10 YEARS Up

Universiteit Utrecht

Dr. Marleen Gillebaart
Dr. Laura Weiss
Gerdien Sonneveld
Jakob Dunshirn
Giselle von Huene-Chan

What is the 10 Years Up Project?

The 10 Years Up project involves the set-up of a cohort that allows for studying the deployment and development of self-regulation strategies over a period of 10 years by examining what goals young people develop for the future, and the strategies they implement to achieve these goals.

A threefold of research questions are examined:

1

How does the nature and frequency of self-regulation strategies develop during the critical period of young adulthood?

2

To what extent is the employment of self-regulation strategies affected by environmental (e.g., neighborhood characteristics) and personal
(e.g., life events, life transitions) factors?

3

How do such strategies affect health and wellbeing, with an emphasis on critical choices about health and wellbeing (e.g., relationships)?

The 10 Years Up Project is the first study to investigate the use and long-term development of self-regulation strategies during young adulthood on such a large scale. Much of past literature has focused mainly on the predictive value of fixed childhood self-regulation (Lerner et al., 2011; Mischel et al., 1988; Moffitt et al., 2011), the use of a single regulation strategy (Demetriou & Bakracevic, 2009), or use in a specific context, such as in academics (Nota, Soresi & Zimmerman, 2004). This research project aims to contribute to the development of effective policies on health and well-being for young adults. Additionally, it aims to provide insight to how environmental and personal factors influence one's self-perceived competence, health, and well-being. The aim of this report is to give an overview on the data collected in year one of the project.

During the ages of 16 to 25, people learn to develop a sense of individuality and independence (Lerner et al., 2011). Reliance shifts away from parents, and various important decisions are made in areas of school, work, relationships, housing, and finances. These choices shape one's path of life and can have a major impact on long-term health and well-being.

This study addresses three critical gaps in self-regulation research:

It addresses longitudinal changes in self-regulation throughout young-adulthood.

It examines a wide variety of self-regulation strategies, rather than the mere inhibition of undesired responses.

It adopts a dynamic prospective approach, where self-regulation, its determinants and outcomes are assumed to change and influence each other over time.
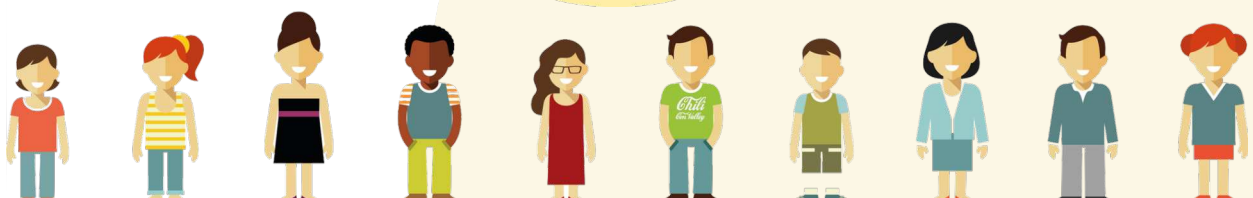
Data Collection
Who participates?

2,955 participants took part in the experiment's first point of data collection. Out of those, 2,863 participants filled-in the questionnaires and their supplementary demographics. A total of 458 participants (~15%) completed all 4 waves of data collection. Additionally, 19 new participants were recruited after the first wave. Altogether, 1.111 participants participated in two or more waves of data collection.

