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Perceived Social Isolation as a Relational Pathway From Bullying Victimization to Adolescent Adjustment: A Three-Wave Study of Multicultural Youth in South Korea

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Research Article

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Abstract

Bullying victimization may shape adolescent adjustment by disrupting social connection before later emotional difficulties become evident. Guided by developmental cascade, belongingness, and interpersonal risk perspectives, this study examined perceived social isolation and friend support as relational pathways linking bullying victimization to depressive symptoms and life satisfaction among multicultural adolescents in South Korea. Public-use data were drawn from Waves 4–6 of the second cohort of the Multicultural Adolescents Panel Study (MAPS 2; N = 1,728; 51.7% boys; mean age at Wave 4 = 13.05 years). In weighted three-wave models, Wave 4 victimization predicted lower Wave 5 friend support (β = −.054) and higher Wave 5 perceived social isolation (β = .204). Perceived social isolation predicted greater Wave 6 depressive symptoms (β = .251) and lower life satisfaction (β = −.205), with significant pathway-specific indirect associations for both outcomes. Friend-support indirect associations were smaller and attenuated in conservative sensitivity models, whereas social-isolation pathways remained significant. Wave 4 friend support also predicted lower Wave 5 victimization (β = −.073), suggesting reciprocal relational dynamics. Because total effects of victimization on depressive symptoms and life satisfaction were nonsignificant and a Wave 4 isolation baseline was unavailable, findings are interpreted as prospective pathway-specific associations rather than causal mediation. Post-bullying responses may benefit from assessing and restoring social belonging in addition to reducing victimization and emotional symptoms.

Introduction

Bullying victimization is a salient interpersonal stressor during adolescence because it combines repeated exposure to peer aggression with threats to social status, acceptance, and belonging. Victimization has been prospectively associated with internalizing difficulties, including depressive symptoms, and meta-analytic evidence supports bidirectional links between peer victimization and internalizing problems across childhood and adolescence (Christina et al., 2021; Reijntjes et al., 2010). Bullying is also associated with lower subjective well-being: a recent meta-analysis of 39 studies found that traditional victimization was moderately associated with lower life satisfaction, although effect sizes varied across cultural contexts and measurement approaches (Chen et al., 2024). These findings establish victimization as a developmental risk marker, but they do not fully explain how an adverse peer experience becomes translated into later emotional maladjustment.

Developmental cascade theory provides a useful framework for addressing this question. Developmental cascades refer to processes through which functioning in one domain alters subsequent functioning in another domain, producing consequences that spread across levels or systems over time (Masten & Cicchetti, 2010). From this perspective, bullying victimization need not produce later depression or reduced life satisfaction through a single direct pathway. Instead, victimization may first disrupt the adolescent's interpersonal ecology, with relational disturbances subsequently carrying risk into emotional functioning. This formulation is consistent with systems approaches to developmental

psychopathology, which emphasize that adjustment emerges from transactions among individuals and their changing social contexts rather than from isolated symptoms or exposures.

A relational cascade is especially plausible in adolescence, when peer relationships become increasingly central to identity, emotional regulation, and everyday belonging. The belongingness hypothesis proposes that forming and maintaining stable, positive interpersonal bonds is a fundamental human motive and that threats to such bonds have broad emotional consequences (Baumeister & Leary, 1995). Bullying directly challenges this need by communicating rejection, low status, exclusion, or social devaluation. Classic peer-relations research similarly shows that victimization, rejection, friendlessness, and loneliness cluster together and can forecast depressed mood (Boivin et al., 1995; Parker & Asher, 1993; Salmivalli & Isaacs, 2005). Thus, the psychologically consequential aftermath of victimization may not be limited to the aggressive acts themselves; it may include a more generalized sense that one is socially disconnected from peers.

This reasoning also aligns with interpersonal risk models of depression. These models posit that adverse or deficient interpersonal experiences can precede emotional difficulties, whereas symptoms-driven models propose the reverse direction and transactional models allow reciprocal influences (Kochel et al., 2012; Zimmer-Gembeck, 2016). Empirical evidence supports elements of all three accounts. For example, longitudinal studies have found reciprocal associations between victimization and depressive symptoms (Burke et al., 2017), whereas other work has found that depressive symptoms can predict subsequent peer difficulties (Kochel et al., 2012). More recently, Cheng et al. (2025) used a three-wave random-intercept cross-lagged panel model in a large adolescent sample and showed that bullying victimization prospectively increased internalizing symptoms and, for girls, reduced friendship and social support. This mixed pattern suggests that relational and emotional processes are dynamic and that identifying specific relational mechanisms may be more informative than assuming a uniform direct victimization-to-symptom effect.

Two relational constructs are particularly relevant but conceptually distinct: friend support and perceived social isolation. Friend support captures the perceived availability and quality of positive peer relationships—for example, whether friends show interest, enjoy spending time together, and provide understanding. Perceived social isolation, in contrast, concerns the subjective experience of relational disconnection, such as feeling alone, lacking friendships, or feeling alienated. In the present study, the MAPS measure labeled social isolation is primarily subjective and overlaps conceptually with loneliness; therefore, we use the term perceived social isolation when discussing its psychological meaning. This distinction matters because possessing supportive relationships and feeling socially connected are related but not interchangeable. A meta-analytic review of 233 studies found small but reliable concurrent and longitudinal associations between friendship experiences and both depressive symptoms and loneliness, with friendship experiences generally more closely related to loneliness than to depressive symptoms (Schwartz-Mette et al., 2020).

