

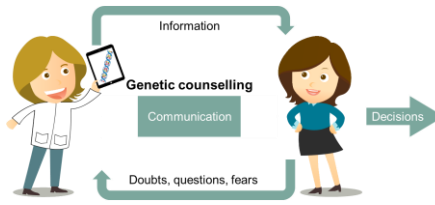
Educational materials for a better communication during genetic counselling sessions

Introduction

Genetic counselling is a communication process between counsellors and counsees (patients and families). Information related to genetic diseases, their causes and inheritance patterns are given to counsees in order they can take informed decisions.

Genetic counselling takes place in a problematic context in which families and patients are emotionally stressed and confronted with amounts of technical and scientific information.

Previous studies have shown the importance of drawings and pictures as a support for better understanding and recall of complex information.



Aims

- Development of educational materials for genetic counselling sessions.
- Improve communication between counsellors and counsees.
- Improve counsees understanding of genetic concepts, inheritance patterns and the different types of genetic variation.
- Create educational materials in Catalan, English and Spanish.

Results

I. Introduction to Genetics

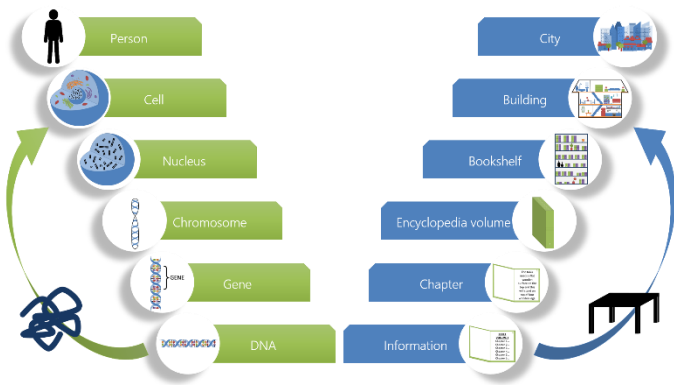


Figure 1. Video animation. An analogy among the familiar concepts of city, buildings, encyclopedia, chapters and information and the biological concepts of body, cells, chromosomes, genes and genetic information is introduced.

II. Genetic Variation

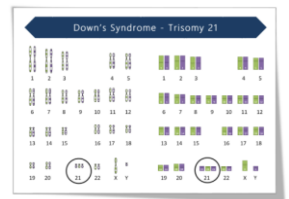
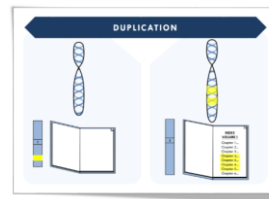
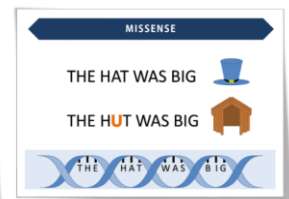
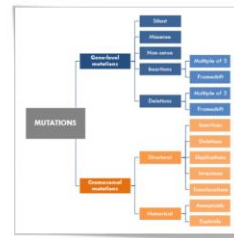


Figure 2. Slides-animation that can be used to explain how proteins are made and the effects of gene-level and chromosomal mutations. The explanation keeps the analogy used in the video *Introduction to genetics*. It can be used as a digital animation or as printed-slides.

III. Inheritance

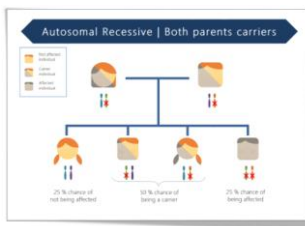


Figure 3. This group of slides explain the different inheritance patterns. Chromosomes are also shown to better follow how mutations are transmitted. It is important the use of user-friendly icons instead of squares and circles to represent males and females.

IV. Molecular Diagnostic Techniques

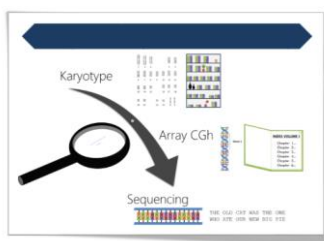
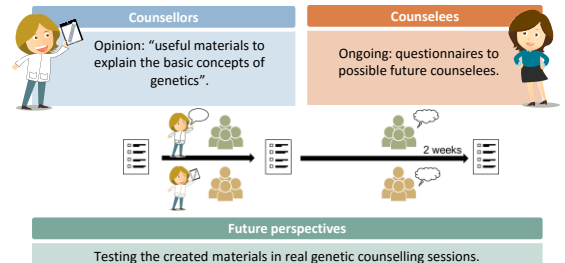


Figure 4. Slides explaining the most common molecular diagnostic techniques. The analogy with the encyclopedia and its volumes is kept. This main slide shows the range of diagnostic techniques, each one focused on studying specific genetic variation events.

Are these materials useful ?



Conclusions

- Pictures and drawings are useful recourses for helping in the comprehension process.
- Genetic counsellors consider that the created materials are useful and didactic and they are willing to use them.
- Preliminary results show an improvement of knowledge with the video and also that counsees remember the concepts for longer with pictures and drawings.

References

- Harper, P. S. (2010). *Practical Genetic Counselling* (7th ed). Edward Arnold
- The role of pictures in improving health communication: A review of research on attention, comprehension, recall and adherence. *Patient Educ Couns*. Dec;64(1-3):393-4.

Acknowledgements

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