

# A quantitative approach to the risk of exclusion based on TERCE results

## Executive summary



# A quantitative approach to the risk of exclusion based on TERCE results



**Asociación Civil Educación Para Todos**

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# Introduction

During the year 2013, the Latin American Laboratory for Assessment of Quality of Education (LLECE) carried out the Third Comparative and Explanatory Regional Study (TERCE), through a broad data collection implemented in the region.

The Asociación Civil Educación Para Todos has used these information resources in order to conduct an approach to Latin America's primary school that enables a characterization of the schooling experiences of boys and girls who transit through it, with special emphasis on those who have undergone situations of school difficulties.

With this frame as a starting point, the study aims to identify the relation between student's schooling pathways –represented with the variables of repetition and overage- and two dimensions where it is possible to identify linkages: the impact of learning, measured through the results of assessments, and the well-being of students in school, reconstructed through the students' answers

to some items of the questionnaire.

In order to reflect the schooling pathways, the indicators of “Access to preschool” and “Difficulty of the pathways” have been built. As well, an approximation to the emotional states of children in school is built in order to detect students who express a schooling experience crossed by negative connotations regarding the relationship with their teachers and peers.

This statistical relationship between schooling pathways and learning and emotional well-being in school is analyzed for the group of students who participate of TERCE. But it is also tested in different contexts, based on the variables that indicate certain characteristics of the student and his/her context.

# Main findings

1. There is a close relationship between the scores in the assessments and (i) the access from the student to preschool, and (ii) the fact of experimenting episodes of school failure, both among students of grade 3 as those in grade 6.

2. Also, a strong relationship is seen between the difficulties in the pathways and what here is referred to as "school discontent", that is, a higher frequency of statements that express an weak emotional anchorage with regards to the school. In the other hand, there is no clear relationship between not having attended preschool and school discontent, which allows to think that the condition of lag impacts negatively on the emotional link of the student with school and learning.

3. It highlights that the expressions of discontent are more frequent among boys, in all levels of difficulty during the pathway. It is also remarkable

the increment of the condition of discontent from both boys and girls as the educational lag increases.

4. It is noteworthy that among the students who attend schools in urban areas, the expressions of school discontent are greater. Instead, in rural contexts even those who have experienced iterated school failure, the discontent expressions are lower. This relationship leads to reflecting about the conditions of schooling in urban context, specially where social inequalities increase.

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NEXT PAGE



# Main findings

5. It also outstands a strong relationship between higher frequency of absenteeism and discontent. It could be linked here to the presence of low motivation to attend a social space that is perceived with high levels of discomfort. Now, the relationship between absenteeism and low results in TERCE seems to vanish when analyzing them by the schooling pathways: those students that never repeated and do not accumulate lag, even those who skip classes very often, show results above the average.

6. It is important to mention that the relationship between difficulties in the schooling pathways and low achievement is expressed even in the most diverse contexts. Among those who integrate the poorest population, the differences of results according to their pathways is statistically significant. Also for those who belong to the middle and upper sectors, the condition of repetition is associated to results far below the

average.

7. Even within students of 6<sup>th</sup> grade who work, the relation between the difficulties in the schooling pathways and lower results is sustained: those who have not repeated, even carrying out labor activities, show results above the average.

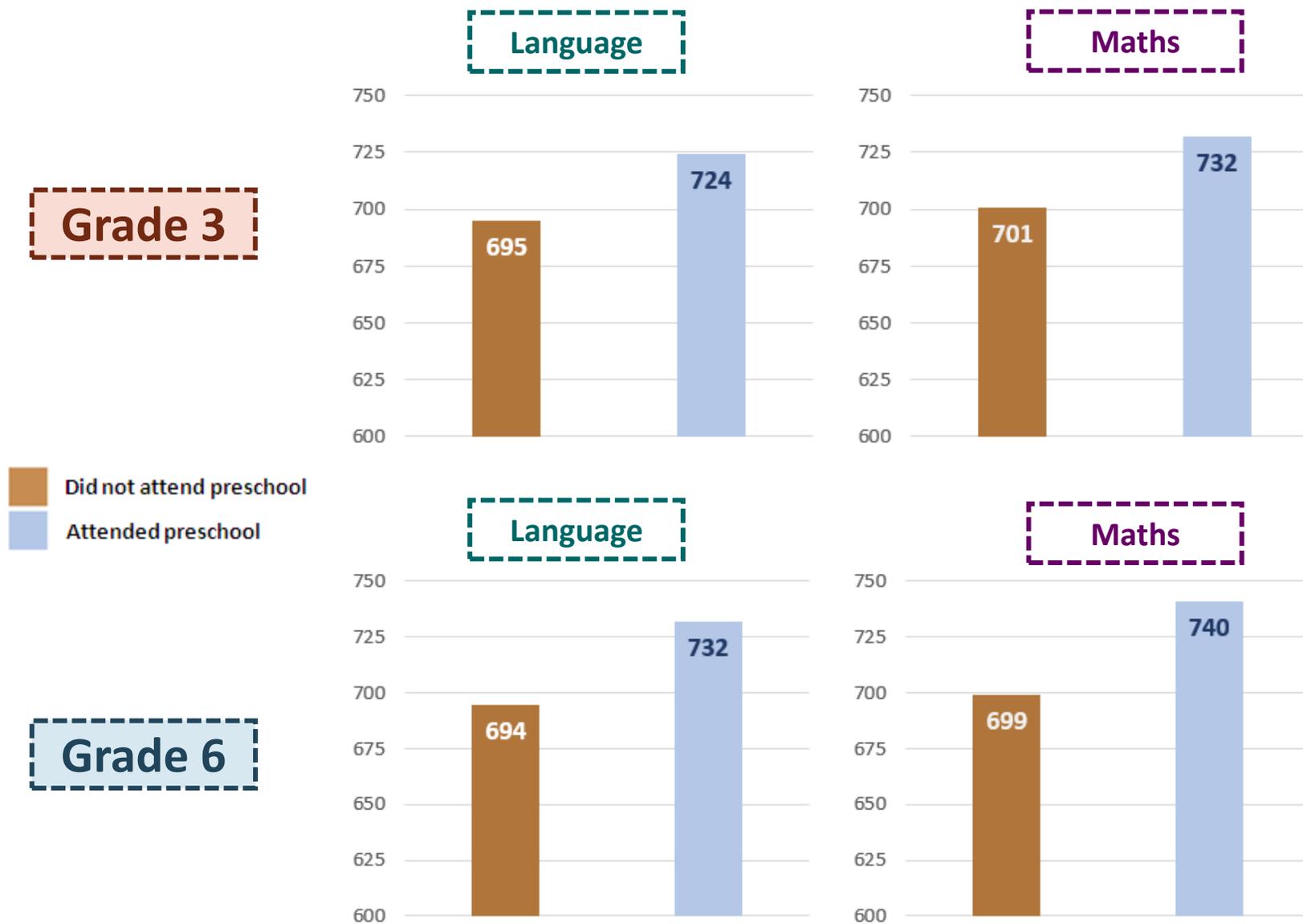
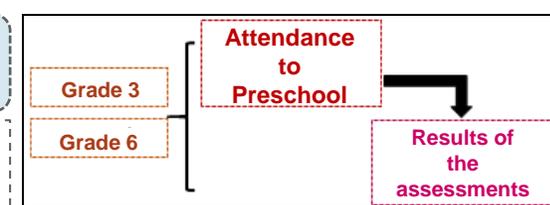
In these figures, it is analyzed the score of the assessments by students who have or have not attended preschool level.

It is observed that there is a close relationship between the scores of the assessments and the fact of having attended preschool, both within students of grade 3 and within those of grade 6.

Through the analysis of these figures, it is identified a high ration of low scores and not having attended preschool between the age of 4 and 6.