Friend support may operate as a relational resource in at least two ways. First, victimization may erode perceived support if adolescents become less trusting, withdraw from peers, lose access to friendships, or interpret the peer environment as less accepting. Second, supportive friendships may reduce later victimization by providing companionship, advocacy, social information, and opportunities for adaptive coping. Evidence for this protective pathway is mixed. Kendrick et al. (2012) found that greater friend support predicted lower subsequent victimization, whereas Burke et al. (2017) did not find a longitudinal association between friendship support and victimization. In the large #BeeWell cohort, Cheng et al. (2025) likewise found no prospective protective effect of friendship/social support on later victimization after separating within-person and between-person variance. Other recent work indicates that friendship quality may facilitate comfort seeking and reduce some forms of later victimization among adolescents exposed to peer stress (Zimmer-Gembeck et al., 2026). These inconsistencies make it important to examine both victimization-to-support and support-to-victimization pathways rather than treating friendship only as a static protective factor.

Perceived social isolation may represent a more proximal relational consequence of bullying because it captures the adolescent's subjective sense of being friendless, alone, or alienated rather than the availability of a particular supportive relationship. Longstanding developmental work has linked victimization and peer rejection with loneliness (Boivin et al., 1995; Salmivalli & Isaacs, 2005), and recent longitudinal research continues to identify prospective associations among victimization, loneliness, and social functioning. However, the magnitude of this pathway should not be overstated. A 2026 meta-analysis of 30 longitudinal studies found that peer victimization predicted subsequent loneliness at the zero-order level, but the association became small after baseline loneliness was controlled (partial r = .07; Chu & Chen, 2026). This finding is directly relevant to developmental-cascade claims: relational disconnection may be a meaningful pathway, but apparent prospective effects can partly reflect prior stability in loneliness or other preexisting interpersonal vulnerabilities. Accordingly, studies without an identical baseline measure should interpret victimization-to-isolation estimates conservatively.

Once established, subjective social disconnection may be especially relevant to later emotional adjustment. Loneliness and perceived isolation are associated with depression and lower well-being, and developmental research suggests that persistent loneliness marks risk for later psychosocial difficulties (Schwartz-Mette et al., 2020). From an interpersonal risk perspective, isolation can reduce opportunities for reassurance, co-regulation, positive social feedback, and corrective peer experiences while increasing rumination and negative interpretations of social events. These processes provide a plausible bridge from victimization to both negative affective outcomes, such as depressive symptoms, and positive functioning outcomes, such as life satisfaction. Examining both outcomes is useful because psychological adjustment is not adequately represented by symptom presence alone; low life satisfaction captures a broader deterioration in subjective evaluation of one's life.

The Korean multicultural context provides a particularly informative setting in which to examine these relational processes. In South Korea, the policy category "multicultural adolescents" includes youth from international-marriage families, immigrant-background youth who were born abroad and later entered

Korea, and children of foreign-national parents. These adolescents may encounter ordinary peer-status dynamics while also navigating cultural, linguistic, national-origin, or appearance-based differences. Prior MAPS research has shown that bullying victimization among youth from multicultural families is associated with depressive symptoms and life satisfaction across development. Park et al. (2024) found that chronic victimization was prospectively associated with lower life satisfaction, with heterogeneity by mothers' country of origin, and Kim and Fong (2024) found that transitions into and out of victimization were associated with corresponding decreases and increases in life satisfaction. Son et al. (2025) further showed that persistent victimization was associated with distinct depressive-symptom trajectories. Recent MAPS 2 research also identifies social isolation as an important psychosocial outcome and suggests that in-school support can buffer pathways from acculturative stress to isolation (Jo et al., 2026). What remains less clear is whether subjective relational disconnection itself helps account for later emotional adjustment beyond a positive relationship resource such as friend support.

The Present Study

The present study tested a three-wave relational developmental-cascade model using Waves 4 through 6 of MAPS 2, spanning early to middle adolescence. We examined whether Wave 4 bullying victimization predicted Wave 5 friend support and perceived social isolation and whether these Wave 5 relational states, in turn, predicted Wave 6 depressive symptoms and life satisfaction. Friend support was conceptualized as a positive relational-resource pathway, whereas perceived social isolation was conceptualized as a relational-disconnection pathway. We further compared their unique indirect associations in parallel-mediation models, evaluated robustness to more conservative outcome controls and alternative proxy-baseline adjustments, and tested the reverse prospective path from friend support to later victimization. We expected victimization to predict lower subsequent friend support and higher subsequent perceived social isolation, and we expected poorer relational functioning to predict greater depressive symptoms and lower life satisfaction. Because prior findings are mixed regarding friendship protection, the reverse friend-support pathway was treated as a complementary test of transactional dynamics rather than as a directional hypothesis.

