
<b>Abstract.....</b>	<b>5</b>
<b>Liste des tableaux.....</b>	<b>9</b>
<b>Liste des figures.....</b>	<b>10</b>
<b>Remerciements.....</b>	<b>11</b>
<b>Chapitre I.....</b>	<b>12</b>
<b>Introduction générale.....</b>	<b>13</b>
<b>Introduction.....</b>	<b>14</b>
Difficultés Intériorisées Et Extériorisées.....	14
Comorbidité.....	17
Stabilité Homotypique Et Hétérotypique.....	17
Modèles Théoriques.....	19
Caractéristiques Individuelles.....	23
Caractéristiques Familiales.....	27
<b>Objectifs et hypothèses générales.....</b>	<b>30</b>
Chapitre II.....	33
Psychosocial Maladjustment and Behavioral Engagement at School in Adolescents from Underprivileged Backgrounds: The Mediating Role of Self-Esteem.....	33
<b>Abstract.....</b>	<b>34</b>
<b>Introduction.....</b>	<b>35</b>
Psychosocial Maladjustment.....	35
Global Self-Esteem and Youth School Engagement.....	38
Developmental Cascades: Global Self-Esteem, Behavioral Engagement and Psychosocial Maladjustment.....	40
Objectives.....	42
<b>Method.....</b>	<b>43</b>
Participants.....	43
Measures.....	44
Analytic Strategy.....	47
<b>Results.....</b>	<b>49</b>
Preliminary Analysis.....	49
Model I—Direct and Indirect Associations Between Depression, Behavioral Engagement, And Self-Esteem.....	49
Model II—Direct and Indirect Associations Between Relational Violence, Behavioral Engagement, And Self-Esteem.....	51
<b>Discussion.....</b>	<b>52</b>
Strengths and Limitations.....	57
Conclusion.....	57
<b>References.....</b>	<b>62</b>

<b>Chapitre III.....</b>	<b>76</b>
Psychosocial Maladjustment in Adolescents from Underprivileged Backgrounds: The Contribution of Parental School Involvement.....	76
<b>Abstract.....</b>	<b>77</b>
<b>Introduction.....</b>	<b>78</b>
Parental School Involvement.....	79
Internalizing and Externalizing Difficulties.....	80
Homotypic and Heterotypic Stability .....	81
Parent School Involvement as Predictors.....	83
Objectives.....	86
<b>Method.....</b>	<b>86</b>
Participants.....	86
Measures.....	88
Analytic Strategy.....	91
<b>Results.....</b>	<b>92</b>
Preliminary Analysis.....	92
Results of the Structural Model.....	92
Multiple-Group Structural Invariance.....	95
<b>Discussion.....</b>	<b>95</b>
Strengths and Limitations.....	99
Conclusion.....	100
<b>References.....</b>	<b>107</b>
<b>Chapitre IV.....</b>	<b>117</b>
<b>Discussion générale.....</b>	<b>118</b>
<b>Résumé des principaux résultats.....</b>	<b>119</b>
Difficultés Intériorisées et Extériorisées.....	119
Variation Selon le Sexe.....	123
Implications Pour les Recherches Futures.....	124
Implications Pour la Théorie.....	126
Implications Pour la Pratique Psychoéducative.....	127
<b>Forces et Limites de la Thèse.....</b>	<b>129</b>
<b>Conclusion.....</b>	<b>131</b>
<b>Références.....</b>	<b>132</b>



## LISTE DES TABLEAUX

Table 2.1. <i>Correlation Matrix and Descriptive Statistics of Model I</i> .....	58
Table 2.2. <i>Contribution of Covariates to Self-esteem, Behavioral Engagement, Relational Violence, and Depression at T1, T2, and T3</i> .....	59
Table 3.1. <i>Correlation Matrix and Descriptive Statistics</i> .....	101
Table 3.2. <i>Contribution of Covariates to Parental School Involvement in Grade 7, Depressive Symptoms, Delinquency, and Relational Violence in Grade 9 and 11</i> . ....	102
Table 3.4. <i>Indirect Paths Between Parental School Involvement in Grade 7 and Depressive Symptoms, Delinquency, and Relational Violence in Grade 9 and Grade 11</i> . ....	104
Table 3.5. <i>Multiple-Group Structural Invariance: Comparison of Coefficients as a Function of Student Sex</i> .....	105

## LISTE DES FIGURES

<i>Figure 2.1.</i> Results of the Cross-Lag Model of Depression, Self-esteem and Behavioral youth engagement predicting the latter Over Time.....	60
<i>Figure 2.2.</i> Results of the Cross-Lagged Model of Relational Violence, Self-esteem and Behavioral youth engagement predicting the latter Over Time.....	61
<i>Figure 3.3.</i> Direct Paths Between Parental School Involvement in Grade 7 and Depressive Symptoms, Delinquency, and Relational Violence in Grade 9 and Grade 11.....	104

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**CHAPITRE I**  
**INTRODUCTION GÉNÉRALE**

## **PRÉSENTATION DE LA THÈSE**

La présente thèse rédigée par article comporte quatre chapitres. Le chapitre I est l'introduction générale de la thèse. Plus spécifiquement, cette section dresse un portrait des difficultés adaptatives intériorisées et extériorisées chez les adolescents de milieux défavorisés. Les modèles théoriques permettant d'expliquer le développement de ces difficultés, ainsi que les caractéristiques individuelles et familiales pertinentes à ces dernières sont aussi abordées. Puis, les objectifs et hypothèses généraux de la thèse sont énoncés. Le chapitre II inclut le premier article qui explore le rôle de comportements intériorisés et extériorisés comme précurseurs des difficultés individuelles des élèves, notamment l'estime de soi et l'engagement scolaire. Cet article présente les sections suivantes : une introduction, les objectifs et hypothèses, la méthode utilisée, les résultats, ainsi que la discussion et les références. Le chapitre III réfère au deuxième article qui porte plutôt sur le développement des difficultés intériorisées et extériorisées comme conséquences du contexte familial de l'adolescent, plus particulièrement d'un manque d'implication scolaire parental. Cet article inclut lui aussi l'introduction, les objectifs et hypothèses, la méthode utilisée, les résultats, ainsi que la discussion et les références. Finalement, le chapitre IV de la thèse constitue la discussion générale, le résumé des principaux résultats obtenus, les forces et les limites du projet, la conclusion et les références.

## INTRODUCTION

La santé mentale des adolescents est un enjeu fondamental de société, puisque les adolescents souffrant de difficultés intériorisées et extériorisées sont plus vulnérables à l'exclusion sociale, à la discrimination, à la stigmatisation, à des difficultés scolaires, à des comportements à risque, à des problèmes de santé physique ainsi qu'à des violations de leurs droits (Organisation Mondiale de la Santé, 2021). Par ailleurs, plusieurs auteurs affirment que les adolescents provenant de milieux défavorisés sont encore plus à risque de rencontrer de telles difficultés (McNeilly et al., 2021). C'est notamment le cas des difficultés intériorisées et extériorisées qui sont de plus en plus nombreuses chez les adolescents canadiens (Statistics Canada, 2022). Plusieurs chercheurs, professionnels, enseignants et parents expriment vouloir approfondir leur compréhension de ces difficultés pour soutenir plus adéquatement les jeunes. Afin d'égayer la compréhension du développement et du maintien des difficultés de santé mentale chez les adolescents de milieux défavorisés, cette introduction présente en premier lieu un portrait des difficultés intériorisées et extériorisées. Ensuite, les modèles théoriques pertinents à la compréhension du lien entre les caractéristiques individuelles et familiales des jeunes et leurs difficultés intériorisées et extériorisées seront abordés. Enfin, les objectifs de la thèse seront énoncés.

### **Difficultés intériorisées et extériorisées**

L'adaptation psychosociale des adolescents se caractérise par un état physique, psychologique et social exempt de difficultés majeures, leur permettant de fonctionner efficacement dans leur environnement scolaire, amical ou familial (Gauchat et al., 2020 ; Piqueras et al., 2019). Au contraire, l'inadaptation psychosociale correspond à un niveau de fonctionnement inférieur dans l'environnement et peut inclure la présence de symptômes psychopathologiques (American Psychological Association, 2022 ; Riquelme, Garcia et Serra, 2018). L'inadaptation psychosociale peut se présenter dans différentes sphères de la vie des adolescents, telles que sur les plans académique, social, et comportemental. L'inadaptation comportementale est généralement conçue en deux types distincts : les difficultés extériorisées et intériorisées.

Les difficultés extériorisées sont, d'une part, des comportements dirigés vers l'environnement. Ces difficultés sont de nature très diversifiée. Parmi ces dernières, on compte par exemple l'hyperactivité, l'impulsivité, les explosions de colère, la consommation de substance, les comportements perturbateurs, les comportements oppositionnels (Cox et al., 2021; Lorber et al.,

2015; Schindler et al., 2015; Wright et al., 2015), mais également la violence relationnelle ainsi que la délinquance (Hébert, 2018; Jones, 2018; Lopez-Tamayo et al., 2016). La violence relationnelle et les conduites délinquante sont d'ailleurs des difficultés importantes qui doivent être abordées à l'adolescence. En effet, elles ont tendance à augmenter transitoirement avec l'âge pour la plupart des jeunes (Chesta et al., 2022 ; Herrenkohl et al., 2022) et peuvent être une entrave à la réussite scolaire (Hoffman et al., 213 ; Samara et al., 2021). Parmi les difficultés extériorisées, la violence relationnelle et les conduites délinquante sont aussi le plus fortement associées à la consommation de substances, à la détresse psychologique, à l'augmentation des tentatives de suicide (Chen et al., 2016 ; Lanctôt et al., 2007) et avec des conséquences pénales à l'âge adulte (Kang et al., 2019 ; Kjellstrand et al., 2018 ; Mermott-Elison et al., 2020).

La prévalence de la violence relationnelle et des conduites délinquantes est aussi relativement élevée. En 2016, on évaluait que 41% des jeunes Québécois présentaient des comportements délinquants et 65% exhibaient de la violence relationnelle (Ministère de la Santé et des Services Sociaux, 2016). La violence relationnelle se caractérise plus précisément par des menaces de rejet, des insultes, des injures, des menaces de détruire des biens appartenant à autrui ou à émettre de fausses rumeurs (Beaulieu et Maltais, 2011; Duru et al., 2019; Leon-Moreno et al., 2019). Contrairement à l'agression verbale et physique qui cible directement les victimes, la violence relationnelle cherche plutôt à causer du dommage au statut social, ainsi qu'aux relation interpersonnelles de la victime (Karriker-Jaffe et al., 2009). Pour ce qui est des comportements délinquants, ils se définissent par des comportements illégaux sanctionnés par les autorités (Assink et al., 2015; Levey et al., 2019; Shek et Zhu, 2018). Ces comportements peuvent se traduire par des vols de biens, des affrontements violents en groupe, du vandalisme tourné contre les institutions comme les écoles et les bâtiments publics ainsi que par une opposition aux forces de l'ordre (Assink et al., 2015; Levey et al., 2019; Shek et Zhu, 2018). La violence relationnelle et les comportements délinquants sont mis de l'avant dans la littérature pour leur contribution marquante au développement. En effet, il s'agit des comportements les plus à risque d'engendrer des conséquences criminelles à l'âge adulte (Kjellstrand et al., 2018; Memmott-Elison et al., 2020).

À l'inverse, les difficultés adaptatives de type intériorisé sont plutôt tournées vers la personne même. Ces dernières incluent entre autres l'anxiété, l'isolement social et la dépression (Moreno, 2018; Oh et al., 2020; Olivier et al., 2018; Orri et al., 2020; Van der Ende et al., 2016; Wilner et al., 2016). En 2016 au Québec, on estimait qu'un élève du secondaire sur dix (12%)

recevait un diagnostic pour une difficulté du type intériorisé (c.-à-d., dépression = 4,9% ; anxiété = 9%). Bien qu'ils ne soient pas les plus prévalents, les sentiments dépressifs sont importants à considérer à l'adolescence (Gutman et McMaster, 2020; Hetrick et al., 2021; Liu et Merritt, 2018), puisqu'il tendent à augmenter à l'entrée au secondaire et à atteindre leur apogée du milieu à la fin de l'adolescence (Peterson et al., 2017). Ces sentiments se caractérisent notamment par la persistance d'une humeur dépressive et sont marqués par un désintérêt vis-à-vis des activités plaisantes, un sentiment de détresse ainsi qu'une altération du fonctionnement social (American Psychiatric Association, 2013; Carney et Freeland, 2017; Gagné et al., 2011; LeMoult et Gotlib, 2019).

Chez les adolescents, des différences significatives entre les sexes sont également rapportées dans la distribution des difficultés intériorisées et extériorisées, et notamment pour la délinquance, la violence relationnelle et la dépression (Ara, 2016). En effet, les garçons sont plus susceptibles de présenter des comportements délinquants et antisociaux (Ara, 2016 ; Bor et al., 2014 ; Olivier, 2017). À l'inverse, les filles ont tendance à présenter des niveaux plus élevés de difficultés intériorisées, telles que les troubles de l'humeur ou les symptômes dépressifs (Ara, 2016 ; Eme, 2016 ; Olivier, 2017). En ce qui concerne la violence relationnelle, les résultats de recherche quant aux différences entre les sexes sont divers. Certains auteurs concluent que les filles ont tendance à adopter davantage de comportements associés à la violence relationnelle comme exclure une personne ciblée du groupe, ne pas la laisser parler, la laisser seule ou véhiculer des rumeurs à son sujet (Duru et al., 2019 ; Ellickson et McGuigan, 2000 ; Povedano et al., 2015), tandis que d'autres chercheurs ne trouvent pas de fortes différences entre les garçons et les filles (Iniguez-Berrozpe et al., 2021 ; Skara et al., 2008).

La distribution des difficultés intériorisées et extériorisées diffère aussi en fonction du statut socioéconomique (SSE) des adolescents. En effet, un SSE faible est associé à davantage de difficultés intériorisées et extériorisées notamment à plus de délinquance, de violence relationnelle et de symptômes dépressifs. Pour expliquer cette tendance, McNeilly et al. (2021) mettent de l'avant que les jeunes de milieux défavorisés sont plus à risque d'être sous-stimulés sur le plan environnemental et sur le plan cognitif. En effet, les jeunes de milieux défavorisés vivent des expériences linguistiques moins complexes et sont exposés à moins d'activités d'enrichissement variées à l'extérieur de la maison. Cette sous-stimulation peut engendrer des difficultés au point de vue des fonctions exécutives qui risquent d'engendrer des difficultés intériorisées et



extériorisées (Letourneau et al., 2011).

## **Stabilité homotypique et hétérotypique**

Des études longitudinales d'adolescents suggèrent que certaines difficultés intériorisées et extériorisées présentent une stabilité substantielle au cours de cette période de développement (Bornovalova et al., 2013 ; Nobile et al., 2013 ; Snyder et al., 2017). En effet, deux types de stabilité sont identifiés, soit la stabilité homotypique et hétérotypique (Frost et al., 2018 ; Shelvin et al., 2017). La stabilité homotypique fait référence à la continuité d'une même difficulté, intériorisée ou extériorisée, d'un moment à l'autre. Par exemple, puisque la présence de symptômes anxieux chez les adolescents au début du secondaire est associée à la présence de symptômes anxieux à la fin du secondaire (Ranoyen et al., 2018), on peut dire que cette difficulté présente une certaine stabilité homotypique. À l'inverse, la stabilité hétérotypique se produit lorsqu'une difficulté en prédit une autre ultérieurement (Frost et al., 2018 ; Shelvin et al., 2017). Par exemple, la présence de symptômes dépressifs chez les adolescents à l'entrée au secondaire est associée à la présence de symptômes anxieux à la fin du parcours secondaire (Ranoyen et al., 2018). Plusieurs auteurs rapportent qu'à l'adolescence, les difficultés intériorisées et extériorisées en général présentent plus de stabilité homotypique que de stabilité hétérotypique (Blok et al., 2021 ; Johnson et al., 2019 ; Snyder et al., 2017). Cela suggère que les schémas en termes de symptômes dépressifs, de délinquance et de violence relationnelle tendent à être relativement constants tout au long de la période adolescente (Blok et al., 2021 ; Snyder et al., 2017). Malgré cela, la stabilité hétérotypique est de plus en plus explorée dans la littérature. En effet, certains auteurs identifient un effet prédictif des difficultés extériorisées sur les difficultés intériorisées (Flouri et al., 2019 ; Murray et al., 2020 ; Oh et al., 2020 ; Oldehinkel et Ormel, 2022 ; Richards et al., 2022). En particulier, les associations entre les symptômes dépressifs, la violence relationnelle et la délinquance sont bien étayées dans la littérature, surtout durant la période adolescente (Fanti et al., 2019 ; Kofler et al., 2011). Les adolescents qui présentent des symptômes dépressifs sont plus à risque de voler des biens, de prendre part à des altercations de groupe violentes ainsi que de vandaliser des institutions. La relation inverse est également soutenue dans la littérature ; la délinquance est associée négativement au désintérêt vis-à-vis des activités plaisantes et positivement au développement d'un sentiment de détresse ainsi qu'à une altération

du fonctionnement social (Fanti et al., 2019 ; Kofler et al., 2011). De plus, la violence relationnelle prédit une augmentation des symptômes dépressifs ainsi que des comportements délinquants chez les adolescents (Atherton et al., 2017 ; Duru et al., 2019 ; Espelage et al., 2018 ; Kushner et al., 2017). Ces associations entre les difficultés intériorisées et extériorisées font l'objet de plusieurs études qui visent à mieux comprendre le développement des adolescents (Bevilacqua et al., 2021 ; Wang et al., 2022), mais appellent à une meilleure compréhension des facteurs qui contribuent à ces tendances. Afin de mieux comprendre le développement et le maintien des difficultés intériorisées et extériorisées, dont la violence relationnelle, la délinquance et la dépression à l'adolescence, il est toutefois pertinent de se pencher sur les théories explicatives du phénomène. Nous avons retenu trois théories développementales reconnues, en raison de leurs objectifs communs qui visent, à partir de différents facteurs, à expliquer les changements observés en cours de développement, soit la théorie écosystémique (Bronfenbrenner, 1974), le modèle transactionnel (Sameroff, 1975) et le modèle des cascades développementales (Masten et Cicchetti, 2010). Ces théories seront d'abord présentées de manière générale, puis abordées sous l'angle du développement des comportements intériorisés et extériorisés.

## **Modèles théoriques**

### **Théorie écosystémique**

Dès le début des années 70, Urie Bronfenbrenner (1974) conteste les croyances voulant que le développement d'un jeune soit principalement affecté par des facteurs biologiques. En effet, ce dernier se penche sur les interactions entre l'individu et l'environnement, prenant comme point de départ une conception de l'adolescent comme agent actif qui contribue à son développement (Tudge et Rosa, 2019). Il crée la théorie écosystémique, en définissant cinq systèmes environnementaux nichés les uns dans les autres, soit le micro-, le méso-, l'exo-, le macro- et le chronosystème. Selon cette théorie, ces cinq systèmes sont interdépendants et influencent le développement des adolescents (Evans, 2020 ; Tudge et Rosa, 2019). Premièrement, le microsystème constitue le premier niveau et comprend les acteurs sociaux en contact direct avec l'adolescent, notamment les parents, la fratrie, les enseignants et les pairs. Selon le modèle écosystémique, les relations dans ce système sont bidirectionnelles, c'est-à-dire que l'adolescent peut réagir aux influences de ces individus, ce qui peut modifier la façon dont ces derniers vont interagir avec l'adolescent. Deuxièmement, le mésosystème englobe les interactions entre les

microsystèmes de l'adolescent, tels que les interactions entre les parents et les enseignants, ou entre les pairs et la fratrie. Ce système est l'endroit où les microsystèmes sont interconnectés. Par exemple, les parents d'un adolescent qui communiquent avec l'enseignant de ce dernier contribuent à son développement. Troisièmement, l'exosystème comprend les structures sociales (c.-à-d., le quartier, le lieu de travail des parents, les médias, etc.) qui influencent l'adolescent indirectement, puisque ces dernières affectent l'un des microsystèmes. Par exemple, un parent qui a un différend avec son patron au travail peut rentrer à la maison en ayant moins de patience pour l'adolescent, ce qui peut influencer son développement. Quatrièmement, le macrosystème est centré sur la manière dont les éléments culturels contribuent au développement, tels que le statut socioéconomique, l'ethnicité, la situation géographique et les idéologies de la culture. Par exemple, un adolescent vivant dans un milieu défavorisé connaîtrait un développement différent de celui qui vit dans un quartier aisé. Finalement, le chronosystème comprend les transitions qui se produisent au cours de la vie, notamment le début de l'école, le passage de l'école primaire à l'école secondaire, le divorce de parents, un déménagement, etc. (Evans, 2020 ; Tudge et Rosa, 2019). Le modèle écosystémique mis de l'avant par Bronfenbrenner constitue une théorie charnière, passant d'une approche réductionniste à une approche plutôt holistique. Le modèle fournit un cadre théorique et de recherche à travers lequel l'influence de l'environnement dans son ensemble est davantage prise en compte dans le développement humain. Ce cadre conceptuel clé permet notamment l'identification de divers facteurs qui peuvent avoir un impact sur les difficultés adaptatives des adolescents. Plus spécifiquement, puisque ce modèle considère et intègre des facteurs inhérents à l'élève, à l'école, à la famille et à la communauté, il fournit un cadre contextuel pertinent à la compréhension du développement des symptômes dépressifs, de la violence relationnelle et de la délinquance d'un élève (Abrams et al., 2005). Par exemple, en ce qui a trait aux symptômes dépressifs, Lakhan et Ekundayo (2013) ont identifié les facteurs déterminants de l'exosystème, du mésosystème et du microsystème, soit le statut socioéconomique, la cohésion sociale et les événements de vie négatifs qui contribuent à l'adaptation ou l'inadaptation des jeunes. Similairement, Harris et al. (2011) identifient les interactions mutuelles entre la famille et le quartier à faible revenu du mésosystème comme influence clé au développement des comportements délinquants chez les jeunes (Palit et Chhabra, 2021). Finalement, la théorie écosystémique est également utilisée pour identifier les facteurs de risques et de protection associés à la violence relationnelle chez les jeunes. Plusieurs facteurs du microsystème sont mis de l'avant,

notamment la socialisation aux pairs, la violence familiale et le manque de surveillance parentale, le climat scolaire et l'exposition à la violence (Espelage, 2014).

### **Modèle transactionnel**

Le modèle transactionnel de Sameroff (1975) met de l'avant au même moment que Bronfenbrenner la notion de transaction personne-environnement. Selon cette idée, il existe une transaction constante entre l'individu et les caractéristiques contextuelles de son environnement, transaction qui est d'autant plus importante pour comprendre le développement des difficultés intériorisées et extériorisées chez l'adolescent. Ce modèle suggère en effet que le développement de tout individu est influencé par une interaction dynamique entre son contexte de vie et ses caractéristiques individuelles. Les résultats du développement ne sont donc ni une fonction de l'individu seul ni une fonction unique du contexte expérientiel. Dans ce sens, le modèle transactionnel accorde une importance particulière aux processus bidirectionnels individu-environnement pour expliquer le développement. L'environnement peut ainsi avoir un effet sur l'individu, mais les comportements de ce dernier peuvent aussi déterminer ses expériences environnementales (Fiese et Sameroff, 1988 ; Sameroff et Mackenzie, 2003). Toujours selon ce modèle, les processus individu-environnement peuvent mener à des succès développementaux ou à l'inverse, à des difficultés adaptatives (Sameroff et Mackenzie, 2003). En effet, l'interrelation entre les processus psychologiques, sociaux et culturels d'un individu dans le temps peut favoriser le développement de ses habiletés, de ses compétences et de son adaptation. À l'inverse, certaines interactions sont défavorables au développement d'une personne et accroissent les possibilités de vivre des difficultés adaptatives (Grizenko et Pawliuk, 1994 ; Larose et al., 2004 ; Racz et al., 2017). En bref, le modèle transactionnel de Sameroff (1975) met de l'avant l'importante notion de transaction bidirectionnelle entre l'individu et l'environnement pour bien comprendre le développement des difficultés intériorisées et extériorisées.

Cette notion de transaction bidirectionnelle est aussi de plus en plus explorée dans la recherche visant à mieux comprendre le développement de la dépression, de la délinquance et de la violence relationnelle chez les adolescents. Par exemple, pour la dépression, Zimmer-Gembeck (2016) identifie la relation transactionnelle entre les symptômes dépressifs et la victimisation. En effet, de nombreux adolescents qui ont été rejetés par leurs pairs présentent des symptômes

dépressifs. Puis, en raison de la présence de symptômes dépressifs, dont leur sensibilité accrue et leur intérêt diminué pour les activités scolaires, ces derniers sont plus à risque de vivre davantage de victimisation par leurs pairs. Le modèle transactionnel est aussi à la base d'études sur les comportements délinquants. Par exemple, il est mis de l'avant que le niveau d'attachement parental influence négativement la prévalence de comportements délinquants chez les jeunes (Chen, 2021). À l'inverse, selon les mêmes auteurs, le niveau de délinquance dans lequel s'engage le jeune contribue négativement au niveau d'attachement parental. Finalement, pour la violence relationnelle, la transaction entre l'implication maternelle et la violence relationnelle des adolescents est explorée. Les résultats montrent que l'implication maternelle prédit négativement la violence relationnelle et son évolution dans le temps. À l'inverse, l'augmentation des comportements de violence relationnelle de la part du jeune entraîne une réduction de l'implication maternelle au fil du temps (Georgiou et Fanti, 2010).

### **Cascades développementales**

Enfin, le modèle de cascades développementales de Masten et Cicchetti (2010) s'avère également complémentaire aux autres, en suggérant que les processus bidirectionnels ne peuvent exister en isolation. Masten et Cicchetti (2010) accordent en effet une importance accrue à ce qu'ils nomment l'ontogenèse, qui réfère à l'idée que les changements développementaux ne peuvent exister séparément (Iverson, 2021). À tout moment, des changements se produisent dans et entre plusieurs domaines à mesure que l'individu subit des changements personnels, tout en interagissant avec un environnement en constante évolution (Iverson, 2021). Cette manière de percevoir le développement met en lumière les multiples interactions et transactions qui se produisent dans les domaines en développement, conduisant à des cascades développementales. Ces cascades développementales font référence aux conséquences cumulatives des nombreuses interactions et transactions se produisant dans les systèmes en développement qui entraînent des effets qui se propagent à travers différents systèmes (Iverson, 2021 ; Masten et Cicchetti, 2010). Selon ce modèle de cascades développementales (Masten et Cicchetti, 2010), le fonctionnement d'une personne dans un domaine déborde ainsi et contribue au fonctionnement de la personne dans d'autres domaines de manière durable, profonde et cumulative (Long et al., 2005 ; Masten et Cicchetti, 2010). Sur la base de cette idée, Masten et Cicchetti (2010) suggèrent que le développement de difficultés intériorisées et extériorisées, comme la délinquance, la violence

relationnelle et la dépression, est caractérisé par une interconnexion complète, soit qu'un changement dans l'une de ces caractéristiques pourrait être associé à un changement dans les autres, et ce de manière directe, indirecte, bidirectionnelle ou longitudinale (Iverson, 2021 ; Liu et al., 2017). De manière plus concrète, cela signifie par exemple que les difficultés extériorisées, notamment la délinquance et la violence relationnelle, peuvent miner le fonctionnement dans un ou plusieurs autres domaines (par exemple, la compétence académique), ce qui peut exacerber le risque de présenter des difficultés intériorisées comme des symptômes dépressifs (Moilanen et al., 2010).