## Reconstruction of the pathways and risk of exclusion

Average score of the assessments by access to preschool, grade and subject.

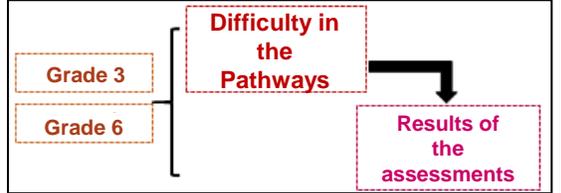


In these figures, it is analyzed the results of the assessments by the difficulty in the schooling pathways.

It is observed the existence of a close relationship between the scores in the assessments and the fact of having experienced situations of school failure, both among students of grade 3 and of grade 6.

### Reconstruction of the pathways and risk of exclusion

Average score of the assessments by difficulty in the pathways, grade and subject.

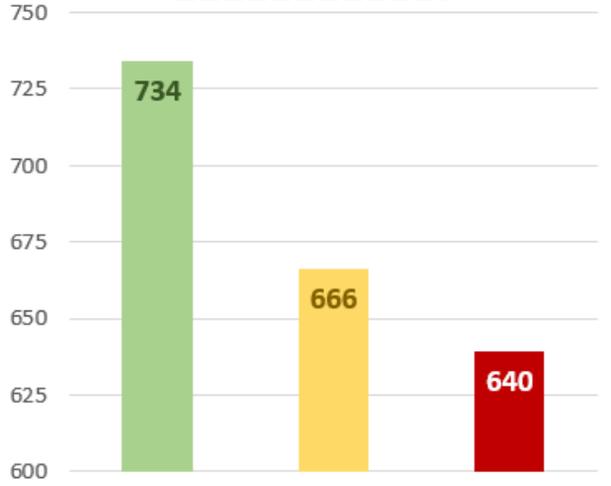


#### Grade 3

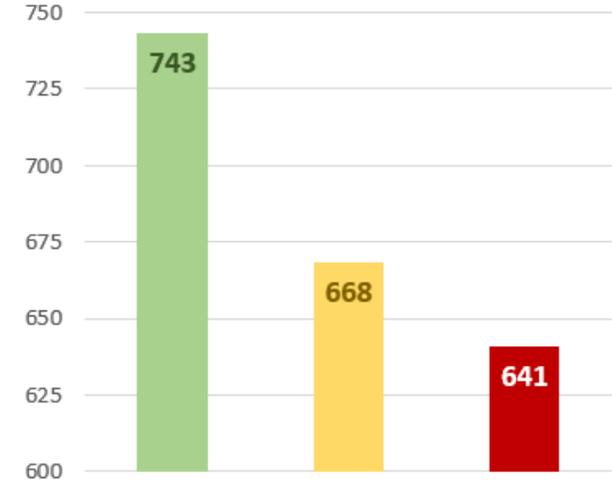
- No difficulty
- Moderate difficulty
- Great difficulty

#### Grade 6

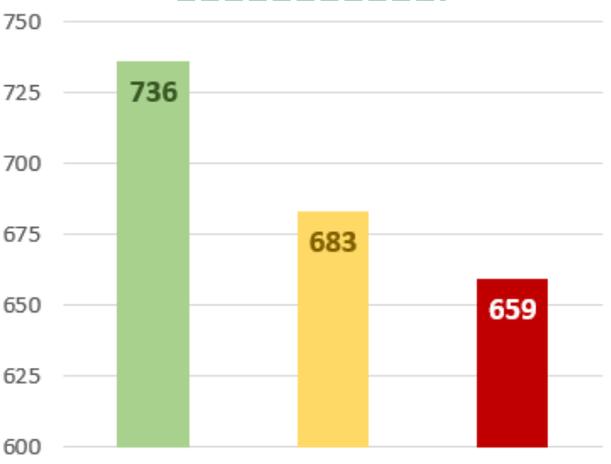
#### Language



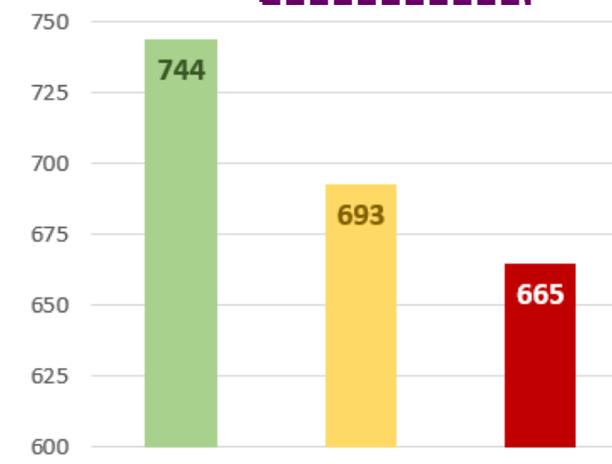
#### Maths



#### Language



#### Maths



# Reconstruction of the pathways and risk of exclusion

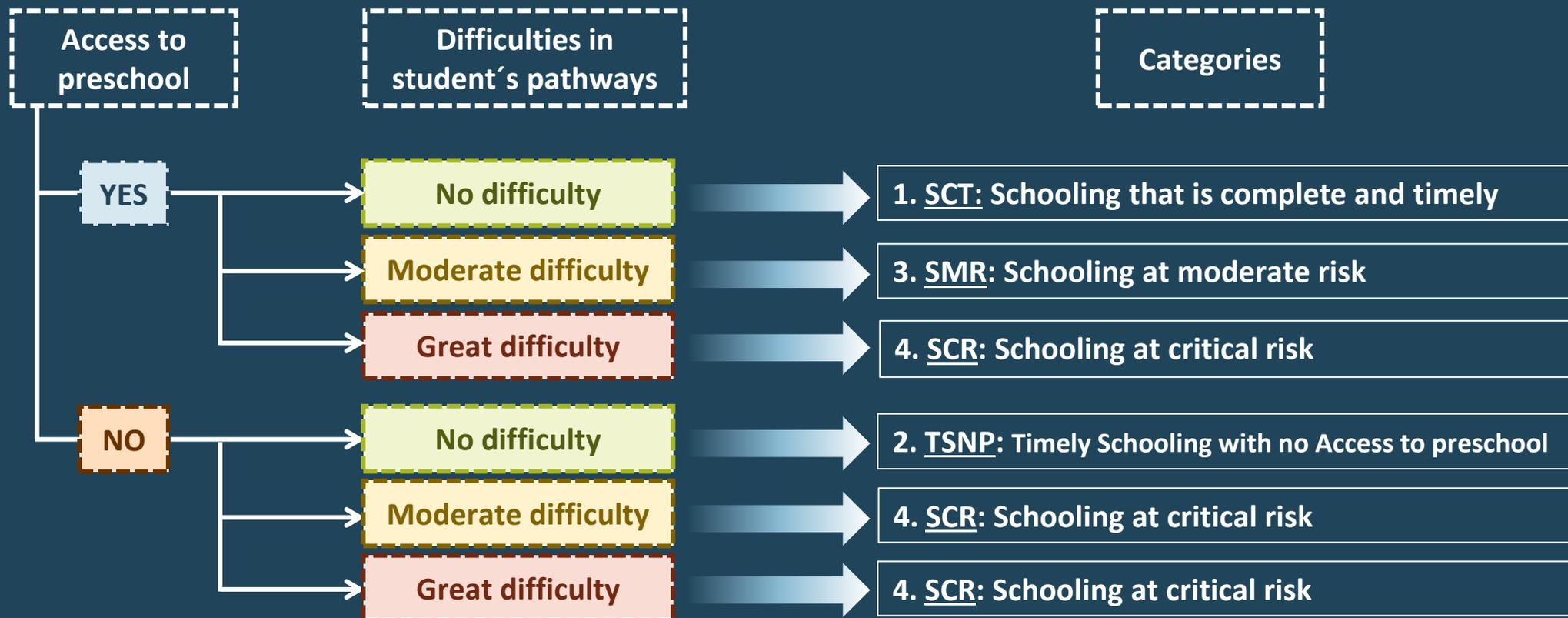
Student's pathways



Results of the assessments

## Indicador: Schooling at risk

This variable is created by the combination of "Difficulties in student's pathways" and "Access to preschool"



The result of the assessments is related with the students' pathways as well as with the condition of access to preschool.

