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We aim to answer two key questions:

How does the mental health status of teenagers from immigrant families compare with that of non-immigrant families?

How do different parenting styles affect teenagers' mental health, and are there notable differences between immigrant and non-immigrant families?

Who We Are.

We are a group of high school students volunteering as a research team with Leading Tomorrow, a non-profit organization dedicated to supporting the growth and development of young people.

We believe that understanding teenagers is essential to supporting their growth, and that rigorous, thoughtful research is key to gaining meaningful insights into their lives.

Teenagers often find it difficult to open up to adult researchers, which can limit the depth and authenticity of the insights gathered. As peers, we are better positioned to build trust and gain more honest insights into their thoughts and experiences.

What We Do.

We conduct sociological and psychological research on the challenges and opportunities related to adolescent growth. Our youth volunteer researchers engage in research design and fieldwork, including interviews with peers to understand their lived experiences and with parents to learn about their parenting styles.

Our goal is to provide objective and accessible analysis representing the voices of both adolescents and parents. Ultimately, we strive to offer evidence-based recommendations grounded in our findings, driven by a shared commitment to youth development, not just academic inquiry.

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Executive Summary

Canada is one of the largest supporters of multiculturalism and immigration hotspots, as in 2021, immigrants comprised about 23% of the Canadian population (Government of Canada, 2023). Colloquially, the country is often described as a cultural mosaic, reflecting the diversity of backgrounds and experiences that immigrants bring with them.

Drawing on data from 343 adolescent–parent pairs, this study reveals that mental health challenges are prevalent among teenagers. While overall mental health scores for immigrant and non-immigrant teens are similar, immigrant youth in the high-stress group experience significantly more distress, likely due to acculturative stress, language barriers, and perceived

discrimination. On the other hand, immigrant teens in low-stress environments demonstrate stronger emotional resilience, possibly owing to protective cultural values such as familial cohesion and collectivism.

Academic pressure emerges as the dominant stressor for all teens, with immigrant adolescents reporting particularly high concern over academic performance and family safety. Gender and family structure further shape mental health outcomes — female and single-parent teens exhibit higher stress levels.

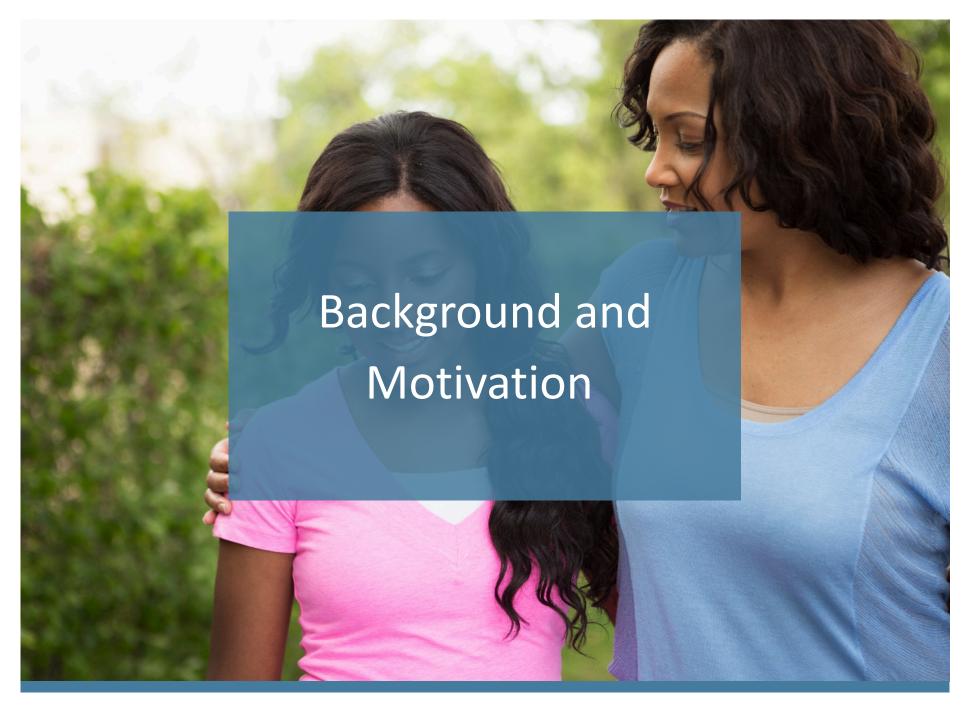
Additionally, introverted and ambiverted teens are significantly more prone to mental health difficulties, indicating the importance of

considering personality traits in mental health interventions.

