Older cyclist assistance

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Rear-view assistance and obstacle detection are well accepted by older cyclists and support a more safe cycling behaviour

Ethische beoordeling	Positief advies
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON28144

Bron
NTR

Verkorte titel
Safe and Aware

Aandoening

Ageing, cycling, looking over shoulder, obstacle detection

Veroudering, fietsen, omkijken, obstakel detectie

Ondersteuning

Primaire sponsor: Roessingh Reseach and Development;
TNO,
Fietsersbond
Overige ondersteuning: Ministry Infrastructure and Environment, Province of Northern-Brabant, Province of Limburg, Province of Utrecht (NL)

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

The main study parameter of the cycling experiments is the van der Laan technology acceptance scale. This scale has two sub-scores: one for usefulness and one for satisfaction.

Toelichting onderzoek

Achtergrond van het onderzoek

Rationale: In the Netherlands, older cyclists cycle more and up to a higher age. Unfortunately this group is prone to injury due to a cycling accident. Some of these accidents are related to issues looking behind, anxious feelings due to unforeseen other road user interaction, or overlooking an obstacle on the road. To support older cyclists in such situations, supporting devices have been developed which are able to inform the cyclist well in advance of traffic from behind and or for obstacle on the road. The supporting devices have been tested in laboratory environments, but have not been evaluated or validated in real life situations.

Objective: The aim of this study is to assess the supporting function of the 'Safe and aware' bicycle, including the rear view assistant and obstacle detection, in a group of older cyclists in safe real life situations. The aim of this study is to analyse if these supporting devices fulfil the wishes and desires of older cyclists.

Study design: This study has a cross-sectional design, with one measurement sessions for assessing the cycling behaviour of older cyclists on a bicycle with and without the supporting devices.

Study population: 20 older subjects (>65 years old).

Intervention (if applicable): no intervention will be applied.
Main study parameters/endpoints: The main study parameter of the present experiment is the van der Laan scale. This measure represents the technology acceptance of the user and classifies the usefulness and satisfaction of the older cyclists experience. These sub-scores are used to evaluate how well the technology fulfils wishes and desires of, in this case, the older cyclist.

Nature and extent of the burden and risks associated with participation, benefit and group relatedness: The risks for the subjects are limited, since the cycling tasks represent functional and familiar movements and are performed within a safe, pre-designed and pre-directed environment. During the cycling tests the difficulty in task increases slowly and can be stopped, by the subject self or by a present therapist, at any time. A Failure Mode and Effect Analysis is performed to ensure there are no serious injury risks. In addition, the

measurements used in this study are all non-invasive and involve no risks to the subjects in any way.

Participation of a subject in this experiment has no direct benefit for him/her, other than expanding knowledge about his or her cycling performance and aiding in development of sophisticated tools to improve bicycle safety.

Doel van het onderzoek

Rear-view assistance and obstacle detection are well accepted by older cyclists and support a more safe cycling behaviour

Onderzoeksopzet

One measurement point;

Onderzoeksproduct en/of interventie

Control (1) and Rear-view assiatnce and Obstacle detection (2)

Contactpersonen

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Minimum age of 65 years

2. Body length between 170 and 195 cm (to be able to cycle on the bicycle)

3. Problems looking behind while cycling and remaining seated on saddle

4. Regular cycling experience (2-3 times per week 15 min);

5. The ability to cycle for 20 minutes continuously;

6. Adequate visual and aural functions to understand the experiments, follow instructions, and give feedback to the researchers.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. Serious visual impairments that limit normal road traffic participation.

2. Serious aural impairments. The subjects should be able to hear and understand instructions given in a loud voice;

3. History of bicycle falls resulting in serious injuries

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blindering:	Enkelblind
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	20-02-2016
Aantal proefpersonen:	20
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	15-01-2016
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL5518
NTR-old	NTR5645
Ander register	: METC Twente P15-28

Resultaten

Samenvatting resultaten
None so far