

Quantified Self in judicial context

Published: 17-05-2017

Last updated: 12-04-2024

The main objective of this pilot study is to: gain insight into the relationship between behavior and emotions of forensic psychiatric patients on the one hand and their physiological activity on the other hand. Unique to this research is the use of...

Ethical review	Not approved
Status	Will not start
Health condition type	Personality disorders and disturbances in behaviour
Study type	Observational non invasive

Summary

ID

NL-OMON44484

Source

ToetsingOnline

Brief title

Quantified Self in judicial context

Condition

- Personality disorders and disturbances in behaviour

Synonym

not applicable

Research involving

Human

Sponsors and support

Primary sponsor: Ministerie van Veiligheid en Justitie

Source(s) of monetary or material Support: budget Wetenschappelijk Onderzoek- en Documentatiecentrum (WODC) ministerie van Veiligheid en Justitie

Intervention

Keyword: behavior, forensic, quantified self

Outcome measures

Primary outcome

The main purpose of this exploratory pilot study is to investigate whether there is a relationship between behavior and experienced emotions of forensic psychiatric patients on the one hand and their physiological activity - heart rate and skin conductance - on the other hand, measured with a portable measurement method.

Primarily data are collected relating to physiological activity and behavioral characteristics.

* Physiological activity is measured with a wrist band, the Empatica E4. The following functions are measured: heart rate, skin conductance, body temperature and movement. For the current research we are interested in heart rate and skin conductance.

Study parameters Stress Study:

O Aggression Questionnaire (AVL-AV)

O Physical Signal List (BSL)

O Youth Trauma Questionnaire (JTV)

* Subjectively experienced stress is measured on the basis of one short question: How much stress do you experience at the moment?

Study parameters Monitoring Study

* Behavior and experienced emotions during the day are charted based on observations by patients themselves and departmental staff.

Other study parameters

Additionally, a few factors that may affect physiological activity and / or stress reactivity are measured:

☐ smoking

☐ Movement

☐ Medication

☐ Caffeine use

☐ Drug / alcohol use / history

☐ Experience with singing

Secondary outcome

not applicable.

Study description

Background summary

Quantified self had gained popularity in recent years. In addition to its use by consumers, people working in health care and politics are increasingly showing interest in quantified self methods. Continuous monitoring of medical data, e.g. with *smart patches*, allows a patient to better understand latent patterns (for example between drug use and sleep), increases patient self-esteem and could lead to more personalized treatment. The potential autonomy for consumers and healthcare patients may also provide opportunities for the judicial context. Quantified self is currently non-existing in the judicial practice, while there is a great need from the field of justice, including forensic psychiatry, to utilize innovative methods. There is also a strong need to use biological knowledge in addition to the more commonly used psychosocial information. Initial research shows that continuous physiological

measurements have the potential to signal increasing tension and / or aggression. This is a relevant application opportunity, especially in the judicial context that often involves impulsive aggressive behavior. In this exploratory pilot study, it is investigated whether measuring physiological characteristics with portable measurement methods (also called wearables) can provide more insight into the relationship between physiology and emotions and behavior.

Study objective

The main objective of this pilot study is to: gain insight into the relationship between behavior and emotions of forensic psychiatric patients on the one hand and their physiological activity on the other hand. Unique to this research is the use of wearables and long-term measurements of physiological data within the judicial context.

Study design

In the first place we will investigate the relationship between self-reported frustration and body awareness and behavioral and physiological responses to a mild stress paradigm. This is investigated with a group of forensic psychiatric patients ($N = 30$) and comprises a one-hour measurement (hereinafter referred to as the Stress Study). Secondly, we will investigate patterns of daily behavior, experienced emotions and physiological activity of a subset of forensic psychiatric patients. This is investigated with an $N = 1$ design, with several individuals being followed over a long period of time (hereinafter referred to as the Monitor study).

Study burden and risks

The extent of the burden for participants will consist of participating in a mild stress paradigm, wearing a wrist band for a number of weeks (for part of the research group) and the completion of some questionnaires. Completing the questionnaire and wearing the wristband are not associated with any risks. The stress paradigm (Sing a Song Stress test) is a relatively new paradigm. First results show that it is a valid paradigm to provoke moderate stress. The design of the paradigm is very mild - participant is asked to sing a song aloud after 30 second preparation time. We do not expect any risks with regard to the stress paradigm. There are no direct benefits for the participants. In the long run, outcomes may contribute to early detection of aggression / frustration based on physiological information. These insights can help to prevent aggressive incidents with help of innovative portable feedback devices. Participants participating in both measurements (Stress Studies and Monitoring Studies) receive a financial compensation. In this research we focus on forensic psychiatric patients. At the same time, comparable research (by other research groups) takes place with adolescents with serious behavioral problems

and regular prisoners. By conducting research in different judicial contexts, we hope to collectively investigate where quantified self methods have the greatest potential in the judicial context.

Contacts

Public

Ministerie van Veiligheid en Justitie

Turfmarkt 147
Den Haag 5211 DC
NL

Scientific

Ministerie van Veiligheid en Justitie

Turfmarkt 147
Den Haag 5211 DC
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

- sufficient understanding of instructions
- mentally competent
- intramural treatment
- willingness to participate in the study

Exclusion criteria

-undesirable mental state to complete to study according to the clinician

Study design

Design

Study type: Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Prevention

Recruitment

NL

Recruitment status: Will not start

Enrollment: 30

Type: Anticipated

Ethics review

Not approved

Date: 17-05-2017

Application type: First submission

Review commission: METC Leiden-Den Haag-Delft (Leiden)

metc-ldd@lumc.nl

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL61637.098.17