

# 10 YEARS UP



**July 2022**

**Report prepared by**

**Jonas Dano, Jennifer Thielen and Jessica Pearson (Master students  
Social Health and Organizational Psychology at Utrecht University)**

**under supervision of**

**Dr. Laura Weiss and Prof. Dr. Denise de Ridder**

**The role of education level and gender in goal selection in the 10YUP study:**

**How do girls and boys in pre-vocational and university preparatory education perceive the importance and attainability of their personal goals?**

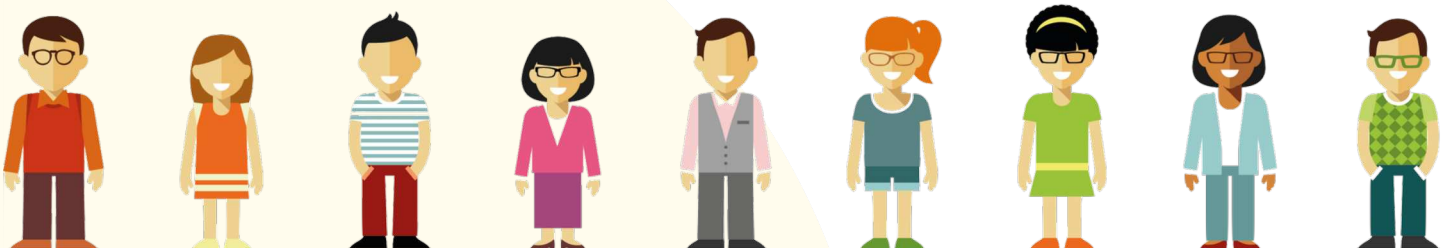
## **Summary of Findings**

The longitudinal 10YUP study examines the development of self-regulation strategies in adolescents from the age of 16. The aim of the present study is to examine in what way gender and education level affect adolescents' choice of goals at the age of 16 years, as well as their perception of importance and attainability of these goals. For this purpose, data from the first wave of data collection (October 2020) were used. Measures of the 'number of selected goals', 'ratings of goal importance' and 'ratings of goal attainability' were compared across groups defined by gender and education level by conducting a series of one-way ANOVAs. Results reveal that there were gender and educational differences in the number of goals that were selected and in ratings of goal importance; differences in attainability ratings were absent. No major differences relating to gender and education level were observed in what kind of goals adolescents considered to be most important. Regardless of gender and education level, all adolescents considered graduating from high school as their most important goal. Girls in higher education tended to prioritize interpersonal and personal well-being goals, whereas boys in vocational education tended to emphasize goals that relate to future achievements and improvements of specific skills.

Adolescence comes with many challenges relating to identity, social relations, and occupational pathways (Erikson, 1968). As a result, adolescents face decisions on what kind of goals they consider worthwhile striving for (Freund & Riediger, 2006). It is therefore important to understand which goals adolescents consider important and attainable and whether there are differences relating to gender and educational level.

Educational level may affect goal selection and goal perception for different reasons. One particular reason is that different education levels prepare for different career paths with higher educational levels (in Dutch VWO) preparing for university and vocational training (in Dutch VMBO) preparing for middle-level applied education (in Dutch MBO) and earlier access to a working life. Consequently, it has been argued that adolescents in vocational training may be more focused on work related goals. Indeed, a study by Klaczynski and Reese (1991) has shown that adolescents in vocational training more often held goals that related to the transition to a working life than adolescents in higher education who put more emphasis on educational goals; this study also revealed that adolescents in vocational training were more occupied with goals in the near future as compared with adolescents in higher education. These kind of differences in goals may be reinforced by peers and teachers in these different educational contexts (Wentzel et al., 2012). Gender may also influence what kind of goals adolescents pursue (Massey et al., 2008). Girls typically pursue goals that are related to interpersonal relations and educational success whereas boys have a stronger focus on occupational success, status, and financial goals.

Notwithstanding the scattered knowledge about gender and educational differences in the kind of goals adolescents pursue, not much is known about perceptions of importance and attainability of these goals. In the present study, perceptions of goal importance and goal attainability stand central. Both goal importance and goal attainability are dynamic constructs that may change over time as with growing older some goals become more relevant whereas other become less relevant (Freund & Ebner, 2005). Goal importance and attainability have been shown to be associated to the extent that people tend to invest more in goals they consider important, which in turn may contribute to attainability perceptions (Bühler, Weidmann, Nikitin, & Grob, 2019).