En résumé, Bronfenbrenner (1974) illustre l'importance de considérer l'environnement et ses nombreux systèmes dans le développement individuel. Ensuite, le modèle de Sameroff (1975) met de l'avant que la bidirectionnalité des processus individu-environnement n'est pas exclusive au mésosystème de Bronfenbrenner (1974) et qu'elle se présente dans toutes les sphères du développement. Finalement, Masten et Cicchetti (2010) proposent que les processus bidirectionnels soient interreliés. En effet, ils mettent de l'avant que tout changement développemental qui se produit dans un domaine déborde aussi dans plusieurs autres domaines liés. En somme, ces théories démontrent non seulement que plusieurs facteurs contribuent à l'augmentation et au maintien des difficultés intériorisées et extériorisées, comme la délinquance, de la violence relationnelle et la dépression, chez les adolescents, mais démontrent aussi que ces dernières peuvent être interreliées dans le développement. Parmi les facteurs identifiés dans la littérature pour leur contribution marquée au développement de ces difficultés chez les adolescents, on retrouve les caractéristiques individuelles et les caractéristiques familiales (Hauser-Cram et Woodman, 2016 ; Sawyer et al., 2018 ; Wang et al., 2018). Par ailleurs, plusieurs de ces caractéristiques individuelles et familiales sont connues pour leur contribution d'autant plus importante chez des adolescents de milieux défavorisés. Ce faisant, le premier article de ce projet de thèse explore le rôle de comportements intériorisés et extériorisés telle la violence relationnelle et la dépression comme précurseurs des difficultés individuelles, soit au niveau de leur estime de soi et de leur engagement scolaire, chez des adolescents de milieux défavorisés. Le second article porte plutôt sur le développement de la délinquance, de la violence relationnelle et de la dépression comme conséquences du contexte familial de l'adolescent, et plus particulièrement d'un manque d'implication scolaire parental. Le rôle de ces facteurs individuels et familiaux d'importance dans le développement des comportements intériorisés et extériorisés est présenté ci-dessous.

## **Caractéristiques individuelles**

Les caractéristiques individuelles qui contribuent aux difficultés intériorisées et extériorisées comme la délinquance, la violence relationnelle et la dépression sont multiples. Elles incluent entre autres les facteurs prénataux, la neurobiologie et le niveau de stress (Abdourahman Ali et Paquette, 2020 ; Bae et al., 2015 ; Hentges et al., 2019 ; Whittle et al. 2020). Deux autres caractéristiques sont toutefois fréquemment identifiées dans les écrits scientifiques pour leur lien avec ces difficultés, soit l'estime de soi et l'engagement scolaire. Ces éléments sont particulièrement importants à l'adolescence puisqu'il s'agit d'une période de transition et de changements importants pour les jeunes (Sawyer et al., 2018; da Conceição Taborda-Simões, 2005) pouvant mener à des fluctuations importantes sur ces deux aspects (Anderson et al., 2000; Berruex, 2016; Duval et al., 2019), et particulièrement chez les jeunes de milieux défavorisés (Archambault et al., 2009).

### *Engagement scolaire*

L'engagement scolaire est un concept multidimensionnel composé de trois dimensions en interaction, faisant référence aux émotions, aux cognitions et aux comportements des élèves. La dimension émotionnelle comprend le fait d'aimer ou d'apprécier l'école, tandis que la dimension cognitive fait référence à l'implication et à la volonté de fournir des efforts (Abbott-Champan et al., 2014 ; Fredericks et al., 2004). La dimension comportementale de l'engagement se caractérise par des efforts et une implication continue malgré les difficultés rencontrées (Archambault et Vandebosche-Makombo, 2014 ; Fredericks et al., 2004). Par exemple, cette dimension se manifeste par la participation aux tâches ainsi que par le respect des normes et des règles de l'environnement. Malgré le caractère multidimensionnel de l'engagement, certaines études choisissent de cibler la dimension comportementale (Faccin et Boisvert, 2019 ; Wang et al., 2019 ; Zhu et al., 2019), car elle permet de cibler des comportements observables (ex. prise de note, lever la main pour répondre à une question), mais également parce qu'il s'agit de l'un des meilleurs précurseurs de la persévérance scolaire (Archambault et al., 2009).

Pour bien comprendre l'engagement scolaire comportemental des adolescents, il est nécessaire de prendre en compte le statut socioéconomique. En effet, la littérature met en lumière que les parents de milieux favorisés ont un meilleur accès à diverses ressources, notamment des

ressources financières, des ressources sociales, ainsi que des ressources éducatives. Ainsi, ces derniers sont plus susceptibles d'offrir des conditions optimales d'apprentissages et de stimulation matérielle à leurs adolescents, ce qui est associé à un engagement scolaire comportemental plus élevé (Chen et al., 2021). À l'inverse, les parents de SSE faible ne disposent pas de la même ampleur de ressources à offrir à leur enfant. Ces derniers n'ont donc pas les mêmes possibilités quant aux occasions éducatives auxquelles ils peuvent exposer leur jeune. En effet, être exposé à moins d'occasions éducatives de qualité est associé à un moins grand intérêt pour l'éducation et à de plus bas niveaux d'engagement scolaire chez ces jeunes (Chen et al., 2021). Le niveau d'engagement scolaire varie également selon le sexe chez les adolescents de milieux défavorisés. En effet, le désavantage socioéconomique affecte plus négativement l'engagement scolaire des garçons par rapport aux filles (Autor et al., 2019). Parmi les nombreuses pistes d'explications possibles, certains auteurs suggèrent que le niveau d'engagement scolaire diminué des garçons peut s'expliquer par le fait que les parents de familles à SSE faible sont majoritairement dirigés par des femmes et que ces dernières peuvent passer plus de temps à encadrer et interagir avec leurs filles. Au contraire, dans les familles à SSE élevé, on observe des investissements compensatoires plus importants chez les garçons (Autor et al., 2019).

Par ailleurs, l'engagement scolaire comportemental présente des associations bidirectionnelles soutenues avec les difficultés intériorisées et extériorisées. En effet, plusieurs auteurs suggèrent que les élèves en général et ceux de milieux défavorisés qui présentent des difficultés adaptatives sont moins engagés à l'école (Blaya, 2010; Cuche et al., 2010; Foster et al., 2020 ; Gavrik et al., 2013 ; Gonzalez et Paoloni., 2015 ; Li et Lerner, 2011; Wang et Fredericks, 2014). Les adolescents qui présentent des comportements délinquants auraient moins tendance à fournir d'efforts dans leurs tâches scolaires, à moins participer en classe et à être moins désireux d'y vivre des succès (Blaya, 2010; Li et Lerner, 2011; Wang et Fredericks, 2014). De plus, les adolescents qui adoptent des comportements tels des menaces de rejet, des insultes, des injures, des menaces de détruire des biens appartenant à autrui ou à émettre de fausses rumeurs présentent un engagement scolaire diminué (Foster et al., 2020). Sur le plan des comportements intériorisés, l'anxiété, les symptômes dépressifs, l'isolement social et l'absence de relations positives avec les pairs ont aussi été démontrés comme des prédicteurs importants du désengagement scolaire en général (Cuche et al., 2010; Gavrik et al., 2013 ; Gonzalez et Paoloni., 2015), notamment chez les élèves issus de familles à faibles revenus (Smokowski et al., 2014). Par exemple, les élèves qui



sont marqués par un désintérêt vis-à-vis des activités plaisantes, vivent un sentiment de détresse ainsi qu'une altération du fonctionnement social tendent à fournir d'efforts dans leurs tâches scolaires, à moins participer en classe et à être moins désireux d'y vivre des succès (Gavrik et al., 2013). Inversement, le désengagement scolaire a aussi été identifié comme un prédicteur des difficultés intériorisées, telles que l'anxiété, les symptômes dépressifs, l'isolement social et de l'absence de relations positives avec les pairs chez les adolescents (Dorio et al., 2018; Olivier et al., 2020). Par exemple, les adolescents présentant des symptômes dépressifs sont plus enclins à entretenir des croyances négatives quant à leur compétences et de vivre un sentiment d'impuissance. Ces sentiments peuvent se transposer dans le contexte scolaire par l'évitement des défis, un manque de persévérance face à l'échec, à des préoccupations excessive vis-à-vis leur compétence, l'usage de stratégies d'apprentissage inefficaces et au désengagement scolaire (Margit et al., 2013). En plus d'être associés aux difficultés intériorisées et extériorisées, un faible niveau d'engagement scolaire comportemental est susceptible de miner l'estime de soi d'un élève (Archambault et al., 2017). Comme il en sera question plus en détail dans le 1<sup>er</sup> article de la thèse, certains suggèrent que l'estime de soi pourrait même agir comme mécanisme (ou médiateur) du lien entre un faible niveau d'engagement et le développement des comportements intériorisés et extériorisés, comme la violence relationnelle et la dépression.

### *Estime de soi*

L'estime de soi est l'évaluation subjective d'un individu de sa valeur. Elle se caractérise par l'évaluation d'une personne envers elle-même, c'est-à-dire s'ils s'apprécient tels qu'ils sont et s'ils se sentent fiers de leurs réalisations (Martinot, 2018 ; Orth et al., 2014). L'estime de soi est un construit multidimensionnel. Selon Harter (1993), ce construit est composé de deux éléments : l'estime de soi globale et l'estime de soi spécifique à un domaine. L'estime de soi globale est la valeur générale qu'un individu s'accorde (Bialecka-Pikul et al., 2019 ; Harris et al., 2017), c'est-à-dire qu'ils se considèrent capables de relever des défis en général (Bialecka-Pikul et al., 2019 ; Bos et al., 2006 ; Harris et al., 2007). L'estime de soi spécifique réfère plutôt à la perception des capacités personnelles dans une sphère particulière, comme, les arts ou le sport (Giguère, 2018 ; Iratxe et Azpiazu, 2018 ; Orth et al., 2018). L'estime de soi globale présente cependant plus d'intérêt que l'estime de soi spécifique dans la présente thèse, notamment pour ses liens avec les difficultés intériorisées et extériorisées telles la violence relationnelle et la dépression, durant la

période qu'est l'adolescence (Descartes et al., 2018 ; Mier et Ladny, 2017 ; von Soest et al., 2016), mais également parce que cette période est particulièrement menaçante pour l'estime de soi, indépendamment du domaine examiné (Iratxe et Azpiazu, 2018 ; Onetti et al., 2018 ; Orth et al., 2018).

Selon les écrits scientifiques, plusieurs facteurs contribuent bidirectionnellement à l'estime de soi, dont le statut socioéconomique. En effet, il est mis de l'avant que les adolescents qui évoluent dans un milieu socioéconomique plus faible sont plus à risque de présenter une estime de soi diminuée. Par exemple, dans le cas où les parents ne peuvent supporter les coûts permettant à l'adolescent de participer aux activités extrascolaires, ce dernier peut se sentir éloigné de ses camarades de classe, se sentir inférieur et vivre de la honte, ce qui affecte négativement son appréciation de lui-même (Leung et Xu, 2013; Simons et al., 2018; Twenge et Campbell, 2002). À l'inverse, les adolescents qui évoluent dans un milieu socioéconomique élevé sont plus à risque de présenter une estime de soi plus positive. Par exemple, les jeunes qui sont inscrits aux activités extrascolaires payantes par leurs parents peuvent développer, entre autres, des liens sociaux et des compétences, ce qui risque d'augmenter leur estime de soi (Leung et Xu, 2013; Simons et al., 2018; Twenge et Campbell, 2002).

La recherche suggère aussi que les difficultés intériorisées et extériorisées prennent part au développement de l'estime de soi. En fait, la violence relationnelle et la dépression semblent contribuer négativement à l'estime de soi chez les jeunes de différents milieux. Comme les comportements agressifs, antisociaux et délinquants ont maintes fois été associés à une estime de soi diminuée (Huynh et Mazet, 2011; Ybrandt et Armelius, 2010), la violence relationnelle semble également jouer un rôle à ce niveau. Les jeunes qui s'apprécient moins et ont moins tendance à être fiers de leurs accomplissements sont plus susceptibles de menacer de rejeter, insulter et véhiculer de fausses rumeurs (Weidmann et al., 2022). De même, les élèves qui présentent de nombreux symptômes dépressifs ont généralement une autoévaluation plus négative et une estime de soi plus faible (Babore et al., 2016 ; Tazouti et al., 2018). En somme, la recherche indique clairement que la violence relationnelle et la dépression chez les adolescents sont associées au désengagement scolaire ainsi qu'à une faible estime de soi. Comme énoncé précédemment et sur la base d'études antérieures (Bang et al., 2020; Mihalec-Adkins, et Cooley, 2020; Yang et al., 2019; Thompson et al., 2017; Yildiz et Karadas, 2017), on peut même émettre l'hypothèse que l'estime de soi agit comme facteur explicatif du lien entre un faible niveau d'engagement et le

développement de ces comportements intériorisés et extériorisés, bien que la recherche actuelle ne permette pas de le démontrer.

## **Caractéristiques familiales**

Au-delà des facteurs individuels, plusieurs composantes familiales influencent le développement des difficultés intériorisées et extériorisées. Les plus documentés sont notamment l'adversité familiale, les psychopathologies parentales, l'abus de substance et les conflits matrimoniaux (Levy et al., 2015). Il est toutefois bien établi qu'un bon nombre de ces facteurs de risque opère à travers des mécanismes basés sur la dynamique des interactions parent-enfant (Sawyer et al., 2018). Un des facteurs familiaux associés au développement des difficultés intériorisées et extériorisées a été particulièrement soulevé dans la littérature, soit l'implication scolaire parentale.

### *Implication scolaire parentale*

L'implication scolaire des parents se définit à travers un large éventail de pratiques parentales en matière d'éducation et de scolarisation que les parents adoptent pour favoriser la réussite scolaire de leur enfant (Brajsa-Zganec et al., 2019 ; Goulet et al., 2023 ; Tardif-Grenier et Archambault, 2016). Chez les enfants et les adolescents, l'implication scolaire des parents a été identifiée comme meilleur prédicteur des difficultés intériorisées et extériorisées, comme les symptômes dépressifs, la violence relationnelle et la délinquance (Barger et al., 2019 ; Lara et Saracostti, 2019 ; Tammariello, 2012 ; Kirkhaug et al., 2013 ; Ogg et Anthony, 2019). En effet, les adolescents dont les parents sont impliqués dans leur éducation tendent à adopter moins de comportements tels que de rejeter, d'insulter, de véhiculer de fausses rumeurs, de voler de biens, de prendre part à des affrontements violents en groupe, à vandaliser et à s'opposition aux forces de l'ordre (Jacobson, 2012 ; Nocenti et al., 2019 ; Ogg et Anthony, 2019). En effet, l'implication des parents à l'école permet aux jeunes d'obtenir des repères et des attentes claires en ce qui concerne leurs comportements (Barger et al., 2019 ; Ogg et Anthony, 2019). Ce faisant, les adolescents savent comment leurs parents réagiront à leurs actions et peuvent planifier leurs comportements en conséquence, ce qui est susceptible de mener à davantage de comportements adaptés (Sher-Censor et al., 2015). L'implication scolaire parentale est également associée à moins de difficultés intériorisées, comme la dépression (Barger et al., 2019 ; Dardas et al., 2018 ;

Tammariello, 2012). Cela peut s'expliquer par le fait que les parents impliqués dans l'éducation apportent du soutien, de la validation et de l'attention, ce qui peut augmenter le sentiment de valeur de l'adolescent et le protéger du développement de symptômes dépressifs (Barger et al., 2019).

De plus, le statut socioéconomique est un facteur clé identifié dans la littérature pour sa contribution à l'implication scolaire des parents. En effet, selon leur statut socioéconomique, les parents peuvent participer à l'éducation de leurs enfants différemment en répondant aux diverses circonstances dans lesquelles ils évoluent. Plus spécifiquement, des travaux suggèrent que certains parents qui présentent un SSE plus faible tendent à prioriser davantage la conformité de leurs enfants aux attentes de la société et créent ainsi une atmosphère familiale où l'autorité parentale prime. De plus, d'autres auteurs rapportent que certains de ces parents, en raison du stress financier qu'ils subissent, peuvent communiquer moins fréquemment avec leurs enfants et tendent à être plus punitifs ou directifs (Hoff et Laursen, 2019). À l'inverse, chez les parents au SSE plus élevé, les auteurs tendent à observer davantage de soutien à la prise d'initiative et à l'autonomie. Les parents de milieux favorisés prôneraient également davantage la participation de leurs enfants dans les discussions et établiraient des règles de la famille plus claires, en plus d'être moins enclins à recourir à des punitions. Pour expliquer ces différences, on souligne notamment la contribution clé des croyances quant aux meilleures pratiques et à l'auto-efficacité. Dans le premier cas, certains parents au statut socioéconomique plus faible peuvent présenter la croyance que leurs enfants doivent éviter d'être gâtés afin de devenir indépendants. Par conséquent, ils pourraient interagir avec leur jeune de manière moins chaleureuse et moins encourageante (Hoff et Laursen, 2019). À l'inverse, les parents à SSE favorable peuvent croire que la chaleur et d'implication sont bénéfiques au développement de l'autonomie du jeune et choisissent d'adopter des comportements en ce sens (Hoff et Laursen, 2019). Dans un deuxième cas, il est question d'auto-efficacité. En effet, certains parents au statut socioéconomique plus faible peuvent avoir plus de difficulté à croire qu'ils arriveront à exercer une influence sur les comportements ou les résultats de leur enfant. Par conséquent, ces derniers pourraient être moins enclins à endosser les résultats positifs de leur jeune et avoir tendance à moins s'impliquer dans l'éducation. Au contraire, les parents au SSE élevé peuvent tendre à croire qu'ils peuvent avoir une incidence sur les comportements de leur enfant, ce qui les encourage à être plus impliqués dans la scolarité (Hoff et Laursen, 2019).

En somme, la théorie démontre non seulement que plusieurs facteurs contribuent à l'augmentation et au maintien des difficultés intériorisées et extériorisées, comme la délinquance, de la violence relationnelle et la dépression chez les adolescents, mais démontrent aussi que ces dernières peuvent être interreliées dans le développement. Ceci est soutenu par la recherche empirique qui suggère que les caractéristiques individuelles et les caractéristiques familiales ont une contribution marquée au développement des difficultés intériorisées et extériorisées chez les adolescents (Hauser-Cram et Woodman, 2016 ; Sawyer et al., 2018 ; Wang et al., 2018). Par contre, comme il sera démontré de manière plus approfondie dans les chapitres 2 et 3 de la thèse, les écrits scientifiques présentent plusieurs limites. Ainsi, on se questionne toujours sur la manière dont se développent les difficultés intériorisées (c.-à-d., dépression) et extériorisées (c.-à-d., violence relationnelle et délinquance) chez les adolescents d'écoles secondaires de milieux défavorisés et sur la contribution des caractéristiques individuelles (c.-à-d., estime de soi, engagement scolaire) et familiales (c.-à-d., implication parentale) à ces dernières. Pour répondre à ces limites, la présente thèse a comme objectif d'explorer l'apport respectif des caractéristiques individuelles et familiales au développement des difficultés intériorisées et extériorisées auprès d'adolescents de milieux défavorisés.

## **PRÉSENTATION DE LA RECHERCHE DOCTORALE**

Tel illustré précédemment, le modèle écosystémique, le modèle transactionnel et le modèle des cascades développementales procurent des cadres précieux pour approfondir la compréhension du développement des difficultés intériorisées et extériorisées des adolescents d'écoles secondaires défavorisées. Ces modèles permettent notamment d'identifier des facteurs clés qui contribuent à l'augmentation ou au maintien de ces dernières en tenant compte des potentielles interrelations entre ces construits. Toutefois, aucune étude longitudinale n'a exploré l'apport respectif des caractéristiques individuelles et familiales au développement des deux types de difficultés adaptatives. L'objectif de cette thèse est de combler ce manque de connaissances chez les adolescents de milieux défavorisés.

### **Objectifs et hypothèses générales**

L'objectif général du projet de thèse est d'explorer l'apport respectif des caractéristiques individuelles et familiales au développement des difficultés intériorisées et extériorisées d'adolescents de milieux défavorisés. Afin de répondre à ce dernier, le développement des difficultés intériorisées (c.-à-d., symptômes dépressifs) et extériorisées (c.-à-d., délinquance et violence relationnelle) sera examiné auprès d'un échantillon d'élèves d'écoles secondaires de milieux défavorisés à travers deux articles. Le premier article de la thèse explorera les caractéristiques individuelles comme précurseur des symptômes dépressifs et la violence relationnelle des adolescents de milieux défavorisés. Plus spécifiquement, cet article vise d'abord l'exploration des liens autorégressifs, bidirectionnels et concomitants entre la violence relationnelle et la dépression avec l'estime de soi et l'engagement comportemental pour identifier les associations entre les construits et leur interinfluence dans le temps. Le second objectif de cet article consiste ensuite à déterminer si l'estime de soi des adolescents peut être un médiateur possible du lien entre la dépression/la violence relationnelle et l'engagement scolaire comportemental. Ainsi, nous émettons l'hypothèse que la présence de comportements de violence relationnelle ou de symptômes dépressifs chez les élèves du secondaire affectera négativement leur estime de soi, ce qui réduira en retour leur engagement scolaire comportemental. Enfin, le troisième objectif de cet article est de déterminer si les associations autorégressives, bidirectionnelles et concomitantes varient selon le sexe des élèves. En nous basant sur les écrits, nous émettons l'hypothèse que les associations longitudinales des difficultés intériorisées seront plus fortes chez les filles, alors les associations longitudinales des difficultés extériorisées seraient plus importantes chez les garçons.

Le deuxième article de la thèse explorera comment les symptômes dépressifs, la violence relationnelle et les comportements délinquants sont affectés par le contexte de vie des adolescents, soit par l'implication scolaire de leurs parents. Plus spécifiquement, le premier objectif de cet article est de déterminer si la dépression, la délinquance et la violence relationnelle peuvent être médiateurs entre l'implication scolaire parentale en début de secondaire et la dépression, la délinquance et la violence relationnelle en fin de secondaire. En effet, il est possible de penser, d'une part, que l'implication scolaire parentale sera liée à la dépression, à la délinquance et à la violence relationnelle respectivement deux ans et quatre ans plus tard. D'autre part, il est anticipé que les symptômes dépressifs, la délinquance et la violence relationnelle en secondaire 3 joueront un rôle médiateur dans la relation entre l'implication parentale et ces mêmes difficultés en

secondaire 5. Le deuxième objectif est d'explorer la stabilité hétérotypique et homotypique des difficultés (c.-à-d., violence relationnelle, dépression, délinquance). Nous émettons l'hypothèse que la violence relationnelle, la dépression et la délinquance vont présenter les deux types de stabilité entre le secondaire 3 et le secondaire 5. Enfin, le dernier objectif de ce deuxième article est de déterminer si les associations varient en fonction du sexe des élèves. En lien avec cet objectif, nous émettons l'hypothèse suivant : les filles vont présenter des associations longitudinales homotypiques plus fortes en ce qui concerne la dépression, alors que les garçons vont montrer des associations longitudinales homotypiques plus importantes en ce qui a trait à la violence relationnelle et la délinquance.

Les deux études quantitatives ont été réalisées à partir d'un sous-échantillon d'élèves qui ont participé à un projet longitudinal de grande échelle menée dans l'ensemble de la province de Québec (Canada) auprès d'élèves qui fréquentaient des écoles secondaires de milieux défavorisés. Au total, 66 écoles ont participé à l'étude pendant l'entièreté du parcours secondaire. Les détails quant aux procédures utilisées ainsi que de l'échantillon seront énoncés dans la section méthodologie de chaque article. Le chapitre II de la thèse présentera le premier article, alors que le chapitre III porte sur le deuxième article. La thèse sera ensuite conclue par une discussion générale intégrative.

## **CHAPITRE II**

### **PSYCHOSOCIAL MALADJUSTMENT AND BEHAVIORAL ENGAGEMENT AT SCHOOL IN ADOLESCENTS FROM UNDERPRIVILEGED BACKGROUNDS: THE MEDIATING ROLE OF SELF-ESTEEM**

**Sarah Shortridge, Isabelle Archambault, Sophie Pascal et Michel Janosz**



## ABSTRACT

In a sample of 4,035 adolescents from secondary schools in disadvantaged areas, this study aimed to explore the role of internalizing and externalizing difficulties such as relational violence and depressive symptoms as precursors of individual characteristics, namely their self-esteem and behavioral school engagement. Using a Cross-Lagged Panel model, we explored the autoregressive, bidirectional, and concomitant associations to determine whether adolescent self-esteem could be a possible mediator of the link between depressive symptoms or relational violence and behavioral school engagement. Furthermore, this article investigated whether the associations varied according to the students' sex. The results were opposite to our hypothesis. Indeed, they showed that it is depressive symptoms and relational violence that play a key mediating role between self-esteem and behavioral engagement of adolescents from disadvantaged school backgrounds. Also, we found some specific differences between sexes. However, our study suggested that there were very few differences between boys and girls in the mechanisms linking self-esteem, internalizing, externalizing difficulties, and school engagement. Therefore, our results allow us to conclude that despite some specific differences, between boys and girls from disadvantaged backgrounds, the developmental mechanisms identified in the study apply in the same way, regardless of the gender of the student. Findings and their implications are discussed further in the following chapters.

