Parenting Styles and Adolescent Mental Health: A Comparative Analysis of Immigrant and Non-Immigrant Families

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Abstract

Adolescent mental health has increasingly been recognized as a critical public health concern with significant implications for long-term individual development. Immigrant adolescents, who often face the challenges of cultural adaptation, may be more vulnerable to mental health difficulties. However, some of the literature argues for the hypothesis of an "immigrant paradox" in which immigrant families tend to have closer familial bonds and higher levels of mutual support, which may contribute to better mental health outcomes than their native-born peers do. In this quantitative, cross-sectional study, we conducted a cluster analysis of adolescents on the basis of their levels of psychological stress—categorized as high, medium, or low. The results revealed that immigrant adolescents were significantly overrepresented in both the high- and low-stress groups compared with nonimmigrant adolescents, thus providing empirical support for both the acculturative stress hypothesis and the "immigrant paradox". Furthermore, whereas previous research on parenting styles has relied primarily on data collected solely from parents. our study collected paired data on both parenting styles and adolescents' mental health outcomes. The analysis indicates that parenting styles play a crucial role in shaping adolescents' mental health. Specifically, authoritarian and permissive parenting were associated with higher stress levels, with this association being particularly pronounced among immigrant families.

Introduction

Adolescent mental health has increasingly been recognized as a critical public health issue in Canada, with substantial implications for individuals' long-term psychological, social, and economic outcomes [1]. Recent statistics indicate that approximately 20% of Canadian adolescents experience significant mental health challenges, including anxiety, depression, and elevated stress levels, underscoring the importance of addressing these concerns within a diverse population context [2].

Within this broader context, the mental health status of adolescents from immigrant families presents complex and seemingly contradictory findings. On the one hand, some studies suggest that immigrant adolescents face heightened vulnerabilities due to unique acculturative stressors, discrimination, and the challenges of navigating dual cultural identities, potentially exacerbating mental health risks compared with their nonimmigrant peers [3,4]. On the other hand, an increasing body of evidence supports the phenomenon known as the "immigrant paradox," which indicates that despite encountering numerous stressors, children from immigrant families often exhibit better or similar mental health outcomes relative to native-born youth [5,6]. This paradox has been attributed to protective cultural factors such as strong family cohesion, community support, parental monitoring, and resilient cultural identities [7,8].

Parenting styles, defined by dimensions of responsiveness and control, have been widely recognized as significant determinants of adolescent mental health [9,10]. Authoritative parenting, characterized by warmth, responsiveness, and appropriate autonomy granting, has consistently been associated with positive psychological outcomes in adolescents, including higher self-esteem and lower incidences of anxiety and depression [11,12]. Conversely, authoritarian and permissive parenting styles, which are characterized 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 [13].

Despite the robust global literature on parenting styles and adolescent outcomes, there remains a notable research gap in the Canadian context regarding how parenting styles may differentially affect adolescent mental health across immigrant and nonimmigrant 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. Whereas previous research on parenting styles has relied primarily on data collected solely from parents, this study addresses the gap by using paired data from both parents and adolescents, allowing for a more nuanced understanding of how parenting practices relate to adolescent mental health. Accordingly, this study investigates the following research questions: (1) How does adolescent mental health differ between immigrant and nonimmigrant families in the GTA? (2) How do different parenting styles affect adolescent mental health outcomes?

Our findings first highlight the polarized distribution of mental health outcomes among immigrant adolescents. Cluster analysis revealed three distinct subgroups—high, medium, and low mental stress—with immigrant adolescents disproportionately represented in both the high-

and low-stress groups compared with their nonimmigrant peers. This pattern supports both the acculturative stress hypothesis and the "immigrant paradox," emphasizing the internal heterogeneity within the immigrant youth population. Building on these insights, the analysis of parenting styles revealed their significant influence on adolescent mental health. Authoritarian parenting was consistently associated with greater stress across both immigrant and nonimmigrant families, whereas permissive parenting was significantly linked to increased stress only among immigrant adolescents. In contrast, authoritative parenting demonstrated a negative, although statistically nonsignificant, association with stress, indicating a potential but inconclusive protective effect.

