

# Personal weaknesses recognized by high school students in the North-West of Italy

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## 1. Introduction

This study is part of a project aimed at supporting the weaknesses of young people who are experiencing, or are at risk of reaching, NEET condition (Not in Education, Employment or Training; aged between 15 and 29 or 34, according to different definitions).

At present the entire project consists of three phases. The first, concluded in 2020 with the volume "From Neet to Need" (see also Bollani, Rota, 2018), presents the European statistical situation of the Neet phenomenon and its sociological implications; it includes an empirical study, based on thorough interviews with people in Neet condition intended to collect their life stories (Merril, West, 2012); the purpose is to classify them as to their internal and external needs, in order to suggest adequate support for intervention. The second phase, to be completed in 2021 with a second book, is the object of this study: it searches for harbingers of Neet status in the difficulties encountered during high school (which in Italy is divided into an initial two-year set and a subsequent three-year set); in fact, in general it is more simple and effective to tackle minor problems by a preventive approach, starting from school age. Of course students as such are not Neets and the anonymity required for a survey dealing with very personal issues does not allow a longitudinal study to be carried out on the same individuals. However, the construction of a comparison base referring to a generic population, relative to the incidence of certain states of weakness (or some of their combinations), will allow for a subsequent comparison with the incidence of the same difficulties in school age for those who find themselves in a Neet situation. The third phase, started in 2021, is about identifying good practices in order to grow Neets into working adults; the people selected to accompany the Neets in this process are now fully trained, while the first groups of Neets will be involved by the end of the year. The research group was identified among members of the InCreaSe Association (Innovation Creativity Settings; [www.increasegroup.org](http://www.increasegroup.org)), which boasts transversal research skills. Numerous local authorities are involved in the project, which is supported by Compagnia di San Paolo Foundation.

As to the specific object of this paper, the first signs of the extreme discomfort caused by Neet condition were sought by investigating signs of weakness in high school students in the Piedmont, Valle d'Aosta and Liguria regions. A survey questionnaire was administered to students, an operator being present in the classrooms, shortly before the start of the pandemic. Collected results will therefore be more directly linked to school activities "in presence", even if discontinuities in teaching methods and characteristics caused by the pandemic might have brought in alterations that will need to be monitored over time.

## 2. Themes of investigation and subjects involved

School transmits knowledge accumulated and elaborated by society over the centuries, allowing younger generations to experience social, cultural and territorial belonging and to be citizens of the society with its rights and duties.

The proposed survey is embedded in the context of training institutions challenged to cope with rapid change and face uncertainty about the impact of offered training courses on personal

growth and access to work in the current context. The intention of the study is to highlight positive states of well-being, certainly present in a school context, but at the same time identify situations of discomfort among students which, if not adequately prevented, can develop in a harmful way. It was decided to address the issue from within the school itself, administering questionnaires to students engaged in secondary education.

The topics of the survey, included in the questionnaire within specific sections, were:

- You and the school (role attributed to the school)
- The relationship with your school
- The relationship with your teachers
- The relationship with your schoolmates
- You and your future (for the three-year period only)
- The relationship with your family
- Personal and family data

Special attention was devoted to the field organization, with an operator present in each class during the survey in order to ensure correct presentation of the questionnaire and homogeneous assistance as well as sense of anonymity towards teachers during its compilation.

It should be mentioned that the Italian secondary education system is divided into an initial compulsory two-year period (“biennio” below) and a subsequent voluntary three-year period (“triennio”); it is also divided into a more academic (classical or scientific) school called “liceo”, a technical school (“tecnico”) and a vocational school (“professionale”).

Students were selected following a multi-stage process, considering schools and classes as first and second level units and students as third level units. The first stage units, i.e. the schools, reflect different territorial situations, with several focuses in the three regions. In particular, for Piedmont distinctions were made according to size and location of the centres and among Turin city areas with different socio-economic patterns. The choice of second stage units, i.e. classes, allowed to reach, to a certain extent, an overall balance among different educational paths; finally, for third stage units, i.e. students, a complete survey of the students present in classrooms at the time of the survey was opted for. In this way, 14 schools (some classes for each) were surveyed, in line with the three Italian regions of interest. In Piedmont 10 schools are considered: three are in Turin city (see Torino1, 2 and 3 in table 1), two in the city belt (in the municipalities of Nichelino and Settimo Torinese), five in other areas of Piedmont (one in the municipality of Pinerolo, close to Turin, and four in different provinces). In Valle d’Aosta and Liguria, two schools were surveyed (see Aosta1 and 2 for Valle d’Aosta and two schools in the municipalities of Genova and Savona for Liguria). Globally, 931 students were surveyed, keeping a sufficient number for each type of educational path, as shown in table 1.