## INTRODUCTION

Adolescent developmental pathways are variable and conditioned by a set of factors that operate in different contexts (Caskey et Anfara, 2014; Marcelli et al., 2018). In disadvantaged areas, adolescents are more likely to encounter an array of difficulties. For this reason, scientists are increasingly interested in understanding the contribution of psychosocial difficulties, such as relational violence and depressive symptoms, on the development of these youths (Forbes et al., 2019; Okano et al., 2020; Panayiotou et Humphrey, 2018; Vaillancourt et Brittain, 2013). Relational violence and depressive symptoms are associated to multiple characteristics. Among the latter, self-esteem and engagement in school have been studied on several occasions, including in disadvantaged communities (Archambault et al., 2009; Lei et al., 2018; Wang et al., 2019). Yet, the different processes that link these variables through adolescence are not well understood. The present study therefore aims to determine how and if relational violence, depressive symptoms, self-esteem, and behavioral engagement in school are interrelated over time in adolescents attending low-SES high schools. In addition, this paper aims to specify whether among this population of adolescents, self-esteem can be a possible mediator between behavioral engagement and relational violence/depressive symptoms.

### **Psychosocial Maladjustment**

Adolescent psychosocial adjustment is characterized by a physical, psychological, and social state that is relatively free of major difficulties and allows them to function effectively in their environment, whether in school, with peers, or in the family (Gauchat et al., 2020; Piqueras et al., 2019). On the contrary, psychosocial maladjustment corresponds to a lower level of functioning in the environment and may include the presence of psychopathological symptoms (American Psychological Association, 2022; Riquelme, Garcia et Serra, 2018). Psychosocial maladjustment can present itself in different spheres of adolescents' lives, such as academically, socially, and behaviorally. Behavioral maladjustment is generally conceived in two distinct types: externalizing or internalizing difficulties.

On one hand, externalizing difficulties are very diverse in nature and include hyperactivity, impulsivity, outburst of anger, disruptive behaviors, and oppositional behaviors (Cox et al., 2021; Weber et al., 2019; Wright et al., 2015). It also includes relational violence, which is an increasingly prevalent type of externalizing difficulty in adolescence (Lopez-Tamayo et al., 2016; Lorber et al., 2015; Schindler et al., 2015; Wright et al., 2015). Relational violence is characterized by threats of rejection, insults, threats to destroy property belonging to others or telling false rumors (Duru et al., 2019). The latter is a major concern to address in adolescence. Relational violence which tends to transitory increase with age for most of the youth (Herrenkohl et al., 2022) can greatly intervene in youth academic success (Hoffman et al., 2013; Samara et al., 2021). It is also strongly associated with psychological distress, increased suicide attempts (Peng et al., 2020; Pournaghash-Tehrani et al., 2021; Sahle et al., 2022), and with criminal consequences in adulthood (Kjellstrand et al., 2018; Smokowski et Evans., 2019).

On the other hand, internalizing difficulties include social isolation, anxiety, and depression symptoms (Moreno, 2018; Oh et al., 2020; Olivier et al., 2018; Van der Ende et al., 2016; Wilner et al., 2016). Depressive feelings are characterized by the persistence of a depressed mood and are marked by a lack of interest in pleasant activities, a feeling of distress as well as an alteration in social functioning (American Psychiatric Association, 2013; Carney et Freeland, 2017; Gagné et al., 2011; La Moul et Gotlib, 2019). Although other types of internalizing difficulties, like withdrawal, fearfulness and inhibition are also prevalent in adolescence, depression symptoms are clearly recognized for their major impact on interpersonal relationships, and physical and mental health and well-being (Gutman et McMaster, 2020; Hetrick et al., 2021; Liu et Merritt, 2018). They present the greatest stability across adolescence (McLaughlin et King, 2015) and are often maintained afterwards (Nguyen et al., 2005).

In adolescents, significant sex differences are also reported in the distribution of relational violence and depression, or on internalizing and externalizing difficulties more generally (Ara, 2016). Indeed, boys are more likely to present some kind of externalizing difficulty, like physical aggression, violence and antisocial behaviors (Ara, 2016; Bor et al., 2014; Olivier, 2017). Besides, girls tend to present higher levels of internalizing difficulties, such as mood disorders and depressive symptoms characterized by worries, sadness, and hopelessness (Ara, 2016; Eme, 2016; Olivier, 2017). As for the sex differences in relational violence, research results are diverse. Some authors conclude that girls tend to adopt more behaviors associated with relational violence, such

as excluding a targeted individual from the group, not talking to them, leaving them alone, or spreading rumors about them (Duru et al., 2019; Ellickson et McGuigan, 2000; Povedano et al., 2015), while other researchers do not find strong differences between boys and girls (Iñiguez-Berrozpe et al., 2021; Skara et al., 2008). Different lines of explanations have been brought in the past literature for understanding these sex differences. However, three main processes are more commonly highlighted.

The first is brain development. Existing literature suggests that sex differences in brain structure (i.e., volume, gray matter density and cortical thickness), organization, and perfusion are present across the lifespan (Kaczurkin et al., 2019; Whittle et al., 2014). These variations between males and females emerge at different times in development and are consistent with the findings of dissimilarities in symptom prevalence and clinical presentation of internalizing and externalizing difficulties, such as depression and relational violence. This suggests a possible sex-distinct developmental mechanism for the emergence of such symptoms (Kaczurkin et al., 2019; Whittle et al., 2014).

The second process is sexual selection (Martel, 2013). This process suggests that male and female markers of psychosocial maladjustment differently increase the risk for externalizing and internalizing difficulties, due to hormonal based influences. Indeed, hormonal differences between males and females can be explained by a different timing of sensitivity to aspects of the environment. Boys and girls being particularly likely to be responsive to different characteristics of their environment and at a different time, this may contribute to respective changes in their attitudes and behaviors. For example, males may be at increased risk for childhood onset externalizing disorders, such as relational violence due to high levels of sensation-seeking and disinhibition (Martel, 2013). High levels of these traits are adaptive from a sexual selection viewpoint because they increase social dominance and can facilitate the practice of male-male competition during childhood. In contrast, females may be at increased risk for adolescent onset internalizing difficulties, such as depression due to high levels of negative emotionality, empathy, and rumination. These cognitive patterns are adaptive from a sexual selection viewpoint since they facilitate female advantage in interpersonal competence which is important for mate selection (Martel, 2013).

The third process is socialization pressures that guide girls and boys towards different roles. These socialization pressures are conveyed in the form of differential attention to boys' and girls'

expressions during emotional events, attention that can encourage the expression of certain emotions and discourage others (Chaplin et al., 2005; van der Pol et al., 2015; Zahn-Walker et al., 2015). For example, boys are often reprimanded (e.g., being told to “man up”) for showing too much emotion (e.g., sadness or fear) whereas girls receive comfort when they are upset (Cook et al., 2019; Thomassin et al., 2019). This contributes to a tendency for girls to be more likely to convey submissive emotions such as sadness, and for boys to be more willing to express disharmonious emotions such as anger and violence (Chaplin et al., 2005; van der Pol et al., 2015; Zahn-Walker et al., 2015).

To summarize, brain development, sexual selection and socialization pressures are among the many hypotheses that are put forward to explain the sex differences in internalizing and externalizing difficulties, such as depression and relational violence. Scientists do not agree on a single determining factor. Therefore, recent studies depict that multiple factors are involved in the development of internalizing and externalizing difficulties and sex differences between the latter (Chi et Cui, 2020; Hyde et Mezulis, 2020). Other factors are explored to better understand the development of internalizing and externalizing difficulties throughout adolescence, namely global self-esteem, and youth engagement in school.

### **Global Self-Esteem and Youth School Engagement**

Youth psychosocial maladjustment is transactionally linked to multiple individual characteristics. The latter include, among others, temperament, self-regulation capacities, stress level, age, sex, intelligence, level of education as well as emotions (Hauser-Cram et Woodman, 2015; Wang et al., 2018). Yet, scientific literature emphasizes the importance of two other characteristics: youth engagement in school and self-esteem. The latter are likely to fluctuate importantly during adolescence (Anderson et al., 2000; Berruex, 2016; Duval et al., 2019), and especially among teens from disadvantaged backgrounds (Archambault et al., 2009).

Several conceptualizations have been put forward to define student engagement. However, for almost twenty years, the definition proposed by Fredericks et al. (2004) brought consensus among the majority. These authors conceptualize engagement as a multidimensional concept composed of three interacting dimensions that refer to student emotions, cognitions, and behaviors. The emotion dimension includes liking or enjoying school, whereas the cognition dimension refers to investment, thoughtfulness, and willingness to make efforts (Abbott-Chapman et al., 2014;

Fredericks et al., 2004). The behavioral dimension of engagement is characterized by continuing efforts and involvement despite obstacles and difficulties encountered (Archambault et Vandebossche-Makombo, 2014; Fredericks et al., 2004). For a student in a classroom, this dimension is displayed through participation in tasks as well as adherence to the norms and rules of the environment. For example, behaviorally engaged students are involved in discussions, collaborative tasks with others and asks the teacher questions by raising their hand. On the contrary, a student with low behavioral engagement takes little part in discussions and interacts less with the teacher. Despite the multidimensional nature of engagement, several studies choose to target this last dimension specifically (Faccin et Boisvert, 2019; Wang et al., 2019; Zhu et al., 2019), as it allows understanding the spectrum of behaviors (e.g., taking notes, raising a hand to answer a question) associated with academic success. When a student adopts behaviors related to low levels of engagement in learning (e.g., initiates disruptive behavior, or not following classroom rules), he or she is at increased risk of poor mental and physical health, and involvement in crime (Bergdahl et al., 2020; Nicholson et Putwain, 2015). In addition to being associated with academic failure, low levels of behavioral engagement are likely increase difficulties and undermine student self-esteem (Archambault et al., 2017).

Self-esteem is an individual's subjective assessment of their worth. It is characterized by the evaluation of a person towards themselves; that is if they appreciate themselves as they are and if they feel proud of their accomplishments (Martinot, 2018; Orth et al., 2014). Self-esteem is also a multidimensional construct. According to Harter (1993), this construct is composed of two elements: global and domain-specific self-esteem. Global self-esteem is the overall value that the individual places on themselves (Bialecka-Pikul et al., 2019; Harris et al., 2017). Thus, students who have good overall self-esteem sees themselves as capable of facing challenges in general, perform better academically and is more accepted by their peers (Bialecka-Pikul et al., 2019; Bos et al., 2006; Harris et al., 2007). Then, domain-specific self-esteem relates to a specific field. For example, an adolescent might feel good in sports and have good self-esteem in that area, but conversely avoid arts because they experience difficulties and present a lower self-esteem in this domain. These two dimensions of self-esteem are likely to change during development (Giguère, 2018; Iratxe et Azpiazu, 2018; Orth et al., 2018). Global self-esteem is, however, of more interest for the study of relational violence and depressive symptoms in adolescence, especially during this

particularly threatening period for global self-worth, and regardless of the area examined (Iratxe et Azpiazu, 2018; Onetti et al., 2018; Orth et al., 2018).

### **Transition from Childhood to Adolescence**

In adolescence, the transition between elementary school and high school is linked to a decrease in behavioral engagement as well as a lower and more unstable global self-esteem in youth (Anderson et al., 2000; Berruex, 2016; Duval et al., 2019). This can be explained by the greater emphasis placed on evaluation and social comparison during this transition, as stricter grading standards are applied (Wigfield et al., 1991). The disruption of youth social network when entering high school can also contribute to a decrease in their behavioral engagement and self-esteem (Wigfield et al., 1991; Wolf et al., 2020; Yang et al., 2019). However, the impact of these changes would be greater among adolescents from disadvantaged backgrounds who, in addition to the stress experienced by the transition to high school, are often confronted with stressful and difficult family and social conditions increasing their difficulties (Devenish et al., 2017; Reiss et al., 2019). Besides, for all adolescents, several biological changes also take place during puberty, such as changes in height, body shape, muscular capacity, physical strength, and sexual characteristics (Blakemore, 2019; Sawyer et al., 2018). These transformations may be responsible for an alteration in self-perceptions, as adolescents experience a confrontation between their ideals, desires, and reality. Navigating this confrontation while simultaneously experiencing the imbalance of puberty can also lead to increased depressive symptoms and higher levels of relational violence (Praise et al., 2019).

### **Developmental Cascades: Global Self-Esteem, Behavioral Engagement and Psychosocial Maladjustment**

Developmental changes across adolescence have been studied for several years. To better understand them, scientists grant an increased importance to ontogenesis (Bell, 2020). Indeed, in a system as complex as the human being, developmental changes cannot exist in isolation (Iverson, 2021). At any given moment in time, change is occurring both within and across multiple domains, as the individual experiences personal changes, while interacting with a constantly changing environment (Iverson, 2021). This way of looking at development highlights the multiple

interactions and transactions that occur in developing systems, leading to developmental cascades (Iverson, 2021; Masten et Cicchetti, 2010).

According to the developmental cascade model (Masten et Cicchetti, 2010), a person's functioning in one domain of adaptive behavior spills over and contribute to this person's functioning in other domains in a lasting, far-reaching, and cumulative way (Long et al., 2005; Masten et Cicchetti, 2010). According to this logic, individual characteristics such as depression, academic achievement, and victimization would be characterized by a complete interconnection such as a change in one of these characteristics could be associated with a change in others (Liu et al., 2017). These cascading effects can also be direct or indirect; they can be bidirectional; and they can span across multiple timescales (Iverson, 2021). Such cascades have been increasingly explored in certain domains of development, especially when looking at associations between cognitive and social competence and between internalizing and externalizing symptoms (Hunt et Tomlinson, 2018). Yet, studies that have examined the specific cascading links between behavioral engagement, global self-esteem and depression or relational violence are limited and even more so for those carried out in schools in disadvantaged areas.

Several authors also suggest that self-esteem could play a key role, as a mediating factor, within various developmental cascades (Bang et al., 2020; Mihalec-Adkins, et Cooley, 2020; Yang et al., 2019; Thompson et al., 2017; Yildiz et Karadas, 2017). Yang et al. (2019) notably depict self-esteem as being at the center of the cascade linking academic success and student well-being, assessed in terms of school satisfaction and affect in school. Thus, according to these authors, students with academic success tend to have a more positive self-esteem, which in turn increases their sense of well-being. However, this study has certain limitations, including the fact that it was implemented with Chinese elementary school students, limiting the generalizability of results to western educational contexts. Other studies have also looked at the role of self-esteem in relation to students' psychosocial maladjustment. For example, Bang et al. (2020) explored the central role of self-esteem in the cascade linking behavioral engagement and depression in adolescents. This study involved 273 adolescents between the ages of 11 and 18 from various public schools in the United States. Results indicate that high school behavioral engagement was positively associated with self-esteem, which, in turn, decreased feelings of depression in adolescents. Mihalec-Adkins and Cooley (2020) also carried out a study targeting the cascade between behavioral engagement and self-esteem, but this time to predict externalizing difficulties, measured in terms of social



problems, rule-breaking behavior, and aggressive behavior. This study included 235 adolescents aged between 11 and 17 years coming from different living environments, such as foster families, group homes, and family residences. Results indicate that an engaged student had more positive self-esteem, which in turn acted as a protective factor against the presence of externalizing difficulties.

The previously mentioned studies focusing on the individual system have certain limitations. First, many present a small sample (Bang et al., 2020; Mihalec-Adkins et Cooley, 2020; Thompson et al., 2016; Yildiz et Karadas, 2017), making it more difficult to generalize the results. Next, most studies are cross-sectional (Bang et al., 2020; Mihalec-Adkins et Cooley, 2020; Thompson et al., 2016; Yildiz et Karadas, 2017), thereby limiting in-depth understanding of the developmental cascades linking constructs to long-term study. In addition, because most previous studies have been conducted in the United States and China with samples of students from the middle class or the general population (Bang et al., 2020; Mihalec-Adkins et Cooley, 2020; Thompson et al., 2016; Yang et al., 2019; Yildiz et Karadas, 2017), the generalization of the results to the reality of adolescents from disadvantaged backgrounds in other contexts is also affected. Finally, many studies did not control for some key variables associated with youth psychosocial development and academic experience in adolescence, including family adversity, educational support from parents, and the nature of the relationship with teachers. These variables are all respectively linked to self-esteem, behavioral engagement, and psychosocial maladjustment (i.e., depression and relational violence), hence the importance of controlling them (Goulter et al., 2021; Fitzpatrick et al., 2020; Kim et al., 2022; Lavy et Naama-Ghanayim, 2020; Roorda et Koomen, 202; Teuscher et Makarova, 2018).

## **Study Objectives**

The purpose of this study is to determine whether adolescents' self-esteem can be a possible mediator between behavioral engagement and psychosocial maladjustment (i.e., depression or relational violence) in adolescents attending low-SES high schools from Grade 7 to Grade 11. Although little research has focused on this specific subject, based on previous work (Bang et al., 2020; Mihalec-Adkins, et Cooley, 2020; Yang et al., 2019; Thompson et al., 2017; Yildiz et Karadas, 2017), it is possible to hypothesize (hypothesis 1) that depressive symptoms/relational violence, self-esteem, and behavioral engagement will be linked over time. As such, we explored

all possible links (i.e., autoregressive, bidirectional, concomitant) between relational violence/depression, self-esteem, and behavioral engagement throughout high school. Yet, it is anticipated (hypothesis 2) that self-esteem will have a mediating role in the relationship between behavioral engagement and relational violence behaviors/depression symptoms. Indeed, the presence of low self-esteem in high school students will negatively lead to more relational violence behaviors/depression symptoms, which will then reduce their level of behavioral engagement. Finally, our study aims to determine whether the autoregressive, bidirectional, and concomitant associations display differences according to the sex of the students. Several studies have studied sex invariance, reporting several differences between boys and girls in adolescence. According to the latter, boys are more likely to present some kind of externalizing difficulty (Ara, 2016; Bor et al., 2014; Olivier, 2017), whereas girls tend to present higher levels of internalizing difficulties, (i.e., depressive symptoms) (Ara, 2016; Eme, 2016; Olivier, 2017). As for the sex differences in relational violence, some authors conclude that girls tend to adopt more behaviors associated with relational violence (Duru et al., 2019; Ellickson et McGuigan, 2000; Povedano et al., 2015), while other researchers do not find strong differences between boys and girls (Iñiguez-Berrozpe et al., 2021; Skara et al., 2008). Based on these studies, it is possible to postulate (hypothesis 3) internalizing mechanisms would be more important in girls, and externalizing mechanisms would be more important in boys.

## **METHOD**

### **Participants**

The data in this study was derived from large-scale longitudinal research conducted throughout the province of Quebec (Canada) from 2002 to 2007 among students attending secondary schools in disadvantaged areas. Overall, 66 schools participated in the study. The selection criterion for these schools was to have a low socio-economic background index based on governmental classification. This classification is mostly based on mothers' under-education (two thirds of the weight of the index) and on parental inactivity (third of the index) aggregated at the school level. This stratified sample of 66 schools was randomly selected based on a pool of 200 schools according to their language of instruction (French and English), their size (small, medium, and large), and their geographical location (urban and rural) (Janosz et al., 2010).

In total, data from 34 124 students from Grade 7th to Grade 11th were collected (Janosz et al., 2010) during the first year of the project, from which 8521 from grade 7. To both optimize the number of participants kept in the sample while limiting the proportion of data to be imputed, we next chose to keep in the sample the students who participated in at least two measurement times out of the three times used for the study. In addition, to avoid including outliers whose prediction error is large, all students who were at most two years older than the average at the time of measurement have been retained. In total, students were removed because their age represented 0.9% of the original sample. Our final sample includes 4,035 students in 7<sup>th</sup> grade, 44.4% (1790) who identified as boys and 55.6% (2245) who identified as girls. In 7<sup>th</sup> grade, the average age of this sample was 12.6 years old.

## **Procedures**

As a first step, the active consent of the parents of all students was sought at the beginning of the research. Written consents were forwarded to the assessment team and then entered in an identity management database, in which each student was assigned a unique identity number. Next, data regarding the composition of the schools (i.e., the number of pupils, the percentage of students with adjustment and learning difficulties, etc.) and students (i.e., sociodemographic information, sex, etc.) were provided by the *Ministry of Education*. It was also necessary to collect data from students who were questioned by paper and pencil or electronic questionnaires (Web-survey), in class or in the computer lab of their school (periods between 60 and 75 minutes). For most of the schools, data collection took place at the same time for everyone or over a “spread” period within a weekly hourly cycle. In each school, data collections were supervised by two trained research assistants who answered students’ questions if needed.

Each participant answered the same sets of questions three times, i.e., in 7<sup>th</sup> grade, 9<sup>th</sup> grade, and 11<sup>th</sup> grade. The questionnaire that was distributed covered the school and social integration of students. Several dimensions related to learning, socialization and qualification were assessed, including academic performance, engagement, and self-esteem, internalizing and externalizing difficulties. Furthermore, another questionnaire was used to collect sociodemographic information. It was administered to students once in the first year of the research since the outcomes are generally very stable across time. This questionnaire was used to document the

characteristics of the students, the composition of their families as well as the socio-economic living conditions.

## **Measure**

### **Externalizing difficulties-Relational Violence**

Student self-perception of relational violence was assessed with the Measures of Social and Personal Adaptation for Quebec Adolescents (Leblanc, 1996). Four items from this validated measure were used to evaluate the level of relational violence among adolescents in the last 12 months. For example, “While you were angry with someone, did you say to others: I don’t want him [her] in our group?”. Cronbach’s alpha for this scale is .76. Students had to answer on a four-point Likert scale ranging from “never” [0] to “very often” [3]. These items were grouped as a sum. A high score on the scale indicates that relationship violence is high.

### **Internalizing Difficulties—Depression**

Depressive symptoms were assessed by a French validated version of the Center for Epidemiologic Studies—Depression Scale (CES-D) (Furher et Rouillon, 1989; Radloff, 1997). The instrument is used to assess depressive symptoms in adolescents. Cronbach’s alpha for this scale is .87. In this study, twenty items were used (e.g.: “I felt that I could not get rid of my dark thoughts even with the help of my family or my friends”). Students were asked to answer on a 4-point Likert scale (Rarely or never [0] Sometimes or infrequently (1–2 days) [1] Occasionally or moderately (3–4 days) [2] Most of the time or all the time [3]). These items were grouped as a sum, with a high value indicating a high depressive tendency.

### **Self-esteem**

Self-esteem was assessed with a French validated version of the Rosenberg Self-Esteem scale (Vallières et Vallerand, 1990; Rosenberg, 1965). This scale is used to assess the general self-esteem of adolescents. As part of the project, ten items were used (e.g., “I feel that I’m a person of worth, at least on an equal plane with others,” “I feel that I have a number of good qualities”; alpha = .84). Students had to respond to each item on a four-point Likert scale (totally disagree [1] somewhat disagree [2] somewhat agree [3] completely agree [4]). Items were grouped as the sum of each scale. A high score on this scale indicates high general self-esteem.

## **Behavioral Engagement**

Engagement was assessed using the School Engagement Scale (Archambault et al., 2009). This validated scale includes four items assessing the behavioral dimension of engagement (e.g., “Did you miss school without a valid excuse?” and “Did you disturb your class on purpose”; alpha = .86). Students had to respond to each item using a four-point Likert scale corresponding to each of the items (e.g., never [0] once or twice [1] several times [2] many times [3]). These items were grouped in the form of a sum. A high score on the scale indicates high behavioral engagement.

## **Control Variables**

**Age and sex.** Student sex (Male = [1], Female = [2]) and age (12 or younger = [12], 13 years old = [13], 14 years old = [14], 15 years old = [15], 16 years old = [16], 17 years old = [17], 18 years old or older = [18]) were self-reported and validated by the *Ministry of Education* official data.

**Family adversity.** Family adversity was assessed using a cumulative index (Brière et al., 2017; Janosz et al., 2010) calculated based on nine family risk factors: low maternal occupational prestige, low paternal occupational prestige, low family wealth, low home educational resources, parental separation, mother secondary school non-completion, father secondary school non-completion, sibling school non-completion, frequent house moves. For each factor, a cut-off point was established to distinguish between family risk and absence of risk. Cut points were established based on previous work using the same sample (see Brière et al., 2017, for details). Family risk for every specific factor was attributed a score of 1, while the absence of risk was attributed a score of 0. The cumulative index consists of the addition of the nine scores for each specific risk factor. Answers on the family adversity cumulative index thus range from 0 (minimum risk) to 9 (maximum risk).

**Educational support from parents.** The Parental School Support Scale was taken from Deslandes (1996). This validated tool measures the frequency of parents demonstrating academic support to their adolescent since the beginning of the school year. Cronbach’s alpha for this scale is .911. Eleven items were used (e.g., “When I get a bad grade at school, they encourage me to try

harder”). Students answered on a four-point Likert scale (never [0], sometimes [1], often [2], very often [3]). These items were grouped as a sum.

**Conflictual relationship with teachers.** We used the Student-Teacher Relationship Scale (STRS) [ $\alpha = .871$ ] developed by Pianta (1992), then translated, adapted into French, and validated by Larose et al. (1999). As part of the project, the seven items of the scale were used, including “I often have conflicts with my teachers”. Students responded to each item on a five-point Likert scale ranging from “not at all” [1] to “a lot” [5]. These items were grouped as a mean. A high average score on the conflictual relationship scale indicates high adversarial relationships with teachers.

**Grade repetition in elementary school.** The item used is one of the predictors included in the dropout risk index scale [ $\alpha = 0.79$ ] (Archambault et Janosz, 2009). The self-reported item is the following “Have you repeated an elementary school year?”. Students responded (Yes = [1], No = [0]).

### **Missing data**

Missing data rates ranged from 6.2% to 10.0% at T1, from 7.6% to 19.3% at T2 and from 38.0% to 49.9% at T3. They were mainly caused by students missing school on the day of the survey or by school mobility. Attrition analyses showed that patterns of missing data at grade 11 distinguished students according to their sex ( $\chi^2(2) = 11.11; p < .001$ ). Indeed, a greater proportion of missing data is found among female students. Furthermore, students with missing data at grade 11 showed less behavioral engagement ( $F(1,3799) = 28.83, p < .001$ ), more depressive symptoms ( $F(1, 3665) = 6.88; p < .001$ ), and lower self-esteem ( $F(1, 3689) = 9.28; p = .00$ ) in grade 7. We relied on a strategy allowing missing responses to be conditioned on all variables comprised in the model (i.e., “missing at random” assumptions; Enders, 2010). To limit the proportion of missing data, the latter were estimated in Mplus using Maximum Likelihood estimator with robust standard errors, which relies on Full Information Maximum Likelihood estimation for missing data under COMPLEX models and allowed missing responses to be conditioned on all variables (i.e.,

“missing at random”, Enders, 2010). This procedure constitutes the best strategy with highly sparse data sets (50% missing data; Xiao et Bulut, 2020).