It can be seen that as the schooling becomes critical, the scores decrease appreciably.

The approach chosen is to analyze the results of the assessments by the variable previously presented, "Schooling at risk", and by the intervening variables such as gender, condition of work, socioeconomic status, etc. for grade 3.

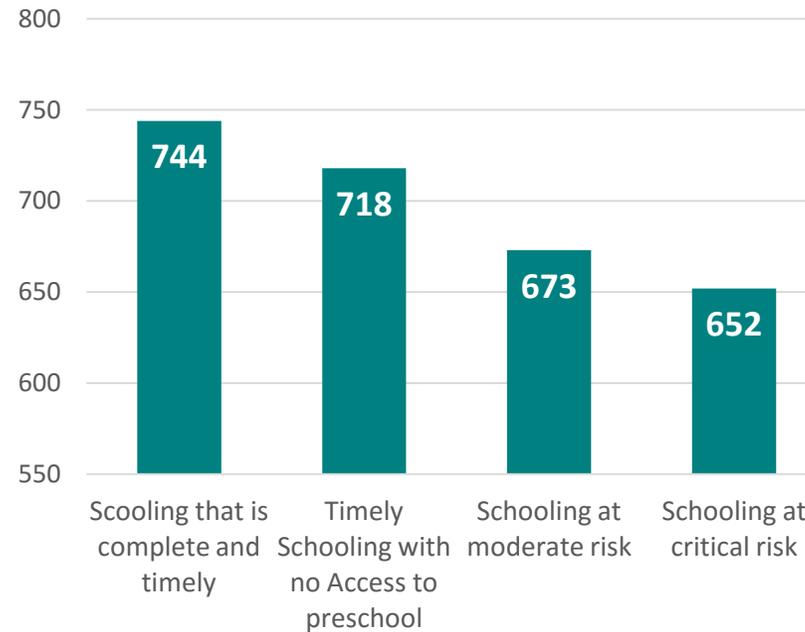
## Schooling at risk

Average results of the assessments  
by schooling risk and subject. Grade 3

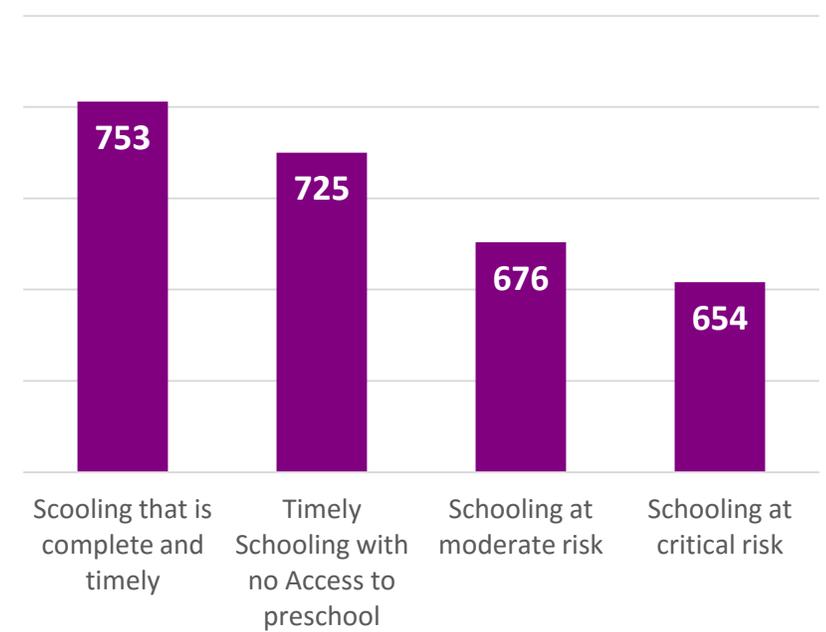


## Grade 3

### Language



### Maths



The result of the assessment is also closely related in 6<sup>th</sup> grade with the students' pathways as well as with the access to preschool.

It can be seen that as the schooling becomes critical, the scores decrease appreciably.

The approach chosen is to analyze the results of the assessments by the variable previously presented, "Schooling at risk", and by the intervening variables such as gender, condition of work, socioeconomic status, etc. for grade 6.

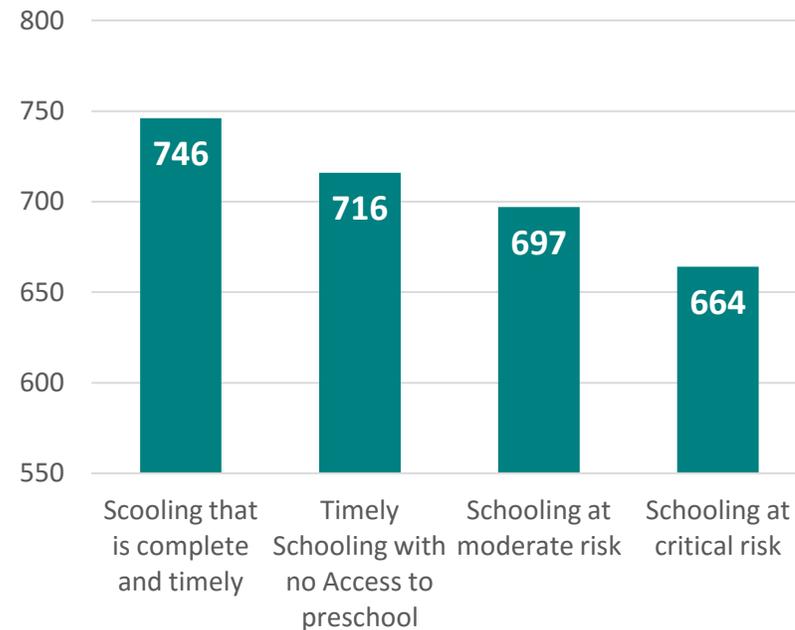
## Schooling at risk

Average results of the assessments  
by schooling risk and subject. Grade 6

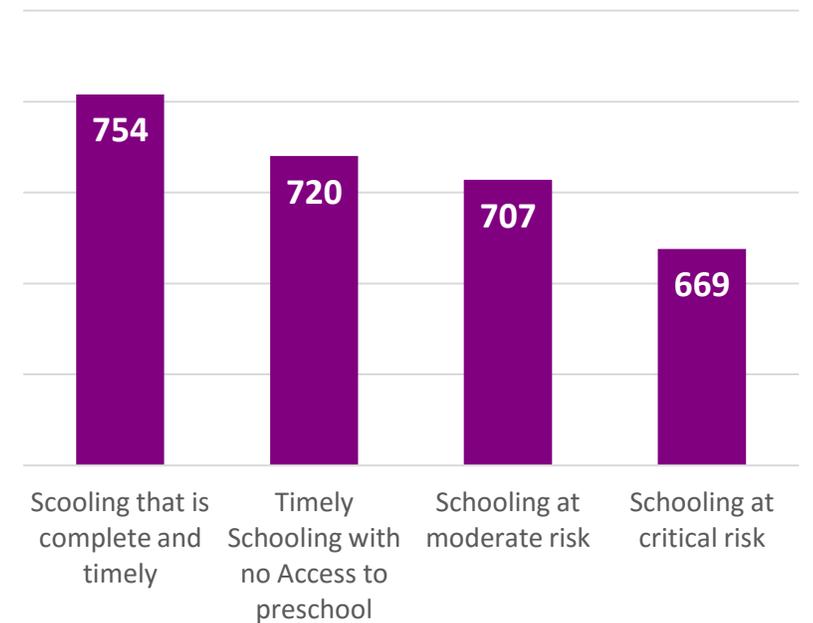


## Grade 6

### Language



### Maths

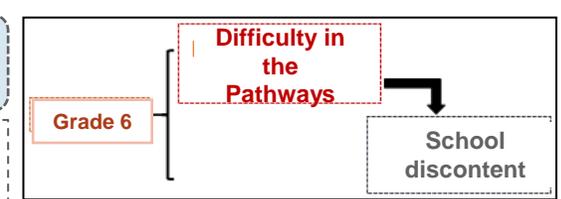


The percentage of students with school discontent increases as the schooling pathways become more complex.