Parenting style plays a clear role in shaping these outcomes.

Authoritative parenting — marked by warmth, clear expectations, and open communication — is associated with more favourable adolescent mental health. In contrast, authoritarian and permissive styles correlate with higher stress and poorer emotional well-being.

Together, these findings highlight the importance of tailored mental health policies and parenting programs that acknowledge cultural contexts, immigrationrelated stressors, and diverse family dynamics.



Background and Motivation

Why focus on teen mental health?

Adolescence is a critical transitional phase marked by profound biological, neurological, and psychosocial changes. This stage is characterized by an intense desire for independence, an inner search for self-identity, and a heightened vulnerability to mental health challenges. Adolescents begin to experiment with social roles, seeking novelty and testing boundaries, which can lead to both personal growth and the emergence of psychological difficulties, including anxiety, depression, and even suicidal tendencies. As this period is crucial in shaping future adult behaviours, positive mental health during adolescence is essential for a smooth transition into adulthood.

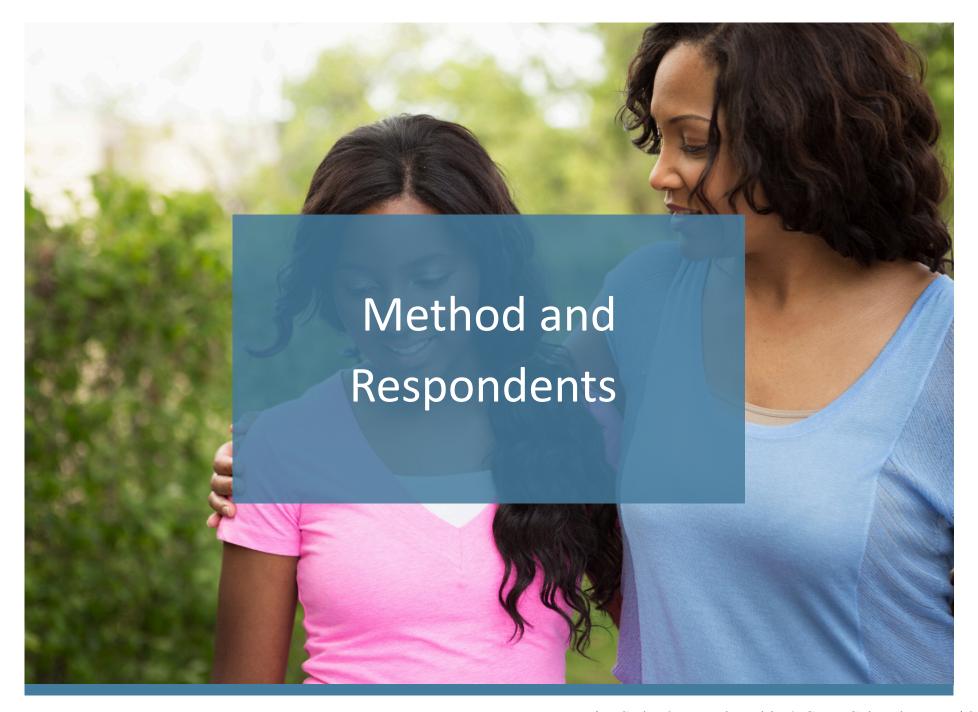
facilitating the development of skills to manage life's challenges.

How might parenting influence Canadian families

Parenting styles, defined by dimensions of responsiveness and control, have been widely recognized as significant determinants of adolescent mental health (Baumrind, 1991). Authoritative parenting, characterized by warmth, responsiveness, and appropriate autonomy granting, has consistently been associated with positive psychological outcomes in adolescents, including higher selfesteem and lower incidences of anxiety and depression. Conversely, authoritarian and permissive parenting styles are marked by excessive control or

lack of guidance and supervision, respectively, are frequently linked to negative mental health outcomes such as elevated stress, anxiety, and lower psychosocial functioning.

Despite the robust literature on parenting styles and adolescent outcomes globally, there remains a notable research gap in the Canadian context concerning how parenting styles might differentially affect adolescents' mental health across immigrant and non-immigrant families. Given Canada's substantial immigrant population and the increasing diversity within urban centers such as the Greater Toronto Area (GTA), it is critical to examine these dynamics empirically.



