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*Re: A study to understand the possible benefits (if any) of using a balance bike*

Dublin City University in conjunction with Y-Volution Sport Ltd. are conducting a study on the effect of balance bikes in the enhancements of fundamental motor skills (eg. running, hoping, skipping etc.) and time to ride a traditional bike.

We are looking for **3-5 year olds** who do not ride a balance bike, a bike with stabilisers or a traditional bike (without stabilisers) at home. Parental consent must be obtained before any child can take part in the study. Garda vetting has also been obtained for each of the researchers conducting the tests.

**What is required as a participant**

Participation in the study will require attendance at two identical testing sessions on either side of an 8 week intervention. The first testing sessions will:

* Be between the **11th and 29th of April** depending on school availability
* There will be an **8 week intervention** between the two testing sessions.
* The second testing session will take place between the **20th of June and 8th of July**.
* The testing sessions will take **25 minutes** per child.

**What will happen during the two testing sessions**

* Two trials of riding both a balance bike and a traditional bike over 9 metres. The researcher will be standing behind the child, holding on to the back of the bike to ensure that they do not fall over. The seat height will be adjusted for each child based on visual observation of leg length and a helmet will also be worn.
* Both assessments on the two bikes of each child will be video recorded for use by the researchers only and will not be viewed by anyone else.
* Ability to ride the two bikes will be scored based on number of foot to ground contacts, speed and movements side to side from a straight line.
* Fundamental motor skills will be assessed using 11 tests. Examples of these tests include threading beads, drawing a trail, catching and throwing a beanbag, one-leg balance, jumping and a shuttle run.
* After each of the two testing session each child will be asked to answer a short questionnaire, the first assessing their perceived motor abilities (how they would rate themselves at specific tasks) and the second rating their experience with the bikes.

**What will happen during the 8 week intervention**

* Each child will be randomly assigned into one of two groups; a balance bike group, and a control group. During the 8 week intervention each child will be asked to free play with either a balance bike or whatever they usually free play with (control).
* There will be a non-contact revolution counter attached to the wheel of the balance bikes and the bikes with stabilisers to be used to determine the number of turns of the wheels so the researchers can assess how often each child was on the bike during the intervention.

**What will happen after the study**

6 months after the study, a questionnaire will be sent out to me enquiring about when my child first rode a bicycle (without stabilisers). If my child has not rode a bicycle at this point then I will be asked the same question 6 months later.

**Why we are performing this study**

We want to complete this study because it is essential to encourage children to be as active as possible as there is a strong relationship between health and physical activity. Key factors that determine the likelihood that children will be active include; child’s ability, enjoyment, and self-confidence. A key miles-stone in a child’s development is the independent riding a bike, which in itself can help to develop a child’s ability in fundamental motor skills, improve fitness and help develop self-confidence. Independent cycling is a challenging task, and so it is important to understand the best way to support its development. No previous studies have looked at the effect of balance bikes on building self-confidence and improving fundamental motor skills and subsequently the skills needed for a smooth transition onto a traditional bike (without stabilisers).

If you are interested in being part of this study or would like to find out more please contact me at jennifer.kavanagh32@mail.dcu.ie (email) or 0863353812 (mobile).

**Thank you in advance for your cooperation,**

**Jenny Kavanagh.**

*All information gathered will be treated in the strictest of confidence. To ensure this, my child’s name will be removed from all data and replaced with an ID number. Only the researcher will know my child’s ID number, and only the researchers will have access to the information.*

***Disclaimer:*** *Neither DCU nor Y-Volution Sport Ltd. and their bike manufacturers are liable for any incidents incurred, whether at home, in school or in DCU, during or beyond the period of the research.*