### Participants

Participants from the first wave of data collection (October 2020) were included, consisting of 1061 adolescents (68% female) aged 16 or 17 years old who were engaged in vocational training (in Dutch VMBO, 22%) or university preparatory education (in Dutch VWO, 78%).<sup>1</sup> Participants who were engaged in other types of education (general secondary education, in Dutch HAVO; secondary vocational education, in Dutch MBO) were not considered for the present analyses.

### Procedure & Materials

All participants were provided with a survey on their personal goals through a phone application. For the present study, we will only consider data relating to goal selection, goal importance, and goal attainability. A list of 36 different personal goals was provided, including, for example, 'finishing my current education' and 'getting my driver's license'. Participants first rated which goals applied to them. Next, they were asked to select their most important goal they were currently engaged with, after which they indicated the importance and attainability of this specific goal on a slider ranging from 0-100 (see De Ridder, Kroese, Brummelman, Benjamins, & Gillebaart, 2021 for details on this questionnaire).



### Descriptive statistics

First, the five most important and five least important goals were calculated for each of the four groups under consideration, i.e, young males in vocational training, young females in vocational training, young males in university preparatory education, and young females in university preparatory education. All data are displayed in Table 1. 'Finishing education' was found to be the most important goal across all four groups. Next, we calculated five most and least attainable goals; these data are displayed in Table 2. Appendix A gives an overview of all goals that were not included in the original questionnaire and were mentioned by participants as the goal they were currently most engaged with.

### Main analyses

Since it was not possible to perform a MANOVA due to an unequal group distribution and unequal variance (the assumption of homogeneity was rejected), a one-way ANOVA analysis using the Welch test (accounting for heterogeneity), was employed to examine differences across groups in number of selected goals and importance and attainability ratings for the goal participants were most engaged with. Significant differences were found in the number of selected goals and importance ratings on average importance score; differences in attainability ratings were absent (albeit marginally significant). See Table 3 for details.

Post-hoc tests were conducted to examine which groups differed from each other. All results are displayed Tables 4.1 to 4.3. Our findings reveal that boys in university preparatory education differ from the other three groups in the number of goals they selected with fewer goals ( $M = 20.06$ ) they wanted to pursue (Table 4.1). Furthermore, boys in university preparatory education rated their selected goal as less important ( $M = 66.35$ ) than the other three groups, especially in comparison with the importance ratings of girls in vocational training ( $M = 74.57$ ). Also girls in university preparatory education rated their goal as (slightly) less important ( $M = 66.35$ ) than girls in vocational training ( $M = 67.84$ ). Differences in attainability ratings across groups were absent (Table 4.3). Overall then, and somewhat surprisingly, adolescents in university preparatory education tend to select fewer goals and rate these goals as less important than adolescents in vocational training.



**Table 1.** *Most and least important goals per gender and educational level, with ‘score’ denoting the level of importance and ‘N’ indicating how many adolescents had chosen this goal as the goal they were currently most engaged with. N = 1052.*

| <i>Vocational Training</i>  |              |          |                             |              |          | <i>University Preparatory Education</i> |              |          |                             |              |          |
|-----------------------------|--------------|----------|-----------------------------|--------------|----------|---|--------------|----------|-----------------------------|--------------|----------|
| <i>Boys (N = 87)</i>        |              |          | <i>Girls (N = 136)</i>      |              |          | <i>Boys (N = 240)</i>                   |              |          | <i>Girls (N = 589)</i>      |              |          |
| <i>Most important goal</i>  | <i>Score</i> | <i>N</i> | <i>Most important goal</i>  | <i>Score</i> | <i>N</i> | <i>Most important goal</i>              | <i>Score</i> | <i>N</i> | <i>Most important goal</i>  | <i>Score</i> | <i>N</i> |
| Finishing education         | 95           | 79       | Finish education            | 96           | 127      | Finish education                        | 92           | 223      | Finishing education         | 96           | 542      |
| Other goal                  | 93           | 42       | Choosing further education  | 94           | 116      | Choosing further education              | 90           | 219      | Choosing further education  | 94           | 528      |
| Get driver’s license        | 92           | 74       | Other goal                  | 93           | 65       | Other goal                              | 84           | 110      | Other goal                  | 93           | 253      |
| Choose further education    | 91           | 69       | Get driver’s license        | 91           | 126      | Enjoy life more                         | 81           | 194      | Enjoy life more             | 92           | 514      |
| Find a job                  | 89           | 72       | Enjoy life more             | 91           | 124      | Become successful                       | 80           | 218      | Reduce amount of stress     | 91           | 500      |
| <i>Least important goal</i> | <i>Score</i> | <i>N</i> | <i>Least important goal</i> | <i>Score</i> | <i>N</i> | <i>Least important goal</i>             | <i>Score</i> | <i>N</i> | <i>Least important goal</i> | <i>Score</i> | <i>N</i> |
| Learn to play an instrument | 54           | 24       | Get better at gaming        | 42           | 29       | Drink less energy drinks                | 29           | 37       | Get better at gaming        | 29           | 72       |
| Get better at gaming        | 55           | 45       | More sex                    | 55           | 35       | Drink less alcohol                      | 38           | 36       | Drink less energy drinks    | 34           | 49       |
| Use less plastic            | 57           | 46       | Drink less alcohol          | 57           | 32       | Get better at gaming                    | 41           | 115      | Drink less alcohol          | 38           | 64       |
| Eat less meat               | 58           | 13       | Drink less energy drinks    | 61           | 39       | Stop smoking                            | 48           | 37       | Have more sex               | 39           | 161      |
| Less screen time            | 62           | 27       | Learn to play an instrument | 61           | 53       | Clean up my room more often             | 48           | 88       | Learn to play an instrument | 43.9         | 264      |