Method and Respondents

What analysis methods were employed?

This study employed a quantitative, cross-sectional survey design to investigate the mental health outcomes of adolescents in immigrant and non-immigrant families, with the influence of different parenting styles.

How was he data on adolescents and their families collected?

A total of 343 adolescent–parent pairs were surveyed in the Greater Toronto Area (GTA). The research targets were pair-based; that is, one valid sample consisted of one adolescent and one of their primary caregivers. Eligible adolescents were between 12 and 18 years of age, and the participating parent

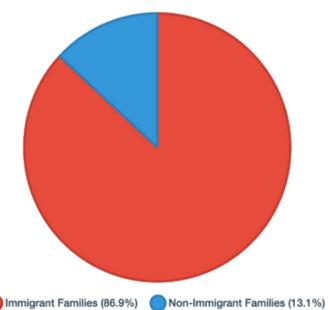
had to be the parent or guardian primarily responsible for the adolescent's daily care. Adolescents were interviewed in person, while parents completed an online survey via a provided link. Informed consent was obtained from both adolescents and their caregivers before participation. Interviews with adolescents were conducted in English, and the online survey for parents was available in English and Simplified Chinese to accommodate linguistic diversity. Anonymity and confidentiality were strictly

The average age of adolescents is 15.3, with a standard deviation of 1.2. The percentage of immigrant families is 86.9%. The definition of 'immigrant family' is that at least

maintained.

one of the parents was born outside Canada. The remaining 13.1% were identified as nonimmigrant families with Canadianborn parents.

Distribution by Immigration Status



Immigrant Families (86.9%) Non-Immigrant Families (1)

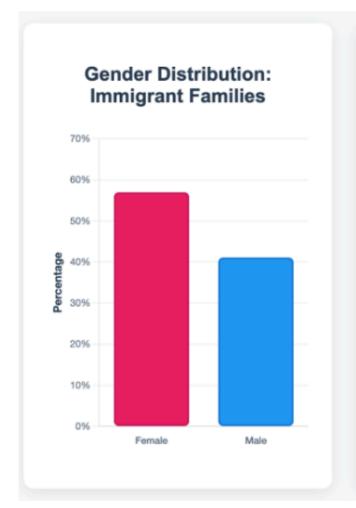
Figure 1.1 Distribution by

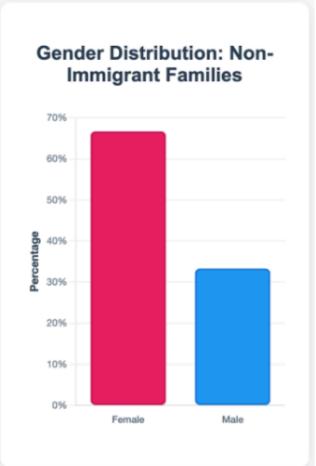
Immigration Status

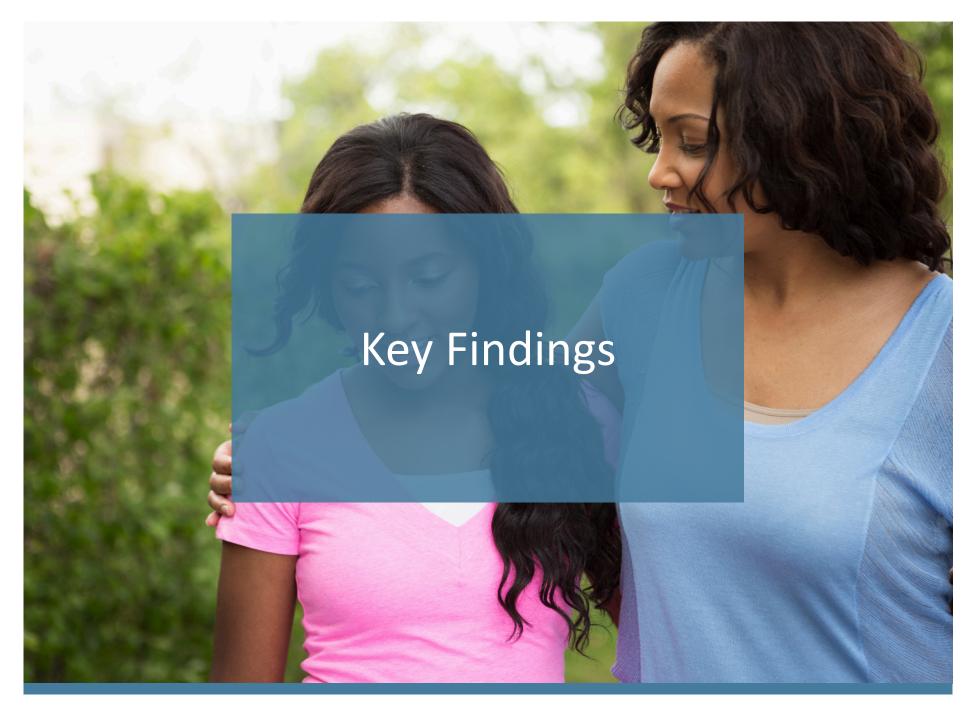
Gender **Distribution in Different Families**