Method

Participants and Data

This study used secondary youth data from the second cohort of the Multicultural Adolescents Panel Study (MAPS 2), an ongoing national longitudinal panel conducted by the National Youth Policy Institute (NYPI) in South Korea to examine the development and adaptation of adolescents from multicultural backgrounds and their caregivers (National Youth Policy Institute, 2025a). MAPS 2 was established in 2019 with students who were in Grade 4. The sampling frame covered multicultural students nationwide, and schools were selected using stratified random sampling and probability proportional to the number of eligible multicultural students, with strata defined by multicultural family type and the 17

metropolitan/provincial regions. Eligible students in sampled schools were surveyed. MAPS 2 distinguishes three broad family-background categories: children born in Korea to an international-marriage family, immigrant-background youth born abroad who later entered Korea, and children of foreign-national parents.

The Wave 1 survey was completed by 2,245 adolescents from 2,223 households. To strengthen representation of immigrant-background youth, 26 additional households were recruited in 2020, yielding a panel of 2,271 adolescents from 2,249 households. Participants have been followed annually from late childhood into adolescence. The current study used Waves 4 (2022), 5 (2023), and 6 (2024), corresponding primarily to Grades 7 through 9. These waves were selected because they span the developmental period in which depressive symptoms and the focal relational variables required for the present models were available.

MAPS 2 Waves 1–6 were publicly released for research use by NYPI on December 31, 2025 through the Korean Children and Youth Data Archive (National Youth Policy Institute, 2025b). Researchers can access the survey files, questionnaires, and codebooks through the archive after completing the required data-use agreement/request procedure. The present study analyzed these public-use secondary data and involved no new recruitment or data collection by the authors.

For the present analysis, youth records were linked across Waves 4–6 using the panel identifiers. The analytic sample consisted of 1,728 adolescents with valid data for the variables included in the final models and a valid Wave 6 longitudinal weight. The sample included 894 boys (51.7%). At Wave 4, participants had a mean age of 13.05 years (SD = 0.29; range = 12–16).

All analyses incorporated the standardized Wave 6 longitudinal panel weight, rescaled to have a mean of 1 in the analytic sample. The longitudinal weight supplied by NYPI adjusts for the panel design and differential response/retention across waves. Family type was not examined as a grouping or moderating variable; sex, age at Wave 4, and family type at Wave 4 were included only as covariates.

Measures

Bullying Victimization

Bullying victimization was assessed at Wave 4 using six MAPS items covering social exclusion, verbal harassment, deliberate isolation, physical aggression or threat, rumor spreading, and appearance-related harassment (National Youth Policy Institute, 2025a). Items were rated from 1 to 4 and averaged, with higher scores indicating more frequent victimization. Cronbach's alpha was .835 at Wave 4. The MAPS documentation labels this construct bullying victimization; however, the items assess the frequency of peer-victimization behaviors and do not separately establish a power imbalance for each episode. Accordingly, the term bullying victimization is retained to match the dataset while this measurement limitation is considered in the Discussion.

Friend Support

Friend support was assessed using three items: “My friends are interested in me,” “My friends like spending time with me,” and “My friends understand me well.” Items were rated from 1 to 5 and averaged, with higher scores indicating greater perceived interest, acceptance, and understanding from friends. Cronbach's alpha was .870 at Wave 4, .892 at Wave 5, and .897 at Wave 6. Wave 4 friend support was included as a baseline covariate, and Wave 5 friend support was examined as a mediator.

Perceived Social Isolation

Social isolation was assessed with four items measuring perceived lack of friendships, feeling alone, loneliness, and feeling alienated from others. Items were rated from 1 to 4 and averaged, with higher scores indicating greater perceived social isolation. Cronbach's alpha was .854 at Wave 5 and .877 at Wave 6. Because the construct was first administered at Wave 5, an identical Wave 4 baseline was unavailable. Wave 4 friend support, social withdrawal, and aggression were therefore included as relational and behavioral proxy baselines in the social-isolation models. Because the items primarily assess subjective rather than objective isolation, the construct is referred to as perceived social isolation in the conceptual interpretation of results.

Depressive Symptoms

Depressive symptoms were assessed using five items rated from 1 to 4 and averaged, with higher scores indicating greater depressive symptoms. Cronbach's alpha was .877, .886, and .898 at Waves 4, 5, and 6, respectively.

Life Satisfaction

Life satisfaction was assessed using three items rated from 1 to 4 and averaged, with higher scores indicating greater satisfaction with life. Cronbach's alpha was .827, .843, and .831 at Waves 4, 5, and 6, respectively.

Covariates

All models included sex, age at Wave 4, and two dummy variables representing family type at Wave 4. Family type was treated solely as a covariate; no family-type subgroup comparisons were conducted.

Analytic Strategy

We estimated regression-based three-wave longitudinal mediation models in which Wave 4 bullying victimization predicted relational functioning at Wave 5, which in turn predicted adjustment at Wave 6. Because an identical Wave 4 measure of perceived social isolation was unavailable, these models were

designed to establish temporal ordering and pathway-specific prospective associations rather than to estimate a definitive within-person change process. Perceived social isolation was specified as the primary relational-disconnection mediator, and friend support was specified as a secondary relational-resource pathway.