Participants ranged in age from 14 to 28 years (M = 16 years, SD = 7 months). However only data of participants aged 16 or 17 was analyzed for this report. A majority of 96.6% of participants (N = 505) were born in the Netherlands, whilst the remaining were born in 14 different other countries. The distribution of sex (Figure 1) and education (Figure 2) of participants of Wave 1 are visually represented below.
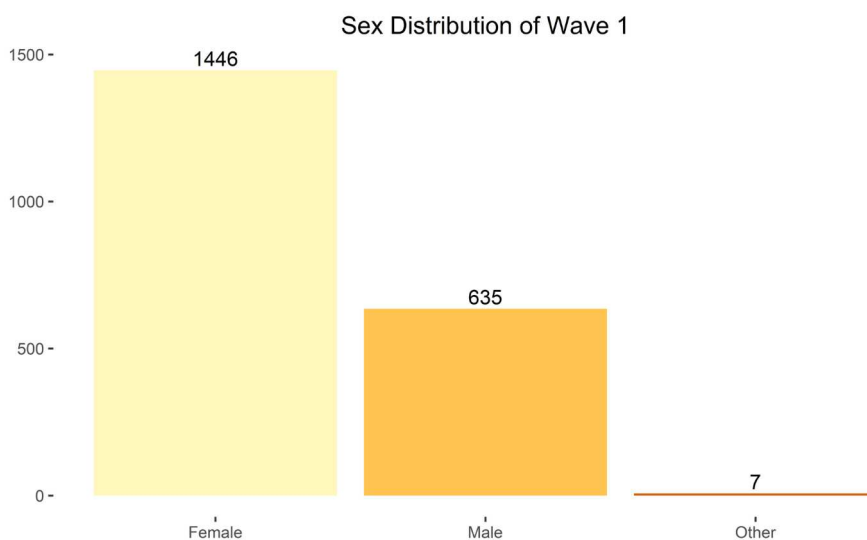
Sex Distribution of Wave 1

Figure 1.

Displays the distribution of reported sex of participants in the first wave of measurements.
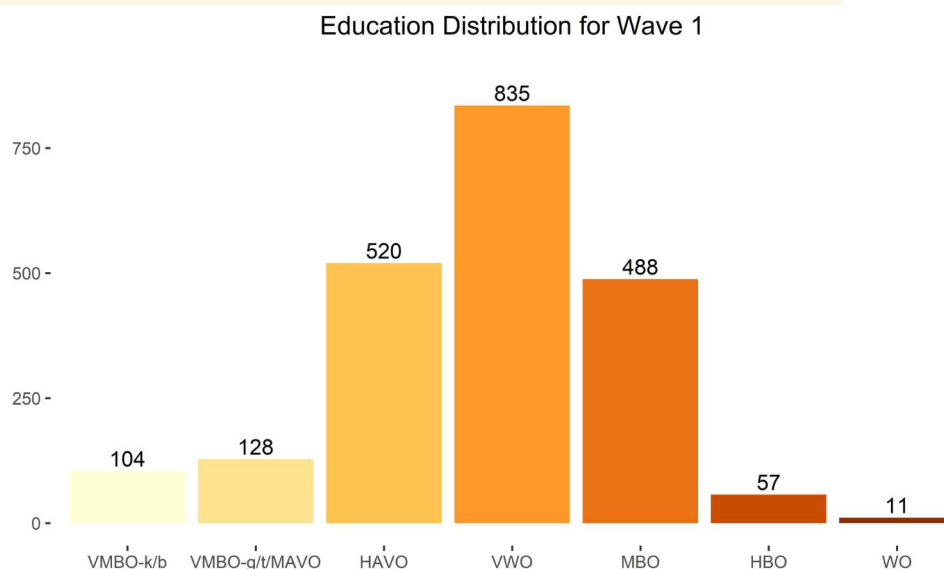
Education Distribution for Wave 1

Figure 2.

Visually showcases the distribution of education level of participants.

Data Collection
What is measured?

During the first year of the study, four measurements across four different time points took place. These measurements, henceforth refereed to as waves, were taken in October/November 2020, January 2021, April 2021, and August 2021. Each wave comprised of demographical data (e.g. sex, age, SES), psychological factors (e.g. participant's social support and the Big 5 personality traits), and domain specific outcomes (e.g. nutrition, financial behaviour). Self-regulation was consistently measured at each of the 4 waves, to categorize how participants chose to strategically attain their goals. For wave 4, no additional demographical data was collected.