Table 1 - Number of students surveyed by education type and school area

	Biennio Liceo	Biennio Professionale	Biennio Tecnico	Subtotal for Biennio	Triennio Liceo	Triennio Professionale	Triennio Tecnico	Subtotal for Triennio	<b>Total</b>
Torino1	17			17	32			32	<b>49</b>
Torino2			20	20			24	24	<b>44</b>
Torino3		16		16		16		16	<b>32</b>
Nichelino	14		34	48	37		15	52	<b>100</b>
SettimoT.se		24	16	40		33	12	45	<b>85</b>
Pinerolo		18		18			16	16	<b>34</b>
Asti			40	40			18	18	<b>58</b>
Cuneo		43	25	68	37	19	23	79	<b>147</b>
Novara	45			45	24			24	<b>69</b>
Vercelli		15		15		39		39	<b>54</b>
Aosta1			32	32			35	35	<b>67</b>
Aosta2		37		37		32		32	<b>69</b>
Genova		17		17			27	27	<b>44</b>
Savona			58	58			21	21	<b>79</b>
<b>Total</b>	<b>76</b>	<b>170</b>	<b>225</b>	<b>471</b>	<b>130</b>	<b>139</b>	<b>191</b>	<b>460</b>	<b>931</b>

### 3. Growth of weakness as an accumulation process

A first research objective concerns how weakness is formed and how it can grow. One possibility that also seems to emerge from life stories is that there is an accumulation phenomenon. A perhaps tolerable weakness emerging for a particular aspect of life in school age may be aggravated by a second circumstance of discomfort, and so on, with the consequence of reaching a very intense state of discomfort due to a sum of causes, each of which is not particularly relevant.

In this perspective, the approach used for this paper consists in considering the key questions of each section of the questionnaire, which, each in view of a specific aspect, detected a condition of well-being or weakness of the answering student. The number of difficult situations encountered for each student was then added; this sum enabled to consider further degrees of individual difficulty.

In particular, ten questions were examined, two for each section of the questionnaire; they are presented below; labels used in figures and the percentage of students in a state of weakness (see ending “\_yes”) for each of them appear in brackets.

As regards the first part of the questionnaire, related to the role students attribute to the school and the relationship they have with it (first two sections), the selected questions were on:

- the importance of school in one's life (Life\_yes: 4.40%)
- the school's ability to foster personal growth (Growth\_yes: 13.43%)
- I thought about changing school (Change\_yes: 47.91%)
- prolonged absences (Absences\_yes: 30.08%)

An aspect fundamental in determining the categories of students most in difficulty certainly is the one concerning the relationship with classmates, which if problematic can lead to important episodes of exclusion and marginalization; thus the chosen questions were whether they:

- were teased or isolated by school friends (Isolated\_yes: 24.92%)
- go out with classmates outside school hours (Outside\_yes: 33.30%)

Other elements taken into consideration are the average grade and the relationship with their teachers; the selected questions concerned:

- whether they ask teachers questions when they do not understand (Questions\_yes: 39.74%)
- which was their average grade in the last term (Grades\_yes: 48.44%)

Finally, two questions were chosen from the section about the relationship with one's family, i.e. whether:

- students feel supported by their family (Support\_yes: 16.33%)
- they have confidence with any adults (Confide\_yes: 21.27%)

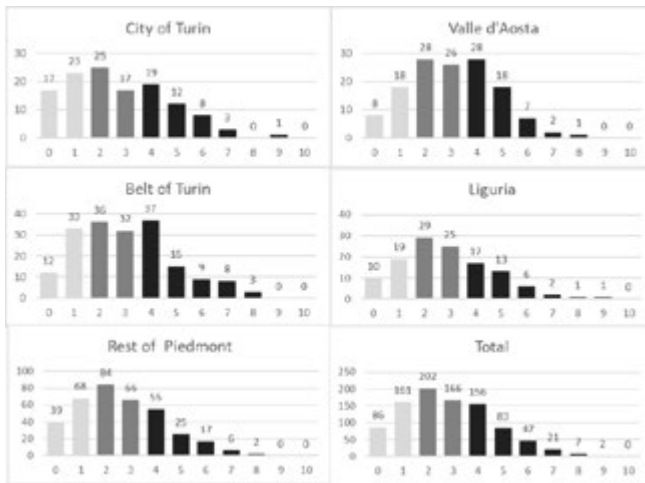
The answers to each of these ten questions were coded in terms of presence or absence of weakness; the resulting synthetic variable indicates the amount of weakness situations, which can vary from zero (absence of weakness) to ten (maximum weakness intensity) for each answering student. The frequency distributions of this variable, called “intensity of weakness”, for all respondents and for those living in different territorial areas of interest for the survey, are presented in figure 1.

