Factors Affecting Academic Resilience in Middle School Students: A Case Study

Factores que Afectan la Resiliencia Académica en Estudiantes de Bachillerato

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Abstract

This research was carried out with the purpose of identifying how and which risk and protective factors affect academic outcomes. The study explored how different family and individual environmental factors foster academic resilience. The exploratory study took place with a group of six students from a public school in Bogotá, Colombia. The school is located in a low-income and marginalized area of the city, where social problems such as poverty and violence are common. Data collection techniques included document analysis, as well as interviews with teachers and parents. The data collection was focused on identifying how academic resiliency skills can be developed in vulnerable young people. It was found that it is possible to identify and describe different protective factors from the family, such as family guidance, family support, and opportunities for meaningful family involvement that explicitly foster academic resilience in at-risk students. It was also possible to address how individual characteristics also foster positive outcomes, including optimism, perseverance, or motivation.

Keywords: academic resilience, risk factors, protective factors, low income, family factors

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Esta investigación se realizó con el propósito de identificar cómo y qué factores de riesgo y de protección afectan los resultados académicos. El estudio exploró cómo los diferentes factores como la familia, ambientales e individuales promueven la resiliencia académica. El estudio exploratorio se llevó a cabo con un grupo de seis estudiantes de un colegio público en Bogotá, Colombia. El colegio está situado en un sector de bajos ingresos y en un área marginada de la ciudad, donde los problemas sociales como la pobreza y la violencia son comunes. Las técnicas de recolección de datos incluyen el análisis de documentos, así como entrevistas con los profesores y los padres. La recolección de datos se centró en identificar cómo las habilidades de resiliencia académica se pueden desarrollar en jóvenes vulnerables. Se encontró que es posible identificar y describir los diferentes factores de protección de la familia, como la orientación familiar, el apoyo de la familia, y las oportunidades para la participación familiar significativa que explícitamente fomentan la resiliencia académica en estudiantes en riesgo. También fue posible abordar cómo las características individuales también fomentan resultados positivos, entre ellos el optimismo, la perseverancia, o la motivación.

**Palabras claves:** Resiliencia académica, factores de riesgo, factores de protección, bajos ingresos, factores familiares
Introduction

Resilience is the process of adapting in the face of adversity. Research has shown that this trait is usual, not unusual, as people commonly demonstrate resilience through life experiences (Chung, 2008). This is because resilience is not a characteristic that people either have or do not have. For this reason, resilience involves behaviors and actions that can be learned and developed in any person. A combination of protective factors and risk factors affect resilience in individuals. Risk factors are those factors that increase the likelihood of a future negative outcome. Protective factors refer to those variables that buffer against the effects of risk factors (Wright & Masten, 2005).

Many studies show that the most important protective factor affecting resilience is having supportive family relationships. On the other hand, different risk factors from family also directly affect the development of resilience. Both of these directly affect children’s academic performance as well. Academic resilience is defined as the ability to deal with adversity, stress or pressure in academic settings. Students who are affected academically by family risk factors may be labeled as non-resilient students. The opposite can be described as resilient students, students who succeed academically in school despite the presence of adversity (Grotberg, 2001).

The purpose of this project was to identify academic resilience in a group of eighth grade students from a school that for the purposes of this study will be called El Triunfo. The study aimed to determine which risk factors affect these skills to overcome adversity. The questions that guided this research project were the following: How do family risk factors and protective factors affect academic outcomes in three teenage students with academically diverse performances? How can academic resiliency skills be developed in vulnerable teenage students?, and How can positive academic outcomes be developed in vulnerable teenage students?

It was possible to conclude that a powerful predictor of the academic outcome for children is the quality of the immediate care-giving environment. However, factors such as the characteristics of the individual and the environment also contribute to academic performance. Finally, the project proposed of value to establish whether, as research suggests, family support and parenting skills are the result of specific protective factors affecting risk factors that foster academic resilience despite adversity.
Literature Review

Resilience is the ability to overcome challenges. In fact, resilience can be seen when people face difficult experiences and know how to deal with or adapt to them. According to Schoon (2006), resilience is a dynamic process in which individuals show adaptive actions when experimenting significant adversity. Adversity is defined as environmental conditions that interfere with or threaten the accomplishment of age-appropriate developmental tasks (Schoon, 2006).

Resilience is a dynamic process whereby individuals show adaptive actions when they experience adversity. Therefore, those fundamental conclusions refer to the ability that allows an individual to overcome adverse life events successfully and gain competence or skills from the process of overcoming challenges and adversity (Chung, 2008).