Table 2.
Questionnaires per Wave

	WAVE 1 Oct/Nov 2020	WAVE 2 Jan 2021	WAVE 3 Apr 2021	WAVE 4 Aug 2021
DEMOGRAPHICS	Sex Age Education Level	SES Living Situation Religion	Parent's Education Ethnicity	
PHYSIOLOGICAL FACTORS	Social Support Self-Esteem	Big 5 Personality Traits Consideration of Future Consequences Self-Continuity	ASRI Fixed/Growth Mindset	Trait Self-Control Life Events Sense of Mastery Life Satisfaction
DOMAIN SPECIFIC OUTCOMES	Sleep School/Work Happiness	Nutrition Exercise Financial Behaviour	Sustainable Behaviour Delinquency & Aggression General Mental Health	Smoking Alcohol & Drugs Bullying Screentime
SELF REGULATION MEASURES	Self-Regulation Strategies (complete version)	Self-Regulation Strategies (abbreviated version)	Self-Regulation Strategies (abbreviated version)	Self-Regulation Strategies (abbreviated version)
ITEM TOTAL	76	71	75	68

Results
What goals did participants select?

The results of the first wave allow to obtain an overview over the participants' most highly valued goals. The most chosen goal, finishing one's studies, was also rated the most important and attainable. Otherwise however, choice frequency did not necessarily align with importance and attainability of a specific goal. An overview over the 10 most frequently chosen goals and importance and attainability ratings of these goals can be found in Table 3.

Table 3.
The 10 Most Frequently Chosen Goals in Wave 1 of Data Collection

	Importance	Attainability
FINISHING MY STUDIES chosen by 1963 participants (91%)	**95%**	**86%**
BECOMING SUCCESSFUL chosen by 1901 participants (88%)	**79%**	**66%**
ATTAIN A DRIVER'S LICENSE chosen by 1899 participants (88%)	**83%**	**81%**
ENJOY LIFE MORE chosen by 1864 participants (87%)	**86%**	**70%**
CHOOSE A FIELD OF FURTHER EDUCATION chosen by 150 participants (82%)	**90%**	**83%**
MINIMIZE STRESS chosen by 1723 participants (80%)	**81%**	**56%**
GAIN MORE SELF-CONFIDENCE chosen by 1720 participants (80%)	**81%**	**61%**
MEET WITH FRIENDS MORE OFTEN chosen by 1687 participants (79%)	**76%**	**72%**
BECOME FINANCIALLY INDEPENDENT chosen by 1664 participants (77%)	**77%**	**68%**
EARN A LOT OF MONEY chosen by 1650 participants (77%)	**71%**	**61%**

A preliminary analysis of the first year of data gives insight to which self-regulation strategies participants have implemented to reach their goals, and how the extent of their usage has developed throughout the first year. A general overview of the average use of each self-regulation strategy for each wave can be found in Table 4 and is visually displayed in Figure 3.

The self-regulation strategies that were assessed in the study were the following: (1) taking initiative, where one is proactive in taking the next steps to pursue a certain goal; (2) implementation of habits to achieve goals; (3) actively seeking opportunities to pursue goals; (4) re-evaluating or checking progress to see if participants feel they are doing well; (5) persevering when things get difficult; (6) suppressing the tendency to give up; (7) remaining positive if they didn't get closer to their goal; (8) providing rewards to themselves when getting closer to goals; (9) making a plan with an approach.

To name the top three, **perseverance** was the most frequently and consistently used self-regulation strategy across all 4 waves. Following shortly after, implementing **habits** was the second most prevailing self-regulation strategy across the four waves. Finally, **checking** the progress of one's goal achievement, was the third most implemented strategy of self-regulation.

How the use of self-regulation strategies developed throughout the first year is displayed by Figures 4 and 5. For example, the top strategy of **perseverance** was implemented most in waves 1.3 and 1.4. On the other hand, implementing **habits** was most utilized for wave 1.1 and **taking initiative** to achieve goals for wave 1.2.