**Table 2.** *Most and least attainable goals per gender and educational level, with ‘score’ denoting the level of importance and ‘N’ indicating how many adolescents had chosen this goal as the goal they were currently most engaged with. N = 1052.*

| <i>Vocational Training</i>       |              |          |                                   |              |          | <i>University Preparatory Education</i> |              |          |                                   |              |          |
|----------------------------------|--------------|----------|-----------------------------------|--------------|----------|---|--------------|----------|-----------------------------------|--------------|----------|
| <i>Boys (N = 87)</i>             |              |          | <i>Girls (N = 136)</i>            |              |          | <i>Boys (N = 240)</i>                   |              |          | <i>Girls (N = 589)</i>            |              |          |
| <i>Most attainable goal</i>      | <i>Score</i> | <i>N</i> | <i>Most attainable goal</i>       | <i>Score</i> | <i>N</i> | <i>Most attainable goal</i>             | <i>Score</i> | <i>N</i> | <i>Most attainable goal</i>       | <i>Score</i> | <i>N</i> |
| Stop smoking                     | 93           | 28       | Be kinder to others               | 87           | 93       | Stop smoking                            | 99.71        | 34       | Finish my studies                 | 86.15        | 531      |
| Drink less energy drinks         | 87           | 30       | Finish my studies                 | 81.96        | 120      | Drink less energy drinks                | 95           | 35       | Choose further education          | 83           | 516      |
| Be on time at school/ internship | 85           | 46       | Travel more often by bike/walking | 81.31        | 65       | Finish my studies                       | 86.11        | 217      | Be kinder to others               | 81.30        | 407      |
| Drink less alcohol               | 84.77        | 22       | Be on time at school/ internship  | 81.34        | 67       | Choose further education                | 85.54        | 212      | Travel more often by bike/walking | 79.81        | 180      |
| Finish my studies                | 83.65        | 78       | Drink less alcohol                | 80.29        | 34       | Get my driver’s license                 | 84.44        | 205      | Drink less alcohol                | 78.17        | 63       |
| <i>Least attainable goal</i>     | <i>Score</i> | <i>N</i> | <i>Least attainable goal</i>      | <i>Score</i> | <i>N</i> | <i>Least attainable goal</i>            | <i>Score</i> | <i>N</i> | <i>Least attainable goal</i>      | <i>Score</i> | <i>N</i> |
| Less stress                      | 58.69        | 65       | Less stress                       | 57.21        | 111      | More sex                                | 53.21        | 137      | More sex                          | 50           | 154      |
| Lose weight                      | 59.83        | 30       | Learn another language            | 57.67        | 90       | Less screen time                        | 62.41        | 112      | Get better at gaming              | 52.64        | 70       |
| Earn a lot of money              | 59.86        | 73       | Earn a lot of money               | 58.94        | 113      | Learn to play an instrument             | 65.76        | 72       | Less stress                       | 53.32        | 494      |
| Use less plastic                 | 61.85        | 46       | More confidence                   | 59.48        | 116      | Earn a lot of money                     | 66.12        | 187      | Lose weight                       | 54.42        | 258      |
| Less screen time                 | 63.23        | 31       | More sex                          | 59.72        | 36       | Use less plastic                        | 67.08        | 125      | More confidence                   | 58.87        | 464      |