In the immigrant group, 57% were female, and 41.1% were male. In the nonimmigrant group, 66.7% were female, and 33.3% were male.

Figure 1.2 Gender distribution by Immigration Status







1. Mental Health Status

How stressed are teens?

We adopted the measurement of teenagers' mental health using a 25-item scale from Chorpita and Spence (2005). The measurement captures emotional, cognitive, and somatic symptoms, with a 4-point Likert scale ranging from 1 (Never) to 4 (Always). The overall mean mental health score for immigrant teenagers is 1.70, while for nonimmigrant teenagers, it is 1.68. These scores, measured on a scale where higher values indicate more severe concerns, suggest a slightly greater level of distress among immigrant teenagers. However, the difference is not statistically significant, indicating that both groups experience similar levels of mental health challenges.

We further looked into what causes mental health stresses in general and for immigrant teens specifically:

- Academic Stress is Prevalent:
 A significant majority (68%) of teenagers experience stress related to academics, with a high average concern level (2.57 out of 4), indicating that school-related pressure is a major issue.
- Family Issues Are Also a
 Common Concern: Over half
 (54%) of teenagers are
 concerned about family-related
 issues, though the average
 concern level (2.21) is
 somewhat lower than that for
 academics.
- Immigrant Teenagers Worry
 More About Performance:
 Immigrant teenagers report

- greater concern about poor academic performance (mean score of 2.73) compared to their non-immigrant peers (2.38), suggesting heightened academic pressure or expectations.
- Greater Concern About Family Safety Among Immigrant Teens: Immigrant teenagers also express more worry about family safety (mean score of 1.76) than non-immigrant teens (1.56), possibly reflecting experiences of instability or insecurity linked to migration or adaptation challenges.

1. Mental Health Status

We also look into the distributions of the mental health score in immigrant and non-immigrant groups, dividing into high, medium, and low stress segments, respectively. Among teenagers with high mental health stresses, immigrant teenagers exhibit significantly higher distress than their non-immigrant counterparts (mean scores of 2.27 vs. 1.97, pvalue < 0.05). This could be caused by a combination of acculturative stress, language barriers, and perceived discrimination that immigrant youth often face, which can exacerbate psychological distress in already high-stress situations (Berry, 2006; Kim et al., 2014).

Conversely, immigrant teenagers in the low mental health concern

group report lower scores than non-immigrant teenagers (mean scores of 1.35 vs. 1.46). This may suggest that when stressors are minimal, immigrant youth may benefit from strong family cohesion, collectivist cultural values, or community support, which serve as protective factors for mental health. Immigrant families often emphasize close interdependence, respect for elders, and mutual obligation, which can foster emotional resilience and a sense of belonging in less stressful environments (Fuligni, 2001; Smokowski et al., 2009).

The following are more comparative results from different demographic groups:

1. Gender

Female teenagers, both immigrant and non-immigrant, report higher levels of mental health concerns than their male counterparts:

- Immigrant females: Mean anxiety score 1.82, compared to 1.62 for immigrant males.
- Non-immigrant females: Mean anxiety score 1.78, compared to 1.56 for non-immigrant males.
- 2. Family Structure
 Teenagers from single-parent
 families report slightly higher
 mental health concerns:
 - Immigrant teenagers from single-parent families: Mean anxiety score 1.85, compared to 1.65 for those from two-parent families.