The shapes of the frequency distributions shown in the figure are very similar, although Turin belt and Liguria display the highest average levels of weakness intensity (3.0 and 3.1) and city of Turin and belt of Turin show the highest variability (standard deviation 2.0 and 1.9).

In all cases, at higher degrees of weakness frequencies progressively decrease. Referring to a more stable condition, intensity of weakness is also measured more synthetically as follows, assuming to set only three qualitative degrees of weakness: students with intensity of weakness 0 and 1 are categorized as students “without weakness” (or nearly so), those with scores 2 and 3 are considered to have “lower weakness”, while students with a score higher than 3 fall into the “greater weakness” category. The subdivision into bands respects the subdivision into tertiles, considering the variable starting from the most disadvantaged in the general total column

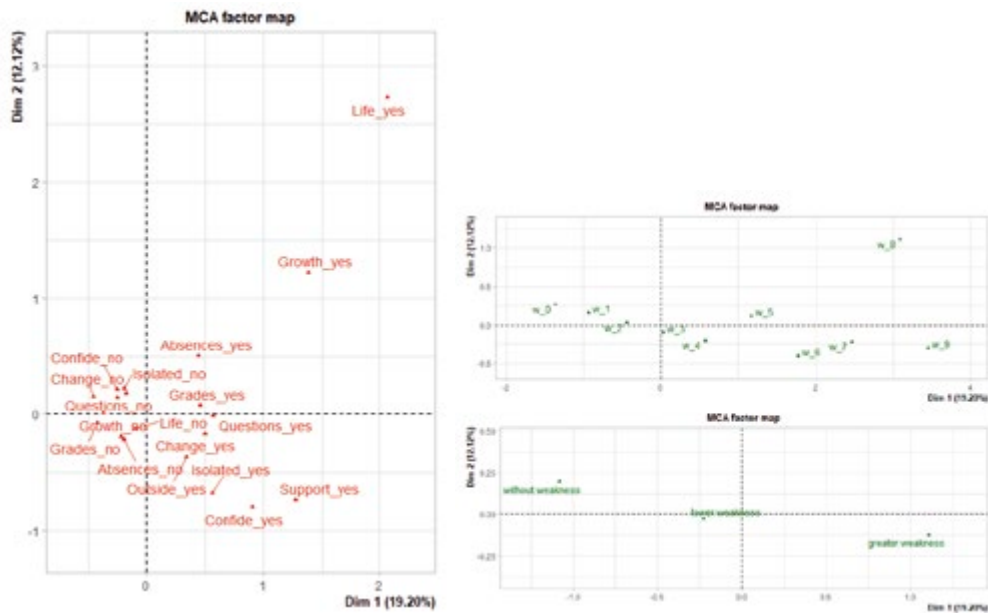
(obtaining following frequencies: greater weakness 33.94%; lower weakness 39.53% and without weakness 26.53%).

Figure 1 – Frequency distributions of the intensity of weakness (0-10)



In order to check the usefulness of the considered variable empirically, as to the degree of weakness, a multiple correspondence analysis (MCA) was performed on the binary coded ten variables used for its construction; the intensity of weakness, as both ten level and three synthetic level variables, are maintained as supplementary. The MCA map is shown in Figure 2; software R and FactoMineR package were used for the analysis (Escofier, Pagès, 2008).

Figure 2 – Relationships among the ten main variables of the questionnaire (active variables are shown in the left box, while supplementary ones, relating to the intensity of weakness, are shown in the two boxes on the right)



Note: the MCA, given its coding scheme, underestimates the percentage of inertia explained by the first factorial dimensions (Abdi, Valentin, 2007). In literature, some methods of re-evaluation of variances explained by first factorial dimensions are indicated to overcome this drawback (Benzécri, 1973; Greenacre, 2017). Using Greenacre's method (more parsimonious), we obtain a variance percentage of 74.65% for the first dimension and of 3.97% for the second (overall, therefore, the first factorial plan would explain the variance of 78.62%, which seems satisfactory; R software and in particular the ca package was used for this re-evaluation, as in Nenadic, Greenacre, 2007).