**Table 3.** Tests of equality of means across four groups.

|                          | <i>Welch statistic</i> | <i>Df1</i> | <i>Df2</i> | <i>p</i> |
|--------------------------|------------------------|------------|------------|----------|
| Number of selected goals | 10.931                 | 3          | 257.772    | <.001    |
| Importance ratings       | 2.872                  | 3          | 263.737    | .037     |
| Attainability ratings    | 2.258                  | 3          | 265.984    | .082     |

**Table 4.1.** Post-hoc testing: number of selected goals (*p*-values displayed).

|  | <i>M</i> | <i>N</i> | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> |
|--|----------|----------|----------|----------|----------|----------|
| 1. Boys Vocational Training                  | 22.62    | 82       | -        | -        | -        | -        |
| 2. Girls Vocational Training                 | 23.27    | 136      | .808     | -        | -        | -        |
| 3. Boys University<br>Preparatory Education  | 20.06    | 236      | <.001    | <.001    | -        | -        |
| 4. Girls University<br>Preparatory Education | 21.27    | 577      | .124     | <.001    | .014     | -        |

**Table 4.2.** Post-hoc testing: importance ratings (*p*-values displayed).

|  | <i>M</i> | <i>N</i> | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> |
|--|----------|----------|----------|----------|----------|----------|
| 1. Boys Vocational Training                  | 73.26    | 87       | -        | -        | -        | -        |
| 2. Girls Vocational Training                 | 74.57    | 145      | .983     | -        | -        | -        |
| 3. Boys University<br>Preparatory Education  | 66.35    | 240      | .156     | .017     | -        | -        |
| 4. Girls University<br>Preparatory Education | 67.84    | 589      | .279     | .031     | .882     | -        |

**Table 4.3.** Post-hoc testing: attainability ratings (*p*-values displayed).

|  | <i>M</i> | <i>N</i> | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> |
|--|----------|----------|----------|----------|----------|----------|
| 1. Boys Vocational Training                  | 68.94    | 87       | -        | -        | -        | -        |
| 2. Girls Vocational Training                 | 65.65    | 145      | .815     | -        | -        | -        |
| 3. Boys University<br>Preparatory Education  | 71.13    | 240      | .921     | .232     | -        | -        |
| 4. Girls University<br>Preparatory Education | 66.57    | 589      | .877     | .984     | .135     | -        |

## Discussion

The aim of this report was to shed light on what goals adolescent males and females with different educational backgrounds consider most important and feasible. Our findings reveal that these groups, varying in gender and educational level, differed in the number of goals they selected and how important they consider these goals. Overall, adolescents in university preparatory education rated their goals a relatively less important than their peers in vocational training. Moreover, they tended to select fewer goals in the first place. This finding aligns with the results from a study by Klaczynski and Reese (1991), suggesting that adolescents in vocational training tend to grow up faster and, as a result, more often pursue goals in the near future that are associated with becoming an adult. This observation makes sense when considering that adolescents in university preparatory education often choose to continue their education after graduating from high school, which automatically brings delays in the pursuit of goals that are connected to life events such as having a job or a family. One may even consider that these kind of life events are taken more seriously than academic goals and hence are rated as more important. A related observation is that boys in vocational training rated the goal of determining their next educational steps far less important than girls preparing for university education with boys in vocational training ranking it as their fourth most important goal and girls in preparatory university education ranking it as the second most important one. This finding confirms a previous study by Klaczynski and Reese (1991), showing that girls in higher education put more emphasis on continuing their education.

Another remarkable finding relates to interpersonal goals as being typical ‘female’ goals with both girls in vocational training and preparing for university considering these kind of goals as most important. This is in line with previous studies on sex differences in goals (Massey et al., 2008). Boys in vocational training typically did not mention interpersonal goals, nor did goals related to well-being or happiness appear in their top 5 list. Instead, they focus more on goals that are associated with adulthood, such as obtaining a driver’s license and finding a job. These findings are well in line with results from a study by Klaczynski and Reese (1991), showing that boys in vocational training tend to prioritize goals that prepare for adulthood.



Notwithstanding these differences in types of goals that are considered important, it should be mentioned that all adolescents regardless gender and educational level typically endorse one common goal: finishing their education.

## **Note**

<sup>1</sup> VMBO (preparatory secondary vocational education) is a four-year vocationally-orientated stream focused on practical knowledge, which leads to vocational training (MBO). It has two qualification levels and students complete the track at the age of 16. VWO (university preparatory education) is a six-year education stream with a focus on theoretical knowledge, that prepares students to follow a bachelor's degree at a research university. Students complete the stream around the age of 18.

