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A STRUCTURAL MODEL OF FAMILY-BASED RISK FACTORS CONTRIBUTING TO SCHOOL BULLYING BEHAVIOR

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Abstract:

School bullying remains a global concern that undermines students' psychological well-being, academic achievement, and social adjustment, with family dynamics increasingly recognized as critical determinants of both risk and resilience. Despite the growing body of research, limited attention has been given to understanding how family-based risk factors interact structurally to shape bullying behaviour. This study aims to fill this gap by applying Interpretive Structural Modelling (ISM) and Matrice d'Impacts Croisés Multiplication Appliquée à un Classement (MICMAC) analysis, validated through consensus from seven domain experts, to systematically model the interrelationships among family-based risk factors contributing to school bullying behaviour through expert consensus using ISM; and (ii) to classify and validate the driving and dependence power of family-based risk factors through MICMAC analysis, thereby establishing a consensus-driven framework for prioritizing interventions in bullying prevention. The ISM results revealed a clear hierarchical structure, with Parental Support and Monitoring emerging as the most influential driver, followed by Family Communication as a key bridging factor, while outcomes such as Parent Child Relationships and Family Life Satisfaction were identified as dependent variables. These results were also supported by the MICMAC analysis, which placed Family Communication as an independent variable with high driving power. Most other factors were grouped as linkage variables with high interdependence as well as sensitivity. Based on these analyses, three broad themes were formed: (1) Parental Support and Monitoring as the Foundational Driver, (2) Family Communication as the Bridge to Relational Stability, as well as (3) Outcomes of Supportive Family Environments. Together, these

findings offer a solid model that can enhance the theoretical knowledge on the role of family in bullying and offer educators, policymakers, as well as counsellors a comprehensive strategy to publicize the role of family in bullying by proposing a family-related intervention to prevent bullying in schools.

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School Bullying, Family-Based Risk Factors, Interpretive Structural Modelling



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Introduction

Bullying in schools has always been considered a widespread issue, and it has severe consequences regarding the social, psychological, as well as academic progress of children (Menesini & Salmivalli, 2017). Victims of bullying have increased risks of depression, suicidal thoughts, anxiety, as well as experiencing hardships in interpersonal relationships, and the bullies are usually characterized by aggressive behaviour that can be continued into adulthood (Al-Raqad et al., 2017; Wang, 2023). The persistence of bullying across multiple cultural and educational contexts indicates the multifaceted nature of the phenomenon and, lately, the family is emerging as one of the major factors related to bullying as victim and as perpetrator. In contrast to those variables in the school context that are typically the focus of prevention programs, family environments have short-term and enduring implications for children's social competencies in the form of conflict management skills, self-regulation, and peer relations (Cook et al., 2010; Olweus, 1994). The current research shows that inappropriate parental support, a lack of healthy family dialogue, as well as exposure to violence in the family, contribute significantly to the development of bullying behaviours (Erginoz et al., 2015c; Machimbarrena et al., 2019). It puts families at the center of the risk and prevention action, which requires further structural scrutiny to comprehend the interaction of family-based variables that lead to bullying effects.

The present research paper aims to fill this gap using Interpretive Structural Modelling (ISM) as well as MICMAC analysis to explore interrelationships among family-based risk factors of school bullying behaviour in a systematic manner. ISM offers a hierarchy of identification of the most powerful drivers in the complex systems, whereas MICMAC analysis involves grouping variables based on their driving and dependence power and thus elucidates their role in defining the outcomes (M. Singh et al., 2019). Hence, the parental support and parental monitoring, disciplinary and solidarity practices, family communication and relationships are

observed and classified structurally to depict their significance in the family system. This design has dual contributions to the practical and theoretical level of a study: on the one hand, it extends scholarly debate of the ecological as well as family stress models of child adjustment. This represents an example of what community's need to realize a more comprehensive and family-focused intervention. Finally, the study may potentially provide an attempt to systematically demonstrate how researchers, educators and policy makers can design interventions, supported by evidence-based practice that effectively reduce bullying perpetration by tackling precursors of bullying within the family.

