



ELSEVIER



Available online at www.sciencedirect.com

ScienceDirect

Procedia - Social and Behavioral Sciences 205 (2015) 168 – 172

Procedia
Social and Behavioral Sciences

6th World conference on Psychology Counseling and Guidance, 14 - 16 May 2015

A Multilevel Structural Equation Model Testing the Influences of Socio-Economic Status and Pre-Primary Education on Reading Literacy in Italy

Fabio Alivernini^{a*}, Sara Manganelli^a

^aNational Institute for the Educational Evaluation of Instruction and Training (INVALSI), Via Borromini, 5 – 00044 Frascati (RM), Italy

Abstract

The aim of the present study is to examine the effect of Socio-Economic Status (SES), individual and compositional effects, and of pre-primary education on reading literacy in Italy. A multilevel structural equation model was used to examine data from 4189 fourth grade Italian students who took part in the Progress in International Reading Literacy Study (PIRLS). SES showed a significant positive direct impact on reading literacy at both student level and school level, while pre-primary education did not have a significant impact on reading literacy. The multi-group analysis showed that there were no significant differences between Italian geographical areas.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of Academic World Research and Education Center.

Keywords: reading literacy; pre-primary education; socio-economic status; multilevel structural equation modeling; PIRLS 2011.

1. Introduction

Several studies detected a large gap in the reading performance of the students in the most socio-economically disadvantaged Italian regions (INVALSI, 2012; INVALSI, 2013). According to the PIRLS 2011 theoretical framework (Mullis, Martin, Kennedy, Trong, & Sainsbury, 2009) socio-economic status and pre-primary education can positively affect reading performance. Many PIRLS countries have a specific program for early childhood education (Mullis, Martin, Minnich, Drucker, & Ragan, 2012) and in Italy non-compulsory pre-primary education is provided for children before 6 years of age. Various studies showed a strong positive relationship between socio-

* Fabio Alivernini. Tel.: +390694185345.

E-mail address: fabio.alivernini@invalsi.it

economic background at the student level (Mullis et Al., 2012) as well as at the school level (Alivernini, 2013) and reading achievement. Additionally, there is some evidence that fourth grade students with at least three years of pre-primary education had higher reading performances than their counterparts (e.g., Mullis, Martin, Foy, & Drucker, 2012). Although there is some evidence (e.g., Berlinski, Galiani, & Gertler) for the benefits of pre-primary education, there is a lack of studies evaluating the effect of pre-primary education on students' achievement while taking into account the role of SES at both student level and school level.

1.1. Purpose of the study

The aim of the present study was to examine the effects of Socio-Economic Status (SES), individual and compositional effects, and pre-primary education on reading literacy in Italy. A focus of the study was on comparing Italian PON regions¹ (the lowest performing Italian Southern regions according to preceding information from various studies, e.g. INVALSI, 2012; INVALSI, 2013) with data from other geographical areas, in order to better understand the performance gap between different geographical areas in Italy. In order to achieve these goals a multilevel multi-group structural equation model, based on PIRLS 2011 Italian data, was developed and tested.

2. Method

2.1. Participants and procedure

The data analyzed in the present study came from the nationally representative sample of 4189 fourth grade Italian students (49.6% boys) and their parents who took part in the PIRLS 2011 study. Participating students attended 202 primary schools randomly selected from the population of Italian primary schools. In each sampled school, one or two whole classrooms were selected, and all the students in each class were assessed for the survey. Students completed the PIRLS reading literacy test and the Student Questionnaire in the classes during an ordinary school day. Parents completed the Learning to Read Questionnaire at home.

2.2. Measures

The PIRLS reading literacy test was used to assess students' achievement in reading, the Student Questionnaire and the Learning to Read Questionnaire were used to assess SES and pre-primary education.

Students' achievement in reading was measured using a test consisting of 135 constructed-response and multiple-choice items. The test items were distributed across 13 booklets and each student completed one booklet (Martin & Mullis, 2012). Item Response Theory models were employed to derive the reading proficiency scale from the 135 items and the plausible value methodology was used to generate five estimates of reading literacy scores for each student (Martin & Mullis, 2012). The first of the five estimates was used in the present study. The analyses were replicated using the second and the third plausible value and the results proved to be stable.

Pre-primary education was measured using 1 item in which parents indicated how long their child attended pre-primary school (ranging from: 0=no pre-primary; 1=1 year or less; 2=between 1 and 2 years; 3=2 years; 4=between 2 and 3 years; 5=3 years or more).

The following indices (Van Damme, Liu, Vanhee, & Pustjens, 2010) were used as indicators of SES:

- Number of books at home: 1 item from the Student Questionnaire, ranging from 1 (0-10 books) to 5 (more than 200 books).

¹Italian PON (Programma Operativo Nazionale – National Operational Programme Education) regions are: Sicily, Apulia, Calabria and Campania. The PON is the program document for the period 2007 – 2013, upon which the support for the development of human resources with the use of the European Social Fund and national resources is provided.

Download English Version:

<https://daneshyari.com/en/article/1108297>

Download Persian Version:

<https://daneshyari.com/article/1108297>

[Daneshyari.com](https://daneshyari.com)