The results of this study highlight the critical need for mental health interventions that clearly reflect the complex realities of diverse immigrant youth populations. Rather than viewing immigrant youth as a uniform group, the findings contrast—with some adolescents experiencing heightened distress due to acculturative challenges, whereas others appearing more resilient and benefitting from strong family or community support. This diversity demands that mental health policies and practices reflect these varied lived experiences. Additionally, the differing effects of parenting styles across cultural contexts highlight that parenting behaviors cannot be evaluated in isolation from the social norms that adolescents are familiar with. Efforts to promote adolescent well-being should therefore focus on considering culturally sensitive family dynamics and ensuring that support systems are tailored to both immigrant and nonimmigrant populations.

Theoretical Framework

Adolescent Mental Health in Immigrant Contexts

Adolescent immigrants frequently experience stress, anxiety, and depression resulting from unique psychosocial challenges such as acculturation, discrimination, and identity struggles [3,14,15]. Acculturative stress, in particular, significantly contributes to mental health disparities among immigrant youth [15,16]. Personality traits, such as extraversion, introversion, and ambiversion, have also been recognized as influential factors in adolescent mental health, potentially moderating or mediating stress responses and overall psychological outcomes [17,18]. Despite these challenges, empirical findings present an intriguing phenomenon known as the "immigrant paradox". Immigrant youth, on average, demonstrate mental health outcomes equal to or superior to those of their nonimmigrant counterparts [5,6]. Factors such as strong familial support networks, cultural preservation, and parental involvement appear protective, potentially offsetting the negative impacts of stressors [19,8].

Parenting Styles and Youth Outcomes

Parenting styles, as conceptualized by Baumrind [20,9], are commonly categorized into four typologies: authoritative, authoritarian, permissive, and neglectful. Authoritative parenting, characterized by warmth, clear communication, and balanced autonomy and control, is associated with optimal adolescent development, including improved mental health, higher academic achievement, and enhanced social competence [11,21]. Conversely, authoritarian parenting---marked by high demands but low responsiveness---has been linked to increased anxiety, depression, and poorer psychological adjustment among adolescents [13]. Permissive

parenting, featuring high responsiveness but limited behavioral control, can result in adolescents struggling with self-regulation, experiencing greater stress, and encountering greater risk for behavioral and emotional difficulties [9,12]. Neglectful parenting, defined by minimal responsiveness and control, is strongly correlated with negative outcomes such as low self-esteem, depression, and high-risk behaviors [10].

Intersection of parenting and immigration

Cultural norms significantly shape parenting behaviors within immigrant families, influencing approaches to discipline, autonomy, and emotional support [22,23]. Cultural expectations and traditional parenting practices often interact with the pressures of assimilation, generating acculturative stress within families and contributing to intergenerational conflicts [3,24]. These intergenerational gaps, particularly pronounced in immigrant contexts, may heighten familial tensions and exacerbate mental health issues among adolescents [25,26]. Understanding how parenting styles interact with cultural and acculturative contexts is crucial for promoting mental well-being and resilience among immigrant youth.

Methods

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

Sample

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 the adolescents and their caregivers prior to participation. The interviews with adolescents were conducted in English, and the online survey for parents was available in both English and simplified Chinese to accommodate linguistic diversity. Anonymity and confidentiality were strictly maintained.

The average age of the adolescents was 15.3 years, and the standard deviation was 1.2 years. The percentage of immigrant families is 86.9%. The definition of an 'immigrant family' is that at least one of the parents was born outside Canada. The remaining 13.1% identified as nonimmigrant families with Canadian-born parents.

Measures

Mental health

This was assessed via a 25-item scale adapted from Chorpita and Spence [27], which captures emotional, cognitive, and somatic symptoms. Responses were recorded via a 4-point Likert scale ranging from 1 (never) to 4 (always). The scale has demonstrated strong internal consistency and construct validity in previous research, making it a reliable tool for assessing anxiety-related symptoms in youth populations. Its multidimensional structure allows for a comprehensive understanding of the different facets of anxiety, including physiological arousal, worry, and mood disturbances.

Parenting style

This variable was measured via the Parental Authority Questionnaire--Revised [28], a 30-item Likert-scale instrument that assesses parenting style on the basis of levels of responsiveness and control. The questionnaire includes three 10-item subscales corresponding to authoritative, authoritarian, and permissive styles. On the basis of Baumrind's typology, the resulting classifications reflect distinct patterns of parental behavior and decision-making.

Personality type

This variable measured the general personality type of the adolescents via the Ten-Item Personality Measure (TIPI) developed by Gosling, Rentfrow, and Potter [29]. The TIPI was selected for its brevity and clarity, ensuring that the items were easily understood by respondents. This variable was included as a control to account for the possibility that differences in personality may influence adolescents' mental health responses to parenting styles [30].