## **Analytic Strategy**

Preliminary analyses consisted of descriptive statistics and correlations to examine the links between all studied variables. To test our main hypothesis, we used a Cross-Lagged Panel model in Mplus 8 (Barbeau et al., 2019; Muthén et Muthén, 1998–2012). The aim of Model I was to determine whether adolescents’ self-esteem can be a possible mediator between internalizing difficulties and behavioral engagement in adolescents attending low-SES high schools from Grade 7 to Grade 11. The model included autoregressive paths and concomitant residual correlations between constructs to assess stability coefficients between the three constructs: depression, self-esteem, and behavioral engagement between 7<sup>th</sup> (T1), 9<sup>th</sup> (T2), and 11<sup>th</sup> grade (T3). To further describe the developmental links between constructs, we observed the mediation processes linking depression, self-esteem, and behavioral engagement between T1, T2 and T3. The aim of the second model (Model II) was to determine whether adolescents’ self-esteem can be a possible mediator between externalizing difficulties and behavioral engagement in adolescents attending low-SES high schools from Grade 7 to Grade 11. The model included autoregressive paths and concomitant residual correlations between constructs to assess stability coefficients between the three constructs: relational violence, self-esteem, and behavioral engagement between 7<sup>th</sup> (T1), 9<sup>th</sup> (T2), and 11<sup>th</sup> grade (T3). In both models, we used age, sex, family adversity, parental support, conflictual relationship with the teacher and grade repetition in elementary school as control variables. For the sake of parsimony, we removed nonsignificant paths between covariates and predictors.

In addition to using robust maximum likelihood estimation to control for potential bias due to missing data, we examined all paths correcting for data clustering using the TYPE = COMPLEX option in Mplus (Muthén & Muthén, 1998-2012). This option adjusts standard errors and chi-squared tests for nonindependence of the observations (i.e., students nested in schools). To determine whether models apply differently to boys and girls, we tested multiple-group structural invariance by comparing a model where all hypothesized regression coefficients were constrained to be equal between groups to another model where coefficients were freely estimated between groups based on the Chi-square Difference Test (Werner et Schermelleh-Engel, 2010). We relied

on five adjustment indicators to assess the fit of the chosen models (Little, 2013; Marsh et al., 2005): the chi-square ( $\chi^2$ ), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The  $\chi^2$  compares the estimated model to the tested model and the fit is good when its value is not significant and lower than three times the degrees of freedom. The CFI and the TLI both compare the fit to the null model. All coefficients are standardized. They indicate a great fit when they are above .99, and a good or acceptable fit when ranging from .95 to .99 or from .90 to .95. The RMSEA and the SRMR compare the tested model to the saturated model, and both indicate a great fit when their values are below .01 and a good fit between .05 and .02.

## RESULTS

### Preliminary Analysis

Descriptive statistics and correlations are presented in Table 2.1. For variables of Model I, concurrent correlations between self-esteem, behavioral engagement, and depressive symptoms at T1 were found to vary from low to high ( $.19 < r_s < .62$ ), with the weakest correlations being between self-esteem and behavioral engagement. The stability of the three constructs, i.e., depression, self-esteem and behavioral engagement, over high school is low to moderate ( $.29 < r_s < .47$ ) with the weakest correlation between depressive symptoms at T1 and depressive symptoms at T3 ( $r = .29$ ).

Regarding variables of Model II, concurrent correlations between self-esteem, behavioral engagement, and relational violence at T1 were found to vary from low to moderate ( $0.19 < r_s < 0.34$ ), with the weakest correlation between relational violence and self-esteem. The stability of the three constructs, i.e., relational violence, self-esteem and behavioral engagement, over high school are low to moderate ( $.27 < r_s < .47$ ) with the weakest correlation between relational violence at T1 and relational violence at T3. Stability of self-esteem across high school is stronger for girls than boys. This is also true for relational violence, between T1 and T2.

### Model I—Direct and Indirect Associations between Depression, Behavioral Engagement, and Self-Esteem



Model I examined the direct and indirect associations between depression, behavioral engagement, and self-esteem. We first tested the sex invariance of a completely saturated autoregressive model by comparing a model where all hypothesized regression coefficients were constrained to be equal between groups to another model where coefficients were freely estimated between groups. The overall model did not apply equally to all groups (difference between models:  $\Delta\chi^2 = 80.12$ ,  $\Delta df = 45$ ,  $p = .001$ ; model fit for free model:  $\chi^2 = 338.12$ ;  $df = 42$ ,  $p = .00$ ; CFI = 0.959; TLI = 0.912; RMSEA = 0.042; SRMR = 0.029), but only few links varied for boys and girls. To facilitate the understanding of the results, we integrated the presentation of these sex variations with the presentation of the general model here.

As illustrated in Figure 2.1, results of the full saturated model first indicate that all autoregressive paths between the depression, self-esteem, and behavioral engagement variables were significant across all time points. Depressive symptoms and self-esteem were concomitantly linked at all measurement times. These variables were also further linked bidirectionally between T1 and T2, then between T2 and T3. Specifically, negative coefficients indicate that a higher level of depressive symptoms was associated with a lower level of self-esteem over time, and conversely, that lower self-esteem at one time point was associated with more depressive symptoms at the next time point. The test of invariance of these links revealed a few differences. First, the link between depression and self-esteem at T1 was stronger in girls than boys (Wald  $\chi^2 = 7.80$ ,  $df = 1$ ,  $p = .005$ ). In addition, the invariance test revealed that the links between self-esteem at T1 and T2, as well as between T2 and T3, were stronger in girls than boys (T1-T2: Wald  $\chi^2 = 4.04$ ,  $df = 1$ ,  $p = .04$ ; T2-T3: Wald  $\chi^2 = 21.45$ ,  $df = 1$ ,  $p < .001$ ).

Regarding behavioral engagement and self-esteem, results show a significant concurrent association at T2 and T3. Indeed, an adolescent with a high level of self-esteem was more likely to be behaviorally engaged in school. However, the longitudinal links between these variables were not significant. The concurrent associations between self-esteem and behavioral engagement did not show any sex variation (T2: Wald  $\chi^2 = 1.24$ ,  $df = 1$ ;  $p = .26$ ; T3: Wald  $\chi^2 = 2.25$ ,  $df = 1$ ,  $p = .13$ ).

As for depressive symptoms and behavioral engagement, results show that all concomitant and longitudinal links were significant at all measurement times. Depressive symptoms and behavioral engagement were linked bidirectionally between T1 and T2, then between T2 and T3. Specifically, depressive symptoms at one time point were negatively associated to behavioral

engagement at the following time point, and vice versa. The test of invariance of these links revealed that only one link is stronger in girls than boys, namely between depression and behavioral engagement at T3 (Wald  $\chi^2 = 7.32$ ,  $df = 1$ ,  $p = .007$ ).

We also examined the mediation processes linking depression/self-esteem/behavioral engagement at T1 to depression, self-esteem, and youth engagement in school at T3 by way of depression, self-esteem, and behavioral engagement at T2. Contrary to our hypothesis, self-esteem did not act as a significant mediator ( $\beta = .001$  (.002);  $p = .57$ ) between behavioral engagement at T1 and depression at T3. However, unexpectedly, results depicted in Figure 2.1. show that depressive symptoms at T2 mediate the association between self-esteem at T1 and behavioral engagement at T3 ( $\beta = .007$  (.003);  $p = .04$ ). The other way around, depressive symptoms at T2 also mediate the association between behavioral engagement at T1 and self-esteem ( $\beta = .004$  (.002);  $p = .04$ ). Finally, the sex invariance of these indirect links was tested. The results are nonsignificant, indicating no difference between boys and girls for these indirect effects (Wald  $\chi^2 = .001$ ,  $df = 1$ ,  $p = .98$ ; Wald  $\chi^2 = 55$ ,  $df = 1$ ,  $p = .46$ ).

### **Model II—Direct and Indirect Associations between Relational Violence, Behavioral Engagement, and Self-Esteem**

We next explored the longitudinal and concomitant links between relational violence, self-esteem, and behavioral engagement throughout high school and tested the sex invariance of this model in a separate set of analysis. Again, we first tested the sex invariance of a completely saturated autoregressive model by comparing a model where all hypothesized regression coefficients were constrained to be equal between groups to another model where coefficients were freely estimated between groups. The overall model did not apply equally to all groups (difference between models:  $\Delta\chi^2 = 134.51$ ,  $\Delta df = 45$ ,  $p < .001$ ; model fit for free model:  $\chi^2 = 334.54$ ;  $df = 42$ ,  $p = .00$ ; CFI = .959; TLI = .912; RMSEA = .042; SRMR = .028). As illustrated in Figure 2.2., results of the fully saturated model showed significant concomitant links between relational violence and self-esteem. However, contrarily to our hypotheses, self-esteem, and relational violence were not bidirectionally linked. For instance, self-esteem was negatively linked to relational violence longitudinally, but relational violence was not significantly linked to self-esteem at any time points. The sex invariance of these links between relational violence and self-esteem were all nonsignificant (Wald  $\chi^2 = .21$ ,  $df = 1$ ,  $p = .65$ ; Wald  $\chi^2 = 1.78$ ,  $df = 1$ ,  $p = .18$ ).

Regarding behavioral engagement and self-esteem, results show significant positive concurrent associations at T2 and T3. Otherwise, model outcomes indicate that longitudinal links were not significant, nor was the sex invariance of these links (Wald  $\chi^2 = .13$ ,  $df = 1$ ,  $p = .71$ ; Wald  $\chi^2 = 2.90$ ,  $df = 1$ ,  $p = .09$ ).

As for relational violence and behavioral engagement, all concomitant and longitudinal bidirectional links were negative and significant at all measurement times. Specifically, a higher level of relational violence at one time point was negatively associated to behavioral engagement at the following time point, and vice versa. Finally, the test of invariance revealed that concomitant links between relational violence and behavioral engagement were significantly stronger in girls than for boys at every time points (Wald  $\chi^2 = 4.49$ ,  $df = 1$ ,  $p = .034$ ). No difference between boys and girls were observed in regard to longitudinal associations between relational violence and behavioral engagement.

We also examined the mediation process linking behavioral engagement/self-esteem/relational violence at T1 to behavioral engagement, self-esteem, and relational violence at T3 by way of behavioral engagement, self-esteem, and relational violence at T2. Contrary to our hypothesis, no self-esteem mediating process was found to be significant. However, results depicted in Figure 2.2. show that self-esteem at T1 contributed to behavioral engagement at T3 through relational violence at T2 ( $\beta = .005$  (.002);  $p = .007$ ). For instance, lower self-esteem in secondary one was associated with higher relational violence behaviors in secondary three, which in turn led to lower behavioral engagement in secondary five. Yet, no difference between boys and girls were found (Wald  $\chi^2 = .21$ ,  $df = 1$ ,  $p = .65$ ; Wald  $\chi^2 = .63$ ,  $df = 1$ ,  $p = .43$ ).

## DISCUSSION

Psychosocial maladjustment is increasingly explored by scientists for its contribution to adolescent development. Indeed, recent research shows that adolescents presenting depression symptoms or behaviors associated with relational violence are at higher risk of presenting lower levels of behavioral engagement in school and self-esteem (Yang et al., 2019; Wolf et al., 2020). Moreover, the relationship between self-esteem and behavioral youth engagement in school has been supported for decades. Indeed, teenagers who participate in school tasks, and adhere to the norms and rules of the classroom tend to appreciate themselves, and feel proud of their

accomplishments, and vice versa (Duval et al., 2019; Reiss et al., 2019). These individual characteristics seemed to be related, but their contribution to maladjustment difficulties of adolescents was until now misunderstood, especially among those from disadvantaged backgrounds. To increase our understanding of these processes, this study aimed to determine if depression and relational violence were linked with self-esteem and behavioral engagement over time. It was expected that adolescents' self-esteem could act as a possible mediator between relational violence/depression and behavioral engagement in adolescents attending low-SES high schools. Our results lead to three main conclusions. First, this study showed that with only some exceptions, internalizing/externalizing difficulties, self-esteem, and behavioral engagement in adolescents were generally all linked concomitantly, longitudinally, and bidirectionally throughout high school. Second, to our surprise, our results led us to reject our main hypothesis stating that self-esteem could play a mediating role between depression/relational violence and behavioral engagement. On the contrary, they indicate that maladjustment difficulties, both at the internalizing and externalizing levels, act as a mechanism of movement of the association between self-esteem and youth behavioral engagement. Finally, although the literature suggests that generally, boys are more likely to present some kind of externalizing difficulty and girls tend to present higher levels of internalizing difficulties, we found very few differences between boys and girls in the process highlighted by our results. These three main findings bringing additional light on the development of adolescents from disadvantaged backgrounds and will be further discussed.

### **Processes Linking Self-Esteem, Maladjustment and Behavioral Engagement Across Adolescence**

First, this study showed that depressive symptoms, relational violence, self-esteem, and behavioral engagement in adolescents were generally linked across adolescence. This suggests that teenagers who present a pronounced lack of interest in pleasant activities or feeling of distress (American Psychiatric Association, 2013; La Moul et Gotlib, 2019) as well as more threats of rejection, and telling false rumors (Duru et al., 2019) also tend to appreciate themselves less and be less involved and collaborative in school (Archambault et Vandenbossche-Makombo, 2014; Fredericks et al., 2004). This is true concomitantly and longitudinally, and vice versa. We have identified two exceptions; self-esteem was linked to relational violence only in one direction, and we found no significant direct bidirectional association between self-esteem and behavioral

engagement. For instance, and as expected, adolescents presenting lower self-esteem were more likely to adopt behaviors associated with relational violence. In line with previous work, this can be explained by the fact that students with low self-esteem try to protect themselves against feeling inadequacy, inferiority, and shame by externalizing blame for their difficulties on to others, which leads to relational violence (Ostrowsky, 2010; Weidmann, 2022). However, those reporting behaviors such as threats of rejection, insulting others, threatening to destroy property belonging or telling false rumors did not report a decrease of their self-appreciation and proudness of their accomplishments. This was more of a surprise. Yet, it could potentially be explained by the idea that relational violence could affect adolescents' specific self-esteem in the social domain, but not necessarily their general self-esteem. Indeed, adolescents might be attracted to the dominance of relational violence perpetrators, which could lead to an increased self-esteem in the relational domain for the latter. For example, boys who threat to reject, insult, threaten to destroy property belonging or tell false rumors have shown to be more attractive to girls (Ostrowsky, 2010; Weidmann, 2022). This can increase the domain-specific self-esteem related to opposite-sex peers but wouldn't increase the adolescent's global self-esteem as measured in our study (Ostrowsky, 2010; Weidmann, 2022).

Second, our results also highlight that students who showed a lower level of self-esteem were less likely to report a high level of behavioral engagement in grade 9 and grade 11. This suggests that within the same school year, adolescents who appreciate themselves as they are and feel proud of their accomplishments tend to actively participate in tasks and adhere to the norms and rules of the environment. However, self-esteem and youth engagement in school were not directly linked longitudinally or bidirectionally. In fact, our results demonstrated that these facets of adolescent development were indirectly linked through the mediation effect of depressive symptoms and relational violence. For depression, this study suggests, on one hand, that adolescents who present a high level of self-esteem at the start of high school tend to present fewer depressive symptoms in grade 9, which, in turn, was associated with higher levels of behavioral engagement at the end of high school. On the other hand, adolescents who present higher levels of behavioral engagement at the beginning of high school, that is who are involved in discussions, collaborate when doing tasks with others and ask the teacher questions by raising their hand, tend to show more interest in pleasant activities, and feel less distressed midway through high school. This was linked to a greater appreciation of themselves in grade 11.

This mediating role of depressive symptoms was not what we expected at first-hand. However, it follows the literature stating that internalizing difficulties tend to peak in mid-adolescence, which may lead to increased behavioral disengagement. Indeed, it is in grade 9 that depressive symptoms are most severe, giving the greatest potential to alter the school functioning of adolescents (Merikangas et al., 2022; Thapar et al., 2012). To explain the contribution of these symptoms in grade 9 on the association between self-esteem and school behavioral engagement, the role of stress must be considered. Indeed, adolescence is a critical window in stress susceptibility since it is a time of substantial cerebral development. According to Anniko et al. (2019), an increased level of stressors in mid-adolescence can shape brain functions as well as behaviors, increasing the potential for teenagers to experience depression symptoms. Since the transition from elementary school to high school is filled with stressful challenges such as adjusting to new academic demands, negotiating new boundaries and responsibilities with parents, trying to fit in with peers and handling romantic relationships, we can hypothesize that it is a major stress factor, present for several months that can have major consequences for students presenting lower self-esteem. This stress ensuing the start of high school could shape the student's brain functions and behaviors, which, with time, could contribute to accentuating depressive symptoms in grade 9 (Anniko & al., 2019; Young et Dietrich, 2015). As students reporting depressive symptoms are less likely to be interested in pleasant activities, feel safe, and comfortable socially, this seems to lead over time to take little part in discussions and interacts less with the teacher (Archambault et Vandenbossche-Makombo, 2014; Fredericks et al., 2004).

For relational violence, we observed the same pattern of result, but only in one direction. That is that the association between self-esteem in grade 7 and behavioral engagement in grade 11 operates through relational violence in grade 9. This signifies that students who tend to exhibit less appreciation of themselves in grade 7 are more likely to threaten, reject, insult, and tell false rumors in grade 9, which leads to less involvement in discussions in class and, reduced collaboration in doing tasks with others. Indeed, it is in grade 9 that relational violence behaviors are most present, giving the greatest potential to alter the school functioning of adolescents (Merikangas et al., 2022; Hemphill et al., 2010). To further explain this result, the role of stress must again be considered. As adolescents enter high school, competition for peer status becomes more acute (Flack, 2016). Adolescents with low self-esteem may develop concerns and insecurities about their social status

among peers (i.e., status stress). The use of relational violence can be perceived as a proactive coping strategy to both lower status stress and gain or maintain their social position (Flack, 2016).

The result highlighting that the association between behavioral engagement in grade 7 and self-esteem in grade 11 doesn't operate through relational violence in grade 9 can be explained by the fact that relational violence can be promoted as a fitting strategy. Indeed, adolescents who are less behaviorally engaged in school are more at risk of associating with delinquent peers (Bae, 2020). Furthermore, delinquent youth are more likely to resort to behaviors such threaten to reject, insult, threaten to destroy property belonging to others or tell false rumors (Pechorro, 2021). Since the adolescent is integrating a group of peers who use these strategies, the latter may seem appropriate. As a result, adopting relational violence doesn't affect the adolescent's self-esteem.

### **Sex Variations**

Finally, our third main finding relates the quasi absence of differences according to the sex of students. For instance, we found no different mediation processes between self-esteem/depression/behavioral school engagement and between self-esteem/relational violence/behavioral school engagement for boys or girls, whether in connection with our initial hypothesis or with the new mediation processes identified. We can therefore say that for the observed effects, explanatory mechanisms of sex differences like brain development, sexual selection, and socialization pressures did not come into play in these processes. Despite the multiple studies highlighting different developmental patterns in boys and girls, the findings regarding the differences between the sexes in psychosocial maladjustment are very weak and inconsistent across countries (Campbell et al., 2021). In fact, multiple meta-analysis have highlighted that sex differences are often very small, sometimes even non-existent (Eagly et al., 2022; Hyde, 2014). Nevertheless, our study still suggests some sex variations. For instance, we found stronger associations between self-esteem from the beginning to the end of high school for girls as compared to boys. This result was unexpected since the meta-analysis of Anusic and Schimmack (2016), reports that the levels of self-esteem between boys and girls are similar and that sex does not modulate the latter throughout development. However, higher results in girls can perhaps be explained by the fact that the schools are in disadvantaged areas. Indeed, in underprivileged areas, the gender gap in terms of educational achievement is greater, favoring girls

(Cobb-Clark et Moschion, 2017; Kindgon et al., 2017). The fact that girls tend to be advantaged educationally may have contributed positively to the higher continuity in their level of self-esteem.

Third, we found that the link between relational violence and behavioral engagement, as well as the association between depressive symptoms and self-esteem are both stronger in girls. Indeed, these results align with literature stating that girls who engage in relational violence feel less secure at school, leading to a lower level of youth engagement in school than boys (Baiden et al., 2020). Moreover, research shows that when girls present depressive symptoms, they tend to show less behavioral engagement than boys. Indeed, authors put forward that girls are more vulnerable to certain stressors (Moksnes et Espnes, 2012; Moksnes et al., 2016). In fact, Dorio et al. (2018) reports that girls cope with symptoms of depression differently, being more likely to focus on their negative moods and ruminate, which can lead to prolonged periods of depressed moods. This extended focus on their negative mood could lead girls to be less engaged in school (Dorio et al., 2018). Additionally, the latter are more likely to internalize the causes of stress than boys, which can contribute to diminished self-esteem (Moksnes et al., 2016). Briefly, although our results confirm some links in the literature regarding sex variations, this study mainly acknowledges that developmental mechanisms are the same between boys and girls in adolescence.

### **Strengths and Limitations**

This study presents several strengths. First, the use of an autoregressive cross-lagged model with three measurement times brings soundness to our research. Indeed, this statistical model is known for its potential to shed light on longitudinal associations between variables that can further our understanding of development (Selig et Little, 2012). Second, the large sample of our study is a key factor to consider. Very few longitudinal studies have this scope, especially among adolescents from underprivileged backgrounds. Third, previous studies measure youth engagement in school in varying ways, some globally (Mihalec-Adkins et Cooley, 2019; Virtanen et al., 2016) while others focus on affective engagement (Markowitz, 2017). No studies focus specifically on behavioral engagement. Fourth, this is the only study of high school students to have examined constructs related to both internalizing and externalizing difficulties in association with self-esteem and youth behavioral engagement. Some limitations of the study are also worth mentioning. First, the adolescent's internalizing and externalizing difficulties are established



through self-reported questionnaires. Indeed, there might be various biases that may affect the results; some answers can be exaggerated, respondents may be too embarrassed to reveal private details, etc. Second, internalizing, and externalizing difficulties are respectively evaluated only by two constructs, depressive symptoms, and relational violence. This makes generalizing the results to all internalizing or externalizing problems rather difficult, given the many difficulties that lie within each of the categories. Finally, although our model has three time points and a large sample of participants, the use of the autoregressive cross-lagged model has its flaws (i.e., difficulty distinguishing overtime causal effects from simple between persons' associations, and possible errors when stable-trait variance exists).

## **Conclusion**

Overall, our study shows that self-esteem does not act as a mediator of the association between adolescents' psychosocial maladjustment and their behavioral engagement throughout high school. Rather, it is depression/relational violence that acts as a mediator in the relationship between self-esteem and behavioral engagement of adolescents from disadvantaged backgrounds. In addition, our study suggests that this finding applies in the same way to girls as to boys.

Our findings present important implications for intervention in disadvantaged areas. First, by identifying the key role of internalizing and externalizing difficulties in grade 9, this study has the potential to help develop realistic strategies in response to the specific needs of students halfway through high school. For example, regarding relational violence and depression in adolescents, teachers of grade 9 could raise their students' awareness of mental health difficulties, as well as to the consequences of the use of rejection strategies on others. Second, our outcomes showing the key role of self-esteem and behavioral engagement at the start of high school indicate that special attention must be paid to the transition from elementary school and the integration to the peer group as a prevention strategy. Professionals surrounding students could implement activities themed around accepting others and the use of prosocial behaviors, which could potentially contribute to increasing youth behavioral engagement and self-esteem, in addition to potentially reducing the risk of presenting internalizing and externalizing difficulties in grade 9. Finally, although our study can be a driving force for the implementation of clinical strategies, it also highlights the importance of pursuing studies in adolescents from disadvantaged areas.

Table 2.1. Correlation Matrix and Descriptive Statistics of Model I

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Age																			
2. Sex	-.04**																		
3. Elementary rep.	.51**	-0.02																	
4. Teacher conflict	.05**	-.12**	0.03																
5. Parent support T1	-.09**	-0.01	-.08**	-.26**															
6. Family adversity	.14**	0.03	.17**	.09**	-.20**														
7. Self-esteem T1	-.034*	-.11**	-.07**	-.30**	.34**	-.12**													
8. Self-esteem T2	-.05**	-.05**	-.08**	-.16**	.20**	-.09**	.41**												
9. Self-esteem T3	-.05**	0.01	-.07**	-.11**	.17**	-.08**	.31**	.40**											
10. Engagement T1	-.10**	.11**	-.08**	-.52**	.25**	-.16**	.19**	.09**	.07**										
11. Engagement T2	-0.02	.11**	-0.0	-.40**	.17**	-.11**	.12**	.20**	.11**	.47**									
12. Engagement T3	-0.01	.20**	0.00	-.33**	.12**	-.08**	.09**	.10**	.21**	.383**	.47**								
13. Depression T1	.09**	.17**	.09**	.32**	-.32**	.15**	-.62**	-.34**	-.25**	-.25**	-.18**	-.10**							
14. Depression T2	.08**	.10**	.09**	.18**	-.17**	.09**	-.29**	-.39**	-.32**	-.13**	-.24**	-.19**	.37**						
15. Depression T3	0.03	0.00	.05*	.13**	-.13**	.09**	-.25**	-.29**	-.36**	-.10**	-.16**	-.22**	.29**	.39**					
16. Rel. Vio. T1	.029	0.018	0.01	.38**	-.20**	.07**	-.19**	-.08**	-.07**	-.33**	-.30**	-.21**	.30**	.17**	.14*				
17. Rel. Vio. T2	-.01	0.032	.01	.184**	-.12**	.03	-.12**	-.12**	-.10**	-.16**	-.30**	-.23**	.4**	.36**	.16**	.342**			
18. Rel. Vio. T3	-.00	.01	-.04*	.172**	-.10**	.05*	-.11**	-.13**	-.14**	-.16**	-.23**	-.30**	.27**	.21*	.38**	.265**	.376**		
M	12.58	1.56	1.56	15.89	20.55	1.55	31.09	30.85	31.74	20.84	19.51	19.27	12.41	12.39	11.82	2.3884	2.1399	1.901	
SD	0.63	0.50	0.36	6.33	7.43	1.58	5.48	5.70	5.79	2.95	3.92	3.87	10.27	10.20	10.27	2.26692	2.24978	2.11798	
Min	12	1	0	7	0	0	10	10	10	0	0	0	0	0	0	0	0	0	0
Max	15	2	2	35	33	9	40	40	40	24	24	24	60	60	56	12	12	12	

Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . Rep. = repetition., Rel. = Relational., Vio = violence.

Table 2.2. Contribution of Covariates to Self-esteem, Behavioral Engagement, Relational Violence, and Depression at T1, T2 and T3.