It can be observed that the intensity of weakness may be used as a good synthesis of the ten variables, as it displays quite homogeneous levels, growing from left to right of the graph and substantially following the first axis of the map. This is congruent with the presence of almost all “\_no” (absence of weakness) statements for almost all variables on the left of the map, while the “\_yes” (presence of weakness) statements are on the right.

It should also be noted that negative responses to the fact that school is useful for one's life and for personal growth, corresponding to a state of weakness visible in the map at the top right in an eccentric position (Life\_yes and Growth\_yes), are generally less recurrent than other types of weakness (4.40% for Life\_yes and 13.43% for Growth\_yes).

#### 4. Living conditions that can facilitate weakness

Considering Figure 2 again, the most important reading direction is - as already shown - from the far left (absence of weakness) to the far right (greater weakness). However, a second useful piece of information can be found using the bottom-up dimension, especially in the quadrants to the right of the graph where the points are vertically more dispersed and can provide information on the type of discomfort experienced. In fact, staying on the right, towards the top there are the already known negative answers on the importance of school for one's life and growth and also situations of prolonged absence (Absences\_yes): this could suggest a difficulty deriving from lack of motivation and escape. On the downside, however, there is a lack of support and attention from adults (Confide\_yes; Support\_yes), as well as isolation at school and outside peer groups (Isolated\_yes, Outside\_yes).

Figure 3 – Supplementary variables in the same plane as Figure 2.

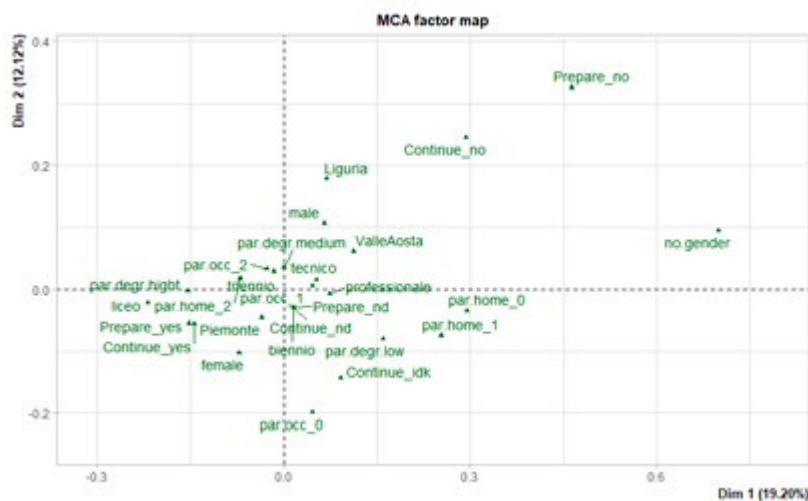


Figure 3 also shows, on the same factorial plane as Figure 2, some characteristics of the surveyed students.

On the left side of the map, where difficulty is generally low, we note the simultaneous greater

presence of both parents in the family unit of cohabitation (par. home\_2), a high parental qualification (at least for one of the two parents; par. degr. high), "liceo" enrolment; for students of the second three-year period (who were asked more questions) also the conviction that school prepares for the future and they will to continue studying.

Compared to "liceo" students, those from other paths ("professionale", "tecnico") generally show more weakness. Females appear to be in a better position than males. Piedmontese schools seem to be in a better position than those of Valle d'Aosta or Liguria.

Looking at the top right of the map, students of the second three-year period, who do not think school prepares for the future (Prepare\_no) and do not want to continue studying (Continue\_no) are in the same position as those already discussed with lack of motivation and orientation to escape in Figure 2.

On the bottom right, which is the already discussed area with more students unsupported by adults and isolated by peers, Figure 3 adds the information concerning greater presence in this area of parents with low qualification (par. degr. low) and difficulty of presence of both parents in the family unit of cohabitation (par. home\_0 or par. home\_1).

## 5. Conclusions

In this study, which considers secondary education institutions from the inside by a survey conducted on students, a transversal look at the various sections of the survey questionnaire was maintained to highlight one of the key aspects of the research, aimed at observing situations of well-being, but also of progressive weakness of the students themselves.

The focus is on observing in the sense of describing and therefore favouring a reflection on causes determining weakness: a method to place surveyed students in a scale polarized between well-being on the one hand and extreme discomfort on the other was proposed; subsequently it was shown how some characteristics (to be explored as possible motivations), derived above all from the school and parenting context, can accompany the different situations of intensity of individual weakness.

Furthermore, in the last three-year school period, attention was devoted to how one's "feeling" within the school context can influence the desire for a future perspective for oneself and how it can influence choices.

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