Developing the design of an educational game for children with hemophilia

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INTRODUCTION

Introduce the disease context to children and teenagers with hemophilia is challenging for parents and healthy professionals. For this reason, it is necessary to develop efficient communication that supports them to understand, participate and accept questions that are related to the disease. The purpose of this project is the development an educational game directed to children in order to help them out to learn more about hemophilia.

This development is an integration of Information technology and hemophilia care. This work describes the process for designing this game. Children and teenagers, who are the users of the game, can also participate of the design development process. This methodology is called partipatory design and the technique used in this project is the BrainDraw.

METHODS

BrainDraw is a participatory prototyping dynamic where the participants are enrolled in the design process. The first dynamic with the participation of ten children with hemophilia, took place in the Hemophilic Unit of UNICAMP in Campinas, SP, Brazil (figure 1). They were split in two groups: a group of 5 children between 5 to 8 years old (mean 6,4 years of age), and another group of 5 children between 9 to 13 years old (mean 10,8 years of age). The dynamic had 4 rounds and each one had a main topic: hemophilic character, a coagulation factor, the inhibitor and the setting of the game. In each round they were told to draw anything related to the topic. Each one received a blank sheet and switched their papers every five minutes. If the child draw something negative adult should intervene.

This game approach is interesting because the player can draw what is in his mind without being criticized. All the dynamic were assisted and accompanied by six adults observers from different areas, including computing, physiotherapist, physical trainer, education, and psychologist.

A

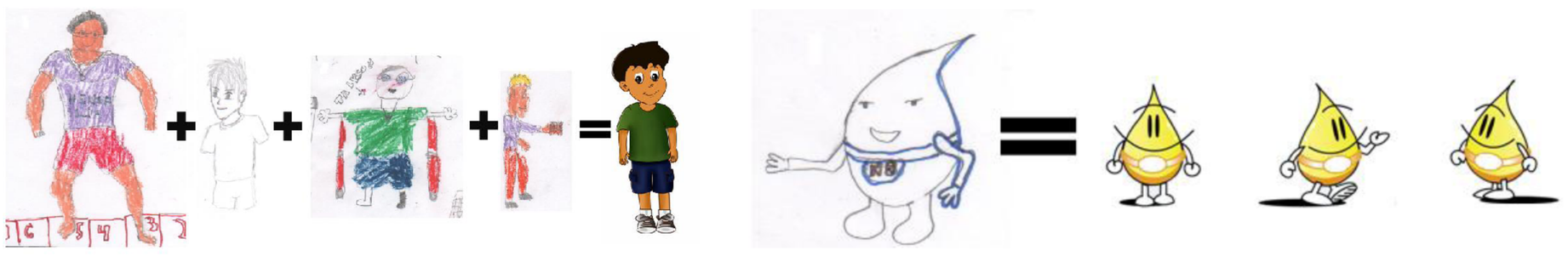
B

Figures 1 A and B. The dinamic of the participatory design

RESULTS

All children actively participated in the activity by giving ideas of how they imagined to be the game's characters. Were obtained as a result many designs candidates being used for the construction of the game design. Among the images that most repeated are syringes, friends, medals and items related to swimming. The construction of the main character and other elements, such as the representation of the coagulation factor, were accomplished through the addition of some selected drawings (figure 2).

Figure 2: The designs drawn by the children and some of the characters used to develop the game



CONCLUSION

The work of selection and adaptation of the images is in progress. Just as the elements shown above, the game developers will use the results of Braindraw as the basis for the construction of characters, scenarios and game elements. Thus, it is expected to build a set closer than children with hemophilia imagination. With the dynamic the probability of the child to identify with the game is greater.

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