1. Mental Health Status

- Non-immigrant teenagers from single-parent families: Mean anxiety score 1.72, compared to 1.55 for those from two-parent families.
- 3. Personality Type
 Teenagers who are introverted and ambiverted (if they gain energy from socializing) are more significantly associated with higher stress levels.
 - The introverted cluster has a p-value smaller than 0.001, being the highest value among all other factors, representing an extremely strong correlation (6.26e-07) between stress and introversion.
 - The ambiverted cluster has a p-value smaller than 0.001, with a strong correlation (0.000352) for stress and ambiversion that is not as high as introversion.

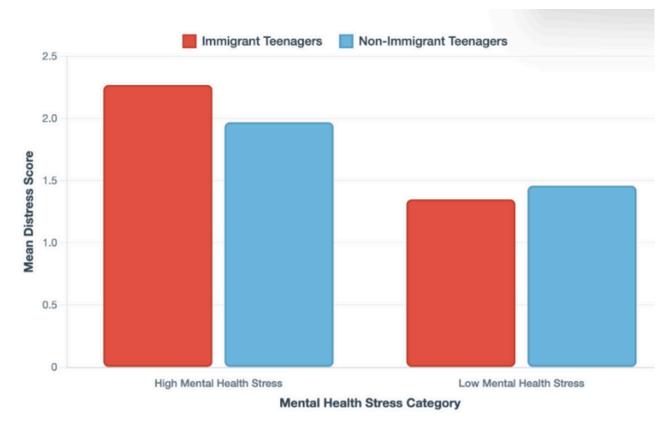


Figure 1.3 Mental Health Stress Categories

2. Parenting Style

What types of parenting styles exist?

Parenting styles can be broadly categorized into three types based on levels of responsiveness and demandingness (Baumrind, 1991). Authoritative parenting, characterized by a balance of high responsiveness and clear expectations coupled with open communication, tends to foster positive outcomes in children, such as higher self-esteem and wellbeing. In contrast, authoritarian parenting, which emphasizes strict rules with low warmth, has been associated with increased anxiety and lower self-esteem in children. Permissive parenting, while high in warmth, lacks firm guidance and may impede the development of self-discipline and responsibility. Research suggests that

authoritative parenting leads to more favourable child development compared to both authoritarian (strict control, low warmth) and permissive (high warmth, low control) styles, which have been linked to less positive outcomes, including potential issues with anxiety, dependence, selfregulation, and risk-taking behaviours. It is important to differentiate permissive parenting from neglectful parenting, which is characterized by a lack of both responsiveness and demandingness.

How are they distributed across categories

Parenting styles in this study were assessed through the application of the Parental Authority

Questionnaire–Revised (PAQ-R), a

developed by Reitman and colleagues in 2002. To mitigate potential self-reporting biases, specifically the inclination of individuals to present their parenting as moderately controlling, a k-means clustering analysis was employed. This statistical method facilitated the identification of distinct parenting style groups based on the collected data, independent of participants' conscious reporting. The analysis yielded three primary parenting style clusters: authoritative, authoritarian, and permissive. The distribution of the caregiver sample across these clusters was as follows: 41.1% were categorized as exhibiting an authoritative parenting style, 37.8% as authoritarian, and 24.2% as permissive.

2. Parenting Style

Further analysis explored potential variations in parenting styles between immigrant and nonimmigrant caregiver groups. The findings revealed statistically significant differences in the prevalence of permissive and authoritarian parenting styles across these groups. Specifically, caregivers within the immigrant group demonstrated significantly higher scores on measures indicative of a permissive parenting style compared to their nonimmigrant counterparts. Conversely, the immigrant caregiver group exhibited significantly lower scores on measures associated with an authoritarian parenting style relative to the non-immigrant group. These findings suggest potential cultural influences or

acculturative processes impacting parenting approaches within the studied population. The distribution of authoritative parenting styles, however, did not show statistically significant differences between the immigrant and non-immigrant groups.



3. Impact of Parenting on Teenager Mental Health

Results from All Families

Our results showed that parenting style really does matter for teen mental health:

- Teens with authoritarian or permissive parents reported more stress.
- Teens with authoritative
 parents (those with balanced
 rules and support) reported
 slightly less stress, but the
 difference was not large
 enough to confirm with
 confidence in the full sample.

These results support the idea that both **too much control** and **too little structure** at home can make it harder for teens to feel emotionally healthy.