For the friend-support pathway, Wave 5 friend support was regressed on Wave 4 bullying victimization, Wave 4 friend support, and the covariates. Wave 6 depressive symptoms and life satisfaction were then regressed on Wave 4 bullying victimization, Wave 5 friend support, their respective Wave 4 outcome levels, Wave 4 friend support, and the covariates. The model predicting Wave 6 social isolation controlled for Wave 4 friend support, but an identical Wave 4 isolation measure was unavailable.

For the primary social-isolation pathway, Wave 5 perceived social isolation was regressed on Wave 4 bullying victimization, friend support, social withdrawal, aggression, and the covariates. Wave 6 depressive symptoms and life satisfaction were regressed on Wave 4 bullying victimization, Wave 5 social isolation, the corresponding Wave 4 outcome, the three Wave 4 relational and behavioral proxy baselines, and the covariates. Parallel-mediation models including both Wave 5 friend support and social isolation were subsequently estimated to evaluate the unique contribution of each pathway.

Continuous variables were standardized using the weighted mean and weighted standard deviation. Models were estimated using weighted least squares with HC1 heteroskedasticity-robust standard errors. Indirect effects were evaluated using 5,000 case-resampling bootstrap samples and percentile 95% confidence intervals. Benjamini–Hochberg false discovery rate corrections were applied separately to the seven primary structural paths and the five primary indirect effects. Sensitivity analyses controlled for the corresponding Wave 5 outcome, added Wave 5 bullying victimization, varied the Wave 4 proxy-baseline adjustment, estimated parallel mediators, and examined the reverse path from Wave 4 friend support to Wave 5 victimization.

Results

Descriptive Statistics

Weighted means, standard deviations, and internal consistency estimates are reported in Table 1. Mean friend support increased slightly from Wave 4 to Wave 6, whereas mean perceived social isolation was essentially unchanged from Wave 5 to Wave 6. Depressive symptoms increased slightly, and life satisfaction declined across the three waves.

Table 1

Weighted Descriptive Statistics and Internal Consistency Estimates

Construct	Wave	M	SD	α
Bullying victimization	4	1.043	0.204	.835
Friend support	4	3.914	0.663	.870
Friend support	5	3.937	0.660	.892
Friend support	6	3.978	0.685	.897
Perceived social isolation	5	1.349	0.545	.854
Perceived social isolation	6	1.348	0.558	.877
Depressive symptoms	4	1.562	0.550	.877
Depressive symptoms	5	1.576	0.573	.886
Depressive symptoms	6	1.583	0.584	.898
Life satisfaction	4	3.191	0.569	.827
Life satisfaction	5	3.133	0.591	.843
Life satisfaction	6	3.117	0.574	.831

Note. N = 1,728. Means and standard deviations are weighted using the Wave 6 longitudinal panel weight.

Friend-Support Pathway

After controlling for Wave 4 friend support and the covariates, Wave 4 bullying victimization predicted lower friend support at Wave 5, β = −.054, SE = .024, p = .022, q = .022. In turn, Wave 5 friend support predicted lower depressive symptoms at Wave 6, β = −.101, SE = .032, p = .002, q = .002; higher life satisfaction, β = .200, SE = .030, p < .001, q < .001; and lower perceived social isolation, β = −.204, SE = .035, p < .001, q < .001. The direct effects of bullying victimization on depressive symptoms and life satisfaction were nonsignificant, whereas the direct effect on Wave 6 social isolation remained positive and significant (Table 2).

Bootstrap analyses indicated significant indirect effects through friend support for depressive symptoms, ab = .0054, 95% CI [.0007, .0131], p = .020, q = .020; life satisfaction, ab = − .0108, 95% CI [− .0227, − .0019], p = .019, q = .020; and social isolation, ab = .0110, 95% CI [.0019, .0237], p = .019, q = .020. However, the total effects on depressive symptoms (β = −.009, p = .730) and life satisfaction (β = −.002, p = .888) were nonsignificant. The significant indirect effects should therefore be interpreted as pathway-specific associations rather than evidence of an overall effect of victimization on these outcomes.

Social-Isolation Pathway

After adjusting for the Wave 4 relational and behavioral proxy baselines and the covariates, Wave 4 bullying victimization predicted greater perceived social isolation at Wave 5, β = .204, SE = .046, p < .001, q < .001. Wave 5 social isolation subsequently predicted greater depressive symptoms, β = .251, SE = .033, p < .001, q < .001, and lower life satisfaction at Wave 6, β = −.205, SE = .027, p < .001, q < .001.

The indirect effect through social isolation was significant for depressive symptoms, ab = .0511, 95% CI [.0263, .0780], p < .001, q = .001, and life satisfaction, ab = − .0418, 95% CI [− .0638, − .0215], p < .001, q = .001. These indirect effects were substantially larger in absolute magnitude than the corresponding friend-support indirect effects. The direct effect on depressive symptoms was nonsignificant, β = −.049, SE = .027, p = .073, whereas the direct effect on life satisfaction was positive, β = .044, SE = .019, p = .021. The total effects on depressive symptoms (β = −.004, p = .873) and life satisfaction (β = .004, p = .830) were nonsignificant. The opposing signs of the direct and indirect effects indicated inconsistent mediation or suppression; accordingly, these findings do not support a claim of complete mediation or a nonzero total causal effect.