Fostering adaptive development depends on the cultural context, as well as academic, emotional, behavioral and physical adjustment. Understanding these different areas is how individuals achieve optimal functioning. Through the five key principles of the life-course approach, individuals might have optimal functioning. The reason is that human development is a life-long process in which individuals construct their own life. However, resilience depends not only on an individual’s environment, but also on the individual development. Consequently, this relation between the environment and individual development produces an elevated probability of an undesirable outcome, which is labeled as a risk. From a resilience view, there are risk factors. Wright and Masten (2005) argue that risk factors are “measurable characteristics in a group of individuals or their situations that predict negative outcomes” (p. 18).

On the other hand, protective factors are concerned with the quality of a person, context or their interaction that predicts better outcomes, specifically in situations of risk. Protective factors also moderate the impact of adversity on adaptation (Wright & Masten, 2005). According to Chung (2008), two protective factors help individuals reintegrate the disruption with resiliency: individual personal characteristics and environmental characteristics that the individual experiences.

For these reason, fostering resilience is an important task because it is how individuals overcome challenges and face difficult experiences. In addition, by fostering resilience, people can develop lifelong skills such as communication and problem-solving skills, and the ability to make realistic plans and be capable of taking the steps necessary to follow through with them.
Many studies have explored which elements increase resilience in vulnerable children. By understanding resilience, it is possible to develop preventative packages, support strategies for parents and schools, and plans to foster resiliency. Nettles, Mucherach, and Jones (as cited in Waxman, Gray, & Padron, 2003) found that family and community experiences create protective factors through the access of social resources, including caring parents, participation in extracurricular activities, and supportive teachers.

Many studies are focused on educational resilience and how to lead advances in the education of students at risk of academic failure. Studies focus on defining the differences between resilient students, students who succeed academically in school despite the presence of adversity, and non-resilient students. Some of the differences identified include family environment, perceptions of the classroom, school environment and problems caused by poverty, health and explicit social conditions. Johnson (1997) proposes that human relationships are the most critical factor in student resiliency, followed by student characteristics, family factors, community variables, and school programs.

Methodology

Research Design

The proposed methodology for this research was a case study. The project sought to understand how risk factors affected academic resilience in six middle school students, and how protective factors were developed in order to build academic resilience. The exploratory methodology made it possible to discover which risk factors were of particular importance in academic performance or resilience, and how academic resilience, as a result, became a protective factor that impacted learners’ lives.

In the case of risk factors, family and context, the literature points to the importance of developing and fostering academic resilience in children. The literature, however, did not describe which or how risk factors in contexts similar to this could remove protective factors from families. For this reason, the data collection proposed sought to identify which risk factors affected skills to overcome adversity and also describe the role of the family as a potential support strategy as a protective factor to foster academic resilience. Finally, the data sought to establish which risk factors and protective factors existed in participants’ contexts.
Context and Participants

The context for this study was a public school located in a marginalized, low-income area of Bogotá. For the purposes of the study, the school has been given a pseudonym, El Triunfo. At the time of the study, the school was what is known as a colegio de concesión.\(^3\) Colegios de concesión are public schools that the local school authority temporarily contracts through public tender to recognized educational institutions and non-profit organizations, which then operate the schools for an agreed period, with the goal of raising standards of quality.

El Triunfo school is located in an area of the city which, according to the District Planning Office of Bogotá (Secretaria Distrital de Planeacion, 2009), has had one of the most marked levels of basic needs in the city, characterized by high economic dependence on families headed by single mothers, high rates of school dropouts, overcrowding and poor housing conditions.

The participants were six students from El Triunfo school. The participants were eighth grade students, between twelve and fifteen years old. The six students were chosen based on their academic records in 2014: two low achievers, two average students, and two high achieving students. Three teachers were also chosen for the study, mathematics and music, as these were the subjects that most students failed. The art teacher was also selected because he was the homeroom teacher. The names of all the participants have been changed for the purposes of this study.

Data Collection Instruments

In order to gather a wide range of data inputs for the case studies, three different techniques were used and described: academic records, interviews, and biographical research.

**Academic records.** Academic records were used to identify potential participants in the case study. Three groups of students were chosen: above average, average and below average. During the case study, teachers’ academic assessments of students was also sought in order to establish students’ academic performance and possible related resilient behaviors.