Literature Review

Bullying is a complex issue and has an international prevalence, and increasing evidence acknowledges that bullying is detrimental to the mental health and social function of young people. It has been reported among 95,545 Sichuan students that bullying victimization increases risk for Post-Traumatic Stress Disorder (PTSD), anxiety, Internet addiction, depression, sleep problems, as well as multiple other behaviour problems, from three times up to 18 times (Zhu et al., 2022). This highlights the need to target these mediating mechanisms with systemic family interventions. The family is a key factor in guiding the formation of aggressive behaviour (Chen et al., 2021; deLara, 2022). During pre-adolescence, after adjusting for their own characteristics, those who received low warmth and high rejection from their parents were involved in the roles of bully-victim (de Vries et al., 2018; Healy et al., 2022; Olweus, 1994). This is also in line with meta-analysis on parental aspects of bullying victimization, as observed that there are small to moderate effect sizes of significant association of parenting as good open communication, good parent-child communication, authoritative parenting style, parent involvement, or protective factor against traditional and cyberbullying (Hinduja & Patchin, 2022; Indrawati & Sugiarti, 2022; Zhou et al., 2022). On the same note, recent quantitative research indicates that family conflict, as well as the verbal insults and substance use occurring frequently in the household, considerably increase the likelihood of bullying participation (Lo et al., 2021; Park et al., 2023).

In addition to the behaviours of parenting, family socioeconomic and demographic factors also weigh. The rates of bullying are also more likely to be high in migrant, rural, as well as low-educated parental families (Albert Torchyan et al., 2024; Haslan et al., 2022; Yang et al., 2020). In addition, socioeconomic disadvantages are compounding stress factors on a family level that exacerbate the parenting disruption and conflict, resulting in a well-expressed Family Stress Model indicating that economic hardship correlates with adverse children's outcomes through distress in caregivers as well as the disruption of parenting practices (Fu et al., 2013). In addition to that, the Ecological Systems Theory by Bronfenbrenner (1979) provides a widening perspective, placing the family within the framework of the microsystem in which the direct interplay between parents as well as children determines the developmental outcomes. In this model, bad parental monitoring, bad communication or exposure to violence are considered as proximal risk factors, which affect the behaviours of children, but distal systems (school or community) are systems that interact with these family systems (Hong & Garbarino, 2012). It is within this theoretical framework that family structures and bullying are interlocked, which confirms the ISM–MICMAC structural mapping as well as demonstrates that parental support and communication are the structural drivers.

Striking a balance between the risk-oriented insights, communication, and protective resources is well developed concerning family support, as well as identity. It has been revealed that family support and school belongingness are major predictors of reduced bullying participation and victimization, while the factors of attachment and emotional attachment in family and school settings are significant (Erdogan et al., 2023; Li et al., 2020). Similarly, emotional intelligence as an empirically validated, trainable skill has also been identified as associated with reduced cases of bullying, which suggests its application in the Social-Emotional Learning (SEL) as well as family-based interventions (Saidi et al., 2023). These results, in combination, indicate and fit the hierarchical order identified in the ISM-MICMAC analysis: Parental Support and Monitoring and Family Communication are seen as the primary drivers, and their effect is measured by discipline, cohesion, as well as relationship quality (Erginoz et al., 2015a, 2015c). The placement of this knowledge in the context of ecological and family stress models advances important theoretical and treatment frameworks for family-focused efforts to reduce school bullying.

In line with the gaps identified in the literature and the need to establish a consensus-driven understanding of family-based risk factors contributing to school bullying, this study sets out the following research objectives:

- i. To identify and structurally model the interrelationships among family-based risk factors contributing to school bullying behavior through expert consensus using ISM.
- ii. To organize and confirm the driving as well as dependence power of family-based risk factors using MICMAC analysis, thus creating a consensus-driven framework of prioritizing interventions in bullying prevention.