Table 2
Primary Standardized Path Coefficients

Path	**β**	**SE**	**p**	**q**
W4 victimization → W5 friend support	−.054	.024	.022	.022
W5 friend support → W6 depressive symptoms	−.101	.032	.002	.002
W5 friend support → W6 life satisfaction	.200	.030	< .001	< .001
W5 friend support → W6 social isolation	−.204	.035	< .001	< .001
W4 victimization → W5 social isolation	.204	.046	< .001	< .001
W5 social isolation → W6 depressive symptoms	.251	.033	< .001	< .001
W5 social isolation → W6 life satisfaction	−.205	.027	< .001	< .001

Note. W = wave. q values are Benjamini–Hochberg false discovery rate-adjusted p values for the seven primary structural paths.

Table 3

Bootstrap Indirect Effects in the Primary Single-Mediator Models

Indirect effect	ab	95% CI	p	q
Friend support → Depressive symptoms	.0054	[.0007, .0131]	.020	.020
Friend support → Life satisfaction	−.0108	[− .0227, − .0019]	.019	.020
Friend support → Social isolation	.0110	[.0019, .0237]	.019	.020
Social isolation → Depressive symptoms	.0511	[.0263, .0780]	< .001	.001
Social isolation → Life satisfaction	−.0418	[− .0638, − .0215]	< .001	.001

Note. Confidence intervals are based on 5,000 case-resampling bootstrap samples. q values are adjusted across the five primary indirect-effect tests.

Parallel-Mediation and Sensitivity Analyses

When friend support and perceived social isolation were entered simultaneously, the unique indirect effect through friend support was nonsignificant for depressive symptoms, ab = .0018, 95% CI [− .0008, .0064], p = .200, whereas the unique indirect effect through social isolation remained significant, ab = .0492, 95% CI [.0254, .0751], p < .001. For life satisfaction, the unique indirect effect through friend support was small but significant, ab = − .0069, 95% CI [− .0160, − .0002], p = .044, and the unique indirect effect through social isolation remained significant, ab = − .0351, 95% CI [− .0554, − .0174], p < .001. Thus, social isolation accounted for most of the unique indirect association with both outcomes.

Controlling for the corresponding Wave 5 outcome attenuated the friend-support indirect effects for depressive symptoms, ab = .0022, 95% CI [− .0009, .0070], p = .172, and life satisfaction, ab = − .0032, 95% CI [− .0088, .0001], p = .062. In contrast, the social-isolation indirect effects remained significant for depressive symptoms, ab = .0266, 95% CI [.0107, .0459], p < .001, and life satisfaction, ab = − .0167, 95% CI [− .0317, − .0047], p = .004. In the conservative parallel-mediation models, the unique indirect effects through social isolation also remained significant for depressive symptoms, ab = .0261, 95% CI [.0103, .0449], p < .001, and life satisfaction, ab = − .0155, 95% CI [− .0303, − .0036], p = .007.

Finally, Wave 4 friend support predicted lower Wave 5 bullying victimization after controlling for Wave 4 victimization and the covariates, β = −.073, SE = .024, p = .002. This reverse-lagged association suggests that friend support may function both as a resource affected by victimization and as a prospective protective factor against subsequent victimization. Overall, the findings supported perceived social isolation as the primary relational pathway and friend support as a secondary relational-resource pathway.

Note

Coefficients are standardized estimates from the corresponding primary single-mediator models. Direct effects shown in the figure are from the social-isolation models. Models controlled for sex, age, family

type, and the Wave 4 baselines specified in the text. In the parallel-mediation model, the unique friend-support indirect effect was nonsignificant for depressive symptoms but remained small and significant for life satisfaction. †p < .10. *p < .05. **p < .01. ***p < .001.

Discussion

Relational Disconnection as the Primary Developmental Pathway

The present study examined whether the prospective correlates of bullying victimization unfold through adolescents' relational functioning before appearing in later emotional adjustment. Across three annual waves of MAPS 2, the clearest pattern was not a direct victimization-to-depression or victimization-to-life-satisfaction association. Instead, Wave 4 victimization was associated with higher Wave 5 perceived social isolation, and social isolation in turn was associated with greater Wave 6 depressive symptoms and lower life satisfaction. This indirect pattern was larger and more robust than the corresponding friend-support pathway. The findings therefore support perceived relational disconnection as the primary pathway identified in these data, while not establishing an overall causal effect of victimization on distal adjustment.

This pattern refines a symptom-centered interpretation of bullying. Victimization is often conceptualized as an interpersonal stressor that precedes internalizing difficulties, and meta-analytic and longitudinal evidence supports prospective associations with depressive symptoms (Christina et al., 2021; Reijntjes et al., 2010; Son et al., 2025). Developmental cascade theory, however, suggests that effects can spread across domains rather than move directly from exposure to symptom (Masten & Cicchetti, 2010). The present results are consistent with a relational cascade in which peer victimization is followed by a more generalized experience of social disconnection, which is then associated with later emotional adjustment. In this formulation, the salient developmental consequence of victimization is not simply exposure to aggression but a possible alteration in how adolescents experience their place in the peer world.

