General self-efficacy in the Norwegian population:

Differences and similarities between sociodemographic groups

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Abstract

Aims: General self-efficacy (GSE) refers to optimistic self-beliefs of being able to perform and control behaviors and is linked with various physical and mental health outcomes. Measures of self-efficacy are commonly used in health research with clinical populations, but are less explored in relationship to sociodemographic characteristics in general populations. This study investigated GSE in relation to sociodemographic characteristics in the general population in Norway.

Methods: As part of a larger national survey, the General Self-Efficacy Scale was administered to a general population sample, and 1787 out of 4961 eligible participants (response rate 36 %) completed the scale. Group comparisons were conducted using independent *t*-tests and one-way analyses of variance. Linear regression analysis was used to examine factors independently associated with GSE.

Results: GSE was lower for older compared to younger participants ($p < 0.001$). It was higher for men compared to women ($p < 0.001$), higher for those with higher levels of education compared to those with lower levels ($p < 0.001$) and higher for those in work compared to their counterparts ($p < 0.001$). Controlling for all variables, male gender and employment were independently associated with higher GSE. Age moderated the associations between gender and employment, on one hand, and GSE on the other. The association between being male and having higher GSE was more pronounced in younger age, as was the association between being employed and having higher GSE.

Conclusions: Male gender and being employed were related to higher GSE among persons in the general population in Norway, and these associations were stronger among persons of younger age. The findings are considered fairly representative for the Norwegian population.

Keywords: cross-sectional study, general self-efficacy, population study, sociodemographic factors, survey

Introduction

Self-efficacy refers to a person's beliefs about how capable he or she is in performing the behaviors needed to bring about a desired outcome (1). The concept contributes to explain behavioral motivation: what people decide to do, the amount of effort they invest in what they do and the persistence they show when doing it. At an aggregated level, mastery experiences from successfully performing a range of behaviors and activities in a variety of situations is believed to build a generalized sense of efficacy (2). Thus, the concept of general self-efficacy is less tied to specific tasks or situations, but reflects a person's disposition to feel confident and trust his or her own efforts to cope with the broad range of tasks and challenges encountered throughout daily life (3). In turn, general self-efficacy (GSE) has been linked with various physical (e.g., 4) and mental health outcomes (e.g., 5, 6).

The increase of chronic illnesses throughout the world, in combination with more focus on cost-effectiveness within the specialized health care services, call for more efforts to be placed on assisting illness self-management. Research studies have found self-efficacy to be modifiable and to be associated with outcomes like adherence to a recommended diet (7), reduced smoking (8), healthier levels of physical activity (9), as well as better health and quality of life (10, 11). However, in a public health perspective, self-efficacy enhancing interventions for those already affected by illness are just one of several possible applications. A broader approach would also consider that modern life poses a wide array of challenges for all members of society, not just those affected by illness. Moreover, the contexts for these daily chores may be unstable. Relationships start, change and end, and may be organized in ways that differ from those traditionally established (12). The technologies by which we do many of our daily chores also change more rapidly than ever before, with differing interpretations concerning the effects on individuals and society at

large (13). As a result, having self-efficacy for a range of complexly connected tasks in a changing societal context is vital for a person's everyday functioning. In light of this, Schwarzer's (2) GSE concept appears to be important. In order to manage and cope with the daily challenges, the person needs a level of confidence that he or she has the required skills, strength and resources to do so. For those affected by illness, however, doing what is required to maintain or improve health add to the challenges of coping with the daily chores.

With a view to GSE in large population studies, Luszczynska and coworkers employed Schwarzer and Jerusalem's general self-efficacy scale (14) with a mixed population from Germany, Poland and South Korea (total n = 1.933) (3). In the meta-analysis, they found that the GSE correlated moderately with social-cognitive variables (r = 0.25), well-being (r = 0.28), and coping strategies (r = 0.28), but only weakly with specific health behaviors (r = 0.14). These associations were of similar magnitude across countries and subsamples, providing support for the universal status of the GSE construct. Scholz and coworkers' findings were based on a sample of 19.120 participants from 25 countries worldwide (15). In their study, the mean GSE score was 29.6 (SD = 5.3, skewness = -0.52), the slight skewness indicating that "the scale is more sensitive to detecting individual differences in the lower than in the higher range of the distribution" (15) (p. 248). Highest GSE was found in the sample from Costa Rica (M = 33.2), whereas the lowest level was found in the sample from Japan (M = 20.2).

According to Bandura (1), self-efficacy arises through the dynamic interaction between the person's characteristics, his or her behavior, and the environment in which the person lives and acts. In line with Bandura's theory, we might expect GSE to increase with age, as higher age may indicate more mastery experience from which to build GSE. For the oldest of adults, however, illness and decreased levels of functioning may again reduce GSE. Work and education may be reciprocally connected to GSE. Higher GSE may be an

important resource for starting and carrying through with education and work, but will also logically be strengthened by mastery experiences from education and work. A similar logic could be applied to explain a possible association between higher GSE and living in a relationship.