Table 4.
Average Scores of Chosen Self-Regulation Strategies Across the 4 Waves

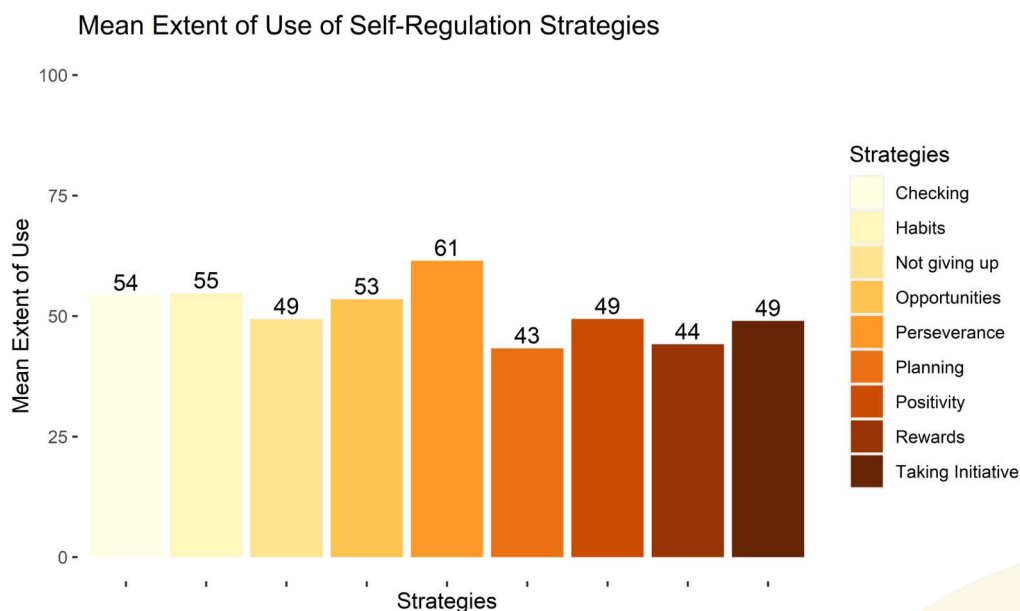| Self-Regulation Strategy	Mean Score Across Waves 1.1 – 1.4
PERSEVERANCE	61.5
HABITS	54.7
CHECKING	54.2
OPPORTUNITIES	53.5
POSITIVITIES	49.4
NOT GIVING UP	49.4
TAKING INITIATIVE	49.0
REWARDS	44.1
PLANNING	43.3

Graphics

Which self-regulation strategies were implemented?

Figure 3.

This figure displays the mean extent of use for each self regulation strategy.

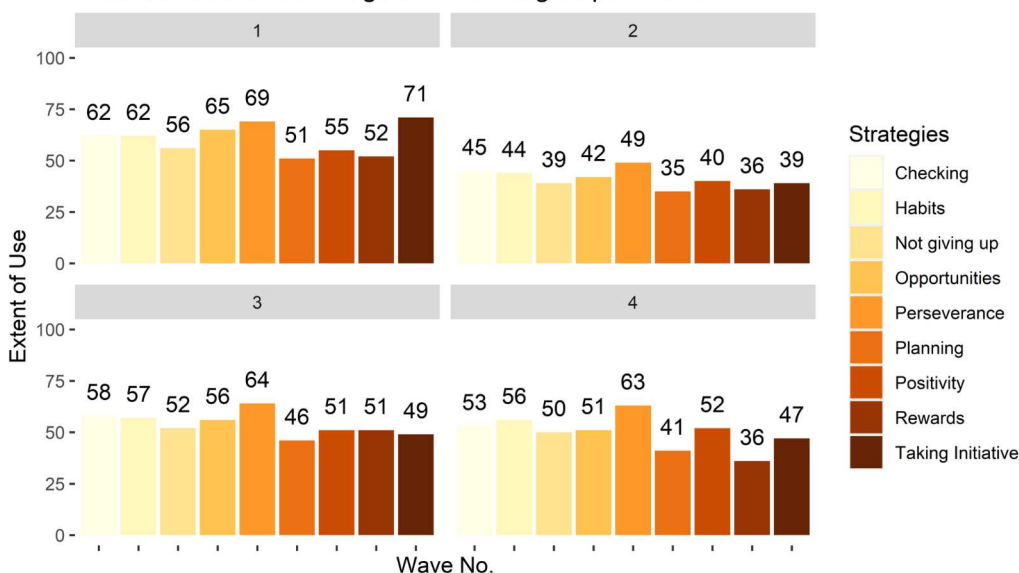### Mean Extent of Use of Self-Regulation Strategies

Figure 4.

This figure provides insight into how the distribution of the used self-regulation strategies developed throughout waves 1.1 to 1.4. It showcases the relative relevance of the different self-regulation strategies for each wave.