The distinction between perceived social isolation and friend support was theoretically consequential. Victimization predicted a modest decrease in friend support but a substantially larger association with subsequent perceived social isolation. In the parallel models, social isolation retained unique indirect associations with both depressive symptoms and life satisfaction, whereas the friend-support indirect association with depressive symptoms became nonsignificant and the life-satisfaction pathway remained comparatively small. This pattern suggests that a subjective state of disconnection may be more proximally related to later adjustment than the perceived quality of supportive friendships alone. Having supportive friends and feeling socially connected are related but not interchangeable: adolescents may retain one or more supportive relationships while still feeling broadly alienated, peripheral, or without a secure place in the peer group.

The social-isolation pathway is also compatible with interpersonal risk models of depression. Repeated rejection, exclusion, and devaluation may alter expectations about relationships, increase vigilance to rejection, and promote withdrawal or concealment, thereby reducing opportunities for positive social feedback and co-regulation (Zimmer-Gembeck, 2016). Once adolescents experience themselves as socially disconnected, depressive affect and diminished life satisfaction may become more likely even if the original bullying episodes have changed or ceased. Recent work on coping with peer stress similarly indicates that victimized adolescents' relational responses—such as comfort seeking versus concealment and rumination—are prospectively associated with depression and future victimization (Zimmer-Gembeck et al., 2026). The present findings extend this literature by identifying a broader subjective state of isolation as a relational correlate that prospectively precedes both symptom-based and well-being outcomes.

At the same time, the magnitude and causal interpretation of the victimization-to-isolation path require caution. The MAPS perceived-social-isolation construct was introduced at Wave 5, so an identical Wave 4 baseline could not be controlled. We adjusted for Wave 4 friend support, social withdrawal, and aggression as relational and behavioral proxies, and the pathway remained evident across sensitivity analyses. Nevertheless, these proxies cannot substitute for prior perceived isolation. Chu and Chen's (2026) longitudinal meta-analysis is especially relevant: the association between peer victimization and later loneliness became small once baseline loneliness was controlled. The present $\beta = .204$ estimate should therefore not be read as the amount by which victimization caused isolation to increase. A more defensible interpretation is that earlier victimization identified adolescents who subsequently reported greater relational disconnection even after several prior relational and behavioral characteristics were considered.

Friend Support as a Secondary and Transactional Resource

Friend support showed a different, more transactional pattern. Victimization predicted a small reduction in later friend support, but higher Wave 4 friend support also predicted lower Wave 5 victimization. This reciprocal configuration is consistent with the idea that friendships are both affected by victimization and capable of shaping later exposure to peer adversity. The protective direction agrees with Kendrick et al. (2012) and with recent evidence that higher friendship quality can reduce some forms of later victimization (Zimmer-Gembeck et al., 2026), but differs from Burke et al. (2017) and Cheng et al. (2025), who did not observe comparable prospective protection under their analytic specifications. Developmental stage, peer ecology, cultural context, and analytic separation of within-person from between-person variance may contribute to these differences. Because the present regression models do not make that separation, the reverse-lagged friend-support finding should be viewed as prospective evidence consistent with protection rather than a causal estimate.

The weaker unique role of friend support should not be taken to mean that friendships are unimportant. Friend support was strongly associated with lower later social isolation and with better emotional adjustment, and its primary indirect associations were statistically significant before more conservative controls were introduced. Rather, the results suggest a distinction between relational resources and

relational disconnection. Supportive friendships may help adolescents cope, maintain social participation, and reduce vulnerability, but their presence does not necessarily guarantee a subjective sense of belonging. Conversely, adolescents can report some supportive friendships while still feeling globally isolated or alienated. This distinction has practical value because interventions focused only on whether a young person 'has friends' may miss the more clinically relevant question of whether the young person feels socially connected.

Multicultural Context and Implications for Bullying Prevention

The findings also extend research on multicultural adolescents in South Korea. Earlier MAPS studies documented longitudinal associations between victimization and depressive symptoms, life satisfaction, and acculturation (Kim & Fong, 2024; Park et al., 2024; Son et al., 2025). The present study shifts the emphasis from whether victimization predicts adjustment to how a relational process may help organize that association. This distinction is relevant in a multicultural context because ordinary peer exclusion can intersect with language, national origin, appearance, and cultural identity, potentially making belonging especially salient. Recent MAPS 2 research likewise linked acculturative stress with social isolation and identified in-school support as a potential protective resource (Jo et al., 2026). The present data did not indicate why adolescents were targeted, so the findings should not be interpreted as evidence of ethnicity-based bullying. Rather, they suggest that social connectedness deserves explicit attention when studying peer victimization among culturally diverse adolescents.