Covariates	Self-esteem T1		Behavioral eng. T1		Depression T1		Relational violence T1		Self-esteem T2		Behavioral eng. T2		Depression T2		Relational violence T2		Self-esteem T3		Behavioral Eng. T3		Depression T3		Relational violence T3													
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE												
School code	.01	0.0	n.s.	-.05	.00	**	.03	.00	†	.02	.00	n.s.	.01	.00	n.s.	-.02	.00	n.s.	-.14	.00	***	$\beta$	SE	-.02	.00	n.s.	-.03	.00	n.s.	-.04	.00	n.s.				
Age	.03	.17	n.s.	-.06	.08	***	.04	.031	**	.02	.07	n.s.	.00	.20	n.s.	.01	.12	n.s.	.03	.036	n.s.	-.05	.08	*	.01	.00	n.s.	-.01	.15	n.s.	.01	.45	n.s.	.02	.09	n.s.
Sex	-.13	.18	***	.05	.09	**	.21	.34	***	.02	.15	n.s.	-.07	.22	***	.08	.13	***	.10	.40	***	.15	.17	***	.00	.20	n.s.	.18	.16	***	.01	.48	n.s.	.06	.22	n.s.
Teacher conflict	-.24	.02	***	-.48	.01	***	.28	.03	***	.35	.01	***	-.12	.02	***	-.37	.01	***	.16	.03	***	.15	.01	***	-.06	.34	**	-.30	.01	***	.09	.04	***	.16	.01	***
Parent support	.28	.01	***	.10	.01	***	-.22	.02	***	-.11	.01	***	.15	.02	***	.07	.01	***	-.11	.03	***	-.08	.01	***	-.12	.02	***	.02	.01	n.s.	-.08	.03	***	-.06	.01	*
Family adversity	-.04	.06	**	-.10	.03	***	.07	.11	***	.02	.03	n.s.	-.05	.07	**	-.07	.04	***	.05	.13	*	.01	.03	n.s.	.16	.02	***	-.06	.05	**	.09	.16	***	.03	.03	n.s.

Note. † $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . n.s. = non-significant. Eng. = Engagement. Elem Rep. = Elementary Repetition

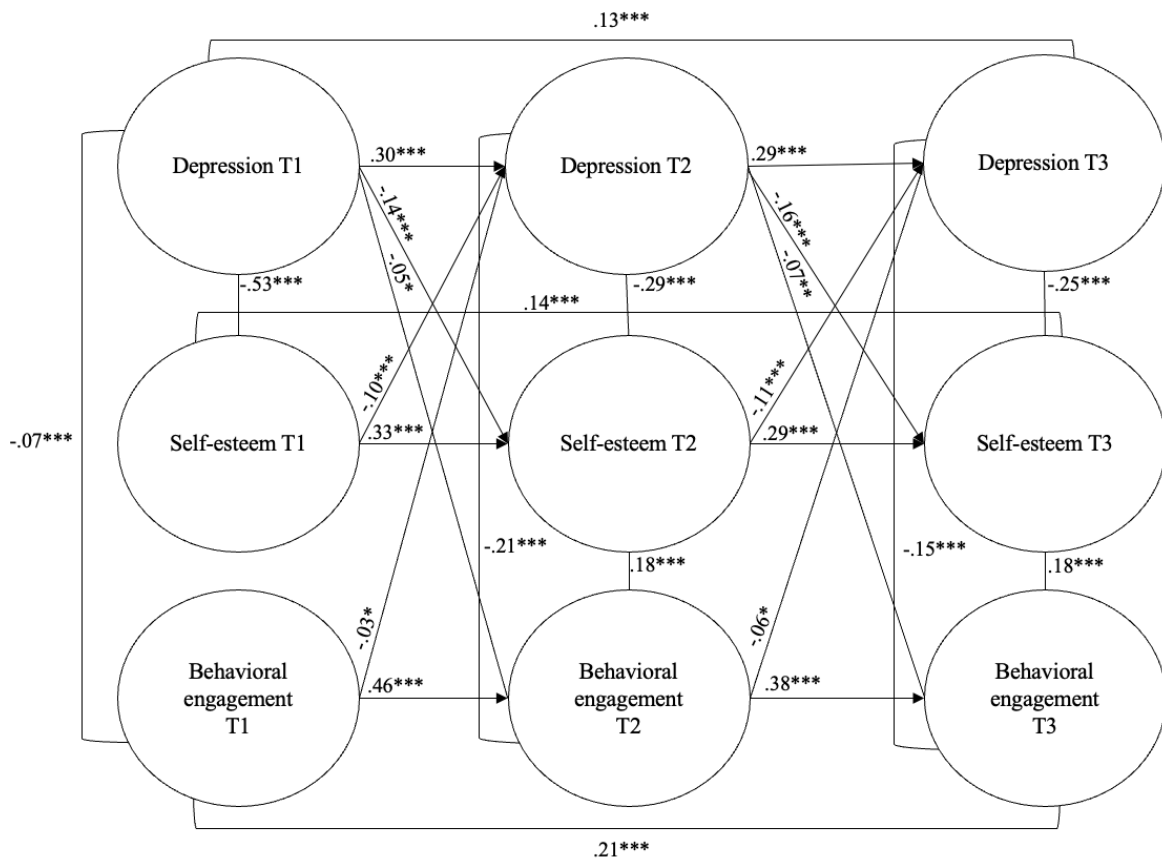


Figure 2.1. Results of the Cross-Lag Model of Depression, Self-esteem and Behavioral youth engagement predicting the latter Over Time. Note. Full lines represent the significant associations expected in the hypothesis. The model also includes the associations between covariates (age, sex, family adversity, educational support from parents, conflictual relationship with teachers at T1).

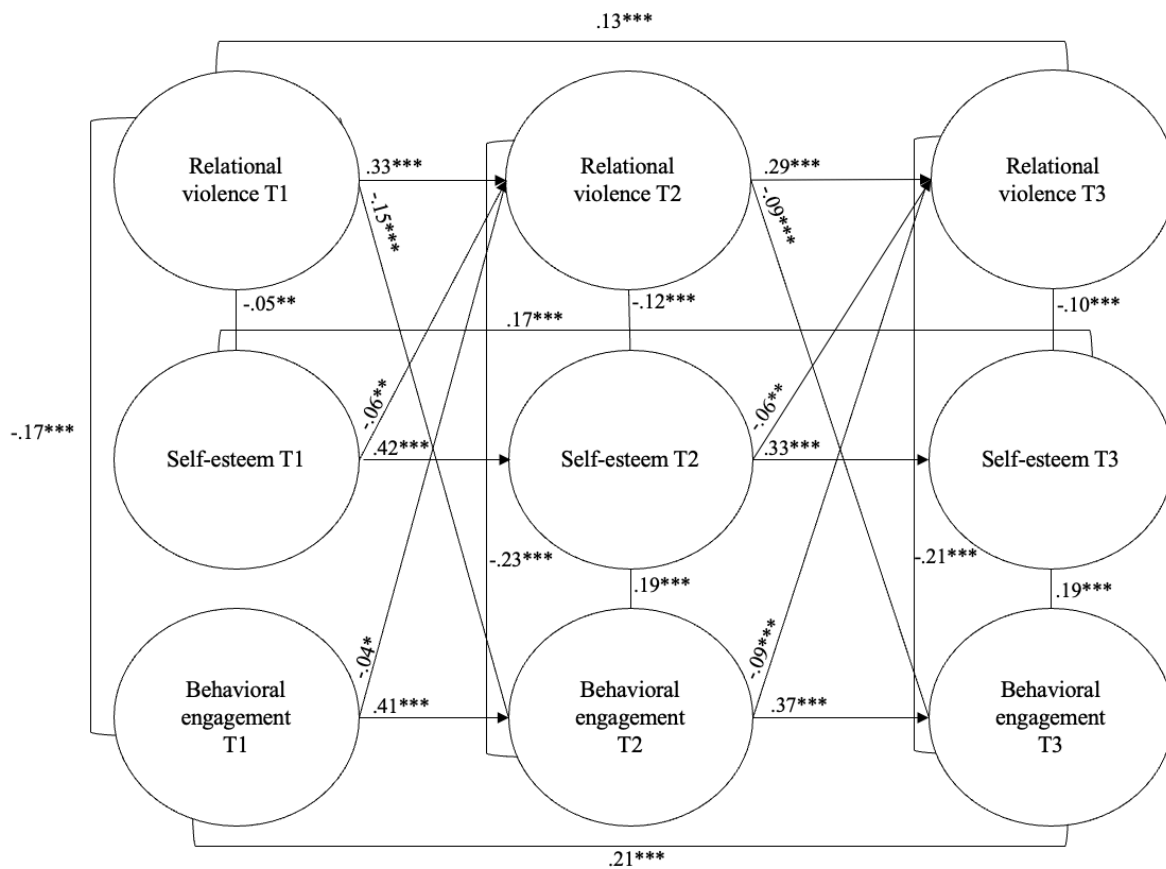


Figure. 2.2. Results of the Cross-Lagged Model of Relational Violence, Self-esteem and Behavioral youth engagement predicting the latter Over Time. Note. Full lines represent the significant associations expected in the hypothesis. The model also includes the associations between covariates (age, sex, family adversity, educational support from parents, conflictual relationship with teachers at T1).

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### **CHAPITRE III**

## **PSYCHOSOCIAL MALADJUSTMENT IN ADOLESCENTS FROM UNDERPRIVILEGED BACKGROUNDS: THE CONTRIBUTION OF PARENTAL SCHOOL INVOLVEMENT**

**Sarah Shortridge, Isabelle Archambault, Sophie Pascal et Michel Janosz**

## ABSTRACT

In a sample of 4,035 adolescents from secondary schools in disadvantaged areas, this study aimed to explore how internalizing and externalizing difficulties are affected by family characteristics, namely parental school involvement. We aimed to determine whether depressive symptoms, delinquency and relational violence can be mediators between parental school involvement at the start of high school, and depressive symptoms, delinquency, and relational violence at the end of secondary school. Furthermore, this study explored the heterotypic and homotypic stability of these behavioral difficulties. Lastly, this article investigated whether the associations varied according to the students' sex. Results show that depressive symptoms in adolescents from disadvantaged backgrounds acts as an explanatory mechanism of parental school involvement and depressive symptoms, delinquency, and relational violence. Also, delinquent behaviors, relational violence and depressive symptoms are generally stable between Grade 9 and Grade 11. Finally, our study underlines that no specific differences between boys and girls regarding the central variables of the study. Indeed, the developmental mechanisms identified between parental school involvement, relational violence, depressive symptoms, and delinquency apply equally for sexes. Findings and their implication are discussed in the following chapters.

## INTRODUCTION

Adolescent developmental pathways are mutable and molded by a set of factors that operate in different contexts (Caskey & Anfara, 2014; Marcelli et al., 2018). In disadvantaged areas, adolescents are more likely to encounter an array of behavioral difficulties whether internalizing, or externalizing. Studies have shown that these difficulties are both relatively constant and closely related over time, as they exhibit homotypic and heterotypic stability. Homotypic stability refers to when an internalizing or externalizing difficulty predict itself at a later point. Conversely, heterotypic stability occurs when a difficulty predicts another at a later time point (Frost et al., 2018; Shelvin et al., 2017). This led researchers to explore the contribution of different characteristics, including family factors, on these developmental patterns. Among the main documented family characteristics, parental school involvement has been studied on multiple occasions (Barger et al., 2019; Dotterer, 2022; Goulet et al., 2023; Tardif-Grenier & Archambault, 2016). Studies have shown that adolescents of parents who are involved in school tend to exhibit less internalizing and externalizing difficulties over time (Barger et al., 2019; Lara et Saracostti, 2019; Tammariello, 2012; Kirkhaug et al., 2013; Ogg et Anthony, 2019). Yet, the different processes that link family characteristics with patterns of change in internalizing and externalizing problems through adolescence are not well understood, especially in youth from disadvantaged backgrounds. To better understand these processes, this study aims to determine whether in grade 9, specific types of internalizing and externalizing difficulties, namely adolescents' depressive symptoms, delinquency, and relational violence, can be possible mediators between parental school involvement in grade 7 and depressive symptoms, delinquency, and relational violence in grade 11. In addition, this paper aims to determine if internalizing and externalizing difficulties will show homotypic as well as heterotypic stability over time, and whether these associations display differences according to the sex of the students. In addressing these objectives, this study focuses on adolescents from low-income schools presenting higher risk for maladjustment difficulties. This study will allow us to deepen the understanding of adolescent development in high school to guide practitioners to better support youth in this pivotal period.

## **Parental School Involvement**

Despite the growing importance of peers at the beginning of high school, parents are an integral part of adolescents' social environments and significantly contribute to the latter's development (Butterfield et al., 2020; Smetana & Rote, 2019; Tousignant-Beaudette et al., 2019). For example, parents' warmth, responsiveness, and communication help adolescents learn how to regulate their emotions in stressful situations. Furthermore, positive, and supportive parenting behaviors encourage adolescents to face challenging circumstances with an appropriate response (Butterfield et al., 2020; Hair et al., 2008). Surely, a variety of parenting behaviors contribute to adolescent adjustment. However, several authors highlight parental school involvement as a key factor in adolescent development (Barger et al., 2019; Lara et Saracostti, 2019; Tammariello, 2012; Kirkhaug et al., 2013; Ogg et Anthony, 2019).

Parental school involvement is defined as a wide range of parental practices regarding education and schooling that parents exhibit to promote their child's school success (Brajsa-Zganec et al., 2019; Goulet et al., 2023; Tardif-Grenier et Archambault, 2016). It is known to be a multidimensional construct (Barger et al., 2019; Dotterer, 2022), although the number of dimensions that defines it remains unclear (Barger et al., 2019; Dotterer, 2022; Goulet et al., 2023). Most studies address two key dimensions, namely school-based involvement, and home-based involvement (Barger et al., 2019; Goulet et al., 2023). School-based involvement includes three types of practices, namely, parents' active participation in any school setting such as participating to parent-teacher meetings or extracurricular events, involvement in decision-making and the administrative processes, and informal communication or contacts between the parents and the school staff (Goulet et al., 2023; Myers et Myers, 2015; Park et al., 2017). Home-based involvement encompasses all kinds of informal learning and teaching practices related to school that take place at home. The latter can include homework help, providing a supportive and stimulating learning environment, discussing school-related issues, and encouraging (Barger et al., 2019; Gan et Bilige, 2019; Goulet et al., 2023). Parents involved at home encourage intellectual pursuit, communicate usefulness of school, discuss school experiences, success, and difficulties, give instructions, and check homework (Goulet et al., 2023). In addition, home-based involvement is highlighted as even more important for students entering secondary school. Indeed, parental behaviors such as checking homework and communicating openly about school are put forward

as facilitators of student adjustment during the school transition (Lau, 2013). In the current study, we examine the home-based dimension of parental school involvement and its contribution to the adolescent internalizing and externalizing behaviors including depressive symptoms, relational violence, and delinquency.

### **Internalizing and Externalizing Difficulties**

The terms internalizing and externalizing are used to describe two groupings of behavioral, emotional, and social difficulties that can exhibit adolescents (Achenbach et al., 2016). First, externalizing difficulties include outburst of anger, disruptive behaviors, hyperactivity, impulsivity, and oppositional behaviors (Cox et al., 2021; Weber et al., 2019; Wright et al., 2015). It also includes relational violence, and delinquent conduct, which are two of the most highly prevalent types of externalizing difficulties in adolescence (Cox et al., 2021; Jones, 2018; Lopez-Tamayo et al., 2016; Lorber et al., 2015; Schindler et al., 2015; Wright et al., 2015). Relational violence includes telling false rumors, insults, threats of rejection, threats to destroy property belonging to others or (Duru et al., 2019). As for delinquent conduct, it is characterized by illegal behavior sanctioned by the authorities (Assink et al., 2015; Levey et al., 2019; Shek et Zhu, 2018). These behaviors include theft of property, violent group altercations, vandalism of institutions such as schools and public buildings, and opposition to law enforcement (Assink et al., 2015; Levey et al., 2019; Shek et Zhu, 2018). Taken together, relational violence and delinquent conduct are powerful difficulties, needed to be addressed in adolescence. In fact, they tend to transitory increase with age for most youth (Chesta et al., 2022; Herrenkohl et al., 2022) can intervene in their academic success (Hoffman et al., 2013; Samara et al., 2021), and among externalizing problems, are the most strongly associated with substance use, psychological distress, increased suicide attempts (Chen et al., 2016; Lanctôt et al., 2007) and with criminal consequences in adulthood (Kang, 2019; Kjellstrand et al., 2018; Memmott-Elison et al., 2020). In adolescents, significant sex differences are also reported in the distribution of delinquency and relational violence (Ara, 2016). Indeed, boys are more likely to present the former, as well as antisocial behaviors (Ara, 2016; Bor et al., 2014; Olivier, 2017). As for the sex differences in relational violence, research results are diverse. Some authors conclude that girls tend to adopt more behaviors such as excluding a targeted individual from the group, not talking to them, leaving them alone, or spreading rumors about them (Duru et al., 2019; Ellickson et McGuigan, 2000; Povedano et al., 2015). However, other



researchers do not find strong differences between boys and girls on these problems (Iñiguez-Berrozpe et al., 2021; Skara et al., 2008).

Second, internalizing difficulties are generally characterized by social isolation, anxiety, and depression symptoms (Moreno, 2018; Oh et al., 2020; Olivier et al., 2018; Van der Ende et al., 2016; Wilner et al., 2016). Although other types of internalizing difficulties, like withdrawal, fearfulness and inhibition are also prevalent in adolescence, depression symptoms are clearly recognized for their important contribution (Gutman et McMaster, 2020; Liu et Merritt, 2018). Depressive feelings include symptoms such as the persistence of a depressed mood, a lack of interest in pleasant activities, a feeling of distress as well as an alteration in social functioning (American Psychiatric Association, 2013; Carney et Freeland, 2017; Gagné et al., 2011; La Moul et Gotlib, 2019). These symptoms show a prominent stability across high school (McLaughlin et King, 2015) and are often maintained afterwards (Nguyen et al., 2005). Moreover, compared to boys, girls tend to present higher levels of depressive symptoms characterized by worries, sadness, and hopelessness which are relatively stable over time (Ara, 2016; Eme, 2016; Olivier, 2017). In adolescents, significant sex differences are also reported in the distribution of internalizing difficulties. Indeed, girls tend to present higher levels of internalizing difficulties, such as mood disorders and depressive symptoms characterized by worries, sadness, and hopelessness (Ara, 2016; Eme, 2016; Olivier, 2017).

Adolescence is a developmental period known for the fact that it confers vulnerability to delinquency, relational violence, and depressive symptoms. Indeed, this period is characterized by stressful changes, such as physical, sexual, and intellectual changes, that occurs while youth need to adjust to new academic demands, negotiate new boundaries and responsibilities with parents, fit in with peers, and handle romantic relationships (Blakemore, 2019; Lee et al., 2014; March-Llanes et al., 2017; Sawyer et al., 2018). This period of vulnerability is even more decisive for adolescence from disadvantaged backgrounds (Devenish et al., 2017; Quon et McGrath, 2013). Therefore, adolescence is a key period to explore the development of delinquency, relational violence, and depressive symptoms, to create a better understanding of adolescent and adult adjustment.

## **Homotypic and Heterotypic Stability of Internalizing and Externalizing Difficulties**

Ara's literature review (2016) highlights that internalizing and externalizing difficulties, such as depressive symptoms, delinquency, and relational violence, typically begin at the start of high school, and peak by the middle of secondary school. Furthermore, for some, these psychosocial adjustment difficulties that start in adolescence persist throughout adult life, creating long-term consequences on adaptation (March-Llanes et al., 2017). But although some externalizing or internalizing difficulties are viewed as episodic, longitudinal studies of adolescents suggest substantial stability during this developmental period (Bornovalova et al., 2013; Nobile et al., 2013; Snyder et al., 2017). More recently, two stability patterns of internalizing and externalizing difficulties have been identified, namely the homotypic and heterotypic stability (Frost et al., 2018; Shelvin et al., 2017). Homotypic stability refers to when an internalizing or externalizing difficulty predicts itself at a later point. Conversely, heterotypic stability occurs when a difficulty predicts another at a later time point (Frost et al., 2018; Shelvin et al., 2017). In adolescence, internalizing and externalizing difficulties in general show a greater homotypic stability than heterotypic stability (Blok et al., 2021; Johnson et al., 2019; Snyder et al., 2017), suggesting that patterns in terms of depressive symptoms, delinquency, and relational violence tend to be relatively constant across adolescence (Blok et al., 2021; Snyder et al., 2017). Despite this, heterotypic stability is increasingly explored in the literature.

Some authors find evidence for a predictive effect of externalizing difficulties on internalizing difficulties (Flouri et al., 2019; Murray et al., 2020; Oh et al., 2020; Oldehinkel et Ormel, 2022; Richards et al., 2022). Specifically, associations between depressive symptoms, relational violence, and delinquency are well supported in the literature, especially in adolescence. For example, authors (Fanti et al., 2019; Kofler et al., 2011) found that adolescents with depressive symptoms are at higher risk of adopting delinquent behaviors in the future. Indeed, authors state that depressive symptoms may be expressed behaviorally by adolescents through heightened theft of property, violent group altercations, vandalism of institutions such as schools and public buildings, which, over time, result in serious delinquency. The inverse relationship is also supported; delinquency is a risk factor for future depression symptoms. This can be explained by the fact that delinquent behavior results in negative interpersonal outcomes such as rejection by caregivers or peers. This decreases social support and leads to depressive symptoms (Fanti et al.,

2019; Kofler et al., 2011). Furthermore, literature shows that relational violence predicts increases in depressive symptoms in adolescents. Stressful interpersonal experiences may generate rumination of negative feedback, which can increase depressive symptoms (Atherton et al., 2017; Duru et al., 2019; Kushner et al., 2017). Finally, research also puts forward that relational violence is associated to delinquency. In a context of relational violence, teenagers might attribute hostility to others' behavior and react with anger and impulsively, leading to the adoption of delinquent behaviors (Espelage et al., 2018). These associations between internalizing and externalizing difficulties are the focus of several studies targeting a better understanding of adolescent development (Bevilacqua et al., 2021; Wang et al., 2022), but call for a better understanding of the contributors to these trends.

Recent studies have explored the mediating role of general or specific dimensions (e.g., depression) of internalizing and externalizing difficulties in adolescence development (Kim et al., 2021; Pace et al., 2019; Smith et al., 2022; Tang et al., 2022). For example, Kim et al. (2021) observed the mediating role of general measures of internalizing and externalizing difficulties in the relationship between childhood trauma and suicidality in outpatient adolescents. To assess internalizing and externalizing difficulties, they used subscales of a general behavioral checklist. The latter was parent-reported and evaluated social competence and behavior problems. Furthermore, Tang et al. (2022) cross-sectional study found mediating role of depression symptoms in the relationship between alexithymia and self-injury of Taiwanese adolescents, while Pace et al. (2019) exhibited the mediating role of somatic complaints, anxiety, and depression symptoms in the relationship between low effortful control and internet abuse in middle-class adolescents. However, these studies include several shortcomings. Indeed, among the few longitudinal studies identified, none of them control for the initial presence of maladjustment difficulties in adolescents. Furthermore, no study explores heterotypic stability of self-reported depression symptoms, delinquency, and relational violence, or the possible contributions of parental school involvement on these outcomes in youth from disadvantaged backgrounds.

### **Parent School Involvement as Predictors of Internalizing and Externalizing Difficulties**

From a theoretical perspective, Bronfenbrenner's Ecological systems theory (1979) can be used to explain the contribution of parental school involvement to depression symptoms, delinquency, and relational violence in adolescents. Indeed, according to this theoretical

framework, the interactions between and within different systems of influence, namely the micro-, meso-, exo-, and macrosystem impact adolescents' well-being. Parents are a part of the microsystem, which is the closest system to the adolescent and provides direct influences. By being highly involved on the home front (i.e., checking homework, discussing school experiences, success, and difficulties, etc.) parents provide support. This interaction with the microsystem results in promoting adolescent mental health and well-being, since receiving support from parents is known to buffer some of the negative impacts of other distressing circumstances youth face during that developmental period (Liu et Zhang, 2023).

Empirically, a lack of parental school involvement has also been shown to be one of the strongest predictors of internalizing difficulties such as depression symptoms, and externalizing difficulties like delinquency and relational violence (Barger et al., 2019; Lara et Saracostti, 2019; Tammariello, 2012; Kirkhaug et al., 2013; Ogg et Anthony, 2019). To the contrary, students of parents who are highly involved in school experience fewer difficulties in terms of delinquency and relational violence (Jacobson, 2012; Nocentini et al., 2019; Ogg et Anthony, 2019). To explain this association, several authors put forward that parental school involvement allows youths to obtain clear guidelines and expectations regarding their behaviors (Barger et al., 2019; Ogg et Anthony, 2019). For example, Barger et al. (2019) state that during parent-teacher conferences, discussions revolve around the student's interactions with peers in the classroom as well as expectations for the child's behaviors. The parents then communicate these expectations through their involvement in the home front (Barger et al., 2019). Therefore, school personnel and parents deliver congruent messages to the child about appropriate behaviors, which can promote positive conduct (Barger et al., 2019). Parents' involvement in adolescent schooling is also associated with fewer internalizing difficulties, such as depression (Barger et al., 2019; Dardas et al., 2018; Tammariello, 2012). This can be explained by the fact that parents' who are involved convey support, validation, and care, which can in turn support adolescents' feelings of worth and protect the latter from developing depressive symptoms (Barger et al., 2019). Besides, a lack of parental school involvement could also contribute to the stability of maladjustment difficulties of adolescents by acting as a risk factor (Mikolajewski et al., 2017; Zarrella et al., 2017). Some authors put forward that parents who present more difficulty helping with homework, who were less supportive, and who avoid discussing school-related issues can contribute to heterotypic stability depression symptoms, delinquency, and relational violence. Indeed, the parent's behaviors

can give rise to a maladjustment difficulty, which, in turn, predicts a more heterotypic development of the latter (Carter Leno et al., 2022; Jobs et al., 2019).

The Ecological systems theory (Bronfenbrenner, 1979) also highlights that both parental school involvement, depression symptoms, delinquency, and relational violence are affected by the macrosystem, characterized by, among other things, the socio-economic status. In fact, parents from low-SES backgrounds typically engage less in high-quality activities of home-based involvement, tend to show reduced communication with the adolescent regarding school, practice low levels of academic socialization, and provide less educational resources (Duan et al., 2018). Furthermore, low-SES is considered among the most important risk factors for adolescents internalizing and externalizing difficulties. This is explained by the fact that the precariousness undermines parents' psychological and economic resources and capacity to provide support, and consistent parenting practices including quality time, control, and attention. This leads to a difficulty in forming a responsive parent-child relationship and hinders the adolescent's willingness to cooperate by following parental rules (Manniko et al., 2020).

