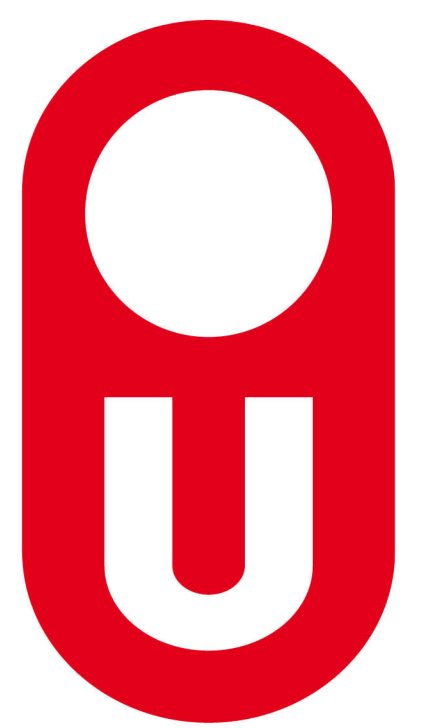


# Physical activity behavior and mental wellbeing in the vocational education and training setting

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## Introduction

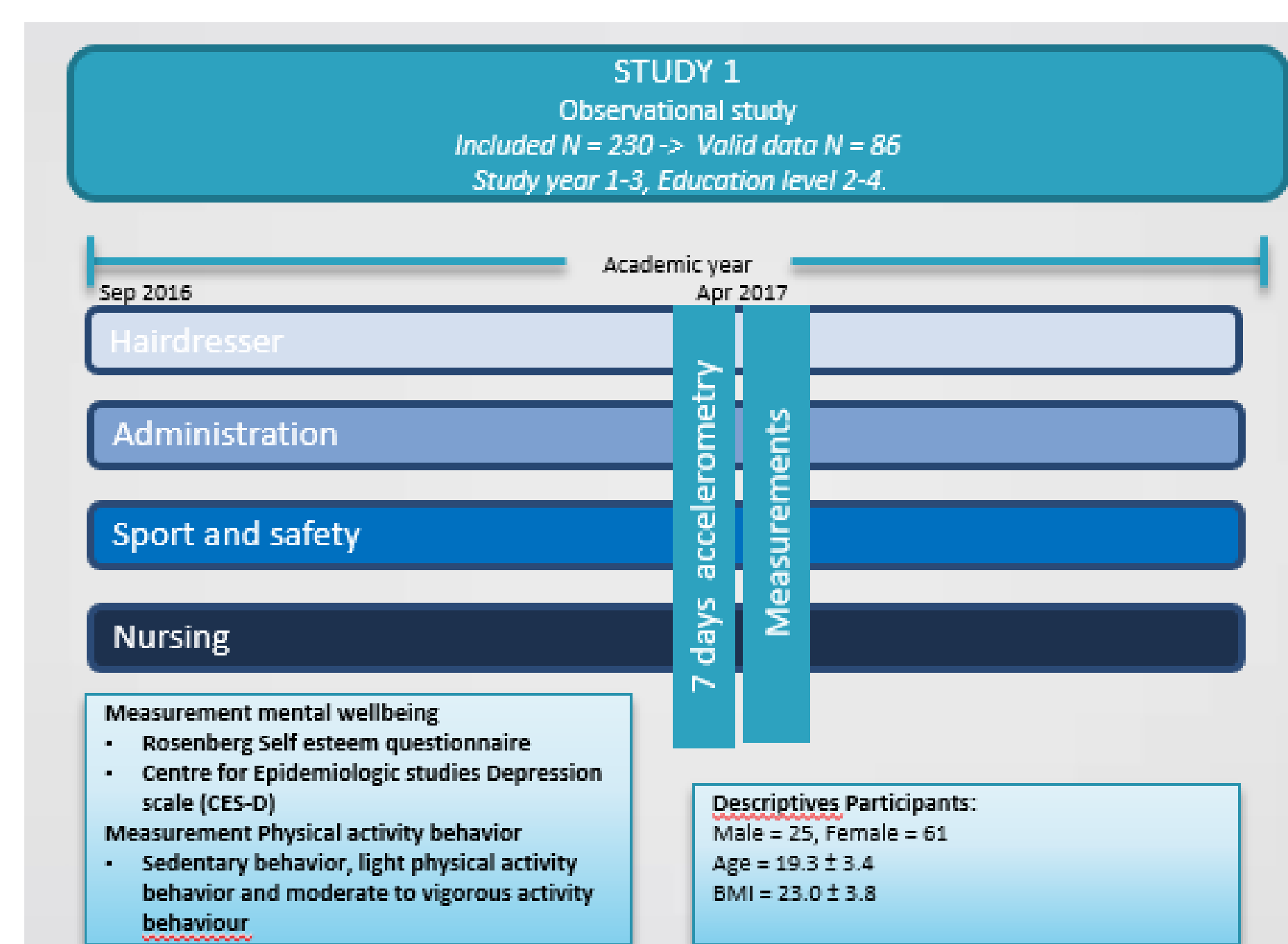
Sedentary time is high in Dutch vocational education and training (VET) students, approximately 80% of VET students have an unhealthy sedentary lifestyle, a large part of sedentary time is due to sitting in school. Breaking up sedentary behavior is associated with an increase in student mental wellbeing, but research in the VET setting is limited. Therefore, physical activity (PA) patterns in relation to student mental wellbeing in VET students should be investigated, as well as the possibility of using "sit-to-stand" (StS) desks to break up sedentary behavior (SB) in the VET setting.