**Interviews.** Interviews took place with three teachers, six students, and parents of three of the students. It was intended that, by carefully choosing the

\(^3\) Colegios de concesión can be roughly translated as “outsourced schools.”
participants to be interviewed, a wide range of responses could be obtained. Open-ended and semi-structured questions were designed intending to gain insight into the importance of academic resilience and protective factors.

The objective of the interview with the teachers was to know their perceptions or insights about the students’ families in order to identify risk factors and protective factors. The objective of interviewing parents was to identify how and which practices promoted academic resilience in their children, and to analyze how risk factors affected protective factors.

**Biographical research.** The objective of this was to identify which situations affect academic resilience and analyze which skills students use to become resilient. The students were asked to keep a personal journal in which they were to represent (write or draw) a difficult situation they experienced each week. The objective of this was to recognize what experiences or events affected or possibly promoted academic resilience in their daily life. The students also had a space each Tuesday in which they shared personal ideas they felt or perceived. Planned activities by the researcher were carried out in each week’s session to attempt to address the research questions.

**Data Analysis and Interpretation**

The following techniques were used to analyze the data: exploratory data analysis for interviews, participant diaries and activity sessions, and a reflective research diary after interviews and sessions. It is important to point out that the case study eventually focused only on three students: Mateo, Pablo and Miguel (high, average and low academic achievers). This is because not all the information could be gathered from all participants. The majority of information was collected from these participants.

**Interviews-sessions-diaries analysis.** Each interview, weekly sessions with the students and the reflective diary were transcribed and analyzed for recurring themes, such as risk factors and protective factors. These themes are presented in Tables 1 and 2. Table 1 represents the environmental risk factors and protective factors resulting from exploratory analysis of interviews, sessions and diaries from the participants.
Table 1. Environmental risk factors and protective factors

<table>
<thead>
<tr>
<th>Environmental Risk Factors</th>
<th>Environmental protective factors</th>
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<tbody>
<tr>
<td>Poverty</td>
<td>Low family stress</td>
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<tr>
<td>Family dysfunction</td>
<td>Child relationship</td>
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<tr>
<td>Family conflict</td>
<td>Parenting skills</td>
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<tr>
<td>Lower economic status</td>
<td>Child attachment</td>
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<td>Lack of social support</td>
<td>Role models</td>
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<tr>
<td>Marital conflict and domestic violence</td>
<td>High expectations</td>
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<tr>
<td>Harsh discipline</td>
<td>Family support</td>
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<tr>
<td>Parent is less supportive, affectionate and playful</td>
<td>Family guidance</td>
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<tr>
<td>Lack of positive parenting skills</td>
<td>Opportunities for meaningful family involvement</td>
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</tbody>
</table>

Table 2 illustrates individual factors fostering academic resilience resulting from exploratory analysis of interviews, sessions and diaries from the participants.

Table 2. Individual factors

<table>
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<tr>
<th>Academic Resilience</th>
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<td>Individual Factors</td>
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<tr>
<td>Optimism</td>
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<tr>
<td>Empathy</td>
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<td>Self-steem</td>
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<td>Direction or mission</td>
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<tr>
<td>Determination</td>
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<td>Perseverance</td>
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<td>Motivation</td>
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<td>Problem Solving Skills</td>
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</table>
In this case study, content analysis was undertaken after all interviews, sessions and diaries were conducted and transcribed. First, risk factors and protective factors were identified. Afterwards, a list of environmental risk and protective factors that emerged from the data collection was created. Each of them was interpreted. Finally, a summary of the main features was written in three individual “stories” from the results of the instruments used in the research, combining findings from all the data collected (interviews, sessions and dairies). Significant concepts were identified and highlighted as well as problems, and areas for additional research.

Results

The case study reveals how different risk factors related to the family environment and the individual characteristics of three students from El Triunfo school affect academic resilience in terms of students achieving high educational outcomes despite adversity, and how specific protective factors as family guidance, parenting skills and positive role models develop resilience skills in vulnerable teenage students.

Case 1: Mateo

Mateo was born in 2001 as the first of three children to married parents. Mateo’s parents both left school at the age of 11. Mateo’s parents work at a mini-market close to their home. They live in one of the poorest, most violent, and overcrowded neighborhoods in Bogota.

Mateo’s parents show keen interest in his education. Mateo has performed well in all academic tests. He has shown no behavior problems. His teachers rated his performance as either “average,” or “above” in all subjects. Based on the results of the five sessions and the interviews with his mother and his teachers, Mateo demonstrates in the characteristics of an individual with academic resilience despite the experience of socio-economic adversity, taking into account his academic average and his two consecutively grades of Excelencia.