Methodology

This paper uses ISM as well as MICMAC analysis, utilizing the knowledge of experts to determine the relationship of all the causes of family-based risk factors and the relationships between them that lead to school bullying behavior. In such ways, the hierarchical nature of relationships between the identified factors can be formed, which can provide a better understanding of the effects each element has on the rest. ISM, which is traditionally expanded (Warfield, 1974), is especially efficient in the analysis of complicated problems that include numerous variables alongside the relations between them. The structured group-based methods include the Focus Group Technique (FGT), Nominal Group Technique (NGT), as well as brainstorming, which are all popular and acceptable in the implementation of ISM (Abbasnejad et al., 2021). The ISM method creates a structured hierarchical framework using variables that potentially impact each other both indirectly and directly (Kundu & Perwez, 2022). The method involves interpretation as well as decision-making of groups of experts, hence it can be said to be interpretive. Meanwhile, its ability to make complex relations simple and reduce them to open structures makes it structural. Every model or digraph that is developed is a unique structural expression of the problem. ISM has succeeded in implementation in a wide range of disciplines, including manufacturing (Gong et al., 2022), environmental studies (Thamsatitdej et al., 2017), policy (Gong et al., 2022), as well as aviation (A. K. Singh & Sushil, 2013). In this study, ISM as well as MICMAC will take their place as effective systems to map the layered and interdependent family-based risk factors that contribute to bullying behaviors in schools in an orderly manner.

The procedures of the ISM approach are described in the following protocols:

- i. Identification of Risk Factors
Family-based risk factors (e.g., poor parental monitoring, domestic conflict, harsh parenting, neglect) were identified through literature synthesis and expert consultation.
- ii. SSIM Development
The NGT was based on pair-wise comparison of the factors by experts. The relationships were represented in the following way: V (i influences j), A (j influences i), X (mutual influence), O (no relation).
- iii. Reachability Matrix (RM)
SSIM values were converted into a binary matrix (1 and 0) to establish direct and indirect linkages among factors.
- iv. Level Partitioning
The reachability Matrix was partitioned to identify hierarchical levels, distinguishing root causes (e.g., neglect, family violence) from higher-level effects (e.g., bullying behavior).
- v. Hierarchical Digraph (ISM Model)
A structural model was constructed to map the progression from foundational family risks to school bullying outcomes.
- vi. MICMAC Analysis
Cross-impact analysis classified the risk factors into autonomous, dependent, linkage, and independent clusters, revealing their driving and dependent power within the model.

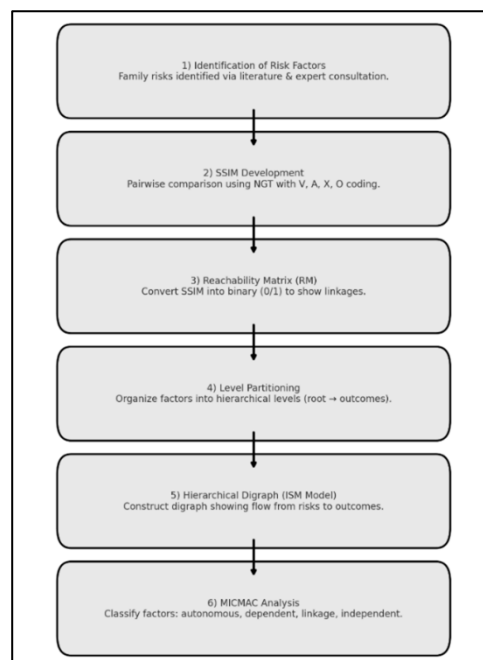


Figure 1: ISM and MICMAC Methodology Flowchart

Sample

For this research, we enlisted the help of seven education experts for ISM sessions. Seven professional experts were willing to take part in the research (Prasad et al., 2020). The experts from different education divisions and public sector organizations are profiled in Table 1 according to their area of knowledge, academic degree, and job experience.