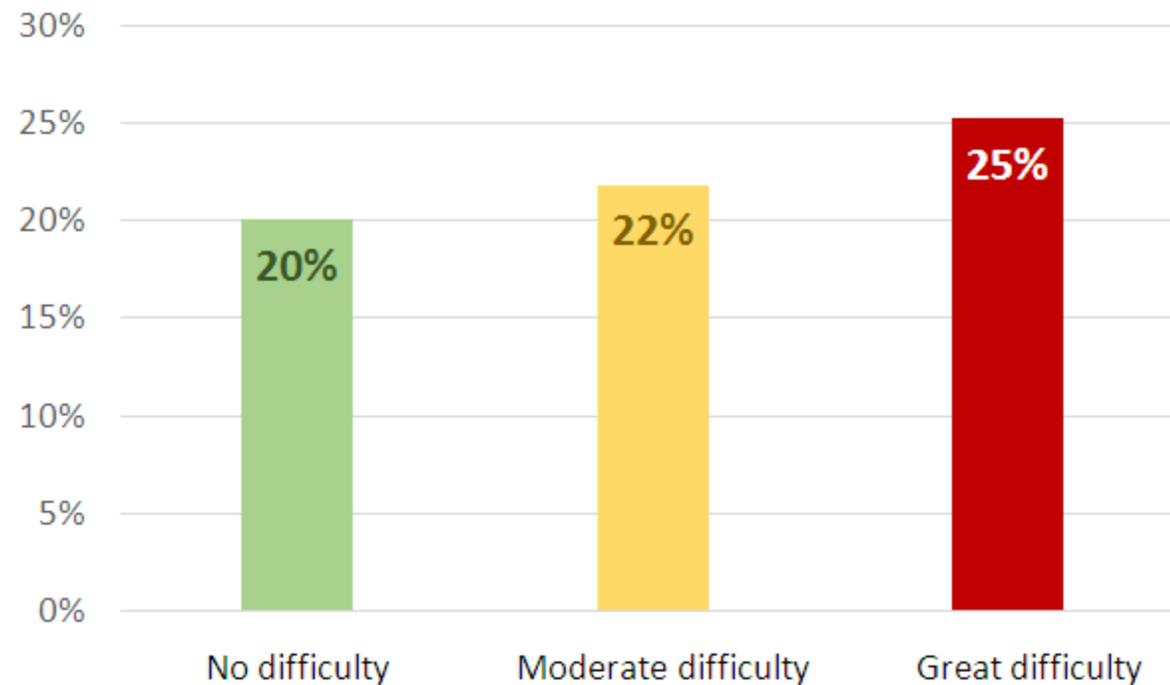
Given that this does not happen when observing the variable “Access to preschool”, the approach chosen is to analyze the indicator of school discontent only by the difficulty in the pathways and by the intervening variables such as gender, condition of work, socioeconomic status, etc. for grade 6.

## Schooling at risk

Percentage of students who express school discontent by difficulty in the pathway



### Grade 6



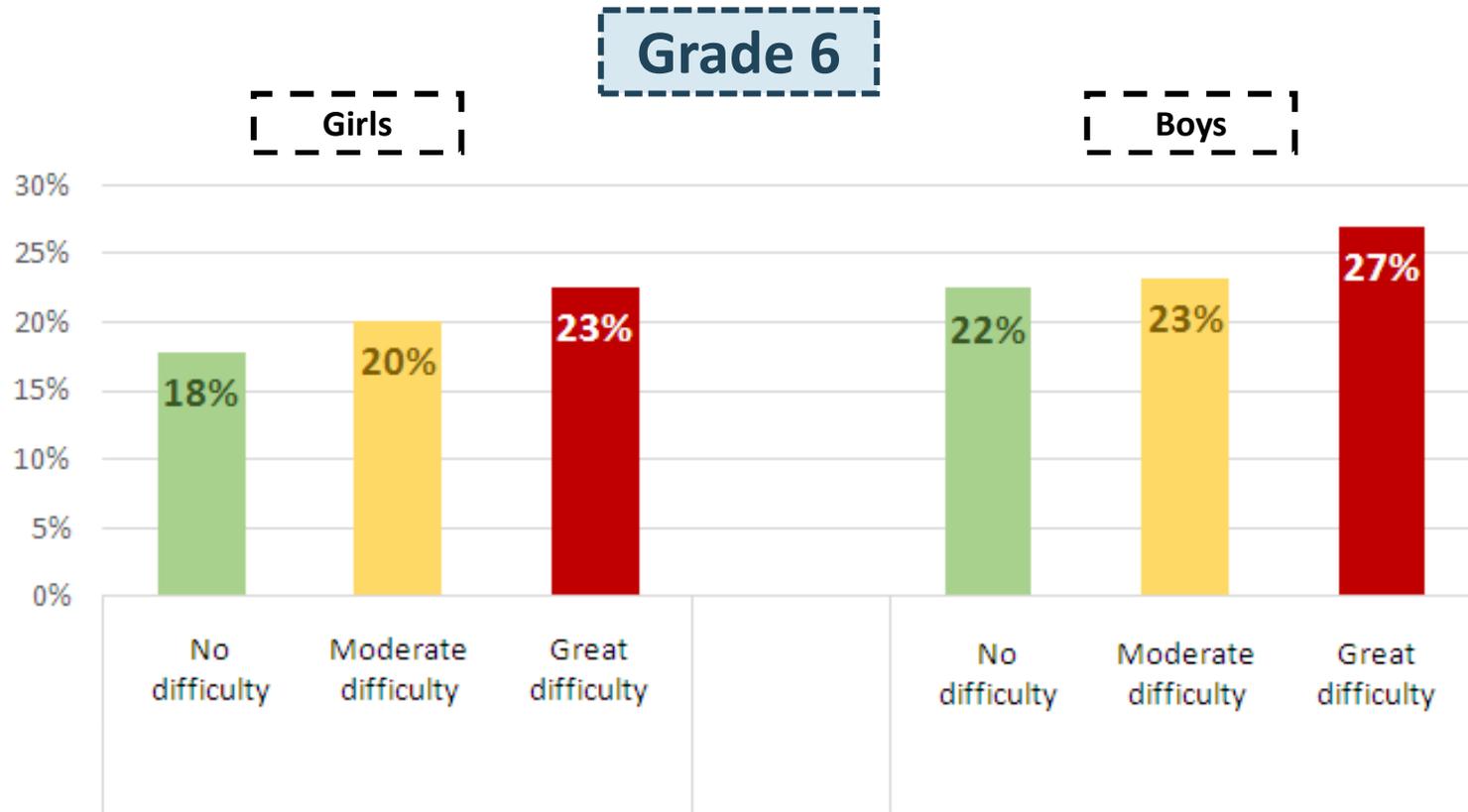
# **Schooling at risk and the link with the profiles Selected results**