Mateo’s family environment appears to be stable and supportive, based on the interview with Mateo’s mother. She described some activities they do on
weekends and how they help their children complete homework. His mother takes an active interest and involvement in Mateo’s education including career planning. The mathematics teacher expressed that Mateo is an independent and autonomous student and that his family has strong and clear agreements about schoolwork. The teacher reported that she truly believes that Mateo shows interest for learning.

As a result of the findings, we can describe this case as an academically resilient student because it is possible to consistently find a larger network of social support and higher satisfaction with that support. The student demonstrates a more autonomy-oriented and open climate in his tasks. The findings also illustrate the principle of resilience as a successful adaptation despite risk and adversity, Mateo is in a high ability group, he enjoys school, and is described by his teachers as a well-behaved boy. He shows a realistic appreciation of his abilities and references and he knows what he wants to achieve in life.

Case 2: Pablo

Pablo is the youngest of five children was born in 2001. His parents both have the same level of education, and both completed university studies. At this moment, his mother is completing a specialist degree in psychology. His father works as paralegal for the Mayor’s Office of Bogota, and his mother works in a call center. At age two, Pablo’s family lived in rented, overcrowded accommodation, but by age nine, they had moved into a new rented home. They live in a house with a cousin, so there are eight people in the house, as well as two pets.

His parents are interested in Pablo’s education. His mother reported, “If he has to make a poster, or model, he calls me at the office, tells what is needed to be done and I buy the materials if necessary, and I also ask him to make a draft of the assignment and as soon as I get home. I help him with the project, which is usually drawing the posters with markers, for him”

Pablo has not performed well in all academic tests, and he has shown some behavioral problems. The high school coordinator has a system to follow up students that arrive late to class, and Pablo has the worst attendance record of his grade. His teachers rated his performance as “on the average” in all subjects.

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4 Original Spanish: Si tiene que hacer una cartelera o una maqueta, me llama a la oficina me cuenta que hay que hacer yo compro los materiales si es necesario y le pido que haga un borrador de lo que necesita y cuando yo llegue a la casa le ayudo hacer lo que necesita, usualmente es pasar a marcador las carteleras.
Based on the results of the five sessions, the diary, and the interviews with his mother and his teachers, Pablo demonstrates the characteristics of an individual with factors that increase resilience, namely optimism and empathy, but shows a lack of determination and perseverance. In terms of the family environment, his family demonstrates a supportive family environment evident in the activities they do on weekends. Depending on the situation, the family organizes a plan to keep family bonds strong. For most of the teachers, it is difficult to hold a meeting with his mother to talk about Pablo’s difficulties. She cannot attend these meetings because of her job and studies.

As a result of the findings, we can categorize Pablo as a resilient student who is not successful academically. His family shows some protective factors that increase resilience, but academically Pablo does not show most of the self factors. Pablo’s family does not evidence these environmental protective factors, including parenting skills (supervision and discipline), low family stress and family guidance. Pablo’s case illustrates the extent to which parenting skills have a direct impact on academic resilience, but also how the individual characteristics foster resilience as well.

Case 3: Miguel

Miguel was born in 2001 as the third of three children to married parents. Miguel’s mother left school in ninth grade. Miguel’s father studied a technological program at SENA, the national vocational training institute. Miguel’s mother works as a secretary and his father is a car mechanic.

His parents in 2014 did not show a strong interest in Miguel’s education. The mathematics teacher reported in the interview that Miguel’s parents were just in the process of asking what is going on when there is nothing to do because he has not learned what he needed to learn during the school year. “This is the typical case in which the parents start showing interest about their children’s performance around the months of October or November when they are about to fail the school year, I ask myself, every time the parents come worried running to my door, asking what are assignments they need to turn in order to pass, where were those parents months ago to show their support their child needed?”

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5 The regular school calendar in Colombia goes from February to November.
6 Este es el típico caso en el que los papás se empiezan a interesar por sus hijos cuando ven que ya en octubre o noviembre van a perder el año, yo me pregunto siempre que llegan angustiados a mi puerta a saber que trabajos debe entregar donde están sus papas hace meses para brindarle el apoyo que necesitaba.
Miguel has not performed well on any academic test, and he failed the academic year. He showed some behavior problems, was absent to different classes, and did not complete homework. His teachers rated his performance as “below average” in all subjects.