Table 1: Expert Qualification

No.	Academic Qualification	Field Expertise	Years
1.	Ph. D	Guidance and Counselling	15 years
2.	Master	Education	9 years
3.	Master	Education	11 years
4.	Master	Education	10 years
5.	Master	Family and Marriage Counselling	6 years
6.	Master	Counselling	5 years
7.	Master	Education	6 years

Data Analysis

Finding From Step 1

For the first step, the researcher interviewed experts and reviewed some literature to determine the elements or steps that can be taken to implement family-based risk factors contributing to school bullying behaviour. Table 2 shows the approach and key actions for family-based risk factors. Based on Table 2, which effectively addresses family-based risk factors contributing to school bullying behaviour, it is essential to enhance parental support and monitoring. Improving parental involvement, particularly from fathers, plays a crucial role in reducing instances of bullying and victimization. Additionally, fostering open communication within families can mitigate bullying behaviour, as poor communication is linked to increased involvement in bullying. Conflict resolution training for parents will serve another purpose by enhancing the dynamics of the family in resolving conflicting issues constructively. The problem of family violence is also crucial and should be addressed, as exposure to these settings largely increases the chances of being bullied. The parents may ensure that they create a friendly environment that deters bullying by encouraging regular, as well as non-punitive, spanking activities. All in all, these strategies highlight the significance of parental involvement as well as good family relations in averting bullying behaviours in children.

Table 2: Family Based Risk Factors Contributing to School Bullying Behaviour

No.	Approach	Key Action
1.	Parental Support and Monitoring	Improving parental support and monitoring is essential, as empirical evidence shows that consistent supervision reduces externalizing behaviours and delinquency, while inadequate parental oversight significantly increases the risk of bullying involvement (Erginoz et al., 2015b).
2.	Family Communication	Enhancing family communication fosters open dialogue and emotional regulation, with studies highlighting that supportive communication builds trust, strengthens pro-social behaviour, and mitigates aggression and peer victimization (Erginoz et al., 2015b; Sitnik-Warchulska et al., 2021).
3.	Conflict Resolution Training	Implementing conflict resolution training for parents equips them with constructive strategies to manage disputes, reduces family hostility, and provides children with adaptive behavioural models for handling interpersonal conflicts (Qian et al., 2022).
4.	Addressing Family Violence	Developing interventions to address family violence is critical, as research consistently links domestic aggression with intergenerational transmission of hostile behaviours; addressing this issue reduces normalization of aggression and bullying among children (“Bullying among Middle School and High School Students--Massachusetts, 2009, 2011”)
5.	Parental Involvement in School Programs	Increasing parental involvement in school programs creates continuity between home and school, with evidence showing that active engagement is associated with lower bullying prevalence and stronger collaborative support for children’s development (Xue et al., 2022).
6.	Consistent Discipline Practices	Promoting consistent and non-punitive discipline reduces oppositional behaviour, as evidence indicates that inconsistent or harsh punishment predicts higher levels of aggression, whereas non-punitive and predictable practices foster compliance and decrease bullying (Baldry & Farrington, 2005; Lösel & Bender, 2014).
7.	Family Cohesion and Flexibility	Fostering family cohesion and flexibility enhances belonging and security while enabling families to adapt positively to stressors, both of which correlate strongly with lower bullying risks among children (Sitnik-Warchulska et al., 2021).
8.	Addressing Parental Hostility	Addressing and reducing parental hostility is crucial, as longitudinal studies confirm that parental hostility and rejection predict children’s peer aggression and victimization; reducing hostility disrupts this negative trajectory (de Vries et al., 2018).
9.	Improving Parent-Child Relationships	Strengthening parent child relationships provides resilience, empathy, and emotional well-being, functioning as key protective factors that reduce children’s vulnerability to involvement in bullying (Healy et al., 2022).
10.	Family Life Satisfaction	Enhancing overall family life satisfaction contributes to stability and emotional support within households, with studies showing that families reporting higher satisfaction experience reduced risks of children engaging in bullying behaviour (Sitnik-Warchulska et al., 2021).

Findings From Step 2

According to Table 3, the Structural Self-Interaction Matrix (SSIM), the findings show that Parental Support and Monitoring and Family Communication stand out as the best driving forces since they always affect the other variables in the system. This demonstrates that parental support, effective communication, as well as supportive family settings are the pillars in the effort to address the risk factors concerning school bullying. Contrary to that, the other variables, including the Improving Parent Child Relationships and Family Life Satisfaction, are found at the dependent end, implying that they are largely influenced by the presence or absence of the preceding root variables. In the meantime, Consistent Discipline Practices, Conflict Resolution Training, Parental Involvement in School Programs, as well as Family Cohesion and Flexibility are placed in the intermediate position, as they are bridging the gap between root causes and results. Ultimately, reducing parental hostility functions as an important connecting element that is shaped by family discipline and cohesion, while also playing a direct role in fostering more positive family relationships. In general, the SSIM demonstrates a structured hierarchy in which strong foundational family practices influence broader systemic improvements, leading to enhanced family well-being and a lower likelihood of bullying behaviors within school settings.