## Students' emotional well-being

### Percentage of students with school discontent by difficulty in the pathways and gender



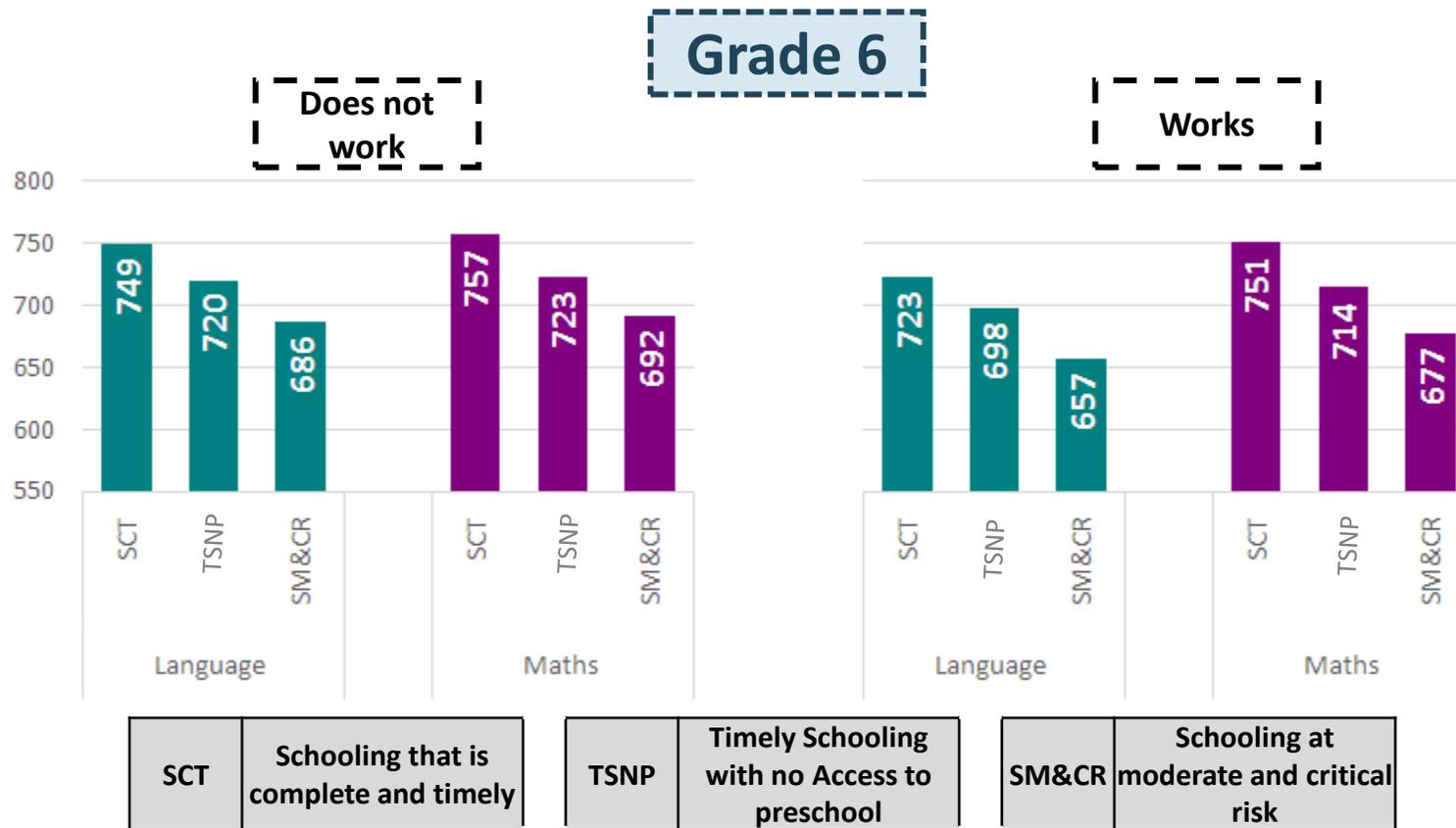
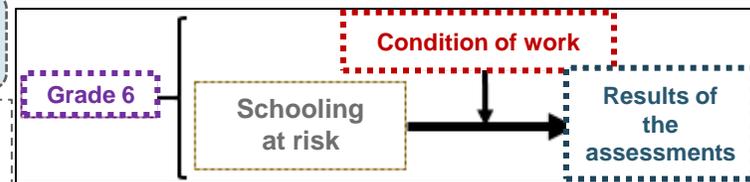
13



The figures above reflect the percentages of students who show emotional discontent in school, distinguishing by the difficulty that they present in their pathways and by gender. It outstands that boys are clearly more affected by the school discontent, in all degrees of difficulty in the pathway. The increase of such discontent is remarkable, both within boys and within girls, as the difficulty increases.

## Reconstruction of the pathways and risk of exclusion

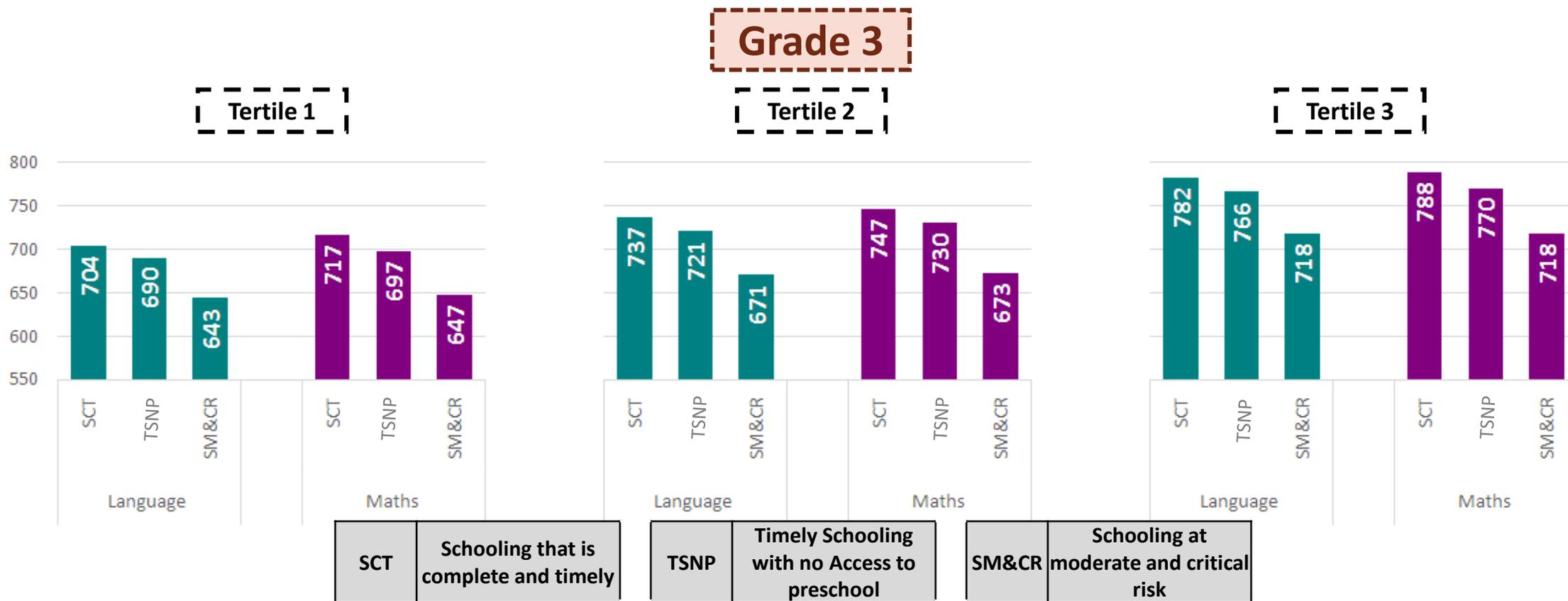
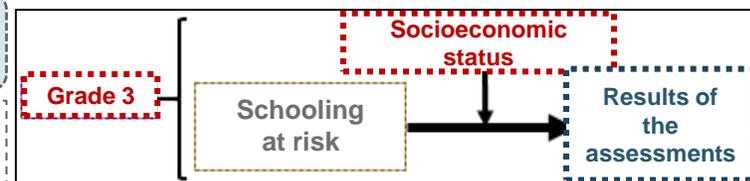
Average score of the students' assessments by schooling risk, condition of work\* and subject



(\*) For the interpretation of the results it must be considered that 12% of the sample doesn't have data regarding the analyzed variable.