What Happens in Immigrant Families

We found that parenting style had

an even stronger impact on teens from **immigrant families**:

- Strict (authoritarian) parenting
 was linked to higher stress,
 possibly because immigrant
 teens face additional
 challenges like adapting to a
 new culture and navigating
 differences with their parents.
- Permissive parenting also led to higher stress, suggesting that when parents don't set clear rules, teens may feel lost or unsupported.
- Supportive (authoritative)
 parenting seemed helpful, but again, the effect wasn't strong enough to be statistically confirmed.
- Larger families tended to report lower stress, possibly due to more built-in support from siblings or extended relatives.

What About Non-Immigrant Families

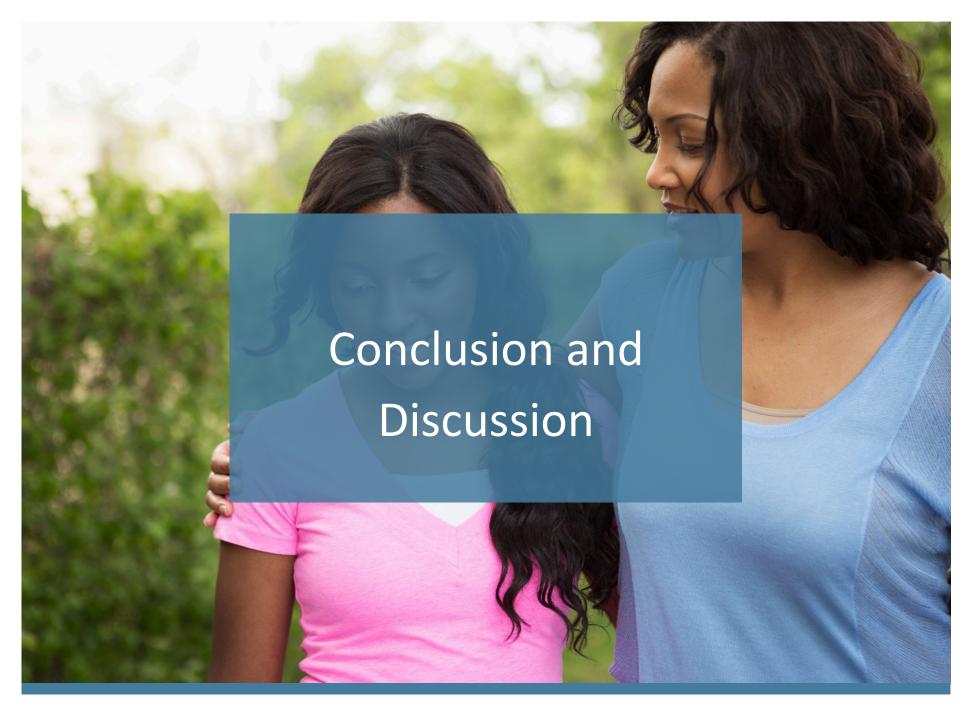
In **non-immigrant families**, the patterns were a bit different:

- Authoritarian parenting still had a negative impact and was linked to higher stress in teens.
- But permissive parenting didn't have a strong effect — teens seemed less affected by a lack of structure.
- Interestingly, marital status
 (whether parents were married or not) played a role: stable family structures were linked to better mental health for teens.
- As in other groups,
 authoritative parenting didn't show a strong or clear effect in this group either.

3. Impact of Parenting on Teenager Mental Health

What This Means

Our study shows that parenting style plays a key role in how teens feel about their lives. While teens in all groups were affected by strict or overly lenient parenting, the effects were stronger in immigrant families, where added cultural pressures may make parenting approaches even more important. Supportive, balanced parenting (authoritative) seems helpful, but more research is needed to fully understand its effects.



Conclusion and Discussions

This study sheds light on the complex and nuanced mental health experiences of adolescents in the Greater Toronto Area, particularly those from immigrant families. Through peer-led research involving 343 adolescent–parent pairs, we have uncovered important patterns regarding stress levels, sources of anxiety, and the influence of parenting styles on youth well-being.

One of the most significant findings is the polarization in mental health outcomes among immigrant youth. While immigrant adolescents are overrepresented in both the high-stress and low-stress groups, non-immigrant adolescents are more likely to fall into the middle range. This suggests that the immigrant experience is far from

homogeneous — some youth struggle deeply, while others are exceptionally resilient. These divergent outcomes likely reflect differences in family dynamics, cultural adaptation, community support, and personal coping resources.