## Research questions:

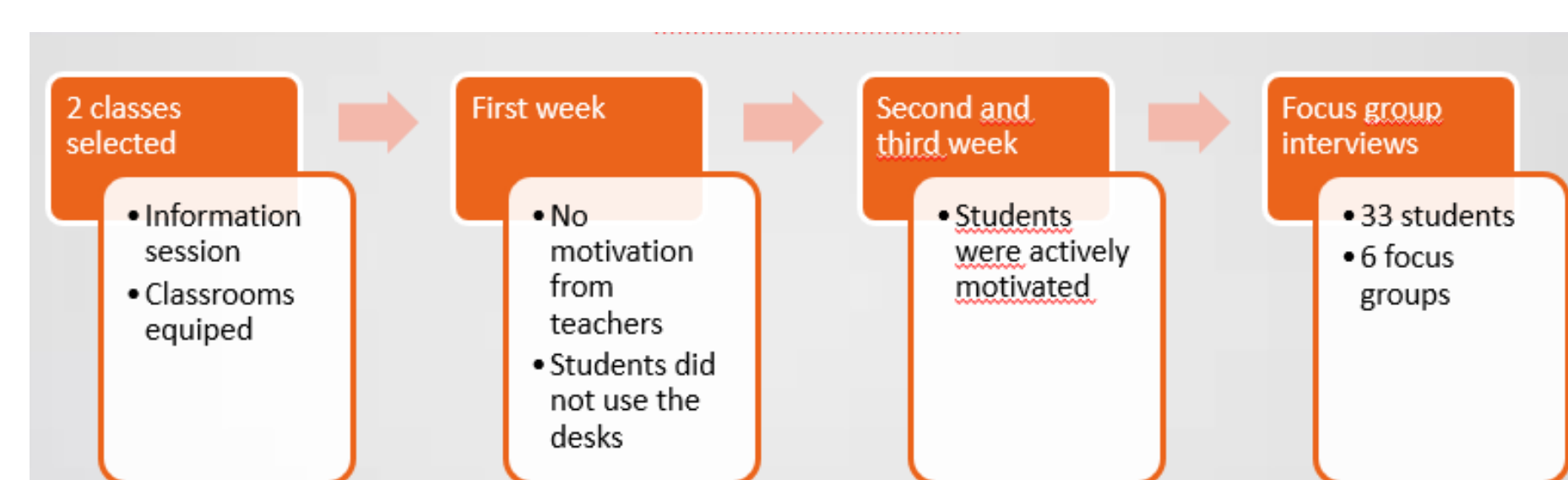
- What is the relationship between physical activity behavior patterns (sedentary time, standing time and light and moderate to vigorous physical activity) and mental wellbeing in vocational education and training students?
- What is the feasibility and acceptability of implementing sit to stand desks in vocational education and training setting?

## Methods

### Study 1



### Study 2



- (1) Did you use the standing option, and what triggered you to use or not use it?
- (2) Can you think of reasons why they would or would not use a standing desks?
- (3) What do you notice when using the standing option of the "sit to stand desks"?
- (4) What do you need to use the standing option of the desks in the future?
- All interviews were transcribed and using deductive content analyses a coding tree was generated

## Main conclusions

### Study 1

	Self esteem		Depressive symptoms	
	B(SE)	P-score	B(SE)	P-score
MVPA	2.06	.091	-4.30	<b>.056</b>
LPA	4.24 (1.87)	<b>.026*</b>	-9.27(3.42)	<b>.008</b>
SB	-.12 (.56)	.838	.86 (1.04)	.412

- Thus students who showed high levels of light physical activity behaviour scored high on self esteem.
- The more students showed light physical activity behavior, the lower they scored on the CES-D questionnaire. A similar trend of borderline significance was found for mild to vigorous physical activity behavior and scores on the CES-D..
- There was no association found concerning, Mild to vigorous Physical activity and Sedentary Behaviour compared to self esteem.

### Study 2

- Stimulation and motivation from teachers is very important students used the desks because teachers asked them to they also mention that if schools want to implement the desks teachers are very important in actually using the desks
- Peer norms seem to prohibit students from standing, students, don't want to be the center of attention and they also mention that this is a feeling they actually experience and thus don't want to stand behind the desks.
- Physical, students mention that on the one hand it would be better for posture but on the other hand it could cause discomfort in muscles and joints. Students experienced fatigue in muscle and joints and mainly liked the desk for adjusting it to their seated posture.
- Cognitively, students expected it would increase their attention but consequently also could cause them to loose focus due to distraction of others. Students did not experience any cognitive benefits, but did experience it being distracting, a reason for this could be that they used the desks for 2 weeks only, and even in these 2 weeks only sporadically, so it could be that there was no habituation of using the sit to stand desks in an upright position.
- Practically, students mentioned that on the one hand it could be beneficial for using it during presentations and on the other hand they mentioned how important it is that desks are easy to use, feel stable and don't distract others or block other view of seeing the front of the class room while using them.

Overall conclusion of these studies is that light physical activity is associated with higher student mental wellbeing, thus it seems to be important to break-up Sedentary Behavior and have more Light physical activity behavior. A possible way to do so is by implementing sit to stand desks. This may result in higher levels of light physical activity, which in turn can decrease depressive symptoms and increase self-esteem thus contributing to a higher student mental wellbeing. To implement such desks in the VET setting, all stakeholders (i.e., students, teachers, schoolboards) should be actively involved in stimulating the healthy behavior of VET students.



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