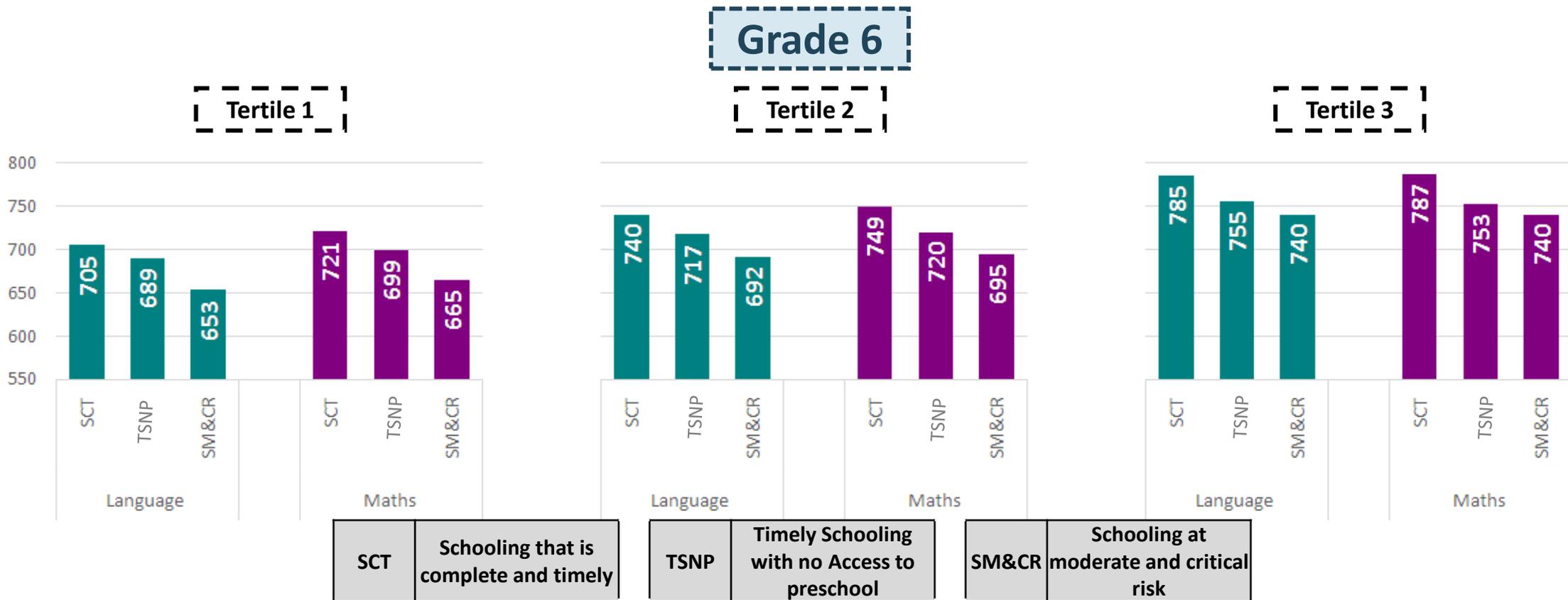
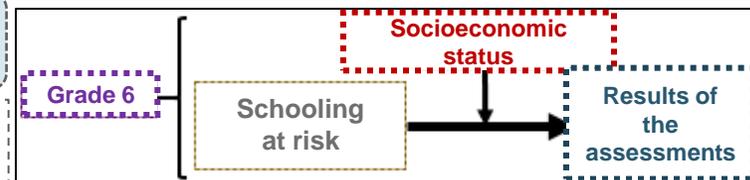
When observing the behavior of students of 6<sup>th</sup> grade between the groups of population by their condition of work, the differences become less pronounced than in 3<sup>rd</sup> grade. In Language, a more remarkable fall can be seen among those who work as their schooling pathways become more complex. Here, for example, it is possible to preview that the students who transit through a schooling at moderate risk and who also work, show similar results compared to those who do not work but who are facing critical risk in their schooling.

## Reconstruction of the pathways and risk of exclusion

 Average score of the students' assessments  
 by schooling risk, socioeconomic status and subject


In this figure, the intervening variable is the socioeconomic status of students of 3<sup>rd</sup> grade. It can be clearly seen that among those who integrate the tertile of lower income (tertile 1), the results of the assessments are lower than among those in the higher income tertiles (tertiles 2 and 3). Among tertile 1, the figures show that the higher results in the assessments, correspond to the students who have transitioned their schooling in a timely and comprehensive manner, and these results are similar to those shown by the students of tertiles 2 and 3 whose schooling is at moderate risk or who have not accessed preschool. In all the groups it is possible to highlight that the better results correspond to Maths.

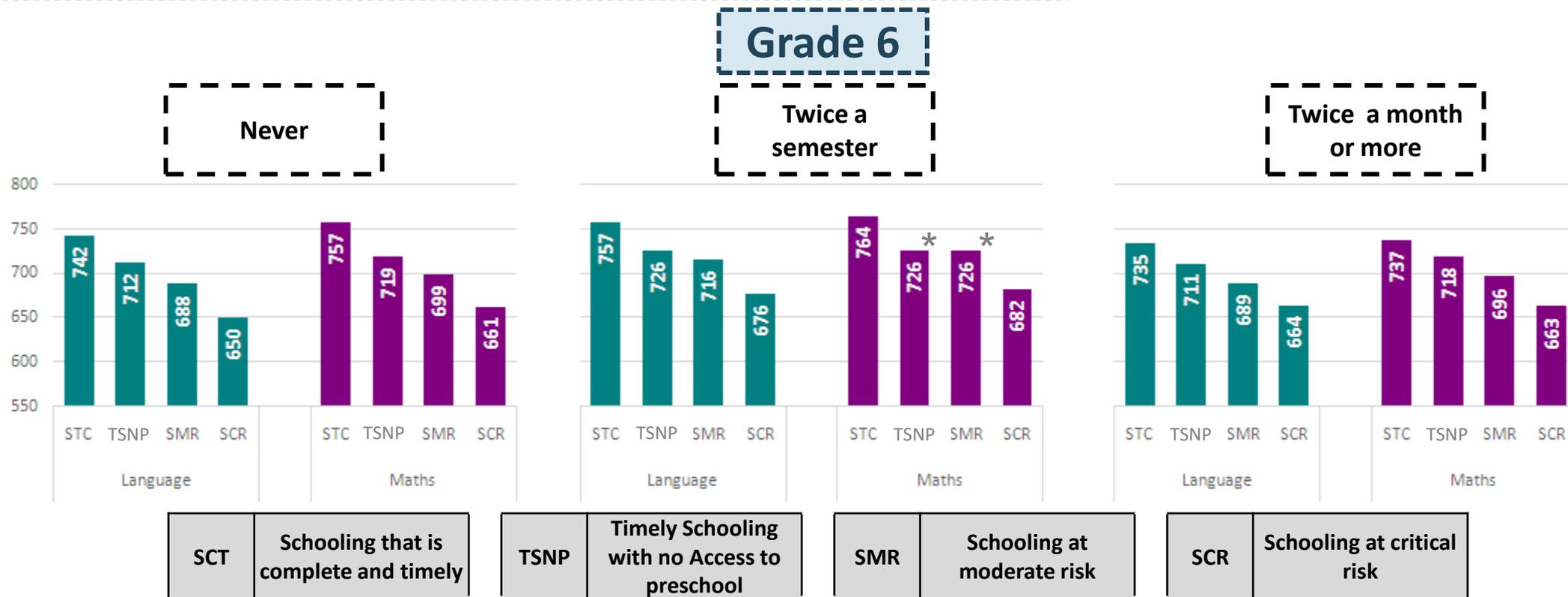
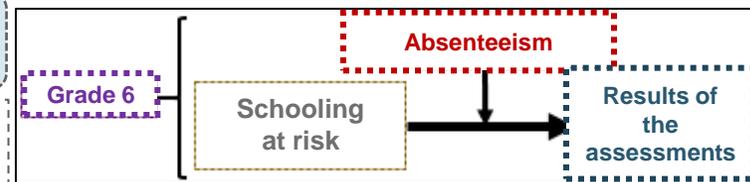
## Reconstruction of the pathways and risk of exclusion