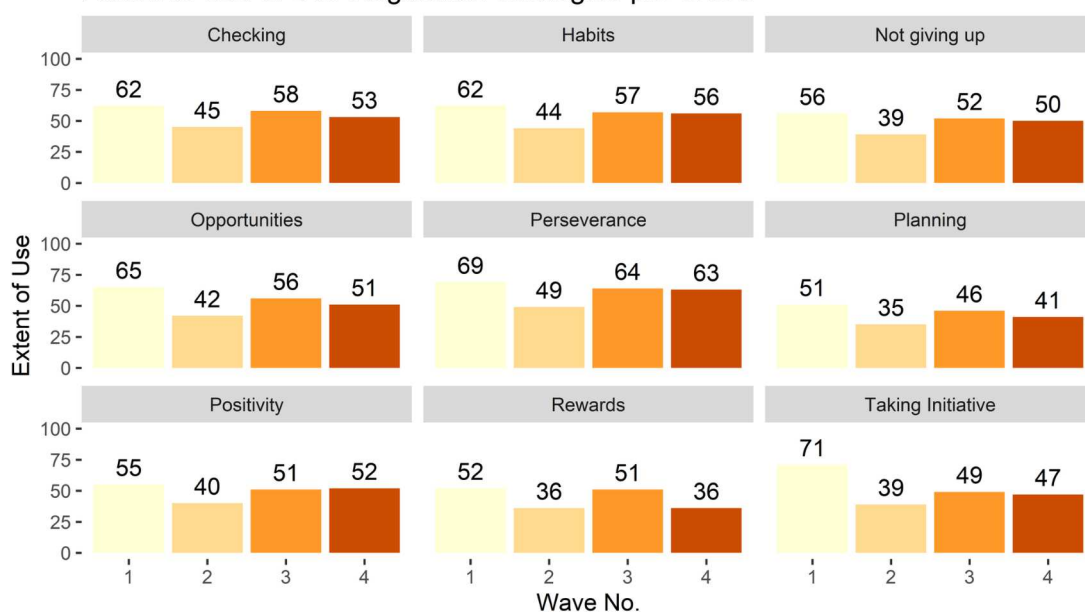### Extent of Use of Self-Regulation Strategies per Wave

Figure 5.

This figure visualises how each self-regulation strategy developed throughout the four waves, respectively.

Extent of Use of Self-Regulation Strategies per Wave

References

Demetriou, A., & Bakracevic, K. (2009). Reasoning and self-awareness from adolescence to
      middle age: organization and development as a function of education. *Learning and
      Individual Differences*. *19*, 181–194. https://doi.org/10.1016/j.lindif.2008.10.007

Gillebaart, M., Brummelman, J., & De Ridder, D. (2021). Study protocol of the Ten Years Up
      project: Mapping the development of self-regulation strategies in young adults
      over time. *Frontiers in Psychology*. *12*, 4049. https://doi.org/10.3389/fpsyg.2021.729609

Lerner, R. M., Lerner, J. V., Bowers, E. P., Lewin-Bizan, S., Gestsdottir, S., & Urban, J. B. (2011).
      Self-regulation processes and thriving in childhood and adolescence: A view of the
      issues. *New Directions for Child and Adolescent Development*. *133*, 1-9.
      https://doi.org/10.1002/cd.300

Mischel, W., Shoda, Y., Rodriguez, M. L. (1989). *Delay of gratification in children. Science, 244*,
      933–938. https://doi.org/10.1126/science.2658056

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., Houts, R.,
      Poulton, R., Roberts, B.W., Ross, S., Sears, M.R., Thomson, W.M., & Caspi, A. (2011).
      A gradient of childhood self-control predicts health, wealth, and public safety.
      Proceedings of the National Academy of Sciences of the United States of America. *108*,
      2693–2698. https://doi.org/10.1073/pnas.1010076108

Nota, L., Soresi, S., & Zimmerman, B. J. (2004). Self-regulation and academic achievement
      and resilience: A longitudinal study. *International Journal of Educational Research,
      41*(3), 198-215. https://doi.org/10.1016/j.ijer.2005.07.001