Additional control variables included immigration status, gender, school type (public vs private school), family size, parents' profile (marital status, education, occupation) and household income.

Analysis and Results

Table 1 shows the key demographic characteristics of the sample. A majority of the teen participants identified as female, accounting for 56.3% of the sample, whereas 41.7% identified as male. In terms of the main caregiver (parent)'s gender, 73.2% were identified as female and 25.9% as male, with a very small percentage opting not to disclose their gender. Most teenagers in the study attended public schools (66.5%), with 32.7% attending private schools.

The distribution of personality types was relatively balanced, with 37.3% classified as extraverted, 33.8% as ambiverted, and 28.9% as introverted. The immigration status data indicated that a significant majority of the participants (86.9%) came from immigrant families, whereas 13.1% were from nonimmigrant backgrounds. The marital status of the parents revealed that 65% were married, and 33.2% were categorized as "divorced" or "separated". This summary reflects a sample that is predominantly female, from immigrant households, and largely enrolled in public schools, with varied personality traits and a majority of married parents.

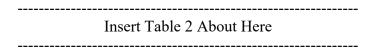
The composition of the study sample does not reflect the actual distribution of the overall adolescent population, as we employed a convenience sampling method. The proportions

presented only describe the characteristics within this specific sample and should not be used to infer population-level trends. The primary focus of the study is not on demographic representativeness but rather on examining the independent paired relationships between parents and children. This matched-pair design allows for a more in-depth analysis of within-family dynamics, such as the associations between parenting styles and adolescent mental health.

Insert Table 1 About Here

Table 2 shows the descriptive statistics table for numerical variables, including the mean (M), standard deviation (SD), and correlations among key variables related to adolescents' mental health and the family context. The average mental health score is 1.659 (SD = 0.357) on a scale where higher values indicate more frequent mental health issues, suggesting a generally low stress level among participants. The mean age of the adolescents was 15.25 years, and the average family size was approximately 4 members.

The correlation results show that age has a modest positive correlation with mental health concerns (r = 0.186), suggesting that older teens may experience slightly more mental health symptoms. Authoritarian parenting also has a weak positive correlation with mental health issues (r = 0.110), whereas authoritative and permissive parenting styles show slight negative correlations. However, these relationships are relatively weak.



The mental health score did not significantly differ between the immigrant and nonimmigrant groups when it was analyzed at the group mean level. However, to explore potential underlying heterogeneity and better capture within-group variation, we adopted a k-means clustering approach to segment participants into three mental health clusters: low, medium, and high stress. This method allowed us to move beyond average group differences and identify subgroups with distinct mental health profiles.

For the high stress cluster, there was a marginally significant difference between the immigrant (19.9%) and nonimmigrant groups (8.9%), with $X^2 = 3.16$, p = 0.075. For the medium stress cluster, there was no significant difference between the immigrant (47.6%) and nonimmigrant groups (44.4%), with $X^2 = 0.16$, p = 0.690. For the low stress cluster, there was a marginally significant difference between the immigrant (32.4%) and nonimmigrant groups (46.7%), with $X^2 = 3.51$, P = 0.061.

The clustering analysis revealed important subgroup differences that align with the dual narratives in the literature. In the high-stress cluster, immigrant adolescents reported higher levels of mental health symptoms than their nonimmigrant peers did. This finding resonates with research emphasizing the increased psychological burden immigrant youth may experience due to acculturative stress, identity conflicts, and social discrimination [3,4]. These challenges may

disproportionately affect a subset of immigrant youth, pushing them into the highest stress category.

Conversely, in the low-stress cluster, immigrant adolescents reported even lower distress scores than their nonimmigrant counterparts did. This finding supports the "immigrant paradox" [5,6], wherein immigrant youth---despite being exposed to adversity—demonstrate comparable or better mental health outcomes, potentially because of culturally rooted protective mechanisms such as close-knit family relationships, a collective identity, and community support [7,8].

Insert Table 3 About Here

Taken together, these findings suggest that immigrant adolescents are not a homogenous group with uniform vulnerability or resilience. Rather, their mental health experiences may be polarized, with some thriving under supportive cultural conditions and others struggling in the face of compounding stressors. Traditional group comparisons may fail to capture this internal diversity, whereas segmentation methods such as clustering offer valuable insight into the coexistence of risk and resilience within the immigrant experience. These insights underscore the importance of tailored mental health interventions that account for both individual and cultural contexts rather than treating immigrant youth as a monolithic population.

