Valorisation

It was February 2017, and I was at a symposium in Sydney (Australia). After one of the many presentations, a simple question from the crowd was “So, what can we do with the results of your study?” - The well-respected professor from the University of Toronto (Canada) decided to explain the purpose of his work by saying “I study behavior, I don’t improve it”. That was the moment I decided to leave...

Our ‘So, what?’ question.
For each scientific study, the ‘So, what..?’ question needs to be answered in a satisfying way, even when the answer is obvious and clear. Therefore, in this section, the focus is on valorisation. In simple terms - and in its broadest definition - valorisation emphasizes on how the results and knowledge derived from scientific research can be of value for society. The products can be diverse and limitless: from all forms of publicity to transfer the knowledge, to commercially available merchandises. In this section, I will focus on (or limit myself to) knowledge transfer, the possible influence of our program on the costs of obesity, the valorisation possibilities for strength exercises, and motivation. At the end of this paragraph a few considerations that needs to be taken into account for all Focus on Strength valorisation steps will be discussed.

The overall purpose of our studies was that we tried to contribute to solving overweight and obesity related health issues. For this, we first tried to understand the biological determinants that cause or prevent the issue, and the psychological determinants that cause or prevent the related health behaviors (and underlying beliefs): a combination of biological knowledge and psychological insights. Our idea was that youngsters who are overweight or obese are better in strength exercises compared to aerobic exercises and are stronger compared to their normal weight peers. From a psychological perspective, this can make them more motivated to engage in strength exercise and to ultimately maintain a physically active lifestyle. From a biological perspective, strength exercises can improve body composition and health.

From knowledge transfer…
For valorisation purposes and as a researcher in general, we see it as our duty to inform others, not only of our successes, but also our failures. One of the principles is that all my work is open, transparent, and therefore replicable. I have attended multiple (inter)national congresses and symposia, and publish our (both National and International) work (available via http://focusonstrength.net). All research and program materials, data, analyses and output are always fully disclosed (when applicable).

…To a reduction of life time costs of obesity…
Obesity has many health and quality of life consequences which might continue during and worsen throughout adulthood (Kelsey et al., 2014). These consequences can be translated to costs to direct (health care; Mirza & Yanovski, 2014) and indirect (productivity or absenteeism) consequences on a societal level (Grieve et al., 2013). Careful estimates of the life time costs were found to be over 90.000 US Dollar (approximately 81.000 euro) greater for a person who is obese versus a person without overweight (Kasman et al., 2015). In our research, we did not focus on losing body weight, but decided to concentrate on improvements in body composition. Applying the strong theoretical
base and the small but significant body composition improvements after 1 year as found in Chapter 8 might reduce these costs and advocates larger scale implementation.

...To strength exercises as product...
The idea of adding strength exercises to one’s daily life creates many possibilities for valorisation. With more emphasis on strength exercises, we do not want children and adolescents to become little bodybuilders, nor that aerobic components should be banned. Rather, we recommend that strength exercises, under qualified supervision, should be added to a child’s physical activity routine.

To increase the strength exercise possibilities for children and adolescents, first infrastructures at schools should be optimised. A workbook with exercises is freely available (see http://focusonstrength.net). This product should be further developed and spread with the help of teachers and professionals (e.g. Kennis Centrum Sport/Knowledge Center Sport). Physical education teachers can be informed about and/or trained in strength exercises, and provided with guidelines and suggestions for practice. For this, developments are needed at the organizational level, such as inclusion of strength exercises and the benefits of social comparison in the training of physical education teachers. Developments at policy level are needed to initiate activities at municipal level to promote strength exercises in children and adolescents. Outside the school setting, different sports in which pure physical strength and/or body mass are beneficial (e.g. rugby, judo) could be systematically promoted and/or developed for youngsters who are overweight. Fitness centres offer strength training, but are often inaccessible for youngsters, suggesting that collaborations between schools and fitness centres may be fruitful. School managements could consider providing this equipment.