Table 3: Structural Self-Interaction Matrix (SSIM)

No.	Variables	1	2	3	4	5	6	7	8	9	10
1.	Parental Support and Monitoring		V	V	V	V	V	V	V	V	V
2.	Family Communication	V		V	V	V	V	V	V	V	V
3.	Conflict Resolution Training	A	A		A	A	A	A			A
4.	Addressing Family Violence	A	A	V		V	V	V			A
5.	Parental Involvement in School Prog.	A	A	V	A		A	A			A
6.	Consistent Discipline Practices	A	A	V	A	V		A			V
7.	Family Cohesion and Flexibility	A	A	V	A	V	V				A
8.	Addressing Parental Hostility									V	A
9.	Improving Parent-Child Relationships								A		V
10.	Family Life Satisfaction										

Finding From Step 3 (Reachability Matrix)

Referring to Table 4, the Reachability Matrix The analysis of the family-related risk factors linked to school bullying shows that Parental Support and Monitoring (Driving Power = 10) and Family Communication (Driving Power = 9) play the most influential roles within the overall system. Both factors affect many of the other variables identified in the model, suggesting that they represent the main foundation of healthy family functioning. Because of their strong influence, these areas should be given greater emphasis when designing family-based intervention strategies. In comparison, factors such as Conflict Resolution Training (Driving Power = 2) and Addressing Family Violence (Driving Power = 2) appear to have less direct influence on the system. This suggests that these factors are more likely to improve after stronger parental support and communication practices are already established within the family environment. Some variables were found to play a middle or connecting role in the structure. These include Consistent Discipline Practices (Driving Power = 6), Family Cohesion and Flexibility (Driving Power = 6), and Parental Involvement in School Programs (Driving

Power = 3). Rather than acting as primary drivers, these factors help carry the positive effects of supportive parenting into broader family relationships and behavioral outcomes.

At the outcome level, Family Life Satisfaction (Driving Power = 4, Dependence Power = 7) and Improving Parent–Child Relationships (Driving Power = 7, Dependence Power = 9) were identified as factors that are highly dependent on the quality of parenting and communication within the family. Their position in the model reflects how positive family interactions may gradually contribute to healthier relationships and emotional well-being. Similarly, Addressing Parental Hostility (Driving Power = 2, Dependence Power = 6) also appears to depend heavily on the overall family environment, particularly the way parents communicate, manage emotions, and interact with their children.

Table 4: Reachability Matrix

No.	Variables	1	2	3	4	5	6	7	8	9	10	Driving Power
1.	Parental Support and Monitoring	1	1	1	1	1	1	1	1	1	1	10
2.	Family Communication	0	1	1	1	1	1	1	1	1	1	9
3.	Conflict Resolution Training	0	0	1	0	0	0	0	1	0	0	2
4.	Addressing Family Violence	0	0	1	1	0	0	0	1	0	0	2
5.	Parental Involvement in School Prog.	0	0	1	0	1	0	0	1	0	0	3
6.	Consistent Discipline Practices	0	0	1	1	0	1	0	1	0	1	6
7.	Family Cohesion and Flexibility	0	0	1	1	1	1	1	1	0	0	6
8.	Addressing Parental Hostility	0	0	0	0	0	0	0	1	0	1	2
9.	Improving Parent-Child Relationships	0	0	1	1	1	1	1	1	1	1	7
10.	Family Life Satisfaction	0	0	1	0	1	0	1	0	0	1	4
11.	Dependence Power	1	2	9	5	8	5	5	9	4	7	

