Title:

WORK AT HEIGHTS TRAINING: CONVENTIONAL APPROACH WITH AND WITHOUT IMMERSIVE VIRTUAL REALITY

Date: 10/07/2024

INFORMED CONSENT (CONTROL GROUP)

Dear participant:
We invite you to participate in a study of investigation titled "Design and assessment of protocol of training for job in heights, Using immersive virtual reality and biosignal measurement, for trainees at a high-altitude training center in the city of Cali."

Before of decide to participate, is important that understand the aim from the study, the procedures involved, the possible benefits and risks, So as your rights as a research participant.

Aim of the Study:

The main objective of this study is to design and evaluate a training protocol for work at heights using immersive virtual reality technology and the measurement of biosignals in a training center in the city of Cali.

Procedures:

If you decide to participate in this study, We will collect data about his performance and will be measured biosignals (Fz cardiac and Fz respiratory) before and during he practical training at altitude. To assess the impact of the training on your physiological response and activity performance. In addition, you will be asked to complete questionnaires and interviews to obtain information about your experience and perception of the training.

It is important to highlight that a pilot test was previously carried out for this study.

For the take of the Fz cardiac you will put a band elastic to level of chest, Named Polar H10, this device allows you to sense and monitor heart rate For the take of the fz respiratory, you will do use of a microphone wireless, very small device that will be placed near your nose and record your breathing sounds.

Benefits:

The results of this study are expected to contribute to the development of a more effective and safer training protocol for workers working at heights in the construction sector.

Risks:

The risks associated with your participation in this study are mainly related to the management of data and information, for which a data management plan has been generated.

Confidentiality:

All information collected during this study will be treated confidentially. Data will be stored securely and will only be accessed by authorized members of the research team. Your responses to questionnaires and interviews will not be linked to your identity, and will be used for research analysis purposes only.

The data will be initially stored in Microsoft Excel®. Only the principal investigator and the research director will have access to this database. Participants will be coded to ensure confidentiality. Once the research is completed, only the data that is useful for obtaining results will be stored at www.figshare.com. and placed under embargo until published in a scientific journal. No sensitive or personal data will be uploaded to this repository.

Rights of the Participant:

Your participation in this study is voluntary and you have the right to withdraw at any time without penalty. In addition, you have the right to ask questions at any time and to receive additional information about the study.

Consent:

By signing this document, you indicate that you have read and understood the information provided above and that you agree to voluntarily participate in this research study. You also understand that you may withdraw at any time without penalty.

Name of the Participant:_____

Signature of Participant:_____

Date:_____

INFORMED CONSENT (INTERVENTION GROUP)

Dear participant:

We invite you to participate in a study of investigation titled "Design and assessment of protocol of training for job in heights, Using immersive virtual reality and biosignal measurement, for trainees at a high-altitude training center in the city of Cali."

Before of decide to participate, is important that understand the aim from the study, the procedures involved, the possible benefits and risks, So as your rights as a research participant.

Aim of the Study:

The main objective of this study is to design and evaluate a training protocol for work at heights using immersive virtual reality technology and the measurement of biosignals in a training center in the city of Cali.Procedures:

If you decide to participate in this study, you will be given a questionnaire to identify signs of alarm for kynetosis, If you no presents none of them, You will be asked to participate in a training session at altitude using immersive virtual reality (VR). During the VR session and during the work practice at altitude, data on your performance will be collected and biosignals (cardiac fz and respiratory fz) will be measured to assess the impact of the training on your physiological response and higher mental abilities. In addition, you will be asked to complete questionnaires and interviews to gather information about your experience and perception of the training. It is important to note that a pilot test has previously been carried out for the realization of this study.

For the take of the Fz cardiac you will put a band elastic to level of chest, Named Polar H10, this device allows you to sense and monitor heart rate, for the take of the fz respiratory, you will do use of a microphone very small wireless device that will be placed near your nose and record your breathing sounds.

Benefits:

The results of this study are expected to contribute to the development of a more effective and safer training protocol for workers working at height in the construction sector. In addition, you will have the opportunity to experience and become familiar with innovative virtual reality technologies.

Risks:

The risks associated with your participation in this study are primarily related to the use of virtual reality technology, such as eye strain, dizziness and motion sickness. For minimize this risk you will take measures, as limit the length of training sessions and providing breaks as needed, also we will apply a questionnaire of signs of alarm for identify those who may be more likely to experience motion sickness and thus not expose the person to the immersive experience.

Confidentiality:

All information collected during this study will be treated confidentially. Data will be stored securely and will only be accessed by authorized members of the research

team. Your responses to questionnaires and interviews will not be linked to your identity, and will be used for research analysis purposes only.

The data will be initially stored in Microsoft Excel®. Only the principal investigator and the research director will have access to this database. Participants will be coded to ensure confidentiality. Once the research is completed, only the data that is useful for obtaining results will be stored at www.figshare.com. and placed under embargo until published in a scientific journal. No sensitive or personal data will be uploaded to this repository.

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Name of the Participant:_____

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Date:_____