To investigate how parenting styles influence adolescent mental health, we conducted a series of linear regression models using the average mental health score as the dependent variable. The overall model included all participants and controlled for demographic variables such as age, gender (of both teenagers and parents), school type, family size, marital status, and immigrant status. Parenting styles were operationalized using three established categories: authoritarian, authoritative, and permissive.

Insert Table 4 About Here

The results from the overall regression model (see Table 4) suggest that parenting styles are significantly associated with adolescents' reported mental health. Specifically, both authoritarian ($\beta = 0.083$, p = 0.007) and permissive parenting ($\beta = 0.100$, p = 0.011) were associated with higher levels of mental stress. These findings support the conceptual argument that parenting characterized by either excessive control or a lack of structure can contribute negatively to adolescent emotional well-being. In contrast, authoritative parenting---often regarded as the most adaptive style---was not significantly associated with mental health in the overall model ($\beta = -0.058$, p = 0.212), although the direction of the relationship was negative, suggesting a potential but nonsignificant protective effect.

To further explore potential differences by cultural and familial context, we conducted subgroup regressions for immigrant and nonimmigrant families. Among adolescents from immigrant families, both authoritarian and permissive parenting styles remained significant predictors of

poorer mental health. The effect of authoritarian parenting (β = 0.089, p = 0.015) was slightly stronger than that in the overall model, indicating that strict parental control may exacerbate stress in the context of immigrant-specific challenges such as acculturation and intergenerational tension. Permissive parenting also showed a significant positive association with mental stress (β = 0.105, p = 0.026), suggesting that insufficient parental boundaries may leave adolescents less equipped to navigate the complex cultural expectations they face. Authoritative parenting in the immigrant group had a negative but nonsignificant coefficient (β = -0.089, p = 0.117), which is consistent with the hypothesized protective role of this style, although it is not statistically significant. Age and school type were also significant in this group, whereas family size was inversely associated with stress, possibly reflecting support dynamics in larger households.

In contrast, the nonimmigrant subgroup presented a somewhat different pattern. While authoritarian parenting remained a significant factor (β = 0.133, p = 0.046), its effect size was larger than that in the immigrant sample, possibly reflecting lower cultural tolerance for parental control among nonimmigrant adolescents. However, permissive parenting was not significantly associated with mental health in this group (β = 0.088, p = 0.331), suggesting that the absence of structure may be less harmful in nonimmigrant contexts or, alternatively, that the smaller sample size limits the detection of this effect. Interestingly, marital status emerged as a significant predictor in the nonimmigrant model, with both "married" and "other" household structures associated with better mental health outcomes. This may point to stabilizing influences of family structure in this subgroup or reflect unmeasured confounding factors. Notably, the effect of authoritative parenting was again nonsignificant (β = 0.063, p = 0.475), in contrast with theoretical expectations.

Discussion and Implications

This study reveals two primary discoveries that contribute to the understanding of adolescent mental health within multicultural contexts. First, although the mean levels of mental health did not differ significantly between immigrant and nonimmigrant adolescents, clustering analysis revealed a polarized distribution among immigrant youth. Immigrant adolescents were more likely to appear in both the high-stress and low-stress mental health clusters, suggesting a bifurcated experience in which some benefitted from cultural or familial protective factors, whereas others experienced elevated stress, possibly due to acculturative pressure, identity conflict, or intergenerational tension. This finding highlights the importance of attending to within-group heterogeneity rather than relying solely on average group comparisons, which may obscure important subgroup differences.

The second major finding concerns the differential effects of parenting styles on adolescent mental health across immigrant and nonimmigrant families. In both groups, authoritarian parenting was associated with increased mental health stress, although the effect was more pronounced among nonimmigrant adolescents. This pattern may reflect the lower cultural tolerance for coercive or rigid parenting in contexts where adolescents expect higher levels of autonomy and personal agency. In contrast, permissive parenting was significantly associated with higher stress levels only among immigrant adolescents. The absence of structure in permissive households may be particularly detrimental in immigrant contexts, where adolescents often face complex bicultural demands and may require stronger guidance to navigate these

challenges. While authoritative parenting showed a negative coefficient in both groups, which is consistent with its theorized protective role, it did not reach statistical significance in either model. These results suggest that the psychological impact of parenting is not uniform across cultural contexts; rather, it is mediated by the social meanings, norms, and stressors associated with different family backgrounds.