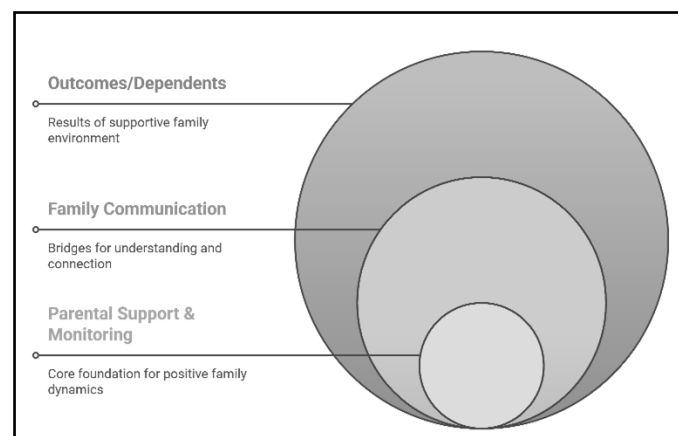
Finding From Steps 4 & 5

According to the Level Partitioning presented in Table 5, the findings reveal a distinct hierarchical arrangement among the identified family-related risk factors linked to school bullying. Parental Support and Monitoring is categorized at Level 3, highlighting its role as the core driving factor that influences the other variables within the framework. Family Communication is positioned at Level 2, indicating that it not only exerts considerable influence on the system but is also shaped by parental support and monitoring practices. In contrast, variables such as Conflict Resolution Training, Addressing Family Violence, Parental Involvement in School Programs, Consistent Discipline Practices, Family Cohesion and Flexibility, Addressing Parental Hostility, Improving Parent–Child Relationships, and Family Life Satisfaction are grouped under Level 1. These variables mainly function as dependent or outcome-oriented components that are influenced by stronger foundational family factors. Overall, the partitioning structure demonstrates how positive parental foundations gradually contribute to wider family outcomes that may affect the occurrence of school bullying behavior.

Table 5: Level Partitioning (LP)

Elements (Mi)	Reachability Set R(Mi)	Antecedent Set A(Ni)	Intersection Set $R(Mi) \cap A(Ni)$	Level
1.	1	1	1	3
2.	2	1, 2	2	2
3.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
4.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
5.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
6.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
7.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
8.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
9.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1
10.	3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10	1

Based on figure 2 presents a hierarchical family dynamics model where Parental Support and Monitoring serve as the primary foundation influencing children's behavioral adjustment and resilience. Family Communication functions as a connecting mechanism that encourages understanding and reinforces relationships within the family environment. The outer components of the model represent several outcome-related elements that may develop through supportive family interactions, including stronger parent child relationships, better emotional stability, and improved satisfaction with family life. In general, the framework implies that positive family well-being and the reduction of bullying-related risks are closely associated with sustained parental involvement combined with constructive communication within the family setting.

**Figure 2: Model of Family-Based Risk Factors Contributing to School Bullying Behaviour**

Findings From Step 6 (MICMAC Analysis)

Based on the MICMAC analysis, the placement of variables across the four quadrants reveals the structural importance of family-based risk factors in contributing to school bullying behavior. Figure 3 illustrates that Family Communication (Variable 2) lies in Quadrant IV (Independent Variables), with very high driving power and low dependence power. This indicates that it serves as a crucial root factor capable of influencing other variables significantly, while not being strongly affected by others. As such, family communication

emerges as a central determinant that strengthens the overall system of family dynamics and is a key area for intervention.