Based on the results of the five sessions, the diary and the interviews with his father, his sister and his teachers, Miguel demonstrates the characteristics of an individual with a lack of optimism, direction or mission, self-esteem, determination or perseverance.

In terms of the family environment, his family demonstrated a lack of a stable and supportive family environment. His family does not appear to take an active interest and involvement in Miguel’s education including career planning. His mathematics, arts and music teachers have the same point of view about Miguel’s family.

As a result of the findings, this case demonstrates a non-academically resilient student because of the lack of environmental protective factors such as low family stress, child relationship, parenting skills, child attachment, high expectations, family support, family guidance and opportunities for meaningful family involvement.

Conclusions

This case study sought to understand how and which risk factors related to the family environment affect the academic outcome of six students from El Triunfo school, and also to explore how and which protective factors compensate specific risk factors. The findings of this study in general support the literature reviewed. From the data analyzed from this study, it was possible to conclude that a powerful predictor of the academic outcome for children is the quality of the immediate care-giving environment. According to Schoon (2006), there are two broad sets of variables working as protective factors that may impede adverse experiences. These factors include characteristics of the individual and the family environment, also presented in the data analysis and interpretation. For this reason, in this case study, risk and protective factors are characteristics of the individual and characteristics of the environment. In the analysis of information of the six participants, the study can conclude that there are specific family and individual risk factors that affect academic outcomes, and that protective factors from the family environment that minimize the effect of different risk factors:

- *Caring and support:* According to Chung (2008),”Despite the burden of parental, family discord, or chronic poverty, most children identified as resilient have had the opportunity to establish a close bond with at least
one person [not necessarily the mother or father] who provided them with stable care” (p. 46).

- **High expectations:** Associated with high expectations are different family characteristics such as structure, discipline, and clear rules and regulations. Schoon (2006) argues that families that establish high expectations for their children’s behavior from a nearly age play a role in developing resiliency.

- **Encouragement of children’s participation:** Rutter (1993) argues that families that create environments characterized by the qualities of caring, high expectations, and opportunities for participation provide support and opportunities for their children.

- **Parenting strategies:** One of the factors most consistently associated with positive academic outcomes is responsive parenting. According to Masten and Reed (2002), a wide variety of specific parenting practices are associated with children’s positive adjustment, including consistent discipline, responsiveness, structure, and monitoring.

- **Parent–child relationship quality:** The quality of the parent–child relationship has been examined in relation to positive child academic outcomes. Luthar (2003) argues that having a good relationship with a parent prepares the child to engage in healthy productive relationships with other people in the social environment.

Grouping the students based on their academic performance the study determine the following:

- **“Average and above” students.** Gonzalez and Padilla (as cited in Waxman, Gray, & Padron, 2003) found that students’ sense of belonging to school was a predictor of academic resilience. High-achieving students reported reading more pages per week, doing more homework, and having higher grades than low-achieving students.

  Based on the present study, Mateo is an academically resilient student. He has similar protective factors including parenting skills (supervision and discipline), child attachment, role models, high expectations, family support, family guidance, opportunities for meaningful family involvement and respectful communication.

- **“Average” students.** According to Johnson (2008) local activities and relationships are also important because potential and reinforce school structures and processes in which transform resilient students relationships into better support. Pablo showed some protective factors like family support, opportunities for meaningful family involvement and respectful
communication, but what made the difference between him and the “average and above” students was the individual characteristics, Pablo presents a lack of optimism, perseverance and determination.

**“Below average” students.** Johnson (1997) proposes that human relationships are the most critical factor in student resiliency. Miguel is not resilient a student because he does not succeed academically in school despite the presence of adversity. In addition, with Miguel, it was difficult to collect all the information, his parents did not attend the meeting, and he did not present his diary or attend the weekly sessions. In this specific case, there are more risk factors than protective factors that affect Miguel’s academic outcome. Finally, resilience comes from supportive relationships with parents, peers and others, as well as cultural beliefs and traditions that help people handle with the inevitable problems in life. Wright and Masten (2005) argues that “every child capable of developing a resilient “mind-set” will be able to deal more effectively with stress and pressure, to deal with everyday challenges, to develop clear and realistic goals to solve problems” (p. 4).

Limitations of the study included a lack of data sources and the limited time available for in-depth interviews, sessions and dairy register. Further research includes four next steps: 1) design a tool to collect information from all families students; 2) define clear support strategies for families who do not show protective factors; 3) create sessions for parents focused on how to foster academic resilience; and 4) teacher coaching and training.
References


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