...To motivation as product.
In our program, to motivate students to be more physically active after school, and to improve the determinants of their physical activity behavior, the basic principles of Motivational Interviewing were applied. For valorisation purposes the motivational program component could be further developed and improved. We have process evaluation data on secondary physiological and psychological outcomes, and are collecting data on teacher experiences; both will result in suggestions to improve the intervention. The motivational program as product can be distributed in secondary schools and other educational settings.

Considerations for further valorisation.
Although strength exercises may have both biological and psychological benefits in the obesity ‘challenge’, other aspects need to be considered for valorisation and implementation. Some of our decisions are directly related to the conditions that need to be considered before using our knowledge optimally. For example, we decided to initially work with high schools and physical education teachers for three reasons: first, social comparison is part of typical classroom settings and therefore unavoidable in the school setting (O’Keefe, Ben-Eliyahu, & Linnenbrink-Garcia, 2013). Second, physical education teachers are aware of the benefits of strength training, are able to teach, or emphasize the right techniques, and are able to provide qualified supervision. Third, parental awareness of the advantages of strength training in terms of their child’s health needs to be increased (see Chapter 5), and this can be done via the children: when adolescents participate in
strength exercises in high school and have positive experiences, they could discuss this with their parents, possibly curving their parents’ attitudes into a more positive direction. Without parental support, youngsters (who are overweight) will not engage in strength exercises (Davison et al., 2013) outside the school setting.

The focus on strength intervention can be implemented in multiple settings, and translated to multiple products, but for each implementation setting or product, the following aspects need to be considered:

1. Implementers and related stakeholders need to be positive, or at least neutral about the product. For example, in settings where parents are more involved in their child’s physical activity behavior, the parents need to be motivated first (see also Chapter 5). In our current program, the school management is an important stakeholder for this intervention. Commitment from the school management was therefore essential to optimize communication with parents and within the school, and with that to optimise the support from the teachers. Moreover, involvement of the school management was important in order to make this program part of the regular curriculum of the school. Therefore, regular meetings with school managements guaranteed proper participation from the schools and improvement the study.

2. An important consideration for social comparison – which might trigger overweight people to become more physically active when there is a strength aspect involved – is not only that overweight youngsters are better than normal weight youngsters, but also that overweight and normal-weight youngsters exercise together, and that there is a mutual appreciation between the youngsters in each other's performance. It is evident that when normal-weight youngsters and youngsters who are overweight are not physically active together, there is no social comparison, as youngsters who are overweight will not find out that they in fact perform better than normal-weight youngsters. Also, when there is no mutual appreciation (e.g., normal-weight youngsters attribute the better strength performance of youngster who are overweight to ‘because they are heavy’ and not to ‘because they are strong’), the positive effects of the social comparison are devaluated. A possible manner to accomplish this is to develop a physical activity team-task with both aerobic and (absolute) strength components, wherein the team (and not the individual) will be evaluated per task at the level of the best team member (which is most satisfying for all group members; Forsyth, 2014). Because youngsters work in teams, the focus is on performance and not on weight. With that, also the level of stigmatization is limited to a minimum (Hunger & Tomiyama, 2014).

3. Collaboration is a must. Obesity is a multidisciplinary problem, and a multidisciplinary approach is needed. Therefore, it is not only important that scientists with expertise in different areas work together, but also governments and industries collaborate.

4. Not only in our current work, but also for future implementation and valorisation, the aim should be on practical and applicable science to aid social value. Together with the implementers, the line between which intervention components are feasible and which are not should be investigated. For example, to gain a better body composition, our intervention required a sharper focus on strength exercises in physical education lessons, resulting in the students spending at least 30 % of the PE lessons on strength exercises (an average of approximately 15 min per lesson). The choice for 30 % was the outcome of meetings with PE teachers about the feasibility of integrating strength exercises in their standard curriculum.
**Conclusions.**

There are limitless options for valorisation of the *Focus on Strength* components. Within this program we do not have to solve obesity per se, but obesity-related health issues. On many levels, we showed that strength exercises might contribute to this solution. Our approach has the abilities to make overweight youngsters more (motivated to be) physically active, and more healthy by means of a healthier body composition; not by focusing on the current aerobic-focused physical activity guidelines, one's BMI, or the idea that overweight youngsters have to lose weight, but by focusing on their strength and on what overweight youngsters like to do.

**References**


