

## **Student's Knowledge and Attitude Towards Direct-To-Consumer Genetic Tests**

Luca Girdali

*M Colotto<sup>1</sup>, L Girdali<sup>1</sup>, R Pastorino<sup>1</sup>, D Arzani<sup>1</sup>, E Vayena<sup>2</sup>, C Ineichen<sup>2</sup>, S Boccia<sup>1</sup>*

<sup>1</sup>Section of Hygiene-Institute of Public Health, Faculty of Medicine, Università Cattolica del Sacro Cuore, Rome, Italy

<sup>2</sup>Institute of Biomedical Ethics and history of medicine, University of Zurich, Zurich, Switzerland

Contact: [girdali\\_luca@libero.it](mailto:girdali_luca@libero.it)

**Aims**

This study reports on the attitudes of 179 Italian Medical Students to direct-to-consumer (DTC) genetic test and to participation in research practices.

**Methods**

Data were collected using a self-completion online questionnaire sent to 380 medical students at the faculty of Medicine of the Università Cattolica del Sacro Cuore in Rome, Italy. Questions pertained issues related to awareness and attitudes towards genetic testing, reactions to hypothetical results, and views about contributing data to scientific research. Descriptive and inferential statistics were used for the analysis.

**Results**

The response rate was 47.1%. None of the students had ever been subjected to a DTC genetic test. Less than 50% of students were aware of DTC genetic test. Seventy-four percent of the sample were interested in undergoing DTC genetic test, and the main reasons were being aware on genetic predisposition to diseases or characteristic, and the potential for inherited genetic predisposition to a disease. Among those who were not willing to undergo a genetic test (26.3% of the sample), the main reason was the lack of confidence in the meaning of the results, followed closely by the fear that the results could be of concern. In the hypothetical situations of an increased disease risk after undergoing DTC genetic testing, respondents would take actions to reduce that risk, while in the opposite scenario they would feel unaffected because of the probabilistic nature of the test. There was a significant association between being female and the interest in participating in a genetic study conducted in a clinic. Furthermore, this interest was also associated to the willingness to making data available for research.

**Conclusions**

We reported a good level of awareness about DTC genetic test and a high interest in undergoing DTC genetic test in our medical students. Nevertheless, opinions and reactions on DTC genetic tests are strongly dependent by the hypothetical good or bad result that the test could provide and by the context whereby a genetic test could be performed. Therefore respondents seem to be exposed to the risk of psychological harms, and a strong regulation regarding their use is required.

**Key message**

- Interest in DTC tests may be the first step to spread knowledge among the doctors of the future years and to make them aware of the opportunities and the risks related to their use