A secondary pattern observed in the data relates to demographic characteristics. Female adolescents and those attending public schools were more likely to report higher levels of mental stress. Although these findings were not the focus of the study, they point to the potential role of gendered experiences and institutional contexts in shaping adolescent mental health. These variables merit further investigation in future work that examines social support systems, academic pressures, and the school climate.

A noteworthy strength of this study is the use of a paired dataset that includes responses from both adolescents and one of their primary caregivers. This design allows for a richer exploration of parenting effects, as it captures intergenerational dynamics within the same family unit---a methodological feature that is rarely available in population-level research. The linked nature of these data enhances the credibility of inferences drawn about parenting style and its connection to adolescent outcomes.

The findings of this study have several implications for practice and policy. Mental health interventions should be attuned to the divergent trajectories that exist within immigrant youth populations. Programs that aim to strengthen adolescent well-being should account for the variability in how parenting behaviors are interpreted and experienced across cultural contexts. Culturally responsive interventions may benefit from focusing on communication and expectation setting within immigrant families, addressing the risks associated with both overly strict and overly lenient parenting styles. At the same time, practitioners should remain attentive to the psychological needs of nonimmigrant adolescents, who may be particularly sensitive to authoritarian parenting approaches.

Future research should explore mediating mechanisms such as identity conflict, bicultural stress, and family cohesion, ideally using longitudinal designs to assess developmental trajectories over time. The evidence of polarized mental health patterns within the immigrant group suggests that a one-size-fits-all approach to youth mental health is insufficient. Rather, effective support strategies must be differentiated to recognize both vulnerability and resilience within culturally diverse populations. This study contributes to a more nuanced and context-sensitive understanding of how parenting and cultural background interact to shape adolescent mental health outcomes.

Ethics Statement

This research was reviewed and approved by the appropriate institutional and/or national ethical review committee. Informed consent was obtained from both the adolescents and their caregivers prior to participation.

Data availability statement

The datasets generated and analyzed during the current study are not publicly available due to privacy concerns related to the sensitive nature of mental health data from minors but are available from the corresponding author upon reasonable request with appropriate ethical approval.

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Table 1. Demography

Variable	n	%
Adolescent Gender		
Female	193	56.3
Male	143	41.7
Not disclosed	7	2.1
Parent Gender		
Female	251	73.2
Male	89	25.9
Not disclosed	3	0.9
School Type		
Public	228	66.5
Private	112	32.7
Other/Unspecified	3	0.9
Personality Type		
Extraverted	128	37.3
Ambivert	116	33.8
Introverted	99	28.9
Immigration Status		
Immigrant Family	298	86.9
Non-Immigrant family	45	13.1
Parental Marital Status		
Married	223	65
Others	114	33.2
Divorced	6	1.7

Table 2. Descriptive Statistics and Correlation Table of the Quantitative Variables

Variable	Mean	SD	Mental Health Average	Age	Family Size	Authoritarian	Authoritative	Permissive
Mental Health Average	1.659	0.357	1.000	NA	NA	NA	NA	NA
Age	15.251	1.198	0.186	1.000	NA	NA	NA	NA
Family Size	3.986	0.818	-0.059	-0.099	1.000	NA	NA	NA
Authoritarian	2.696	0.588	0.110	0.093	-0.005	1.000	NA	NA
Authoritative	3.861	0.393	-0.050	-0.093	-0.040	-0.066	1.000	NA
Permissive	3.150	0.514	0.065	-0.019	0.005	-0.283	0.301	1.0001

Table 3. Comparison of Stress Level Categories between the Immigrant and Nonimmigrant Groups

Stress Level	Immigrant		Nonimmigrant		Statistical Test	
	n	%	n	%	p value	Sig.
High	59	19.9	4	8.9	0.0753	†
Medium	141	47.5	20	44.4	0.6896	
Low	96	32.4	21	46.7	0.0609	†

Note. † Indicates marginally significant difference (p < 0.10)

†Total Sample: Immigrant n = 296, Nonimmigrant n = 45

Table 4. Ordinary linear regression results

Coefficients	Overall		Immigrant		Nonimmigrant	
	β	р	β	р	β	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	3.61e-07***				
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***

Note. Significance codes: *** p < 0.001, ** p < 0.01, * p < 0.05, and blank cells indicate nonsignificant results ($p \ge 0.1$).