## References

Bühler, J.L., Weidmann, R., Nikitin, J., & Grob, A. (2019). A closer look at life goals across adulthood: Applying a developmental perspective to content, dynamics, and outcomes of goal importance and goal attainability. *European Journal of Personality*, 33, 359-384.

De Ridder, D.T.D., Kroese, F.M., Brummelman, J., Benjamins, J., & Gillebaart (2021). Graduating from high school, enjoying life more, and being kinder to others: Goals and self-regulation in young people Report on the development of the Goal Setting and Goal Striving Inventory. Available at [www.10yup.nl](http://www.10yup.nl).

Erikson, E.H. (1968). *Identity: Youth and crisis*. New York: Norton Company.

Freund, A.M., & Ebner, N.C. (2005). The aging self: Shifting from promoting gains to balancing losses. In W. Greve, K. Rothermund & D. Wentura (Eds.), *The adaptive self. Personal continuity and intentional self-development*, pp. 185-202. Hogrefe & Huber Publishers.

Freund, A.M., & Riediger, M. (2006). Goals as building blocks of personality and development in adulthood. In D.K. Mroczek & T.D. Little (Eds.), *Handbook of Personality Development*, pp. 353-372. Psychology Press.

Klaczynski, P.A., & Reese, H.W. (1991). Educational trajectory and 'action orientation': Grade and track differences. *Journal of Youth and Adolescence*, 20, 441-462.

Massey, E.K., Gebhardt, W.A., & Garnefski, N. (2008). Adolescent goal content and pursuit. A review of the literature from the past 16 years. *Developmental Review*, 28, 421-460.

Wentzel, K.R., Baker, S.A., & Russell, S.L. (2012). Young adolescents' perception of teachers' and peers' goals as predictors of social and academic goal pursuit. *Applied Psychology*, 61, 605-633.

Wentzel, K.R., Baker, S.A., & Russell, S.L. (2012). Young adolescents' perception of teachers' and peers' goals as predictors of social and academic goal pursuit. *Applied Psychology*, 61, 605-633.

## Appendix A: Other mentioned goals

| <i>VMBO boys</i>   | <i>VWO boys</i>                       |
|--|---------------------------------------|
| Work at KLM  | Get a girlfriend                      |
| Start my own business  | Travel                                |
| Learning a different shooting discipline   | Be happier by looking less at others  |
| Become a Twitch Streamer   | Believe more (religion)               |
| Be myself and show that I am an ordinary person who doesn't want problems and has emotions | Become a millionaire                  |
| Buy a tractor  | Spend more time playing an instrument |
| Playing at more festivals as a DJ  | Discover other cultures               |
| Learn to eat more  | Taking my mom on vacation             |
| Meditate more often  | Be more helpful                       |
| To get back at people who act stupid to me   | Keep students informed about politics |
|  | Improve my concentration (ADD)        |
|  | Cycle 5000 km per year                |
|  | Choosing work that is important to me |
|  | Get better at programming             |

| <i>VMBO girls</i>   | <i>VWO girls</i>  |
|---|---|
| Be better with my money   | Stay happy  |
| Be more honest, so lie less   | Take better care of myself  |
| Stay healthy  | Enter university and study where I want   |
| Be happy  | Becoming myself (transition).   |
| Do what makes me happy  | Pass my Latin exam  |
| Have a nice and stable relationship   | Making my voice heard in the world for those who can't.                           |
| Focus more  | Getting my vwo diploma  |
| Enjoy life and don't think too much   | Getting into a relationship   |
| Get rid of my eating disorder   | Become successful in my sports  |
| Become a police officer   | Working on myself and spend more time on my hobbies                               |
| Making an LED facemask for when corona ends                                     | Stay in my relationship   |
| Make sure I find a new fun, interesting course which gives me a nice profession | Find a nice further education   |
| Have more motivation so that I can be more positive in life                     | Be admitted to medicine and become a pediatrician                                 |
| Be myself   | Become a model  |
|   | Start a family  |
|   | Get rid of my eating disorder   |
|   | Have my dreams come true, like going to law school and traveling around the world |
|   | Get mentally healthier  |
|   | Buy a boat  |
|   | Moving to Canada  |
|   | Achieve that I am free  |
|   | Know what I want for my future.   |
|   | Learn to accept myself  |
|   | Stay happy  |
|   | Take better care of myself  |
|   | Enter university and study where I want   |
|   | Becoming myself (transition)  |
|   | Pass my Latin exam  |
|   | Getting my VWO diploma  |