Academic stress emerged as the most common source of anxiety for all adolescents, but immigrant youth reported significantly higher concern levels around academic performance and family safety. These results align with existing literature on acculturative stress. which includes the pressure to succeed academically as a way to honour parental sacrifices, the challenge of balancing multiple cultural identities, and heightened sensitivity to family stability (Berry, 2006; Kim et al., 2014).

Parenting style was also a key predictor of adolescent mental health. Our findings support previous research suggesting that authoritative parenting — marked by warmth, responsiveness, and balanced control — is linked to more favourable mental health outcomes. In contrast, both authoritarian (strict and controlling) and permissive (lacking structure) parenting styles were associated with higher stress levels, especially within immigrant families. This pattern underscores the importance of adapting parenting approaches to the emotional and developmental needs of adolescents in the context of migration and cultural change.

Conclusion and Discussions

These findings carry several implications

- 1. Mental Health Support Must Be Culturally Sensitive and Differentiated. Programs and interventions cannot treat immigrant youth as a monolithic group. Tailored support systems that recognize both the risk factors (e.g., acculturative stress, language barriers, intergenerational conflict) and protective factors (e.g., strong family ties, community networks) are essential.
- 2. Parent Education Should
 Emphasize Balanced
 Approaches. Many immigrant parents may rely on parenting styles rooted in their home cultures that are either highly controlling or overly permissive due to work pressures or

- adjustment challenges.
 Community workshops or school-based programs can provide guidance on the benefits of authoritative parenting in the Canadian context.
- 3. Youth Perspectives Are Crucial.
 This peer-led research approach allowed for more honest and nuanced insights from adolescents, who may otherwise feel uncomfortable sharing openly with adult researchers.
 Engaging youth as collaborators, not just subjects, should be a model for future studies and policy design.
- 4. More Research Is Needed. While this study offers valuable initial findings, future work could explore longitudinal trends, incorporate qualitative narratives, and examine how

factors such as ethnicity, gender identity, and socioeconomic status intersect with mental health outcomes among youth.

In conclusion, adolescence is a transformative yet vulnerable time, and its challenges are compounded for many youth navigating life as children of immigrants. By combining rigorous methodology with youth-led inquiry, this research contributes to a deeper understanding and offers actionable insights for educators, policymakers, parents, and youth advocates. We hope that this work helps shape more empathetic, evidence-based strategies to support all adolescents in thriving, regardless of where they or their families come from.

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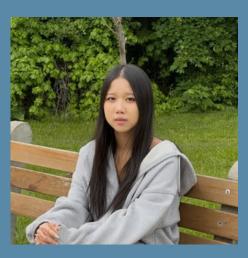
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Appendix: Ordinary Linear Regression Results

Ordinary Linear Regression Result (Mental Health Score Dependent Variable)

Coefficients	Overall		Immigrant		Non-immigrant	
	в	р	в	р	в	р
Intercept	0.756	0.045*	1.135	0.016*	-0.191	0.816
Age	0.047	0.001**	0.049	0.004**	0.036	0.325
Gender						
Teen Gender (Male)	-0.137	0.0002***	-0.147	0.0005***	-0.342	0.0005***
Teen Gender (Unanswered)	-0.181	0.260	-0.151	0.379		
Parent Gender (Male)	-0.034	0.398	-0.006	0.900	-0.129	0.383
Parent Gender (Unanswered)	0.087	0.644	0.354	0.303	-0.216	0.293
School Type (Public)	0.091	0.015*	0.121	0.005**	0.022	0.813
Family Size	-0.033	0.127	-0.051	0.048*	0.041	0.366
Parenting Style						
Authoritarian	0.083	0.007**	0.089	0.015*	0.133	0.046*
Authoritative	-0.058	0.212	-0.089	0.117	0.062	0.475
Permissive	0.100	0.001*	0.105	0.026**	0.088	0.331
Personality Cluster						
Ambiverted	-0.220	0.000***				
Introverted	0.027	0.546				
Immigrant Status	-0.077	0.190				
Marriage						
Married	0.153	0.271	-0.245	0.319	0.451	0.032*
Others	0.086	0.544	-0.326	0.187	0.790	0.0005***

N = 343

Note. Significance codes: *** p < 0.001, ** p < 0.01, * p < 0.05.



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