An important statistical feature of the results was the absence of significant total effects of Wave 4 victimization on Wave 6 depressive symptoms and life satisfaction. The significant indirect associations should therefore not be described as evidence that victimization produced an overall deterioration in these outcomes through complete mediation. Contemporary mediation analysis permits a nonzero indirect effect in the absence of a nonzero total effect, especially when multiple pathways operate in opposing directions, but interpretation must remain pathway-specific (Hayes, 2022). This issue is particularly important for life satisfaction, for which the direct path in the social-isolation model was small and positive while the indirect path through isolation was negative. The resulting inconsistent mediation or suppression pattern does not imply that victimization improves life satisfaction; rather, it indicates that the statistical decomposition depends on the mediators and covariates included and that unmeasured pathways may operate in different directions.

The nonsignificant total effects may also reflect characteristics of the exposure distribution. Mean bullying victimization at Wave 4 was very low ($M = 1.043$ on a 1–4 scale), creating a marked floor and limited between-person variability. Under these conditions, small pathway-specific associations may be detectable even when an overall distal association is not. Prior MAPS studies that modeled chronic or transitional victimization patterns are informative in this regard. Park et al. (2024) showed that chronic victimization was linked to life-satisfaction trajectories, and Kim and Fong (2024) found that transitions into and out of victimization were associated with changes in life satisfaction. Future work should test

whether relational-disconnection pathways differ for persistent, escalating, relational, or potentially identity-relevant victimization rather than relying only on a single continuous victimization score.

The practical implications follow directly from the relational pattern and align with the emphasis of bullying-prevention research on actionable school responses. Stopping aggressive behavior remains the first priority, but the end of overt victimization may not mean that a student has regained belonging. A young person may no longer be actively targeted yet continue to feel friendless, alone, or alienated. Post-bullying assessment can therefore include perceived isolation, belonging, and access to reciprocal peer relationships alongside screening for depressive symptoms. School responses may incorporate structured opportunities for inclusive peer participation, mentoring, facilitated reconnection with supportive peers, and monitoring of classroom social integration. For multicultural adolescents, these practices should also be attentive to language, national-origin stereotypes, appearance-based exclusion, and cultural identity when those factors are relevant. Importantly, relational recovery should not be framed as the victim's responsibility to simply "make friends"; intervention targets should include the peer ecology and the availability of safe, reciprocal inclusion.

The reciprocal friend-support finding additionally suggests a preventive implication. Stronger supportive peer ties before or early in victimization may reduce later vulnerability, although the causal status of this association remains uncertain. Friendship-based strategies should therefore complement, not replace, whole-school anti-bullying practices. Meta-analytic evidence indicates that comprehensive school programs can reduce bullying and victimization (Gaffney et al., 2019). The present findings add a recovery-oriented target to that prevention framework: schools may need not only to reduce opportunities for bullying but also to track whether previously victimized students regain meaningful social connection after incidents have been addressed.

Limitations and Future Directions

Several limitations should be considered. First, all focal variables were youth self-reports, which may inflate associations through shared method variance and perceptual consistency. Second, the absence of a Wave 4 perceived-social-isolation measure prevents a strong change or within-person mediation interpretation. Third, the regression-based longitudinal mediation models establish temporal ordering across annual waves but do not separate stable between-person differences from within-person fluctuations; RI-CLPM or related models would provide a stronger test when repeated isolation measures become available. Fourth, observational mediation cannot rule out time-varying confounding, including changes in school context, peer networks, discrimination, family stress, or concurrent mental health. Fifth, the friend-support and perceived-isolation scales were brief, and the latter combines loneliness, friendlessness, and alienation; future research should distinguish subjective loneliness, objective isolation, peer acceptance, and social-network position. Sixth, the MAPS victimization items do not separately verify power imbalance for each event, so some reported experiences may represent peer victimization more broadly rather than bullying under a strict definitional criterion. Seventh, the annual measurement interval may miss shorter-term relational dynamics following victimization. Eighth, the very low mean level of victimization may limit generalizability to adolescents experiencing severe or

chronic bullying. Finally, although longitudinal weights address differential panel retention, complete-case requirements may leave residual selection bias, and family-background heterogeneity by migration history, gender, or cultural identity remains an important direction for subsequent research.

Despite these limitations, the study has several strengths. It used a large three-wave national panel of multicultural adolescents, incorporated longitudinal panel weights, controlled baseline levels of the distal outcomes, applied heteroskedasticity-robust standard errors and bootstrap inference, corrected primary tests for false discovery rate, and conducted multiple sensitivity analyses. It also examined the reverse prospective association from friend support to later victimization. Most importantly, the study distinguished a positive relational resource from a subjective relational-disconnection state. That distinction revealed that perceived social isolation was the more stable and unique pathway associated with later emotional adjustment.

Conclusion

Bullying victimization may not translate uniformly or directly into later depressive symptoms or reduced life satisfaction. In this sample, its most consistent prospective relational correlate was higher subsequent perceived social isolation, which in turn was associated with later depressive symptoms and lower life satisfaction. Friend support appeared to play a smaller and potentially reciprocal role. These findings shift attention from a purely symptom-centered account of bullying toward a relational developmental process: after victimization, a consequential question is not only whether aggressive behavior has stopped, but whether adolescents continue to feel socially connected, accepted, and able to experience themselves as belonging within their peer world.