 Average score of the students' assessments  
 by schooling risk, socioeconomic status and subject


As it was observed among students of 3<sup>rd</sup> grade, analyzing now the results of the assessments of those who attend 6<sup>th</sup> grade the lowest results are shown by the children integrating the lower tertiles. The comparison between tertiles of population enables to highlight that the results achieved in the assessments by the students of the lower income tertiles but with timely and comprehensive schooling are similar to the results shown by the students with schooling at moderate risk or who have not accessed preschool, but who belong to higher income tertiles.

## Reconstruction of the pathways and risk of exclusion

Average score of the students' assessments by schooling risk, absenteeism\*\* and subject



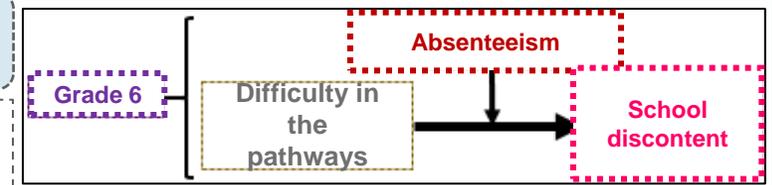
(\*) The differences highlighted by asterisks are not statistically significant for estimates based on 95% confidence.

(\*\*) For the interpretation of the results it must be considered that 15% of the sample doesn't have data regarding the analyzed variable.

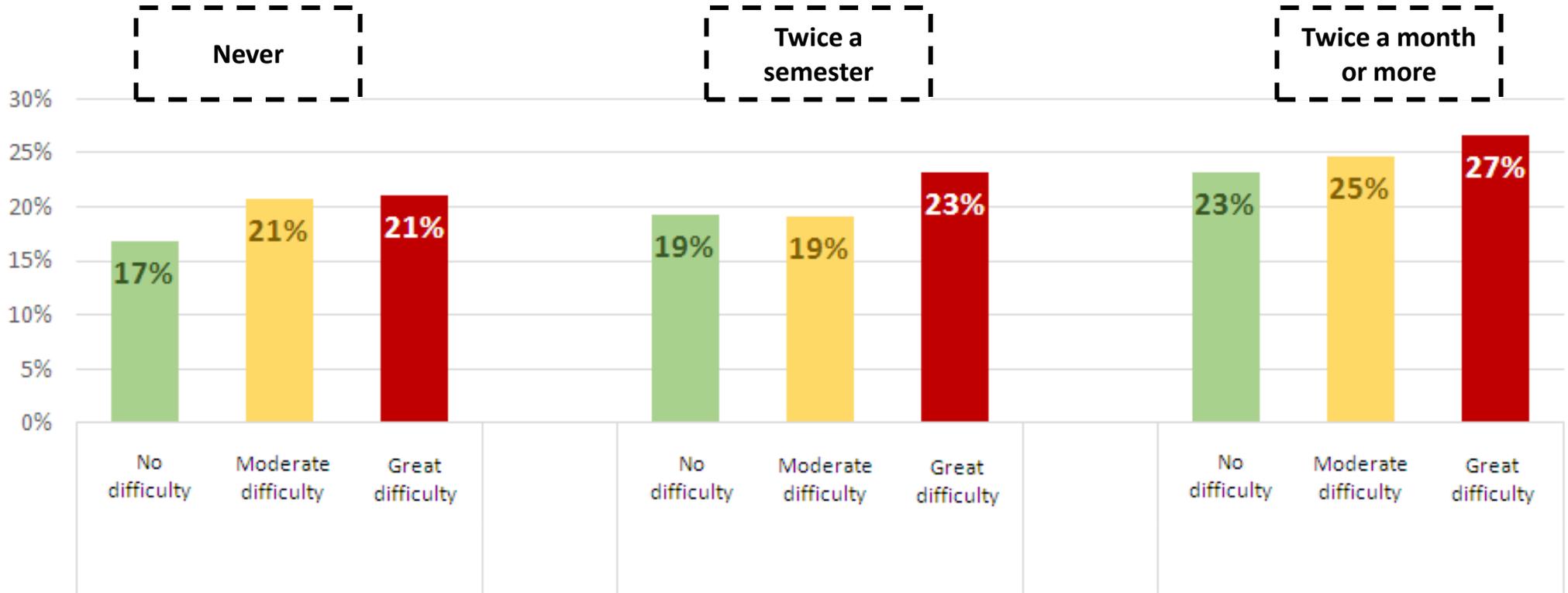
Among those who attend 6<sup>th</sup> grade, the results achieved in the assessments do not generally show great differences among the groups according to their absenteeism level. Even if the group which shows lower results corresponds to those who have missed classes twice a month or more, that is, the group with higher absenteeism, the differences across the 4 groups are not very noticeable.

