

Managing Exam Stress Using UMTS Phones: The advantage of Portable Audio/Video Support

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Abstract: Test-taking anxiety or stress is very common among university students. It can be very distressing and sometimes debilitating. Exam anxiety involves physical components and emotional components that may be taken into account for managing and reducing anxiety. An approach to control exam anxiety is to learn how to regulate emotions. To help students in managing exam stress we developed a specific protocol based on mobile narratives - multimedia narratives experienced on UMTS/3G phones. 30 female university students (M=23.48; sd=1.24) who were going to perform an exam within a week were included in the trial. They were randomly divided in five groups according to the type and mobility of the medium used: (1) audio only narrative (CD at home); (2) audio only narrative (portable MP3); (3) audio and video narrative (DVD at home); (4) audio and video narrative (UMTS based); (5) control group. Audio/video narratives induced a reduction in exam anxiety in more than 80% of the sample vs 50% of the MP3 sample and 0% of the CD sample. Further, all the users who experienced mobile narratives on UMTS phones were able to relax before the exam, against 50% of DVD users and 33% of audio-only users. The trial showed a better efficacy of mobile narratives experienced on UMTS phones in reducing the level of exam stress and in helping the student to relax. These results suggest that for the specific sample considered – Italian university students – the media used for providing an anti-stress protocol has a clear impact on its efficacy.

Keywords: Exam stress, cellular phones, UMTS, Mobile Narratives

1. Introduction

Test-taking anxiety or stress is very common among university students. It can be very distressing and sometimes debilitating. Exam anxiety involves physical components and emotional components that may be taken into account for managing and reducing anxiety.

A common approach to control exam anxiety is Stress Inoculation Training (SIT). SIT [1, 2] has been employed on a treatment basis to help individuals cope with the aftermath of exposure to stressful events and on a preventive basis to "inoculate" individuals to future and ongoing stressors.

Typically a SIT protocol is based on a three-phase intervention [3, 4]:

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- *conceptualization phase*: A Socratic-type exchange is used to educate clients about the nature and impact of stress;
- *skills acquisition and rehearsal*: The specific coping skills are taught to the clients;
- *application and follow through*: provides opportunities for the clients to apply the variety of coping skills across increasing levels of stressors.

2. A SIT Protocol for Cellular Phones

To help students in managing exam stress we developed a specific protocol based on mobile narratives - multimedia narratives experienced on UMTS/3G phones (Nokia 6680). Following the SIT protocol, our one is composed by six sessions:

- *session 1 and 2* target the psycho-physiological reactions to the exam;
- *session 3 and 4* target the psycho-physiological reactions and coping strategies;
- *session 5 and 6* present the stressful situation (an exam) to test and eventually tune the learned strategies.



Figure 1. A screen shot of the simulated exam

30 female university students ($M=23.48$; $sd=1.24$) who were going to perform an exam within a week were included in the trial. They were randomly divided in five groups according to the type and mobility of the medium used: (1) audio only narrative (CD at home); (2) audio only narrative (portable MP3); (3) audio and video narrative (DVD at home); (4) audio and video narrative (UMTS based); (5) control group.

At the start of the treatment, before and after the exam, subjects were submitted to the following questionnaires: STAI: State-Trait Anxiety Inventory [5]; VAS: Visual Analog Scale [6] and PANAS: Positive and Negative Affect Schedule [7].

3. Results.

Audio/video narratives induced a reduction in exam anxiety in more than 80% of the sample vs 50% of the MP3 sample and 0% of the CD sample (STAI Questionnaire – $X^2=11.25$; $p<.05$ - Figure 2). Further, all the users who experienced mobile narratives on UMTS phones were able to relax before the exam, against 50% of DVD users and 33% of audio-only users (VAS Questionnaire – $X^2=13.33$, $p<.05$ - Figure 3).

Finally, a negative correlation was found between the level of anxiety – as assessed by VAS Questionnaire - and exam marks ($r: -.340, p < .05$).

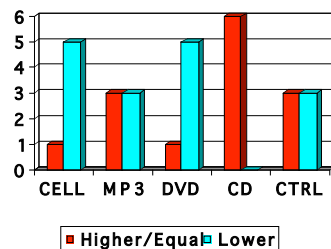


Figure 2. Anxiety level during exam

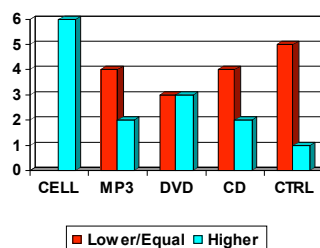


Figure 3. Relaxation level before exam

4. Conclusions

The trial showed a better efficacy of mobile narratives experienced on UMTS phones in reducing the level of exam stress and in helping the student to relax. These results suggest that for the specific sample considered – Italian university students – the media used for providing an anti-stress protocol has a clear impact on its efficacy.

Further, the data confirm that 3G mobile handsets may be used as relaxation tools when backed by a specific therapeutic protocol and meaningful narratives.

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