Finally, several other factors have been put forward for their contribution to parental school involvement and internalizing and externalizing difficulties in adolescence, namely the nature of the relationship with teachers, sex, and age of the student, as well as grade repetition. These variables are all respectively linked to maladjustment (i.e., depressive symptoms, delinquency, and relational violence) and parental school involvement, hence the importance of controlling them while studying their associations (Ara, 2016; Bor et al., 2014; Ceballo et al., 2014; Kincade et al., 2020; Olivier, 2017; Owusu Kyereko et al., 2022; Roorda et al, 2020; Serna et Martinez, 2019).

In summary, the contribution of parental school involvement to both externalizing and internalizing difficulties have respectively been the subject of various studies (Barger et al., 2019; Lara et Saracosti, 2019; Tammariello, 2012; Kirkhaug et al., 2013; Ogg et Anthony, 2019). Yet, few studies have looked at the contribution of parental school involvement among high school students in general and to specific dimensions of externalizing and internalizing difficulties like delinquency, relational violence, and depression symptoms, in particular. Furthermore, recent studies exploring heterotypic stability suggest that depression symptoms, relational violence, and delinquency can be interrelated over time. However, heterotypic stability on these specific dimensions altogether or the mediating role of externalizing and internalizing difficulties haven't been studied, and even less in students from disadvantaged backgrounds. To contribute to the

advancement of scientific and clinical knowledge, this study therefore examines the contribution of parental school involvement to depression symptoms, delinquency, and relational violence, as well as the possible interrelation between these psychosocial maladjustment difficulties in adolescents from low-SES high schools.

## **Study Objectives**

Based on a sample of 4,035 adolescents attending low-SES secondary schools and followed every two years across their high school journey, the first objective of this study aims to examine how parental school involvement at the beginning of the secondary school (grade 7) is associated with some of the most prevalent externalizing and internalizing difficulties in adolescence, namely delinquency, depressive symptoms, and relational violence in grade 9 and grade 11. Although little research has focused on this specific subject, based on previous work, it is possible to hypothesize that (hypothesis 1) parental school involvement when entering secondary school (in grade 7) will be linked with depressive symptoms, delinquency, and relational violence later in adolescence, in grades 9 and 11. Our second objective is to determine whether adolescents' depressive symptoms, delinquency, and relational violence at the mid-point of high school (grade 9) can be a possible mediator between parental school involvement at the time of the transition to high school (grade 7) and depressive symptoms, delinquency, and relational violence in adolescents at the end of high school (grade 11). It is anticipated (hypothesis 2) that depressive symptoms, delinquency, and relational violence in grade 9 will have a mediating role in the relationship between parental school involvement in grade 7 and these same difficulties in grade 11. Our third objective aims to determine if internalizing and externalizing difficulties will show homotypic as well as heterotypic stability between grade 9 and grade 11. Following existing work, it is predicted (hypothesis 3) that depressive symptoms, delinquency, and relational violence will show homotypic as well as heterotypic stability between grade 9 and grade 11. More specifically, depressive symptoms, delinquency, and relational violence in grade 9 will predict themselves in grade 11 and will also predict other difficulties at the same time point. Finally, our study seeks to establish whether the associations display differences according to the sex of the students. Several studies have studied sex invariance, reporting differences between boys and girls in adolescence. Based on these studies, it is possible to postulate (hypothesis 4) that depressive symptoms will show stronger

homotypic longitudinal associations in girls, and that boys would show stronger homotypic longitudinal associations regarding relational violence and delinquency throughout high school.

## **METHODS**

### **Participants**

The data in this study was partly derived from large-scale longitudinal research conducted throughout the province of Quebec (Canada) from 2002 to 2007 among students attending secondary schools in disadvantaged areas (Janosz et al., 2010). Overall, 66 schools participated in the study. The selection criterion for these schools was to have a low socio-economic background index based on governmental classification. This classification is mostly based on mothers' under-education (two thirds of the weight of the index) and on parental inactivity (third of the index) aggregated at the school level (Janosz et al., 2010). This stratified sample of 66 schools was randomly selected based on a pool of 200 schools according to their language of instruction (French and English), their size (small, medium, and large), and their geographical location (urban and rural).

In total, data from 34 124 students from grade 7 to grade 11 were collected (Janosz et al., 2010) during the first year of the project, from which 8521 from grade 7. To both optimize the number of participants kept in the sample while limiting the proportion of data to be imputed, we next chose to keep in the sample the participants who participated in at least two measurement times out of the three time points used for the study (which are grade 7, grade 9, and grade 11). Our final sample includes 4,035 students in 7<sup>th</sup> grade, 44.4% (1790) who identified as boys and 55.6% (2245) who identified as girls. In 7<sup>th</sup> grade, the average age of this sample was 12.6 years old.

### **Procedures**

#### **Parental consent**

The implementation of this study was first approved by an ethical board. Next, the active consent of the parents of all students was sought at the beginning of the research. Written consents were forwarded to the assessment team and then entered in an identity management database, in which each student was assigned a unique identity number. The average percentage of parental consents obtained, all schools combined, is 70% (Janosz et al., 2010).

## **Data Collection**

Students were questioned by paper and pencil or electronic questionnaires (Web-survey), in class or in the computer lab of their school (periods between 60 and 75 minutes). For most of the schools, data collection took place at the same time for everyone or over a “spread” period within a weekly hourly cycle. A first questionnaire was completed by each participant three times, i.e., in 7<sup>th</sup> grade, 9<sup>th</sup> grade, and 11<sup>th</sup> grade and covered school and personal difficulties of students. Several dimensions related to socialization and adjustment were assessed, including delinquency, relational violence, depressive symptoms, and parental support in school. The second questionnaire is a sociodemographic questionnaire. It was administered to students once in the first year of the research since the outcomes are generally very stable across time. This questionnaire was used to document the characteristics of the students, the composition of their families as well as the socio-economic living conditions (Janosz et al., 2010).

## **Measures**

### *Internalizing Difficulties—Depressive Symptoms*

Depressive symptoms were self-reported by students in 7<sup>th</sup>, 9<sup>th</sup> and 11<sup>th</sup> grades using a validated version of the Center for Epidemiologic Studies-Depression Scale (CES-D) (Furher & Rouillon, 1989; Radloff, 1997). The instrument is used to assess depressive symptoms in adolescents. In this study, twenty items were used (e.g.: “I felt that I could not get rid of my dark thoughts even with the help of my family or my friends”). Students were asked to answer on a four-point Likert scale (Rarely or never [0], Sometimes or infrequently (1–2 days) [1], Occasionally or moderately (3–4 days) [2], Most of the time or all the time [3]). These items were grouped as a sum, with a high value indicating a high depressive tendency. Cronbach’s alpha for this scale is .87.

### *Externalizing Difficulties-Relational Violence*

Student self-perception of relational violence was assessed in 7<sup>th</sup>, 9<sup>th</sup> and 11<sup>th</sup> grade with the validated Measures of Social and Personal Adaptation for Quebec Adolescents (MASPAQ) (Leblanc, 1996). Four items were used to evaluate the level of relational violence among adolescents in the last 12 months (e.g.: “While you were angry with someone, did you say to others: I don’t want him [her] in our group?”). Students must answer on a four-point Likert scale



(Never [0], Once or twice [1], Several times [2], Very often [3]). These items were grouped as a sum. A high score on the mean scale indicates that relational violence is high. Cronbach's alpha for this scale is .76.

#### *Externalizing Difficulties- Delinquency*

The frequency of delinquent behavior in adolescents over the past 12 months was self-reported by students in 7<sup>th</sup>, 9<sup>th</sup> and 11<sup>th</sup> grade using the Measures of Social and Personal Adaptation for Quebec Adolescents (MASPAQ) (Leblanc, 1996). It comprises twenty items (e.g., "Have you used a weapon (stick, knife, gun, rock...) in a fight with another person?"). Students responded to these items on a four-point Likert scale (Never [0], Once or twice [1], Several times [2], Very often [3]). These items were grouped as a mean. A high score on the mean scale indicates high frequencies of delinquent behaviors. Cronbach's alpha for this scale is .94.

#### *Parental School Involvement*

Student perception of parental school involvement over the past 12 months was assessed in 7<sup>th</sup> grade by a validated tool developed by Deslandes (1996; based on Epstein et al., 1993). It comprises eleven items (e.g., One of my parents asks me about school (assignments, tests, activities, friends, teachers...), "One of my parents helps me figure out my homework when I don't understand"). Students responded to these items on a four-point Likert scale (Never [0], Sometimes [1], Often [2], Very often [3]). These items were grouped as a mean. A high score on the mean scale shows a high level of parental school involvement (Janosz et al., 2010). Cronbach's alpha for this scale is .92.

#### **Control Variables**

**Age and sex.** Student sex (male =[1], female = [2]) and age (12 or younger = [12], 13 years old = [13], 14 years old = [14], 15 years old = [15], 16 years old = [16], 17 years old = [17], 18 years old or older = [18]) were self-reported in 7<sup>th</sup> grade.

***Grade repetition in elementary school.*** A self-reported item was used to measure grade repetition (i.e., “Have you repeated an elementary school year?”). Students responded to the item with “Yes” = [1], or “No” = [0].

***Previous Internalizing and Externalizing Difficulties.*** Students self-reported depressive symptoms, relational violence, and delinquent behavior in grade 7 were used as control variables.

***Family adversity.*** Family adversity was assessed using a cumulative index validated and used in diverse studies (Brière et al., 2017; Janosz et al., 2010). This index is calculated based on nine family risk factors as self-reported by students: low maternal occupational prestige, low paternal occupational prestige, low family wealth, low home educational resources, parental separation, mother secondary school non-completion, father secondary school non-completion, sibling school non-completion, and frequent house moves. For each factor, a cut point was established to distinguish between family risk and absence of risk. Family risk for every specific factor was attributed a score of 1, while the absence of risk was attributed a score of 0. The cumulative index consists of the addition of the nine scores of each specific risk factors, showing a maximum of 9 and a minimum of 0. Cut points were established as follows. For maternal and paternal occupational prestige, family wealth, home educational resources, participants with scores under the mean plus one standard deviation was considered at risk and attributed a score of 1 for each of these factors, while for house moves, participants with scores above the mean plus one standard deviation was considered at risk and attributed a score of 1. Participants from families with structures other than nuclear, as well as participants whose mother or father did not complete secondary school, and participants having a sibling who dropped out of school were also considered at risk and attributed a score of 1 for each of these factors. As mentioned, these nine specific scores for these nine family risk factors were then summed, generating the family adversity cumulative index.

***Conflictual relationship with teachers.*** We used the student self-reported conflictual relationship scale inspired by the work of Pianta (1992), then translated and adapted into French by Larose et al. (1999). This scale includes seven items (e.g.: “I often have conflicts with my teachers”). Students responded to each item on a five-point Likert scale (Not at all [1], Not really

[2], Neutral/not sure [3], A little [4], A lot [5]). These items were grouped as a mean. A high average score on the conflictual relationship mean scale indicates high adversarial relationships with teachers. Cronbach's alpha for this scale is .87.

## **Missing Data**

Missing data rates ranged from 6.2% to 10.0% at T1, from 7.6% to 19.3% at T2 and from 38.0% to 49.9% at T3. Missing values were mainly caused by students missing school on the day of the survey. Attrition analyses showed that patterns of missing data at grade 11 distinguished students according to their sex (depressive symptoms:  $\chi^2(2) = 11.11; p < .001$ ;  $\chi^2(2) = 12.04; p < .001$ ). Indeed, a greater proportion of missing data was found among female students. Furthermore, students with missing data in grade 9 showed more delinquency and relational violence at grade 7 (respectively  $F(1, 3584) = 12.21; p < .001$ ;  $F(1, 3732) = 5.34; p = .21$ ). As for students with missing data in grade 11, they showed more delinquency and depressive symptoms at grade 7 (respectively  $F(1, 3579) = 19.64; p < .001$ ;  $F(1, 3665) = 6.88; p < .001$ ). As a result, we relied on a strategy allowing missing responses to be conditioned on all variables included in the model (i.e., "missing at random" assumptions; Enders, 2010). To limit the proportion of missing data, the latter were estimated in Mplus using Maximum Likelihood estimator with robust standard errors, which relies on Full Information Maximum Likelihood estimation for missing data under COMPLEX models. This strategy represents the best option with highly sparse data sets (50% missing data; Xiao & Bulut, 2020).

## **Analytic Strategy**

First, the descriptive statistics and correlation matrices have been used to examine the relationships between all studied variables. Then, to test our main hypothesis, we conducted a path analysis model in Mplus 8 (Muthén et Muthén, 1998-2012) using bootstrapped standard errors (Preacher et Hayes, 2008). Our model tested (H1) the direct paths between parental school involvement in grade 7 with depressive symptoms, delinquency, and relational violence in grade 9 and grade 11. We tested a fully saturated model (H1) and evaluated all possible paths between covariates, predictors, and outcome variables. For the sake of parsimony, the nonsignificant paths involving covariates were removed from the final model. We also tested (H2) the mediation

processes linking parental school involvement in grade 7 with delinquency, depressive symptoms, and relational violence in grade 9 and grade 11. The mediation links (H2) were tested using the Sobel test and bootstrapped standard errors (Preacher et Hayes, 2008). Finally, we examined the stability of internalizing and externalizing difficulties between grade 9 and grade 11 by observing the direct paths between depressive symptoms, delinquency, and relational violence (H3).

In addition to using robust maximum likelihood estimation to control for potential bias due to missing data, we examined all paths correcting for data clustering using the TYPE = COMPLEX option in Mplus (Muthén & Muthén, 1998-2012). This option adjusts standard errors and chi-squared tests for nonindependence of the observations (i.e., students nested in schools). To determine whether models apply differently to boys and girls (H4), we tested multiple-group structural invariance based on student sex. We compared a model where all hypothesized regression coefficients were constrained to be equal between groups to another model where coefficients were freely estimated between groups based on the Chi-square Difference Test (Werner et Schermelleh-Engel, 2010). Five adjustment indicators were further used to determine the fit of the models: the chi-square ( $\chi^2$ ), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The  $\chi^2$  fit is considered good when the value is not significant and lower than three times the degrees of freedom. The CFI index indicates a good fit when above .95 while the TLI index shows a good fit when above .90. The RMSEA and the SRMR both indicate a good fit when their values are between .05 and .02 (Little, 2013; Marsh et al., 2005).

## RESULTS

### Preliminary Analysis

Descriptive statistics and correlations are presented in Table 3.1. Concurrent correlations between delinquency, depressive symptoms, and relational violence in grade 9 and grade 11 were moderate to high ( $.36 < r_s < .64$ ), with the weakest correlations being those between depressive symptoms and delinquency or relational violence. The stability of delinquency, depressive symptoms, and relational violence over two years were moderate ( $.31 < r_s < .35$ ). In addition, the correlations between parental school involvement in grade 7 and delinquency, depressive

symptoms, and relational violence in grades 9 and 11 were found to be negative and low ( $-.17 < r_s < -.10$ ).

## Results of the structural model

### Direct links

To determine if parental school involvement was associated with depressive symptoms, delinquency, and relational violence, we first examined a full saturated model. The contribution of covariates in the full saturated model is presented in Table 3.2. For the sake of parsimony, we removed nonsignificant paths between covariates and predictors. The final model presents an excellent fit ( $\chi^2 = 32.91$ ,  $df = 27$ ,  $p = .20$ ; CFI = .99; TLI = .99; RMSEA = .01; SRMR = .01) and is illustrated in Figure 3.3. Results of this model showed that parental school involvement in grade 7 is significantly linked to depressive symptoms ( $\beta = -.05$  (.02),  $p < .01$ ) and delinquency ( $\beta = -.04$  (.02),  $p < .05$ ) in grade 9 controlling for student characteristics and prior difficulties (i.e., depressive symptoms, delinquency, and relational violence in grade 7). More precisely, this means that adolescents who have parents that are more involved in their education in grade 7 are less likely to develop a lack of interest in pleasant activities, a feeling of distress, and are less likely to adopt behaviors such as theft of property, violent group altercations, or vandalism in grade 9. However, parental school involvement in grade 7 was not significantly linked to depressive symptoms ( $\beta = -.00$  (.02),  $p = .86$ ) or delinquency ( $\beta = -.02$  (.02),  $p = .45$ ) in grade 11. Yet, results further revealed that parental school involvement in grade 7 was not significantly linked to relational violence in grade 9 ( $\beta = -.03$  (.02),  $p = .06$ ) or grade 11 ( $\beta = -.04$  (.02),  $p = .11$ ).

Moreover, results showed that autoregressive paths were mostly significant for depressive symptoms ( $\beta = .33$  (.03),  $p < .001$ ), delinquency ( $\beta = .35$  (.04),  $p < .001$ ), and relational violence ( $\beta = .22$  (.03),  $p < .001$ ) between grade 9 and grade 11. Moreover, depressive symptoms in grade 9 was associated to delinquency two years later (grade 11) ( $\beta = .08$  (.02),  $p < .001$ ), and delinquency in grade 9 was associated with depressive symptoms in grade 11 ( $\beta = .07$  (.03),  $p < .05$ ). This means that adolescents who exhibit an increased lack of interest in pleasant activities, a feeling of distress and a depressed mood in grade 9 are more likely to adopt behaviors such as theft of property, violent group altercations, or vandalism in grade 11, controlling for confounders. The inverse relationship is also true: students who adopt delinquent behaviors in the

middle of high school are more at risk of presenting depressive symptoms in their last year of high school. Furthermore, delinquency, and depressive symptoms in grade 9 were both associated to relational violence in grade 11 (respectively,  $\beta = .11 (.03)$ ,  $p < .001$ ;  $\beta = .08 (.02)$ ,  $p < .001$ ). Indeed, adolescents who exhibit a lack of interest in pleasant activities, a feeling of distress or adopt behaviors such as theft of property, violent group altercations, or vandalism in grade 9 are more likely to menace others of rejection, insult them, threaten to destroy property belonging or telling false rumors about comrades in grade 11. Yet, our results showed that relational violence in grade 9 was not significantly associated to delinquency ( $\beta = -.01 (.03)$ ,  $p = .81$ ) and depressive symptoms ( $\beta = .00 (.03)$ ,  $p = .99$ ) two years later (grade 11).

### **Indirect Links**

Next, we examined the mediation process linking parental school involvement in grade 7 to delinquency, depressive symptoms, and relational violence in grade 11 by the way of delinquency, depressive symptoms, and relational violence in grade 9. First, results show that parental school involvement when entering secondary school (grade 7) contributed to depressive symptoms and delinquency at the end of secondary school (grade 11) through autoregressive paths. In fact, a lack of parental school involvement when entering high school contributes to an increase of both depressive symptoms and delinquent behaviors in the middle of high school, which in turn contributes to the stability of the latter at the end of high school (respectively:  $\beta = -.02 (.01)$ ,  $p < .01$ ; and  $\beta = -.01 (.01)$ ,  $p < .05$ ), controlling for previous internalizing and externalizing difficulties. Second, we found no mediation processes between parental school involvement in grade 7, and relational violence in grade 9 and grade 11 ( $\beta = -.008 (.004)$ ,  $p = .052$ ). Third, results suggest a mediating effect of depressive symptoms in the prediction of delinquency and relational violence. On one hand, lower parental school involvement in grade 7 was associated with higher depressive symptoms in adolescents in grade 9, which in turn led to more delinquent behaviors in grade 11, controlling for previous internalizing and externalizing difficulties ( $\beta = -.004 (.002)$ ,  $p < .05$ ). On the other hand, parental school involvement in grade 7 contributes to relational violence in grade 11 through depressive symptoms in grade 9, controlling for confounders ( $\beta = -.004 (.002)$ ,  $p < .05$ ). This suggests that adolescents with less involved parents in school in grade 7 shows more depressive symptoms in grade 9, which leads to exhibiting more relational violence

in grade 11. Delinquency as well as relational violence in grade 9 did not act as mediators between parental school involvement at entry in secondary school and the development of other difficulties later in secondary school (grade 11). These results are shown in detail in Table 3.3.

### **Multiple-Group Structural Invariance**

Finally, we also tested whether the hypothesized links between parental school involvement in grade 7 and delinquency, depressive symptoms, and relational violence in grade 9 and grade 11 varied as a function of students' sex. The Chi-square Difference Test of multiple-group structural invariance as a function of student sex indicated that the model where coefficients were freely estimated between group better fitted the data compared to the model where all hypothesized regression coefficients were constrained to be equal between groups (difference between models:  $\Delta\chi^2 = 25.41$ ,  $\Delta df = 15$ ,  $cd = 1.29$ ,  $p < .05$ ). Coefficients in the model were then compared using the Wald  $\chi^2$  and are presented in Table 3.4. Two significant differences between boys and girls were observed in the associations in the model. First, a significant association was found for boys between parental school involvement in grade 7 and relational violence in grade 11 ( $\beta = -.08$  (.04),  $p < .05$ ), which was not the case for girls ( $\beta = .03$  (.03),  $p = .24$ ). Second, a greater stability was found for relational violence between grade 9 and grade 11 among girls ( $\beta = .28$  (.03),  $p < .001$ ) than among boys ( $\beta = .15$  (.06),  $p < .01$ ). No other significant differences were observed between girls and boys in the remaining associations of the model.

## **DISCUSSION**

Past studies suggest that parental school involvement can contribute to adolescent externalizing and internalizing difficulties (Barger et al., 2019; Lara et Saracostti, 2019). Yet, the mechanisms linking parental involvement with delinquency, relational violence, and depressive symptoms over time is misunderstood, and especially among adolescents from disadvantaged backgrounds. To increase our understanding of these processes, this study of low-SES secondary schools aimed to determine if parental school involvement at the start of high school was linked with depressive symptoms, delinquency, and relational violence in grade 9 and grade 11, as well as to explore the potential mediating role of difficulties in grade 9 in the associations between parental school involvement and difficulties in grade 11. Our study also aimed to establish if

internalizing and externalizing difficulties showed homotypic as well as heterotypic stability between grade 9 and grade 11 and to determine whether the associations displayed differences according to student sex.

First, our results show that parental school involvement at the start of high school seems to act as a direct risk factor for delinquency and depressive symptoms in grade 9. Indeed, authors inspired by the ecosystem's literature have put forward the notion of risk factors to mental health (Lunansky et al., 2021). According to the latter, a risk factor can influence the development of internalizing or externalizing difficulties and thereby increase or decrease the probability that adolescents exhibit long-term psychosocial adjustment or maladjustment (Fried et al., 2017; Lunansky et al., 2021). Our results illustrate that the lack of parental school involvement in grade 7 is a risk factor to adolescents exhibiting delinquency and depressive symptoms in grade 9, which, in turn, shows homotypic stability through grade 11. Thus, although literature suggests that the contribution of parental involvement decreases in importance through high school for adolescents of disadvantaged backgrounds (Benner, 2011; Brannon, 2007), our study provides a valuable precision. Indeed, a lack of parental involvement at the beginning of high school has shown repercussions throughout the entire high school course, as it contributes to the increase and stability of delinquent behaviors and depressive symptoms of adolescents. Therefore, it is wrong to think that parents play a less important role in their child's educational development as the latter grows older.

Similarly, our study highlights that relational violence in grade 9 shows homotypic stability through grade 11. However, with the exception of a weak association in boys, parental school involvement did not show significant associations to the latter. We can therefore think that other factors may contribute to the development of relational violence in adolescents from disadvantaged areas. As relational violence is more related to interactions with peers, it is possible that the perception of safety or the peer network might have a greater contribution to the adoption of behaviors such as threats of rejection, insults, threats to destroy property belonging or telling false rumors. Indeed, Bradshaw (2015) puts forward that adolescents who feel safe at school are less likely to engage in such behaviors, whereas students who perceive their safety as compromised show a greater risk of favoring aggressive retaliation and exhibiting relational violence. In terms of peer network, adolescents from disadvantaged schools are likely to have fewer resources outside their school that might protect them from relational violence; therefore, when the school social



network in poor, these youths may perceive their school environment as more unsafe, which can heighten the risk of exhibiting relational violence (Bradshaw et al., 2015; Nocentini et al., 2019). Since our study was set in motion in disadvantaged schools, we can think that students might rely less on their parents and more on their perception of safety in determining whether to display behaviors of relational violence.

Further, in line with our hypothesis, results highlight that the adoption of delinquency and or the propensity to show signs of depressive symptoms showed heterotypic stability between grade 9 and grade 11. However, to our surprise, it was not the case for relational violence in terms of heterotypic stability, as relational violence was not linked to delinquency or depressive symptoms. This result was unexpected but may be explained by the fact that relational violence may be considered in certain contexts as a normative strategy that can sometimes promote adaptation rather than a behavior impeding it. Indeed, Hensums et al. (2023) expose that adolescents adopt relational violence to attain their goals, such as succeeding academically, socially, and personally. Since the latter are more easily attainable with status and power, exhibiting behaviors related to relational violence can sometimes be adaptative. In fact, it allows adolescents to gain social skills, material success, social attractiveness, social dominance, popularity, and sexual opportunities. In this line of thought, the use of relational violence can be considered a normative means of achieving goals rather than a maladjustment difficulty, which might be especially true in students from disadvantaged backgrounds (Malecki et al., 2020). We can therefore think that relational violence is perhaps more common in adolescents, and less associated with significant maladjustment difficulties, which could explain the absence of heterotypic stability.

In a very innovative way, our results show that depressive symptoms act as an explanatory mechanism for the link between parental school involvement and later depressive symptoms, delinquency, or relational violence. Indeed, controlling for previous internalizing and externalizing difficulties, adolescents of parents who lack school involvement (i.e., less likely to help with homework, provide a less supportive and stimulating learning environment, rarely discuss school-related issues and infrequently encourage) at the start of high school are more likely to show depressive symptoms in grade 9, which leads to more depressive moods, delinquency, and relational violence behaviors in grade 11. The direct associations between parental school involvement, depressive symptoms, and externalizing difficulties are well supported by the

literature (Barger et al., 2019; Lara et Saracostti, 2019). However, the innovative aspect of this finding results in the key role of depressive symptoms, which acts as an explanatory mechanism in this regard. It can be brought that this never documented trend might be aligned with the concept of academic stress.

