

Addressing medical absenteeism among pre-vocational secondary students: effectiveness of a public health intervention.

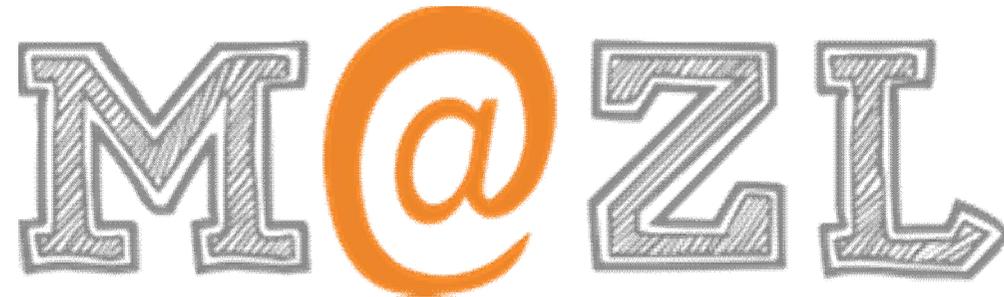


EUSUHM, Estonia-Tallinn

4 June 2015

Yvonne Vanneste, the Netherlands



The logo consists of the letters 'M', '@', 'Z', and 'L' in a stylized, hand-drawn font. The '@' symbol is orange, while the other letters are grey with a white outline and a hatched texture.

**Dutch intervention 'Medical Advice for Sick-reported Students',
abbreviated as MASS**

**In Dutch: 'Medische Advisering van de Ziekgemelde Leerling',
abbreviated as M@ZL**



This presentation

- School absenteeism and health inequalities
- Description of the MASS intervention
- Effect study:
 - Objective
 - Methods
 - Results
 - Discussion and conclusions
- European perspective?
- Any questions?