# Students' emotional well-being

## Percentage of students with school discontent by difficulty in the pathway and absenteeism

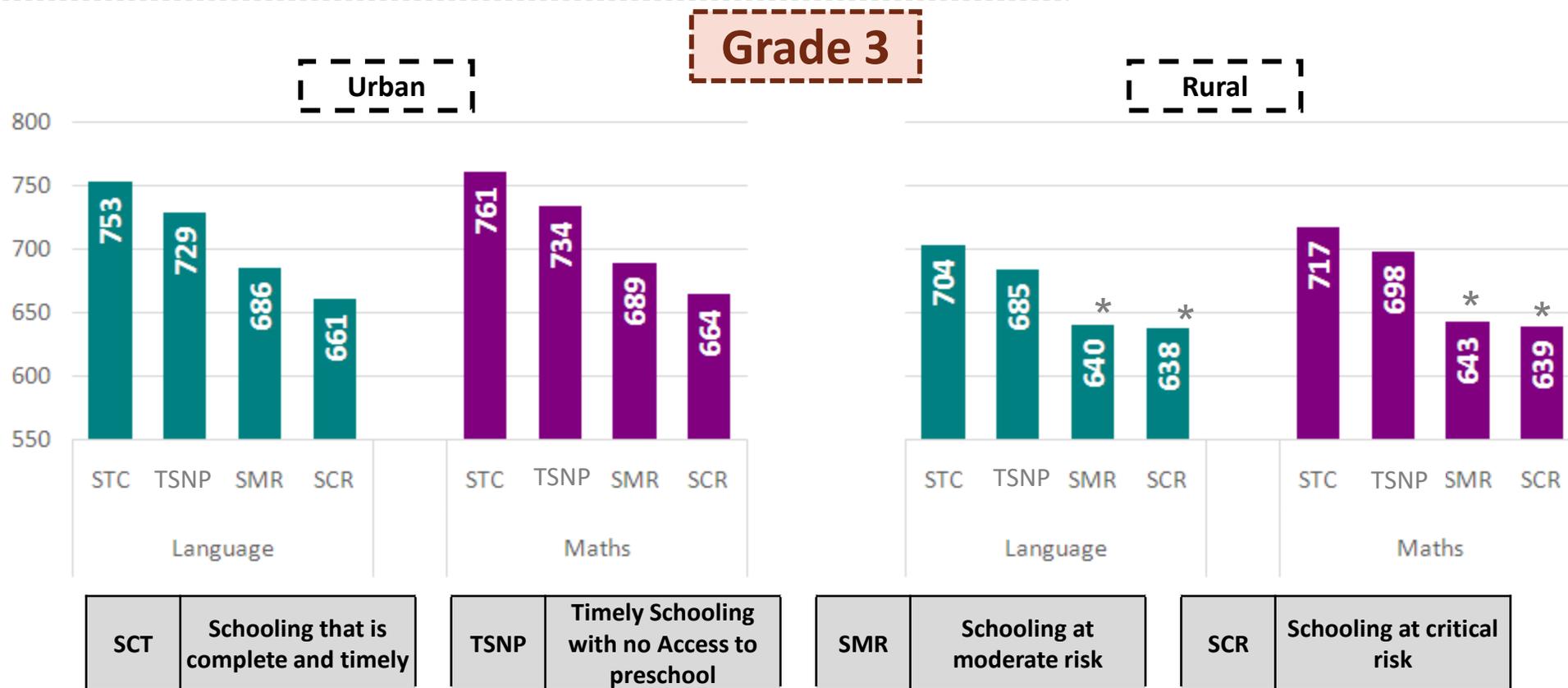
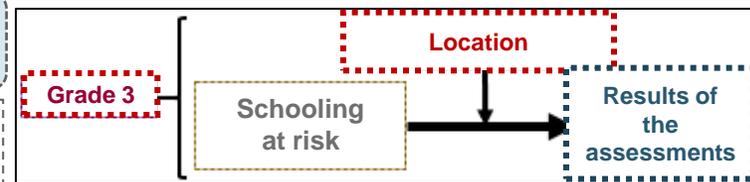


### Grade 6



It can be observed in the graphs that in the groups that tread their pathways without difficulty and those that tread it with severe difficulty there is a easily recognizable trend. The data shows that as the absenteeism grows, the school discontent becomes greater for students. The students who show a severe difficulty in their schooling pathway, and whose absenteeism increases up to once or twice a week, are the most affected by the feeling of been discontent at school.

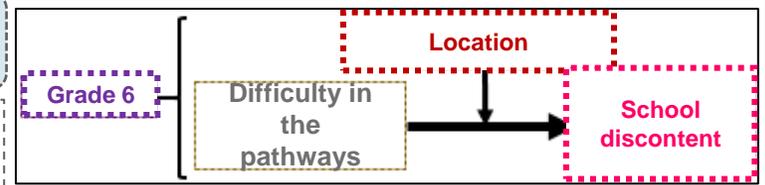
## Reconstruction of the pathways and risk of exclusion

 Average score of the students' assessments  
 by schooling risk, by school location and subject


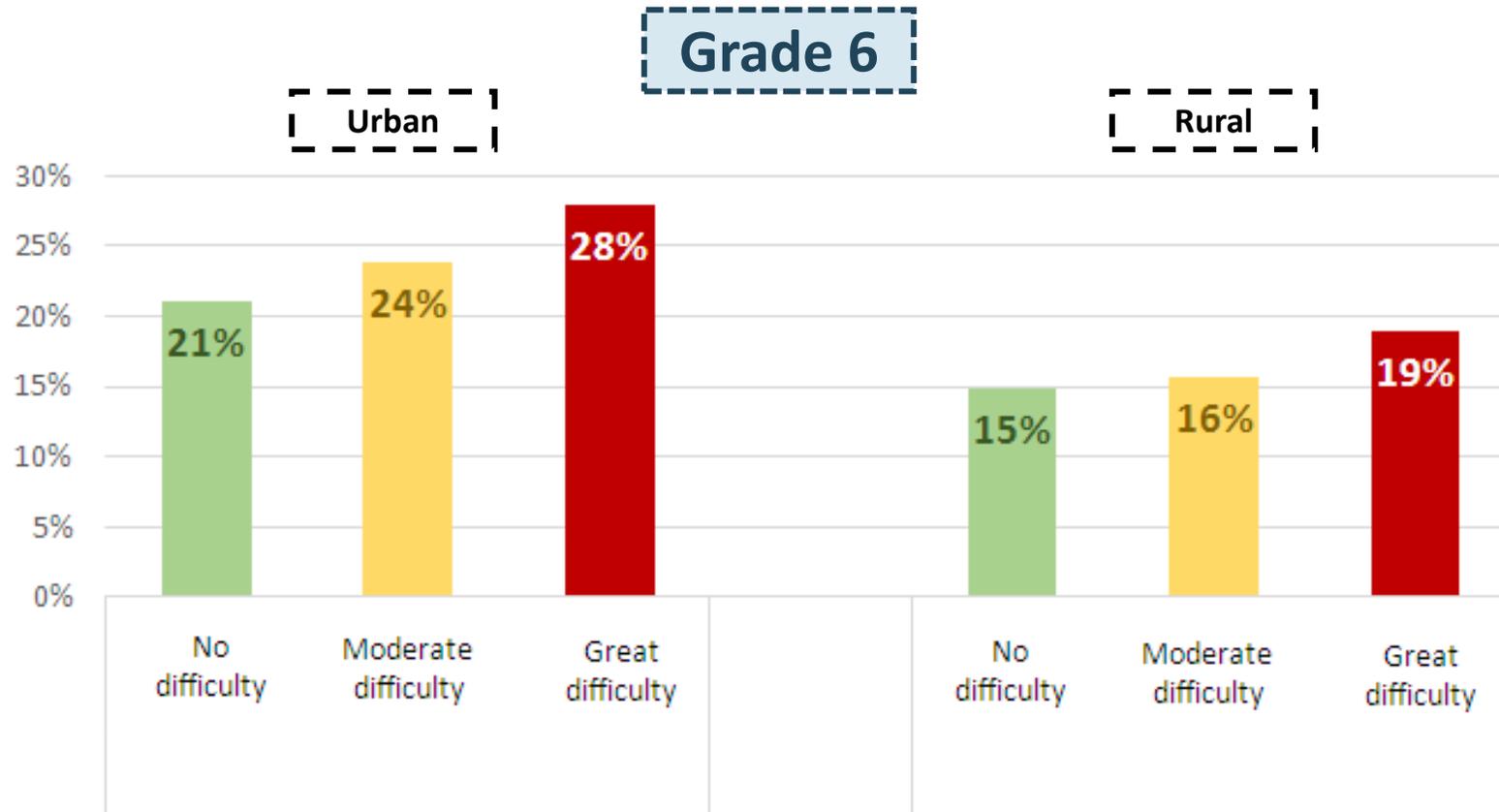
(\*) The differences highlighted by asterisks are not statistically significant for estimates based on 95% confidence.

The attendance to rural schools is the intervening variable that is analyzed in the figures above. It is observed that the students of 3<sup>rd</sup> grade who attend rural schools have achieved lower results in the assessments, with remarkable drops as the pathways become more complex. It is highlighted that in rural locations there is not much difference between STC and TSNP. This can be related to the fact that exclusion from preschool in rural areas may depend in a greater measure to the lack of supply, while in the urban locations there may be a higher impact of the socioeconomic variable. Something to remark is that in the rural locations there is practically no difference between SMR and SCR.

## Students' emotional well-being



Percentage of students with school discontent, by difficulty in the pathway and by school location



While within the students who attend schools in urban areas, the percentage of students with school discontent increases as the difficulty in their pathways grows higher, among those who attend schools in rural locations the increment is less intense. In all cases, the percentage of students with school discontent is higher among those who attend urban schools.