In fact, adolescence is a time of major changes in all areas of functioning. Indeed, the latter is filled with stressful challenges, such as trying to fit in with peers, negotiating new boundaries with parents, handling romantic relationships, and adjusting to new academic demands (Anniko et al., 2019). Academic matters such as evaluations, assignments, and the educational environments are known to be the most important sources of stress in adolescents and have supported associations with depressive symptoms (Jayanthi et al., 2014; Zang et al., 2022). Indeed, the latter can be explained by the fact that adolescents exposed to numerous academic-related stressors are living with constant and overwhelming stress. In turn, this can damage their goals and hopes, and cause them to develop hopeless thoughts, which leads to the development of depressive symptoms (Jayanthi et al., 2014; Zang et al., 2022). Parental school involvement has a significant role in reducing students' academic stress (Hadi et al., 2020; Rapheal et Paul, 2018). Indeed, when adolescents with involved parents face academic dilemmas, they can count on their parent to help solve the problem by discussing difficulties, giving instructions, and checking homework. This leads adolescents to have a greater perception of self-efficacy towards learning, show a substantial use of metacognitive strategies, to exhibit a considerable perception of control over use of time, and lower levels of academic procrastination. This is likely to decrease the academic stress (Fuentes et al., 2019) linked to increased depressive symptoms. On the contrary, adolescents of parents who lack school involvement can rely less on the latter to help resolve academic dilemmas. This can lead the adolescent to show a decreased interest in school, a diminished perception of self-efficacy towards learning, to use fewer metacognitive strategies, exhibit a lack of control, and show more academic procrastination, which increases academic stress (Fuentes et al., 2019). Since adolescents of parents showing less involvement in school are more likely to present academic stress, they are also more likely to exhibit depressive symptoms (Jayanthi et al., 2014; Zang et al., 2022). In fact, authors further explain that adolescents who exhibit depressive symptoms tend to ruminate. Specifically, the latter are more inclined to remember things from the past negatively and show more hopelessness towards the future (Alderman et al., 2015; LeMoult et al., 2019). In doing so, adolescents are more likely to have a negative perception of their life and adopt behaviors

accordingly, leading to externalizing difficulties such as relational violence and delinquency (Alderman et al., 2015; LeMoult et al., 2019) and internalizing difficulties such as depression (Blok et al., 2021; Johnson et al., 2019; Snyder et al., 2017), which is especially true from adolescents from low SES backgrounds (Landberg et al., 2019).

Finally, our results indicate that some specific differences were found between sexes, but that the latter do not extend to explanatory mechanisms linking parental school involvement and depressive symptoms, delinquency, and relational violence. Quite surprisingly, only two differences were found between boys and girls. First, results show that girls exhibit stronger homotypic stability in relational violence between grade 9 and grade 11. This supports some authors putting forward that girls tend to adopt more behaviors such as excluding a targeted individual from the group, not talking to them, leaving them alone, or spreading rumors about them (Duru et al., 2019; Ellickson et McGuigan, 2000; Povedano et al., 2015). Second, our study puts forward that the association between parental school involvement in grade 7 and relational violence in grade 11 is only significant in boys. Since this unexpected result is weak in strength, it would be relevant to explore it further. Beyond these two specific differences, our study's results were opposite to our prediction stating that depressive symptoms would show stronger longitudinal associations in girls, and that boys would exhibit stronger longitudinal associations regarding relational violence and delinquency throughout high school. Indeed, literature does highlight differences between boys and girls in specific maladjustment difficulties such as that girls tend to exhibit more internalizing difficulties, such as depressive symptoms, and boys tend to adopt behaviors related to externalizing difficulties, like delinquent behaviors. Although our results align with the fact that some of the specific differences between boys and girls are present in adolescents, our study brings a new perspective by highlighting that the developmental mechanisms between parental school involvement and internalizing and externalizing difficulties in adolescence apply equally to boys and girls.

### **Strengths and Limitations**

This study presents several strengths. First, the large sample of our study is a key factor to consider. Very few longitudinal studies have this scope, especially among adolescents from underprivileged backgrounds. Second, several research has studied depressive symptoms,

delinquency, and relational violence independently (Tammariello, 2012; Kirkhaug et al., 2013; Ogg et Anthony, 2019). Our study is thus the only one to have examined constructs related to all three constructs in association with parental-school involvement in low-income high school students. Third, our research fills an important gap in the literature. Indeed, previous studies measure parental school involvement through school-based parental involvement (Healy et al., 2020; Lechuga-Pena et al., 2019; Ogg et al., 2021), while this study focused on home-based parental involvement. No studies focus specifically on home-based parental school involvement, while also studying specific dimensions of both internalizing and externalizing difficulties in adolescents. Fourth, our study controls for student depressive symptoms, delinquency, and relational violence in grade 7, which limits the influence of the latter as confounding variables and enhances the internal validity of our study. Finally, our research considered the interdependence of observations by using clustering which solidifies the patterns and relationships identified.

Some limitations of the study are also worth mentioning. First, the data collection for this longitudinal study were implemented more than twenty years ago, which limits the generalization of the results. Indeed, we can think that the reality of adolescents today is different due to multiple changes, such as the appearance of social media and cyberbullying, the increase in mental health diagnoses among adolescents, the diversification of student profiles in disadvantaged areas, etc. Second, the adolescent's depressive symptoms, delinquency, and relational violence variables were established through self-reported questionnaires. For this reason, there might be various biases that may affect the results; some answers can be exaggerated, respondents may be too embarrassed to reveal private details, etc. Third, internalizing, and externalizing difficulties were evaluated only by only these three constructs: depressive symptoms, delinquency, and relational violence. This makes generalizing the results to all internalizing or externalizing problems rather difficult, given the many difficulties that lie within each of the categories. Lastly, the generalization of findings might also be limited to schools located in low-income neighborhoods. Indeed, it would be favorable to replicate the findings using a different sample.

## **Conclusion**

Overall, our results show that depressive symptoms act as an explanatory mechanism for the link between parental school involvement and externalizing difficulties such as delinquency and relational violence. Furthermore, our study suggests that depressive symptoms and

delinquency both show heterotypic and homotypic stability in adolescents through high school. In addition, this research highlights that these findings apply in the same way to girls as to boys.

Our findings present important implications for intervention in disadvantaged areas. For example, by identifying the key role of depressive symptoms in grade 9, this study has the potential to help develop realistic strategies in response to the specific needs of students halfway through high school. For example, teachers of grade 9 could raise their students' awareness of mental health difficulties by defining depression symptoms, encouraging the monitoring of emotional and behavioral changes, and establishing where to get help. Moreover, by establishing that developmental mechanisms in adolescents do not differ according to the sex of the student, our research allows to create universal clinical strategies that can be implemented on a larger scale regardless of the sex of students. Third, our outcomes show the key role of parental school involvement at the start of high school, indicating that special attention must be paid to home-based school supervision as a preventive strategy. Professionals surrounding students could implement activities themed around open communication with parents about school and organize activities involving students and family members to potentially reduce the risk of presenting depressive symptoms in grade 9, as well as internalizing and externalizing difficulties in grade 11. Finally, although our study can be a driving force for the implementation of clinical strategies, it also highlights the importance of pursuing studies in adolescents from disadvantaged areas.

Table 3.1. *Correlation Matrix and Descriptive Statistics.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Elementary															
2. Teacher	.03														
3. Family	.16**	.09**													
4. Sex	-.02	-.12**	.03												
5. Age	.51**	.05**	.14**	-.04**											
6. Parent inv.	-.08**	-.26**	-.20**	-.01	-.09**										
7. Dep.	.09**	.32**	.15**	-.17**	.09**	-.32**									
8. Dep.	.09**	.18**	.09**	.10**	.08**	-.17**	.37**								
9. Dep.	.05*	.13**	.09**	.00	.03	-.13**	.29**	.39**							
10.	.03	.49**	.10**	-.07**	.07**	-.30**	.35**	.19**	.17**						
11.	.02	.30**	.06**	-.12**	.15	-.16**	.15**	.40**	.21**	.42**					
12.	-.02	.24**	.07**	-.17**	.03	-.13**	.13**	.21**	.41**	.31**	.31**				
13. Rel.	.01	.38**	.07**	.02	.03	-.20**	.30**	.17**	.14**	.60**	.26**	.18**			
14. Rel.	.01	.18**	.03	.03	-.01	-.12**	.16**	.36**	.16**	.26**	.64**	.25**	.34**		
15. Rel.	-.04*	.17**	.05*	.01	-.01	-.10**	.16**	.21**	.38**	.22**	.30**	.64**	.27**	.35**	
M	.13	15.89	1.56	1.56	12.58	20.55	12.42	12.39	11.82	3.00	3.05	11.82	2.39	2.14	1.90
SD	.36	6.33	1.58	.50	.63	7.43	10.27	10.27	10.28	3.10	3.42	10.28	2.27	2.25	2.12
Min	0	7	0	1	12	0	0	0	0	0	0	0	0	0	0
Max	2	35	9	2	15	33	60	60	56	21	21	21	12	12	12

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . Rep. = repetition. Dep. = Depressive. Inv. = Involvement. Rel = relational.

Table 3.2. Contribution of Covariates to Parental School Involvement in Grade 7, Depressive Symptoms, Delinquency, and Relational Violence in Grade 9 and 11.

Covariates	Parental school inv. Grade 7			Depressive symptoms Grade 9			Delinquency Grade 9			Rel. violence Grade 9			Depressive symptoms Grade 11			Delinquency Grade 11			Rel. violence Grade 11		
	$\beta$	SE		$\beta$	SE		$\beta$	SE		$\beta$	SE		$\beta$	SE		$\beta$	SE		$\beta$	SE	
Family adversity	-.20	.02	***	.02	.02	n.s.	.02	.02	n.s.	-.00	.02	n.s.	.05	.02	**	.04	.02	*	.03	.02	†
Age	-.09	.02	***	.02	.02	n.s.	-.03	.01	†	-.03	.02	†	-.02	.02	n.s.	.02	.02	n.s.	-.01	.02	n.s.
Sex	-.01	.02	n.s.	.05	.02	*	-.09	.02	***	.03	.02	n.s.	-.05	.02	**	-.13	.02	***	-.01	.02	n.s.
Grade repetition	-.08	.02	**	.04	.02	*	.00	.02	n.s.	.01	.02	n.s.	.01	.02	n.s.	-.05	.02	*	-.05	.02	*
Teacher conflict Grade 7	-.25	.02	***	.06	.02	**	.11	.02	***	.04	.02	†	-.02	.03	n.s.	.05	.03	†	.04	.03	n.s.
Dep. symptoms Grade 7	-.32	.02	***	.30	.03	***	-.00	.02	n.s.	.04	.03	n.s.	.16	.04	***	.01	.02	n.s.	.02	.02	n.s.
Delinquency Grade 7	-.30	.02	***	.02	.03	n.s.	.34	.03	***	.05	.03	*	.02	.04	n.s.	.12	.04	**	.00	.03	n.s.
Rel. violence Grade 7	-.20	.02	***	.03	.02	n.s.	.01	.02	n.s.	.29	.02	***	.01	.03	n.s.	-.01	.02	n.s.	.12	.03	n.s.

Note. †  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . n.s. = Nonsignificant. Dep. = Depressive. Rel. = Relational. Inv. = Involvement.

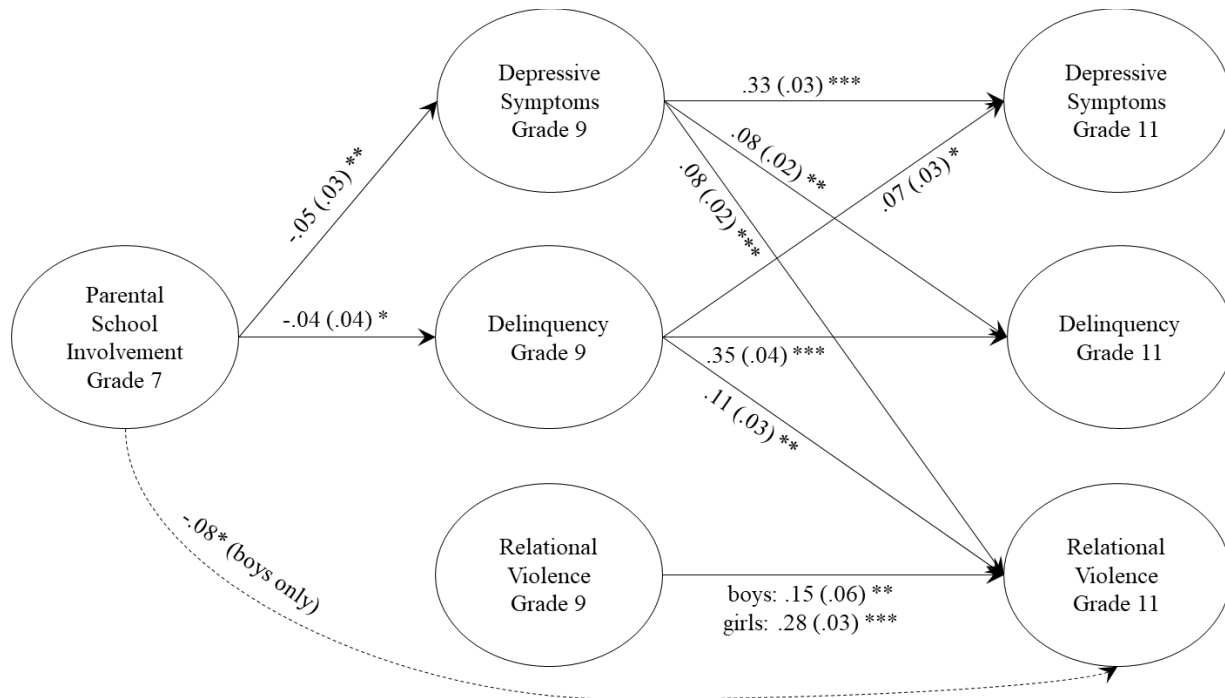


Figure 3.3. *Direct Paths Between Parental School Involvement in Grade 7 and Depressive Symptoms, Delinquency, and Relational Violence in Grade 9 and Grade 11.*

**Note.**  $*p < .05$ .  $**p < .01$ .  $***p < .001$ . Standardized betas and bootstrapped standard errors are displayed. Model fit:  $\chi^2 = 32.91$ ,  $df = 27$ ,  $p = .20$ ; CFI = .99; TLI = .99; RMSEA = .01; SRMR = .01. Full lines represent the observed associations for both boys and girls. The dotted line represents an observed association for boys only. The model also includes the associations between covariates (age, sex, family adversity, conflictual relationship with teachers, as well as depressive symptoms, delinquency and relational violence in grade 7) and variables in the model at all time points, as well as correlations between variables at each time point.



Table 3.4. *Indirect Paths Between Parental School Involvement in Grade 7 and Depressive Symptoms, Delinquency, and Relational Violence in Grade 9 and Grade 11.*

Grade 7	Grade 9	Grade 11	$\beta$	(SE)	<i>p</i>
Parental school in	→ Dep. symptoms	→ Dep. symptoms	-.017	.007	**
Parental school inv.	→ Dep. symptoms	→ Delinquency	-.004	.002	**
Parental school inv.	→ Dep. symptoms	→ Rel. violence	-.004	.002	*
Parental school inv.	→ Delinquency	→ Dep. symptoms	-.003	.002	n.s.
Parental school inv.	→ Delinquency	→ Delinquency	-.014	.007	*
Parental school inv.	→ Delinquency	→ Rel. violence	-.005	.003	†
Parental school inv.	→ Rel. violence	→ Dep. symptoms	.000	.001	n.s.
Parental school inv.	→ Rel. violence	→ Delinquency	.000	.001	n.s.
Parental school inv.	→ Rel. violence	→ Rel. violence	-.008	.004	†

**Note.** Note. †  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . n.s. = Nonsignificant. Dep. = Depressive. Rel. = Relational. Inv. = Involvement. The model also includes the associations between covariates (age, sex, family adversity, conflictual relationship with teachers, as well as depressive symptoms, delinquency, and relational violence in grade 7 and variables in the model at all time points, as well as correlations between variables at each time point.

Table 3.5. *Multiple-Group Structural Invariance: Comparison of Coefficients as a Function of Student Sex.*

Association	Wald $\chi^2$ ( $df = 1$ )	$p$
Parental school inv. Grade 7 → Dep. symptoms Grade 9	.26	n.s.
Parental school inv. Grade 7 → Dep. symptoms Grade 11	3.07	†
Parental school inv. Grade 7 → Delinquency Grade 9	.01	n.s.
Parental school inv. Grade 7 → Delinquency Grade 11	3.23	†
Parental school inv. Grade 7 → Rel. violence Grade 9	.53	n.s.
Parental school inv. Grade 7 → Rel. violence Grade 11	6.27	**
Dep. symptoms Grade 9 → Dep. symptoms Grade 11	.38	n.s.
Dep. symptoms Grade 9 → Delinquency Grade 11	3.7	†
Dep. symptoms Grade 9 → Rel. violence Grade 11	.59	n.s.
Delinquency Grade 9 → Dep. symptoms Grade 11	.05	n.s.
Delinquency Grade 9 → Delinquency Grade 11	.01	n.s.
Delinquency Grade 9 → Rel. violence Grade 11	.00	n.s.
Rel. violence Grade 9 → Dep. symptoms Grade 11	1.02	n.s.
Rel. violence Grade 9 → Delinquency Grade 11	1.50	n.s.
Rel. violence Grade 9 → Rel. violence Grade 11	5.98	*

**Note.** Note. †  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . n.s. = Nonsignificant. Dep. = Depressive. Rel. = Relational. Inv. = Involvement. The model also includes the associations between covariates (age, sex, family adversity, conflictual relationship with teachers, as well as depressive symptoms, delinquency and relational violence in grade 7) and variables in the model at all time points, as well as correlations between variables at each time point.

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**CHAPITRE IV**  
**DISCUSSION GÉNÉRALE**

## DISCUSSION GÉNÉRALE

Cette thèse visait à examiner le rôle de facteurs individuels et familiaux comme précurseurs ou conséquences du développement ou du maintien de difficultés intériorisées et extériorisées spécifiques, soit la violence relationnelle, la délinquance et les symptômes dépressifs, chez des élèves de milieux défavorisés pendant leur parcours à l'école secondaire. Considérant les conséquences négatives liées à ces difficultés d'adaptation, nous espérons que, de par ses objectifs et les résultats obtenus, cette thèse aura des retombées non seulement au point de vue de la recherche, mais aussi au point de vue de la pratique.

D'une part, la première étude avait comme objectif d'explorer le rôle des comportements intériorisés (c.-à-d., symptômes dépressifs) et extériorisés (c.-à-d., violence relationnelle), comme précurseur aux caractéristiques individuelles des adolescents, c'est-à-dire leur estime de soi et leur engagement scolaire comportemental. À partir d'un échantillon d'élèves du secondaire de milieux défavorisés, notre étude visait ainsi à établir si l'estime de soi jouait un rôle médiateur dans la relation entre les symptômes dépressifs, la violence relationnelle et l'engagement scolaire comportemental. Contrairement à ce qui était attendu, les résultats suggèrent plutôt que ce sont les symptômes dépressifs et la violence relationnelle qui jouent un rôle clé de médiation entre l'estime de soi et l'engagement comportemental d'adolescents de milieux scolaires défavorisés et que ces résultats s'appliquent de la même manière chez les garçons et les filles. D'autre part, la deuxième étude de la thèse visait à explorer les comportements intériorisés (c.-à-d., symptômes dépressifs) et extériorisés (c.-à-d., délinquance, violence relationnelle) comme résultat du contexte de vie, soit des caractéristiques familiales. Ainsi, les résultats de l'étude ont permis d'établir que la dépression agit comme mécanisme explicatif de l'association entre l'implication scolaire parentale et les difficultés extériorisées telles que la violence relationnelle et la délinquance et que, de nouveau, ces résultats s'appliquent de la même manière pour les filles et pour les garçons. Conjointement, ces deux études ont permis de dégager que les difficultés intériorisées et extériorisées sont au cœur des processus individuels et scolaires des adolescents. En effet, plutôt que de jouer un rôle clé au départ de chaînes développementales, les difficultés intériorisées et extériorisées sont un mécanisme central au milieu du parcours secondaire des jeunes, et ce, tant pour chez les garçons que chez les filles. Nous discuterons ici des principaux résultats mis de l'avant par chaque étude, d'abord au niveau des connaissances acquises dans cette thèse sur le rôle clé des comportements intériorisés et extériorisés et notamment des symptômes dépressifs à l'adolescence, mais

également du peu de différences observées à cet égard entre les garçons et les filles. Nous concluons ensuite en présentant les implications des résultats de la thèse pour la recherche, de la théorie et la pratique.

## **RÉSUMÉ DES PRINCIPAUX RÉSULTATS**

### **Difficultés intériorisées et extériorisées**

La première étude de cette thèse révèle que l'estime de soi ne joue pas le rôle attendu de médiateur entre les difficultés intériorisées et extériorisées et l'engagement scolaire comportemental. En effet, elle souligne plutôt que ce sont la dépression et la violence relationnelle qui agissent comme mécanisme dans l'association entre l'engagement scolaire comportemental et l'estime de soi. Pour la dépression, les adolescents de milieux défavorisés qui sont plus impliqués dans les discussions, qui collaborent dans les tâches et qui posent des questions à l'enseignant en levant la main au début du secondaire tendent à présenter plus d'intérêt vis-à-vis les activités plaisantes et à ressentir moins de détresse au milieu du secondaire. De ces sentiments dépressifs diminués à la mi-parcours découle une plus grande appréciation d'eux-mêmes à la fin du secondaire. Fait intéressant, la dépression agit également comme mécanisme bidirectionnel, c'est-à-dire qu'un faible niveau de symptômes dépressif permet également d'expliquer l'association entre l'estime de soi et l'engagement comportemental. Cela signifie que les adolescents de milieux défavorisés qui ont une appréciation générale d'eux-mêmes plus faible et qui exhibent moins de fierté vis-à-vis leurs accomplissements au début du secondaire tendent à présenter moins d'intérêt vis-à-vis les activités plaisantes et à ressentir plus de détresse au milieu du secondaire. La présence accrue de sentiments dépressifs à la mi-parcours mène ces derniers à moins s'impliquer dans les discussions, à moins collaborer aux les tâches et à moins poser des questions à l'enseignant en levant la main à la fin du secondaire. Pour la violence relationnelle, notre étude révèle des résultats similaires, mais seulement dans un sens. En effet, les adolescents qui présentent moins d'appréciation d'eux-mêmes au début du secondaire sont plus à risque de menacer, de rejeter, d'insulter et de véhiculer des fausses rumeurs à la mi-parcours, ce qui les mène à moins s'impliquer dans les discussions en classe et à moins collaborer aux tâches à la fin du secondaire. L'inverse ne s'est cependant pas avéré fondé dans la mesure où la violence relationnelle n'agit pas comme mécanisme dans l'association entre l'engagement scolaire comportemental et l'estime de soi. Plus spécifiquement, les élèves qui s'impliquent moins dans les discussions en classe et collaborent

moins aux tâches à l'entrée au secondaire n'ont pas exhibé davantage de comportements tels que de menacer, de rejeter, d'insulter et de véhiculer des fausses rumeurs à la mi-parcours, ce qui n'a pas mené à une appréciation d'eux-mêmes diminuée à la fin du secondaire. Cela est sans doute dû au fait que dans certains contextes, la violence relationnelle peut peut-être devenir une stratégie utilisée par les adolescents pour s'adapter. En effet, les adolescents moins engagés sur le plan comportemental à l'école peuvent dans certains cas être plus à risque de fréquenter des pairs délinquants (Bae, 2020). De plus, les jeunes délinquants sont plus susceptibles de recourir à des comportements tels que menacer de rejeter, insulter, menacer de détruire des biens ou raconter de fausses rumeurs (Pechorro, 2021). Puisque l'adolescent intègre un groupe de pairs qui utilisent ces stratégies, ces dernières peuvent sembler appropriées. Conséquemment, l'adoption de la violence relationnelle n'affecte pas l'estime de soi.

En somme, les rôles médiateurs des symptômes dépressifs et de la violence relationnelle n'étaient pas attendus. Toutefois, cela suit la littérature qui met de l'avant que les difficultés intériorisées et extériorisées tendent à culminer dans leur sévérité à la mi-adolescence, ayant un plus grand potentiel d'altérer le fonctionnement scolaire des adolescents (Merikangas & al., 2022; Solmi et al., 2022). Le fait que, contrairement à ce qui était anticipé, ce soient les comportements intériorisés et extériorisés qui agissent comme mécanisme plutôt que l'estime de soi peut sans doute s'expliquer par le rôle du stress vécu par les adolescents lors de la transition de l'école primaire à l'école secondaire. En effet, cette transition implique plusieurs stressseurs, dont s'adapter aux nouvelles exigences scolaires, négocier de nouvelles limites et responsabilités avec les parents, s'intégrer au groupe de pairs et manœuvrer les relations amoureuses. Ces nombreux défis peuvent être des facteurs de stress majeurs ayant le potentiel de générer des conséquences importantes sur les fonctions cérébrales et les comportements des jeunes de milieux défavorisés. Parmi ces dernières, on reconnaît le risque accru d'exhiber des symptômes dépressifs ainsi que présenter des comportements de violence relationnelle deux ans plus tard (Anniko & al., 2019; Flack, 2016 ; Merikangas & al., 2022; Solmi et al., 2022 ; Young et Dietrich, 2015). Ces résultats illustrent la nécessité de porter une attention particulière aux impacts de la transition de l'école primaire à l'école secondaire sur le développement des adolescents de milieux défavorisés dans les études futures.