School absenteeism and health inequalities

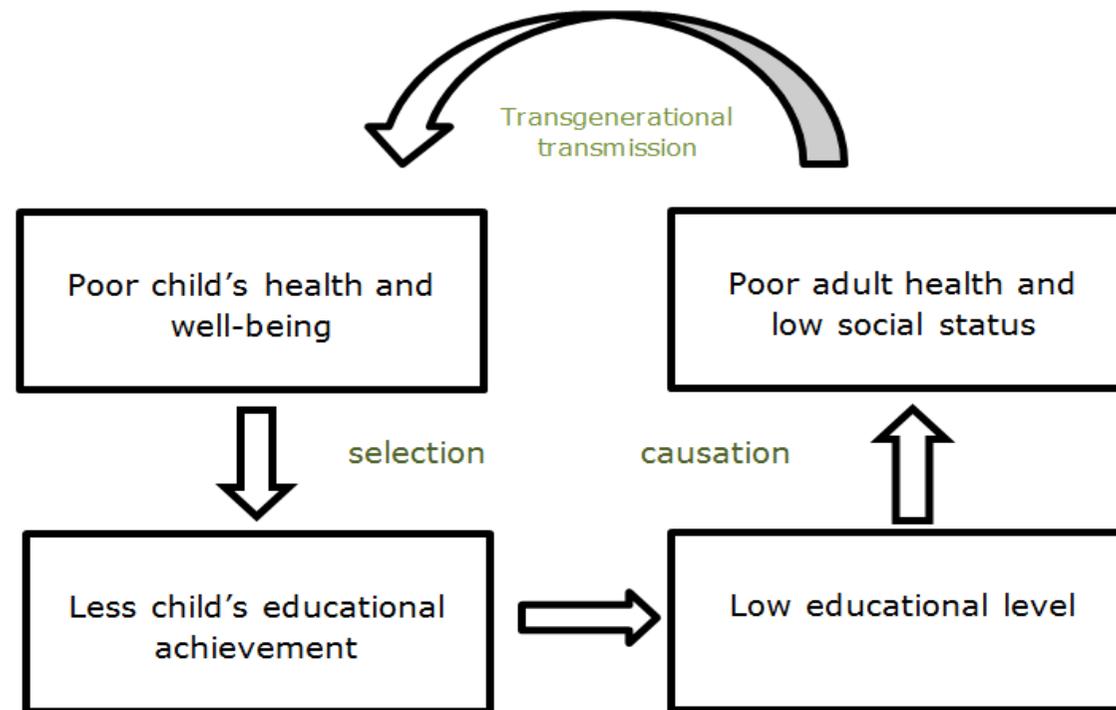
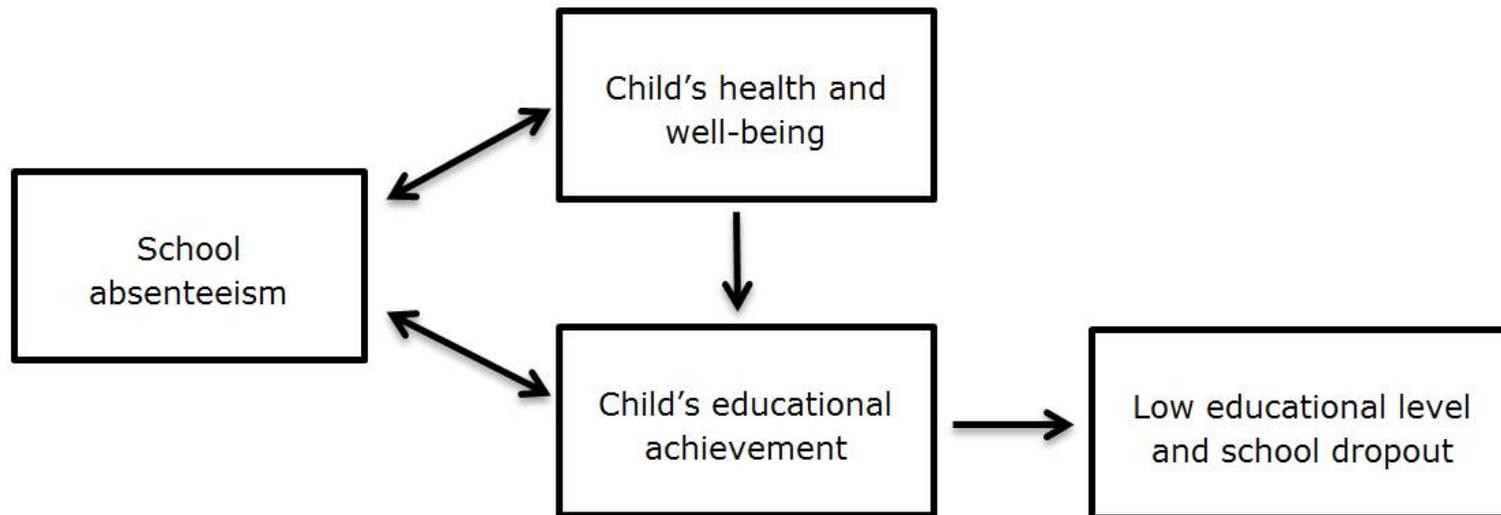


Figure 2: Visualisation of the causation and selection process, and the transgenerational transmission of a low socioeconomic (health) status in a life-time perspective. Source: Adapted from Allensworth (2010) [80] and Murray et al. (2006) [91].



School absenteeism and health inequalities



Visualisation of the correlation between school absenteeism, young people's development and low educational level and school dropout.



School absenteeism and health inequalities



The interdependence between school absenteeism and students' health is definitely reflected in medical absenteeism.

In the Netherlands, a public health intervention has been developed to address medical absenteeism in pre-vocational secondary education.

The MASS intervention

Provides

- a clear *framework*
- in which *schools*,
- in collaboration with *youth health care physicians*,
- are able to *reach* students and their parents,
- *discuss* aspects of the student's medical absence, and
- design and monitor a management *plan*

Aims to optimize students' health and maximize students' participation in school activities.



Maastricht University *Leading in Learning!*



Basic principles

Step 1 School's policy:

- Inclusion in school policy
- Communication about the new policy in case of absenteeism because of medical reasons.