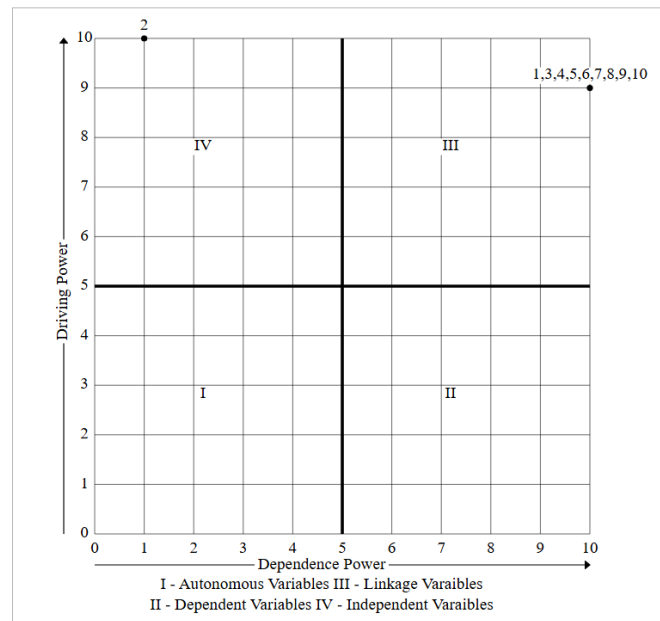


Figure 3: MIMAC Analysis

In contrast, most variables Parental Support and Monitoring (1), Conflict Resolution Training (3), Addressing Family Violence (4), Parental Involvement in School Programs (5), Consistent Discipline Practices (6), Family Cohesion and Flexibility (7), Addressing Parental Hostility (8), Improving Parent Child Relationships (9), as well as Family Life Satisfaction (10) are grouped in Quadrant III (Linkage Variables). These parameters apply strong driving and strong dependence: they drive but also respond to the changes in the system. Being both the determining centrals and strongly dependent, they are something more than fragile and influenced easily by changes in other quantities. Briefly, this figure suggests that anti-bullying intervention at school must focus on efforts to strengthen the autonomy-promoting determinants, such as family communication, on the one hand, and on anchoring the bearing variables, which confirm change, on the other.

Discussion

These results of ISM and MICMAC analysis contribute to an overall understanding of family-based risk factors on school bullying behavior. Positive behaviors were tried to reduce bullying with effective instructions, active involvement and monitoring, underpinned by the root, which was Parental Support and Monitoring in this ISM hierarchical digraph, which emerged as a dominant ruling force. In the second stage of assault, Family Communication was ranked second as well because it is the factor mediating between Parental Support and the other Family processes just detailed. At the output level, the following variables were identified as dependent variables: Conflict Resolution Training; Parental Involvement in School Programs; Consistency of Discipline Practices; Addressing Parental Hostility; Family Cohesion and Flexibility; Preserving Parent Child Relationship; and Family Life Satisfaction (legacy existing from a strong parental/communication base). The result was confirmed by the MICMAC analysis, which disaggregated liberalized variables based on driving and dependency power. "Family Communication is a dependent variable with a high cause, low effect, meaning that it

is the core issue, and it may also be family resilience and behavior control. By contrast, the majority of the remaining factors, Parental Support and Monitoring, Addressing Family Violence, Conflict Resolution in Families Skills, Consistent Discipline Practices, Parental Involvement in School Programs and Activities, Addressing Parental Hostility, Family Cohesion and Flexibility, Improving Parent-Child Relationships, and Family Life Satisfaction were associated factors. However, as influential as they are, they are highly vulnerable to fluctuations in the system, and the interventions that target them should be stable and, if reinforcing, should not be counterproductive. These factors are interdependent, which also means that any change or imbalance in one component will have an effect in the other part of the system, thus determining the risk of school bullying in the long run.

Theme 1: Parental Support and Monitoring as the Foundational Driver

The evaluation identifies Parental Support and Monitoring as the primary basis of family dynamics that determines all further processes. The result is consistent with the outcomes of the existing studies that indicated that parental engagement, consistent encouragement, as well as control are key factors of concern in terms of behavior development in children (Mishna et al., 2012). When families make their expectations and supportive monitoring very clear, children would feel safe, appreciated, and advised, which would decrease the risks of aggressive or bullying activities (Ginsburg et al., 2009). In contrast, negative or inconsistent parenting has consistently been linked to school deviance and is positively linked to peer victimization. Thus, the model suggests that improvement of parent support systems should be among the first to be addressed in prevention and intervention efforts. Policies and practices that support enhanced caring, monitoring and involvement of parents are an impediment against bullying, and a long-term investment in resiliency and positive youth development.