Declarations

Author Contribution

S.W. conceived and designed the study, curated and analyzed the data, interpreted the results, prepared the tables and figure, and wrote and revised the manuscript. S.W. approved the final version of the manuscript.

Data Availability

The data analyzed in this study were obtained from the second cohort of the Multicultural Adolescents Panel Study (MAPS 2), conducted by the National Youth Policy Institute (NYPI), Republic of Korea. The data are publicly available through the NYPI MAPS archive at https://www.nypi.re.kr/archive/mps, together with the corresponding codebooks, user guides, and related documentation.

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Figures

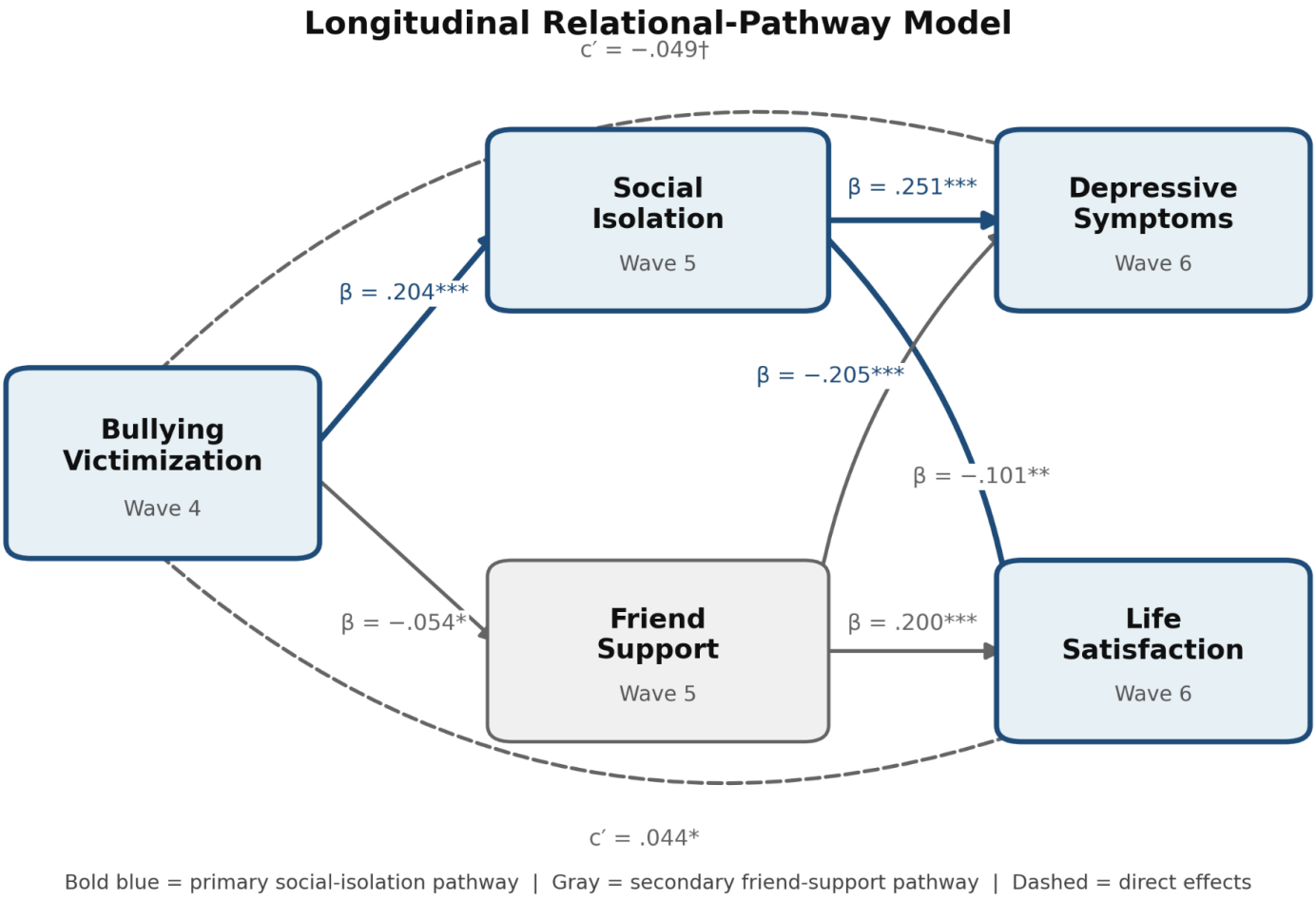


Figure 1

Longitudinal Relational-Pathway Model Linking Bullying Victimization to Adolescent Adjustment

Note. Coefficients are standardized estimates from the corresponding primary single-mediator models. Direct effects shown in the figure are from the social-isolation models. Models controlled for sex, age, family type, and the Wave 4 baselines specified in the text. In the parallel-mediation model, the unique friend-support indirect effect was nonsignificant for depressive symptoms but remained small and significant for life satisfaction. †p < .10. *p < .05. **p < .01. ***p < .001.