Step 2 Referral to the youth health care physician (YHCP):

- Identification of students with extensive medical absence by using the MASS-criteria.
- Referral to the YHCP for student and parents.

MASS-criteria: four times reported sick in 12 school weeks or more than six consecutive days.

Basic principles

Step 3 Consultation of student and parents with the YHCP:

- Analysis of underlying diseases and/or problems to account for the absence.
- Designing a management plan, including agreements on cure, care and school attendance.

Step 4 Monitoring the management plan:

- Monitoring the execution of the management plan.



The objective of the study

To investigate the effectiveness of MASS on students' medical absenteeism



Methods; study design and population

A quasi-experimental design with an intervention group and a control group has been used.

7 intervention schools (MASS) and 7 control schools ('care-as-usual'):

- Characteristics: urbanisation, fields of education, school size.
- Retrospective recruiting of the data of the controls

Resulting in an intervention group of 493 students and 445 control students



Methods; data collection and outcome measurements

The level of medical absence was measured at three points in time:

- For the intervention group, the first time (T_0) was when the student was invited to the YHCP.
- For the control group, the first time (T_0) was on December 1 or February 1. After 12 school weeks (T_1) and 12 months (T_2) the measurement was repeated.

The level of a student's medical absence was measured as:

- the number of absence periods and
- the number of absence days by reporting sick during the 12 school weeks prior to the three measurement points.



Methods; statistical analysis

- To determine differences in socio-demographic variables between the intervention group and the control group:
 - Pearson's chi-squared tests (for categorical variables)
 - Student's t-test (for continuous variables)
- To study differences in the development of the level of a student's medical absence over time:
 - multilevel analysis



Results: characteristics

Table 2: The selected demographic characteristics and the initial values of medical absenteeism of the intervention and control groups.

| | Intervention group (493) | Control group (445) | Statistical values |
|--|--------------------------|---------------------|---------------------------|
| Gender, % male | 44.2* | 35.7 | $\chi^2=7.01^{**}$, df=1 |
| Age in years, mean (SD) | 14.54 (1.32) | 14.32 (1.28) | t=2.49* |
| Absence rate in periods per 12 school weeks, mean (SD) | 3.91 (1.62)** | 4.50 (1.16) | t=-6.20** |
| Absence rate in days per 12 school weeks, mean (SD) | 8.40 (5.39)* | 9.92 (5.39) | t=-4.27** |
| Number of days per period | 2.29 (1.53) | 2.39 (1.67) | t=-0.95 |

* $p \leq 0.05$; ** $p \leq 0.01$.



Results:

number of absence periods

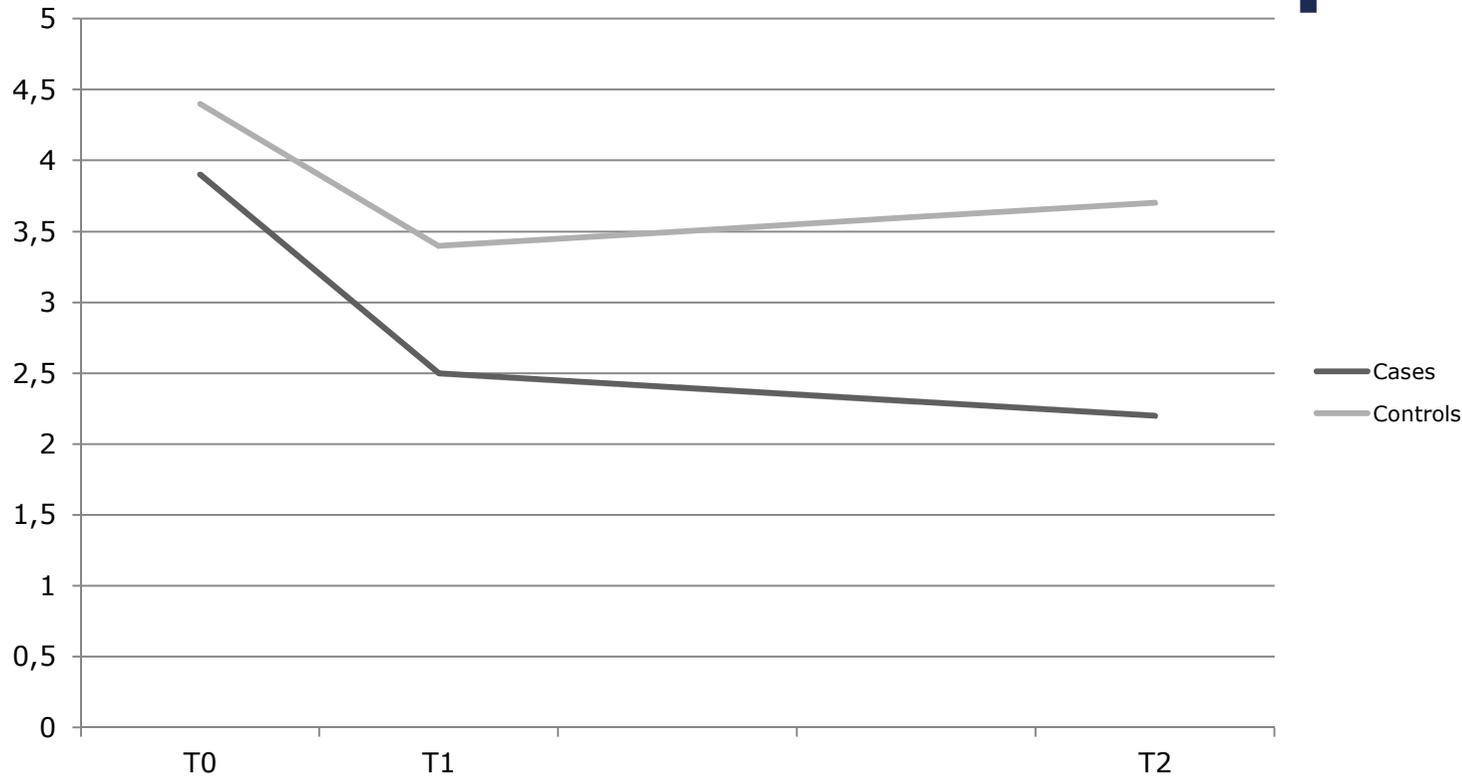


Figure 1: The progress of the absenteeism in number of periods.



Results:

number of absence days

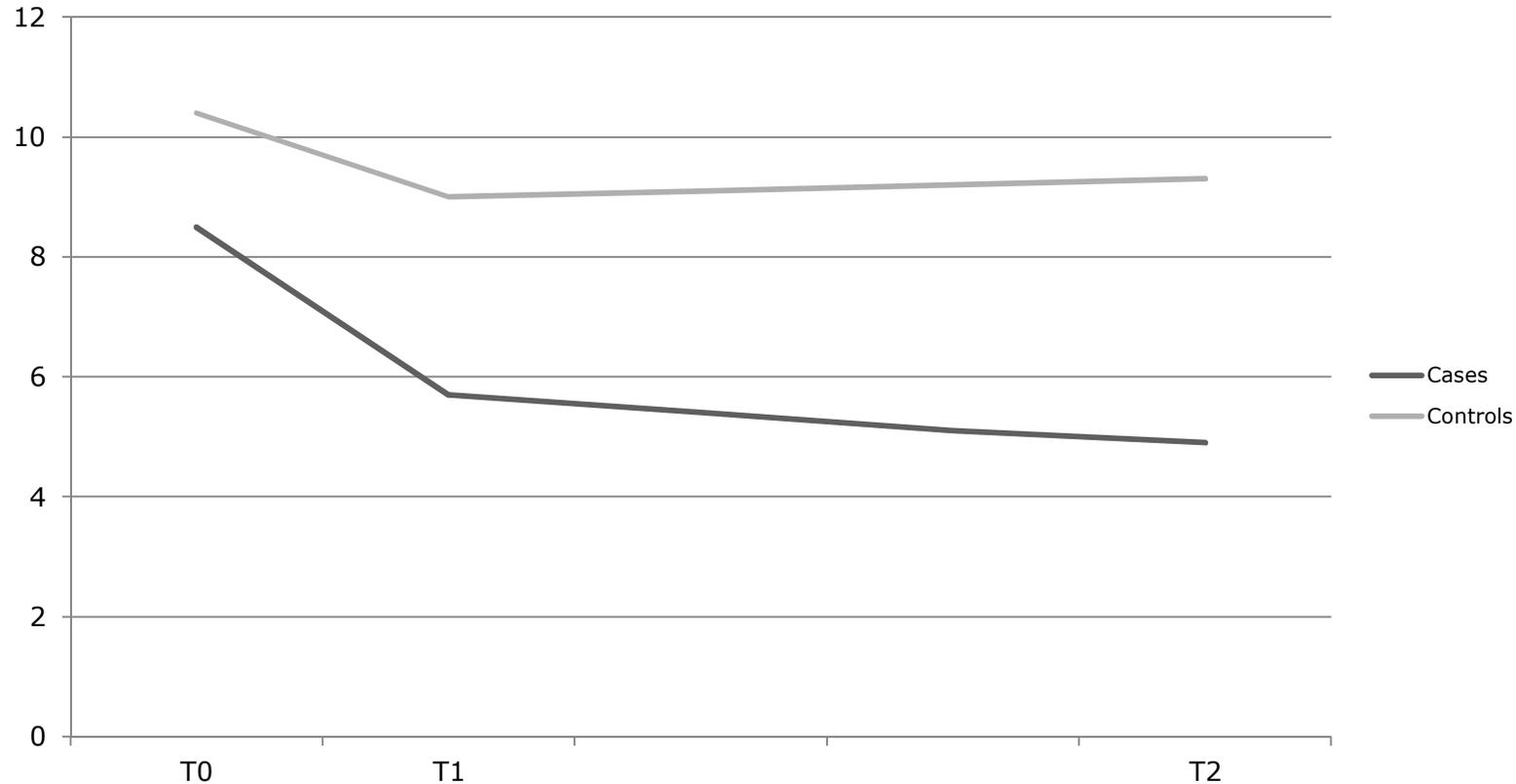


Figure 2: The progress of the absenteeism in number of days.



Results:

number of days per period

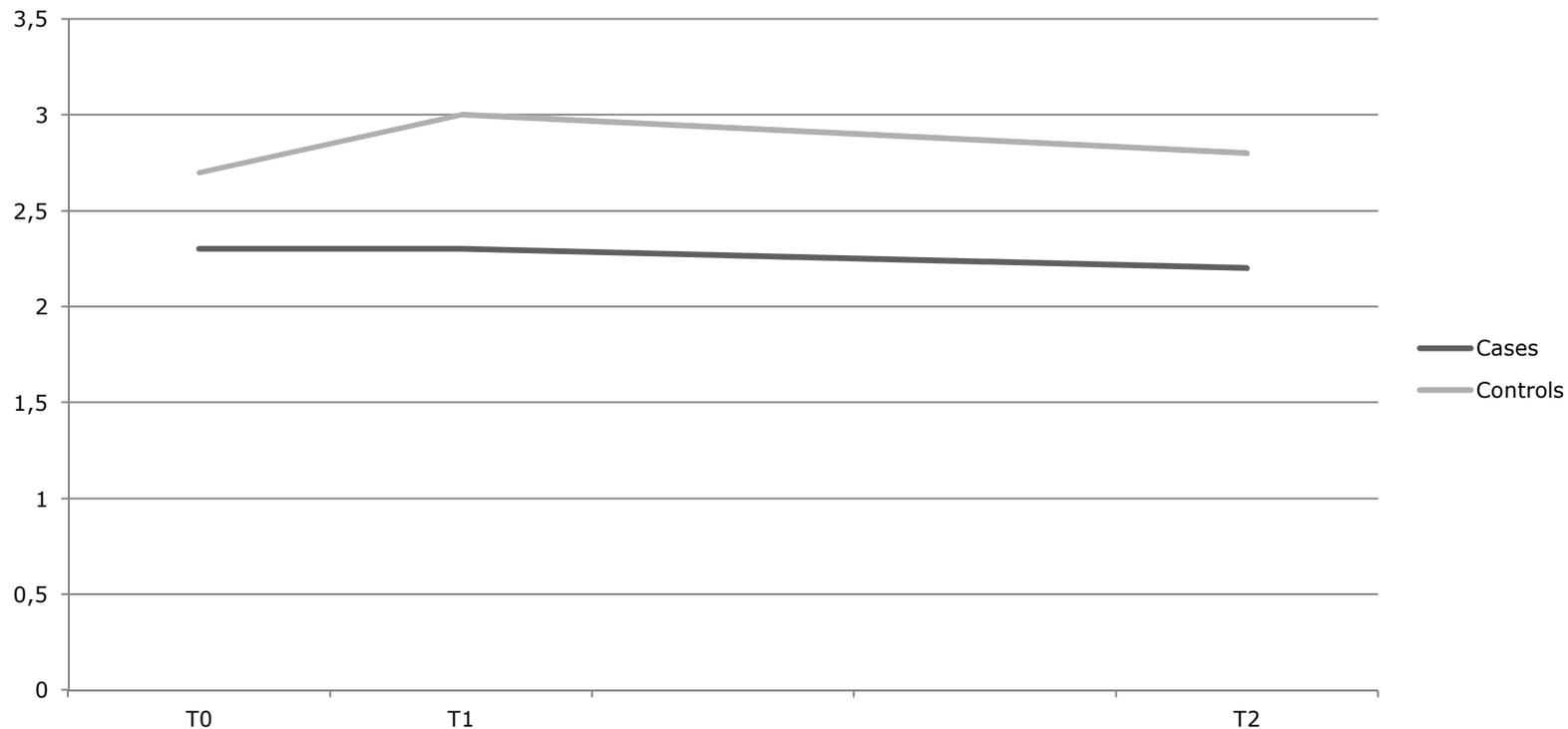


Figure 3: The progress of the absenteeism in number of days per period.



Discussion

- The study showed a decrease in the number of absence periods and days in the intervention group and the control group. The effects, however, were significantly stronger in the intervention group.
- Rapid decline after 12 school weeks:
 - Regression-to-the-mean?
 - Attention generated?
- The effect after 12 months:
 - Analysis of the underlying problems by the YHCP and arranging care and cure?
- With respect to the number of days per period, no significant effects were found.
 - A two days absence as a natural minimal period for one sick report?
 - In line with 'Sharp-at-work'-intervention.



Discussion

Limitations:

- Differences between both groups
 - In gender and age. No gender and age effect was found on the absence rate in periods and total number of days
 - In the initial absence rate.

- This study provides no definite answers to the question which specific factor is responsible for this decrease.
 - a raised threshold for reporting sick in future?
 - attention paid by school?
 - the intervention of the YHCP, resulting in more personalized and adequate care or support



European perspective?

Generalizability at national level:

- in pre-vocational secondary educational level, however,
- to what extent can these results be generalized in other educational levels?

And, to what extent can these results be generalized internationally?

- Both public health care and school systems differ substantially across countries.
- Sickness reports: must always be verified by an appropriately licensed medical professional in order to be accepted?
- Medical absence among students is a universal problem
- In general, medical absenteeism has a wide variety of causes, and personal attention to individual students is necessary to create an effect on medical absenteeism.



CONCLUSION

More than one

- 1) The MASS intervention seems to be more effective than “care-as-usual”.
- 2) The effectiveness is demonstrated primarily by a decrease in the number of periods reported sick.
- 3) MASS seems to be a promising tool in the public health setting for addressing medical absenteeism among students, and could potentially be an effective way of taking action against health inequalities.



Maastricht University *Leading in Learning!*



West-Brabant



Are there any questions?