La deuxième étude de la thèse démontre également le rôle clé des symptômes dépressifs à l'adolescence, qui peuvent être une résultante d'un environnement familial moins soutenant au



niveau scolaire. Cette étude indique en effet que les symptômes dépressifs agissent comme mécanisme explicatif du lien entre l'implication scolaire parentale et la dépression, la délinquance et la violence relationnelle. Ainsi, les adolescents de parents qui sont moins enclins à aider avec les devoirs, qui ont de la difficulté à fournir un environnement soutenant et stimulant à leur adolescent, qui discutent moins souvent de problèmes reliés à l'école et qui encouragent moins fréquemment leur enfant au début de son parcours au secondaire sont plus à risques de présenter des symptômes dépressifs deux ans plus tard. Conséquemment, cette augmentation de la détresse psychologique semble mener non seulement à une augmentation de symptômes dépressifs, mais également à une augmentation de leurs conduites délinquante et à l'adoption de plus de comportements relationnels violents à la fin du parcours secondaire. Globalement, cela signifie que le manque de soutien scolaire parental mène les adolescents de milieux défavorisés à développer de symptômes dépressifs et, conséquemment, à présenter davantage de difficultés adaptatives intériorisées et extériorisées. Il est intéressant de constater que le rôle explicatif de ces mécanismes est exclusif aux symptômes dépressifs. Cette découverte importante peut s'expliquer par le fait que les adolescents sont exposés à de nombreux facteurs de stress liés aux demandes académiques qui peuvent mener les jeunes de milieux défavorisés à développer des pensées négatives quant à leurs buts et ambitions, ce qui peut engendrer le développement de symptômes dépressifs (Jayanthi et al., 2014 ; Zang et al., 2022). En effet, l'implication des parents dans l'éducation joue un rôle important dans la réduction du stress scolaire des adolescents (Hadi et al., 2020 ; Rapheal et Paul, 2018). Ces derniers, lorsque confrontés à des dilemmes scolaires, peuvent compter sur l'aide de leurs parents pour résoudre le problème. Cela conduit les jeunes à présenter une plus grande perception d'auto-efficacité envers leurs apprentissages, à utiliser des stratégies métacognitives, à se percevoir en contrôle et à moins procrastiner. Lorsqu'au contraire, les parents sont peu impliqués, les adolescents peuvent moins compter sur ces derniers pour les aider à résoudre des dilemmes scolaires. Ce faisant, l'adolescent peut exhiber moins d'intérêt pour l'école, présenter une perception diminuée de son auto-efficacité envers l'apprentissage, utiliser moins de stratégies métacognitives, percevoir un manque de contrôle et procrastiner davantage, ce qui augmente son stress scolaire (Fuentes et al., 2019). Puisque les adolescents dont les parents sont moins impliqués à l'école sont plus susceptibles de présenter du stress scolaire, ils sont également plus enclins à présenter des symptômes dépressifs (Jayanthi et al., 2014 ; Zang et al., 2022). De plus, les adolescents qui présentent de tels symptômes ont tendance à ruminer, notamment de se

souvenir négativement des événements du passé et de montrer plus de désespoir face à l'avenir (Alderman et al., 2015 ; LeMoult et al., 2019). En ruminant, les jeunes sont plus susceptibles d'avoir une perception négative de leur vie et d'adopter des comportements en conséquence, entraînant des difficultés extériorisées telles que la violence relationnelle et la délinquance (Alderman et al., 2015 ; LeMoult et al., 2019) et des difficultés intériorisées telles que les symptômes dépressifs (Blok et al., 2021; Johnson et al., 2019; Snyder et al., 2017).

Enfin, les résultats de la deuxième étude soulignent également que les comportements délinquants, de violence relationnelle ou les symptômes dépressifs sont généralement stables entre le secondaire 3 et le secondaire 5. Cela signifie que les symptômes dépressifs et comportements extériorisés comme la violence relationnelle et la délinquance chez les adolescents de milieux défavorisés se prédisent elles-mêmes (stabilité homotypique), mais se prédisent aussi entre elles (stabilité hétérotypique) (Frost et al., 2018 ; Shelvin et al., 2017). En revanche, la violence relationnelle fait exception en ce qui a trait à la stabilité hétérotypique, puisqu'elle n'est pas associée aux comportements délinquants ou aux symptômes dépressifs dans le temps. Ce résultat inattendu peut toutefois être expliqué par le fait que l'adoption de comportements de violence relationnelle peut être perçue comme une stratégie normative dans certains contextes, puisqu'elle peut permettre l'atteinte de buts sociaux, personnels ou académiques (Hensums et al., 2023).

En somme, les résultats des deux études mettent de l'avant plusieurs conclusions. D'abord, le poids marqué des difficultés adaptatives de type intériorisé et extériorisé au milieu du parcours secondaire est mis de l'avant. En effet, le secondaire 3 est une année empreinte d'une vulnérabilité marquée sur le plan de l'adaptation pour les adolescents de milieux défavorisés, puisque les symptômes dépressifs, les comportements délinquants et la violence relationnelle tendent à culminer dans leur sévérité, ayant un plus grand potentiel d'altérer le fonctionnement. Ensuite, nos études suggèrent que la transition de l'école primaire à l'école secondaire est un changement important pour les jeunes, puisqu'ils font face à de nombreux défis stressants (c.-à-d., s'intégrer au groupe de pairs, négocier des nouvelles limites avec leurs parents, explorer les relations amoureuses, s'adapter aux demandes académiques changeantes, performer dans leurs travaux et évaluations) tant sur le plan social, personnel, qu'académique. L'entrée à l'école secondaire et la réponse de stress suivant cette dernière semble contribuer à l'augmentation des difficultés intériorisées et extériorisées à la mi-adolescence. La dernière conclusion met en lumière que les caractéristiques individuelles, soit l'estime de soi et l'engagement comportemental, puis les

caractéristiques familiales, notamment l'implication scolaire des parents peuvent avoir un rôle de facteurs de risque ou de facteur de protection au développement des jeunes. En effet, lorsque l'estime de soi est positive, l'engagement comportemental élevé, et les parents sont impliqués dans l'éducation, cela favorise le développement adapté des adolescents de milieux défavorisés. À l'inverse, lorsque l'estime de soi est diminuée, l'engagement comportemental est bas, et les parents sont moins impliqués dans l'éducation, cela semble contribuer à l'inadaptation des jeunes. Finalement, le résultat clé des deux études est que les difficultés intériorisées et extériorisées jouent un rôle clé au milieu du parcours secondaire d'adolescents de milieux défavorisés. Elles sont au cœur des processus individuels de ces derniers, que ce soit sur le plan personnel ou scolaire.

### **Variation selon le sexe**

Plusieurs auteurs mettent de l'avant des différences entre les garçons et les filles en ce qui concerne la distribution des difficultés intériorisées et extériorisées (Ara, 2016 ; Bor et al., 2014). En effet, les garçons sont plus à risque de présenter des difficultés de type extériorisées tel que la délinquance, alors que les filles sont plus vulnérables aux difficultés intériorisées, notamment la dépression (Ara, 2016 ; Bor et al., 2014 ; Eme, 2016 ; Povedano et al., 2015). En ce qui concerne la violence relationnelle, les recherches ont des conclusions variées. Certains auteurs concluent que les filles adoptent plus de comportements de violence relationnelle (Duru et al., 2019; Ellickson et McGuigan, 2000; Povedano et al., 2015), alors que d'autres ne rapportent aucune différence entre les sexes (Iñiguez-Berrozpe et al., 2021; Skara et al., 2008). Dans nos deux études, nous avons non seulement exploré les différences entre les sexes en ce qui concerne la variation entre les garçons et les filles en ce qui a trait aux mécanismes développementaux entre les difficultés intériorisées, les difficultés extériorisées, les caractéristiques individuelles et les caractéristiques familiales. Nos études soulignent toutefois très peu de variations entre les sexes dans les processus qui contribuent à l'adaptation ou à l'inadaptation. Seules quelques variations ont été soulignées.

Ainsi, d'une part, notre première étude souligne des différences spécifiques entre les garçons et les filles. Par exemple, la stabilité homotypique de l'estime de soi du début à la fin du secondaire semble plus forte chez les filles que chez les garçons. Ceci indique que le niveau d'estime de soi globale chez les adolescentes au début du secondaire prédit plus fortement leur niveau d'estime de soi à la mi-parcours. Cela s'applique aussi de la mi-adolescence à la fin du

secondaire. De plus, le lien entre la violence relationnelle et l'engagement comportemental, ainsi que l'association entre les symptômes dépressifs et l'estime de soi sont tous deux plus forts chez les filles. Toutefois, cette étude suggère qu'il y a très peu de différences entre les garçons et les filles quant aux mécanismes liant l'estime de soi, les difficultés intériorisées, les difficultés extériorisées et l'engagement scolaire. En effet, les quelques variations spécifiques identifiées entre les sexes ne se transposent pas aux processus de médiation entre l'estime de soi, la dépression et l'engagement scolaire ou entre l'estime de soi, la violence relationnelle et l'engagement scolaire. Cela nous permet donc de conclure que malgré certaines différences spécifiques entre les garçons et les filles de milieux défavorisés, les mécanismes développementaux identifiés dans cette étude s'appliquent de la même manière, indépendamment du sexe de l'élève.

Similairement, notre deuxième étude dénote certaines différences spécifiques entre les garçons et les filles, mais n'identifie aucune différence en ce qui concerne les liens indirects entre les variables centrales de l'étude, notamment l'implication scolaire parentale, les symptômes dépressifs, les comportements délinquants et la violence relationnelle. Ainsi, une fois de plus, cela signifie que les variations spécifiques entre les garçons et les filles ne s'étendent pas aux mécanismes développementaux entre l'implication scolaire parentale, les symptômes dépressifs, les comportements délinquants et la violence relationnelle, signifiant que ces derniers s'appliquent de la même manière pour tous les élèves de milieux défavorisés. Ces conclusions s'alignent avec partiellement avec la littérature. Comme cette dernière, nos résultats mettent de l'avant que certaines différences entre les sexes sont présentes chez les adolescents de milieux défavorisés, notamment en termes de stabilité ainsi que dans la force de certains liens. Toutefois, cette thèse suggère qu'au-delà des différences spécifiques, les mécanismes développementaux associés à l'adaptation ou à l'inadaptation chez les adolescents et des adolescentes sont les mêmes.

### **Implications pour les recherches futures**

La méthodologie employée et les résultats obtenus dans cette thèse permettent de mettre de l'avant quelques implications pour des recherches futures. D'une part, peu d'études combinent les difficultés intériorisées et extériorisées dans la compréhension de l'adaptation et l'inadaptation chez les adolescents de milieux défavorisés en plus d'explorer la contribution de caractéristiques individuelles et familiales. À notre connaissance, seulement deux autres études répondent à ces

caractéristiques. La première de Loukas et Prelow (2004) cible une population de jeunes latinos de quartiers défavorisés de 10 ans à 14 ans. Ces derniers se penchent sur les facteurs de risques au développement des difficultés intériorisées et extériorisées, notamment les routines familiales, la supervision maternelle et la compétence socioémotionnelle. La seconde étude de Shi et al. (2020) cible une population de 784 enfants de la maternelle à la première année du secondaire. Ces élèves sont considérés à risque dû à leur statut socioéconomique faible et à leur bas niveau de compétence académique. Les auteurs explorent les antécédents qui peuvent expliquer le développement comorbide des difficultés intériorisées et extériorisées. Parmi les antécédents, ils étudient entre autres l'intelligence, la personnalité, le genre, le support maternel, l'adversité socioéconomique, la relation conflictuelle avec l'enseignant et le rejet des pairs. Ainsi, ces études comme la nôtre se penchent sur des populations variées en ce qui concerne l'âge des participants ainsi que par la définition du statut socioéconomique faible. Ce faisant, pour établir un portrait plus robuste du développement des adolescents, il serait important que les recherches futures continuent d'examiner les difficultés extériorisées et intériorisées en lien avec les caractéristiques individuelles et familiales à l'adolescence chez une population défavorisée. De plus, pour assurer une plus grande représentativité des comportements intériorisées et extériorisées, il serait pertinent de se pencher sur davantage de difficultés adaptatives telles que, par exemple, l'anxiété, l'isolement social et l'opposition. Dans le même ordre d'idées, non seulement d'autres caractéristiques individuelles et familiales pourraient être ajoutées aux études, mais il serait aussi intéressant d'aborder d'autres types de caractéristiques, comme les caractéristiques sociales par exemple.

Ensuite, nos articles mettent de l'avant que les difficultés intériorisées et extériorisées sont au cœur des processus individuels chez les adolescents au milieu du parcours secondaire. Pour expliquer ces résultats, plusieurs pistes de réflexion suggèrent l'apport du stress, tant sur le plan académique que le stress suivant la transition de l'école primaire à l'école secondaire. Par exemple, les jeunes doivent s'intégrer au groupe de pairs, négocier des nouvelles limites avec leurs parents, explorer les relations amoureuses, s'adapter aux demandes académiques changeantes, performer dans leurs travaux et évaluations, etc. En effet, le stress serait donc important à explorer davantage pour bien cerner sa contribution au développement des difficultés intériorisées et extériorisées chez les adolescents à la mi-parcours secondaire, mais spécialement chez les jeunes de milieux défavorisés. Par ailleurs, puisque plusieurs adolescents feront face à d'autres transitions scolaires

qui entraînent de nouvelles demandes académiques, il serait pertinent pour les études futures de se pencher sur le rôle du stress dans le passage de l'école secondaire au collégial, afin de mieux comprendre les mécanismes qui mènent au développement et au maintien des difficultés intériorisées et extériorisées chez les jeunes adultes de milieux défavorisés.

Finalement, comme mentionné précédemment, plusieurs études identifient des variations entre les sexes en ce qui concerne le développement des difficultés intériorisées et extériorisées, ainsi que des caractéristiques individuelles et familiales. Notre étude identifie elle aussi des distinctions spécifiques, mais suggère plutôt que les mécanismes développementaux sont les mêmes pour les garçons et les filles. À notre connaissance, aucune étude ne met de l'avant de tels résultats auprès d'une population d'adolescents de milieux défavorisés. Il semble donc nécessaire que les études futures se penchent davantage sur les variations entre les sexes au-delà des différences spécifiques déjà identifiées dans la littérature. En effet, il serait pertinent d'explorer si nos conclusions s'appliquent à d'autres mécanismes développementaux, surtout en lien avec les difficultés intériorisées et extériorisées des adolescents de milieux défavorisés. De plus, il serait intéressant d'approfondir les réflexions pour tenter de déterminer ce qui a pu mener au fait que les mécanismes développementaux sont les mêmes pour les garçons et les filles.

### **Implication pour la théorie**

Les résultats de cette thèse ont également des implications importantes en lien avec les théories du développement. D'abord, ils soutiennent la conception de modèle écosystémique de Bronfenbrenner (1974) mettant de l'avant que plusieurs systèmes sont nichés les uns dans les autres, notamment le micro-, le méso-, l'exo-, le macro- et le chronosystème (Evans, 2020 ; Tudge et Rosa, 2019). En effet, les liens identifiés dans nos études entre les difficultés intériorisées et extériorisées, les caractéristiques individuelles et les caractéristiques familiales d'adolescents de milieux défavorisés confirment que plusieurs systèmes sont interdépendants et influencent le développement des adolescents. Par exemple, nous illustrons l'apport de l'implication scolaire parentale, un facteur du microsystème, aux symptômes dépressifs, à la violence relationnelle et à la délinquance, le tout chez des jeunes d'écoles défavorisées, un facteur écosystémique. Nos études mettent donc elles aussi de l'avant l'importance de considérer l'environnement dans lequel le jeune évolue afin d'approfondir notre compréhension de son développement.

Ensuite, notre projet met de l'avant qu'afin de bien comprendre le développement des adolescents, il est aussi nécessaire de se pencher sur la notion de transaction (Sameroff, 1975), c'est-à-dire de concevoir que l'environnement peut avoir un effet sur l'individu, puis que les comportements de ce dernier peuvent aussi déterminer ses expériences environnementales. En effet, plusieurs relations transactionnelles sont identifiées entre les difficultés intériorisées et extériorisées, les caractéristiques individuelles et les caractéristiques familiales. Par exemple, nos résultats mettent de l'avant que la présence des symptômes dépressifs en secondaire 3 chez les adolescents prédit la présence de ces derniers deux ans plus tard. Ceci peut être expliqué par une transaction entre l'élève et son environnement social. En effet, un jeune qui présente un désintérêt vis-à-vis des activités plaisantes, un sentiment de détresse et une altération du fonctionnement social est plus à risque de vivre des interactions négatives et du rejet dans sa classe. Ce faisant, le jeune est plus à risque de vivre davantage de détresse psychologique et de présenter des symptômes dépressifs à la fin du secondaire (Zimmer-Gembeck, 2016).

Pour finir, les mécanismes identifiés dans les deux études de la thèse soutiennent la théorie des cascades développementales de Masten et Cicchetti (2010). En effet, tant dans la première étude qui présente le rôle explicatif des symptômes dépressifs sur le lien entre l'implication scolaire parentale et les symptômes dépressifs, la délinquance et la violence relationnelle que dans la seconde étude qui illustre le rôle des symptômes dépressifs et la violence relationnelle qui agissent comme mécanismes dans l'association entre l'engagement scolaire comportemental et l'estime de soi, nos résultats vont de pair avec la théorie des cascades développementales qui stipule qu'il y a interconnexion complète entre divers facteurs du développement et qu'un changement dans un domaine en provoque simultanément un dans un autre domaine. Nos résultats mettent ainsi en lumière l'importance de considérer l'interconnexion complète et dynamique des facteurs qui contribuent au développement des adolescents et soulèvent l'importance de poursuivre la réflexion afin de dresser un portrait juste et robuste du parcours secondaire des élèves de milieux défavorisés.

### **Implication pour la pratique psychoéducative**

Les résultats de la présente thèse ont plusieurs implications pour la pratique psychoéducative. Plus spécifiquement, les conclusions ont des retombées pour les parents

d'adolescents de milieux défavorisés, les élèves d'écoles secondaires ainsi que pour les professionnels œuvrant dans le milieu scolaire.

D'abord, les résultats du projet de thèse mettent de l'avant que les difficultés intériorisées et extériorisées notamment les symptômes dépressifs, la violence relationnelle et la délinquance, sont influencées par divers facteurs, dont l'implication scolaire parentale, l'estime de soi et l'engagement scolaire. Plus spécifiquement, on met de l'avant qu'un manque d'implication parentale sur le plan scolaire semble être associés à la présence de difficultés adaptatives intériorisées et extériorisées relativement stables à moyen et long terme à l'adolescence. Dans ce sens, il importe pour les psychoéducateurs de sensibiliser les parents quant au rôle clé de leur implication scolaire auprès de leur enfant. Sur le plan pratique, les psychoéducateurs pourraient créer une boîte à outils contenant des stratégies efficaces afin de mousser la communication entre les parents et leur jeune au sujet de l'école. Par exemple, l'un des outils pourrait être une liste de questions à poser à l'adolescent abordant divers sujets scolaires, dont l'intégration au groupe de pairs, la relation avec l'enseignant, l'intérêt vis-à-vis les activités académiques, etc.

Ensuite, les conclusions de notre recherche mettent de l'avant qu'une estime de soi positive, ainsi qu'un engagement scolaire élevé peuvent être des facteurs de protection vis-à-vis le développement de symptômes dépressifs et de violence relationnelle chez les adolescents. Dans cette perspective, les psychoéducateurs peuvent tenter d'identifier les jeunes qui pourraient présenter une estime de soi diminuée ou un engagement scolaire comportemental faible en faisant de l'observation dans les classes ou à travers les échanges avec les enseignants. Cela permettrait d'intervenir rapidement auprès de ces adolescents, avant que ces facteurs aient des impacts négatifs à plus long terme sur le fonctionnement des jeunes. De plus, à titre préventif, les psychoéducateurs peuvent mettre en œuvre des interventions à plus large spectre, visant à augmenter l'engagement scolaire et l'estime de soi des jeunes dès leur arrivée à l'école secondaire. Par exemple, il peut être question de mettre en œuvre des activités de groupe pour les classes en secondaire 1.

De plus, les résultats de la thèse illustrent la stabilité des difficultés intériorisées et extériorisées, mais également que le secondaire 3 est un moment clé en ce qui concerne ces comportements chez les adolescents de milieux défavorisés. En effet, c'est à ce moment qu'elles présentent le plus grand potentiel à altérer le fonctionnement de jeunes. En ce sens, ces résultats



soulèvent l'importance pour les psychoéducateurs d'agir tôt, dès l'entrée au secondaire, afin d'informer les adolescents quant aux difficultés de santé mentale qu'ils pourraient rencontrer durant leur parcours scolaire. De plus, ces professionnels pourraient mettre de l'avant le fait que le secondaire 3 est un moment de particulière vulnérabilité à l'augmentation de symptômes dépressifs, de comportements délinquants et de violence relationnelle et sensibiliser les jeunes quant à l'importance d'établir un réseau de soutien positif, mais également aux conséquences que peut avoir l'adoption de certains comportements. Par exemple, dans le cas de la délinquance, certains comportements peuvent enfreindre la loi et mener à des conséquences judiciaires. En plus de viser la sensibilisation et l'information, les psychoéducateurs pourraient créer un outil pratique et un protocole à suivre lorsqu'un élève est témoin de comportements lié à des difficultés au point de vue de la santé mentale, tels que la délinquance, la violence relationnelle et la dépression. Ce protocole pourrait inclure les comportements à adopter et à proscrire auprès de cette personne, ainsi que les personnes-ressources à contacter (c.-à-d., enseignant, technicien en éducation spécialisée, psychoéducateur, travailleur social).

### **FORCES ET LIMITES DE LA THÈSE**

Ce projet de thèse possède de nombreuses forces. Parmi ces dernières, on retrouve l'échantillon. En effet, les deux études de cette thèse ont été menées à partir du même échantillon d'élèves qui ont été recrutés dans le cadre d'un projet de recherche plus large sur des élèves d'écoles secondaires défavorisées du Québec. La force de cet échantillon est sa taille significative, c'est-à-dire qu'il inclut 66 écoles et les données récoltées auprès d'un échantillon de 4035 élèves relativement représentatif des écoles de milieux défavorisés. Ce faisant, l'étude est plus généralisable, lui permettant de véhiculer des résultats plus fiables et plus robustes. De plus, l'utilisation d'un échantillon d'adolescents issus d'écoles défavorisées permet de combler le manque de connaissance de la littérature sur le développement de ces jeunes, la plupart des études ayant été réalisées auprès d'adolescents de classe moyenne. Une seconde force importante de la thèse à souligner est son aspect longitudinal qui inclut trois temps de mesure. Plusieurs études ne considèrent que les distinctions transversales lorsqu'il est question des difficultés intériorisées et extériorisées des adolescents (Matos et al., 2017; Moreno et al., 2021; Vilela et al., 2020). Ainsi, le retour à un tel devis nous a permis de documenter les changements qui prennent forme au niveau du développement et du maintien des difficultés intériorisées et extériorisées au courant du

parcours à l'école secondaire, en plus de donner un aperçu de la contribution des caractéristiques individuelles et familiales à cet égard. Une troisième force de cette thèse est qu'elle intègre des variables peu explorées dans la littérature sur les caractéristiques qui contribuent au développement des difficultés intériorisées et extériorisées. En effet, l'engagement scolaire comportemental est rarement mesuré spécifiquement dans ces travaux. D'autres études se penchent souvent sur une variable globale d'engagement (Bang et al., 2020; Lombardi et al., 2019; Salmela-Aro et Upadyaya, 2020), mais rares sont celles qui ciblent cette dimension en particulier. Dans le même ordre d'idée, plusieurs études se penchent sur les pratiques parentales (Garcia et al., 2020; Pérez-Fuentes et al., 2019; Qin et al., 2021), mais très peu étudient l'implication scolaire spécifiquement en lien avec la dépression, la délinquance et la violence relationnelle.

Cette thèse présente néanmoins certaines limites qui invitent à émettre des conclusions prudentes à la lumière de nos résultats. D'abord, nos études sont, à notre connaissance, les seules qui ciblent des adolescents d'écoles défavorisées et qui se sont penchées sur les difficultés intériorisées et extériorisées en association avec l'implication scolaire parentale, l'estime de soi et l'engagement scolaire comportemental. Afin de confirmer les résultats obtenus et de les généraliser, ces résultats devront donc être reproduits. D'autres limites sont à noter en ce qui concerne certaines mesures utilisées dans le projet. D'abord, les adolescents ont répondu à des questionnaires autorapportés. Ce type de mesure peut entraîner des biais, dont celui de désirabilité sociale. En effet, ce type de questionnaire peut mener à des réponses exagérées et les répondants peuvent parfois être gênés de révéler certaines informations, ce qui peut faire en sorte que les résultats ne soient pas justes. Ensuite, les difficultés intériorisées et extériorisées ont été mesurées uniquement par trois dimensions, soit la dépression, la délinquance et la violence relationnelle. Bien que ces dimensions soient pertinentes, car elles peuvent avoir de lourdes conséquences sur le fonctionnement des jeunes (Chesta et al., 2022; Herrenkohl et al., 2022; Kang, 2019; McLaughlin et King, 2015), cette dimension rend impossible la généralisation des résultats à toutes les difficultés intériorisées et extériorisées, compte tenu des nombreuses difficultés inhérentes à chacune des catégories. Finalement, l'analyse statistique utilisée dans la première étude, soit le modèle autorégressif à décalage croisé ne fait pas l'unanimité. En effet, ce modèle ne permet pas de départager les processus intra et inter-individuels (Berry et Willoughby, 2017). Ainsi, en ne permettant pas de distinguer les relations qui soient spécifiques au contexte (donc observables à un point dans le temps) des changements stables (donc sur la portion de variance des construits

qui s'apparente à la notion de trait), les estimations longitudinales et transactionnelles documentées sont potentiellement surestimées (Hamaker et al., 2015).

## CONCLUSION

En somme, bien que nous en reconnaissons les limites, cette thèse met en lumière des résultats novateurs et importants qui nous permettent d'approfondir notre compréhension du développement d'adolescents de milieux défavorisés. Entre autres, notre étude dégage la contribution clé de certaines difficultés intériorisées et extériorisées au milieu du parcours des adolescents du secondaire. Les comportements délinquants, la violence relationnelle et encore davantage les symptômes dépressifs semblent être au cœur des processus menant à l'adaptation ou à l'inadaptation des adolescents et jouent un rôle central au cœur de l'adolescence. Comme conséquences de difficultés individuelles (c.-à-d., faible estime de soi ou faible niveau d'engagement scolaire comportemental) et familiales (c.-à-d., faible implication scolaire parentale), ces comportements ont un rôle à jouer dans le développement des difficultés intériorisées et extériorisées des adolescents de milieux défavorisés, tout comme dans le développement de leur estime de soi et de leur engagement scolaire. Comprendre ces processus transactionnels s'imposait donc pour assurer des évaluations plus justes et précises de la part des professionnels, en plus de favoriser l'identification des meilleures pratiques préventives à utiliser chez le personnel scolaire, les parents, et les adolescents. De plus, cela souligne la nécessité d'effectuer des évaluations fréquentes de la santé mentale des jeunes, pour assurer d'offrir le soutien clinique approprié. Par ailleurs, notre projet met en lumière les nombreux mouvements développementaux qui ont cours à l'adolescence et soulignent l'importance de considérer non seulement l'adolescent et ses caractéristiques, mais également le contexte dynamique dans lequel il évolue. Finalement, nous souhaitons que les conclusions de cette thèse permettent aux intervenants de mieux comprendre les processus développementaux qui mènent à l'inadaptation et leur permettront d'agir conséquemment.

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