Theme 2: Family Communication as the Bridge for Relational Stability

The Family Communication construct appears to be a significant moderator between the founder stage of parental support and components of the family outcomes. Additionally, trust, communication, and problem-solving can also be learned through communication in the family, which is another factor in providing functioning coping strategies, ensuring the birth of healthy children (Froeschle et al., 2011). Moreover, inadequate communication is frequently linked with misconceptions and unresolved conflicts, as well as aggressive conduct toward peers (Erginoz et al., 2015a; Machimbarrena et al., 2019). Interventions designed to promote open communication, listening and resolution of conflict within families, thus, may be conceptualized as points of departure in transforming the traps of overt hostility and aggression. This information highlights the necessity to support children and parents to develop a repertoire of communication skills, as part of bullying prevention efforts.

Theme 3: Outcomes of Supportive Family Environments

The second layer is the Outcomes of Supportive Family Environments (closer parent-child relationships, emotional stability, and general family satisfaction). Results are those from the addition of the effects of advantage and parent interaction. This finding suggests that the better the quality of the original family of origin, the more favorable the ties. These families are also immune to peer victimization and other external stressors, and do not feel victimized by their parents (Erginoz et al., 2015a; Önder & Yurtal, 2008; Yıldız İnanıcı, 2021). Secondly, the current findings were consistent with the larger goals of SEL in which family-level resilience

was associated with higher levels of school engagement, cooperation, as well as lower levels of aggression (Elliott et al., 2022; Shi & Cheung, 2024). Therefore, the model proposes that the treatment of the family-level risk factors should not only be the right intervention but also the means to construct protective factors for the future. In this way, the findings underscore the need for broader (whole individual, family-based) bullying prevention efforts that target not only schools but also the home setting.

These estimates compare well with those from previous methods and with the estimates from the intrinsic measures of the theory. For example, an enhancement of Parental Support and Monitoring reflects a dedication to responsibility, affective awareness, and self-regulation as final principles of family processes. Likewise, the strengthening of the Family Communication triggers the deepest processes of empathizing, of coping with conflict, of the formation of socioemotional skills, and diminishes the aggressiveness and hostility, two processes that generally are present in bullying behavior (Chapoñan et al., 2023; Lereya et al., 2013). Mediating variables Observed outcomes (translated in ISM), such as Improving Parent Child Relationships and Family Life Satisfaction, directly contribute to products of the ultimate aims of social and emotional learning interventions, functional family systems, and rearing resilient, effective and adaptive individuals. To sum up, the two ISM and MICMAC analyses agree and indicate that effective interventions must begin with improvement in parental care/communication, with consequent increasing family integration, discipline and conflict resolution. These, in turn, produce healthier relationships, greater satisfaction, and ultimately reduce the incidence of bullying behaviors.

Conclusion

Building upon the ISM and MICMAC results, future research should prioritize longitudinal and cross-cultural studies that examine the dynamic role of parental support and monitoring, as well as family communication in shaping children's social-emotional outcomes. Within schooling systems, research like this could enrich theories that relate to the prevention of bullying by combining a systemic perspective, as well as specific methods under which structural mathematical modelling, like ISM and MICMAC, would result in the identification of latent interdependencies among family factors (Aminah et al., 2023; Gofin & Avitzour, 2012). Furthermore, mixed methods designs may be used in future research to examine the quantitative impact of drivers and qualitative experiences of families and children to inform our understanding of the evidence base for family-centered interventions. From a social standpoint, these findings challenge programs that are focused narrowly on individuals or schools, and, in contrast, argue for the family to be put at the center of our thinking about potential agents of change. Besides, politicians and implementers might want to think about: Programs to strengthen families, helping parents to learn how to communicate better, how to monitor their children, and how to resolve conflicts. These interventions can be incorporated into community-based counseling and school family partnership programs that actively engage families in creating supportive environments. Schools may also strengthen prevention efforts by equipping teachers with the knowledge and skills to recognize family-related risk factors and collaborate effectively with parents. Future research should further examine linkage factors such as consistent disciplinary practices, family cohesion, and parental involvement, given their interconnected roles within family systems. Understanding these relationships may enhance the long-term effectiveness of interventions. Greater emphasis should also be placed on culturally responsive and resilience-oriented approaches that support both bullying prevention and family well-being.

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