Empirically, sociodemographic variables like age and gender have been ambiguously associated with GSE, and associations may be dependent on other characteristics of the samples employed. In Sweden, Löve and colleagues (16) found GSE to be higher among men compared to women, and to be higher in a randomized population cohort than among persons on sick leave. In Norway, Leganger and coworkers reported from studies of GSE conducted among 421 adults who smoked (mean age 39.5 years, 50.6 % females), and among 1.576 18-year old adolescents (52.2 % females) (17). In the sample of adults, no main effects were found for age, gender, or education, but GSE was higher for men than for women among those with the lowest level of education. Within this low education group, higher GSE was also associated with lower age. In the sample of adolescents, GSE was significantly higher for boys (M = 25.4) than for girls (M = 23.4, $p < 0.001$). Such findings provide reasons to explore possible interactions between the sociodemographic variables, with a view to their associations with GSE.

As GSE has been found to be an indicator of health, knowledge about the level and distribution of GSE in the general population as well as in various sociodemographic groups is important in a coping perspective relevant to health outcomes, daily life and work. Moreover, since Norway is a country with a high standard of living, relatively small income differences, high degree of gender equality, and equal rights to education and healthcare services, comparisons with other countries are relevant. Internationally, there are few large population studies concerned with the GSE, and those that exist have aimed at confirming the proposed one-factor structure of the instrument (3, 15) and at investigating factors

associated with GSE, driven by theory (3). We have been unable to identify studies focused on GSE levels and distribution in different sociodemographic groups.

Study aim

The present study aimed to investigate GSE in relation to sociodemographic characteristics in the general population in Norway.

Method

Study design

The Norwegian Population Study (NorPop) was designed to gather data for a wide variety of health conditions and provide norm data for several questionnaires used for assessing symptoms, attitudes and behavior. The study had a cross-sectional survey design.

Sample selection and size

The sampling procedure aimed at recruiting a representative sample of the Norwegian population as participants in the study (18). Based on a public registry of names and addresses for the Norwegian adult population (≥ 18 years of age and registered as a Norwegian citizen), an agency external to the researchers' institutions (The Central National Register) randomly selected a sample of persons stratified by age, gender and geographic region, for possible inclusion in the study.

The sample size calculations were based on the premise that we should be able to document a) differences in group percentages as small as 6 percentage points, b) between two (equally sized) groups, c) percentages around 50, d) with a maximum 5 % risk of committing a type 1 error, e) with a statistical power of 80 %, and f) an expected response rate of 40 %. Based on the above criteria, the questionnaire would be sent to a minimum of {[(1,96 + 0,84)*((50*(100-50) + (44*(100-44))] / (50-44)*(50-44)*(100/40)*2} = 5406 persons. Therefore, during 2015 and 2016, the questionnaires were sent by regular mail to

5,500 invited persons along with a letter explaining the purpose and procedures of the study. Of the 5,500, nine persons had died, 21 could not fill out the questionnaire because of co-morbidity or old age, and 499 envelopes were returned because the address was not valid. Thus, the eligible sample consisted of 4,971 individuals. Of these, 1,792 subjects (36%) completed the questionnaires (32.6 % of the targeted sample).

Comparing responders and non-responders, there were no significant differences in mean age, gender proportions or the distributions of living in rural and urban areas. The sample proportion in active work was 66% whereas it was 67% in the general population (19). In both groups, 17% lived alone. However, in the study group there were 1.3 % without work and 53 % with higher education, compared to 4.4 % and 41.0 % in the general population (18). Thus, we consider our sample fairly representative of the general Norwegian population, although a larger proportion of the sample had higher education. The flowchart in Figure 1 displays the recruitment and inclusion process.

FIGURE 1 ABOUT HERE

Measures

General self-efficacy

The *General Self-Efficacy Scale* (14) measures optimistic self-beliefs in coping with the demands, tasks, and challenges of life in general. It consists of 10 statements that respondents rate on a scale from 1 (not at all true) to 4 (exactly true). Examples of statements are “I can always manage to solve difficult problems if I try hard enough” (item 1) and “I am certain that I can accomplish my goals” (item 3). The individual’s scores on each item are summed up to a GSE score. Thus, the score range is 10-40 with higher scores indicating higher GSE. High correlations with measures of self-appraisal, self-acceptance,

and optimism, and with social-cognitive variables, behavior-specific self-efficacy, and well-being (3), have indicated theoretical accuracy of the concept. For the current study, a Principal Components Analysis of the scale revealed one underlying dimension, with an associated Eigenvalue of 5.94 and explaining 59.4 % of the variance in the data. Factor loadings ranged 0.61-0.83. Internal consistency of the scale was 0.92, and the mean inter-item correlation was 0.54. The scale had been translated into Norwegian and validated before it was used in the present study (20).

Sociodemographic background

Data for age, sex, education, employment status, relationship status, and population size of place or city of residence were collected. Age was transformed into categories: 18-30 years, 31-40 years, 41-50 years, 51-60 years, 61-70 years, and 71 years of age or above. For the regression analysis, age was used as a continuous variable, whereas formal education level was dichotomized: 12 years' education or less (representing high school or less education) versus 13 years' education or more (representing some level of higher education). Employment status was similarly dichotomized into working versus not working. The former category included persons being employed with paid work or undergoing education, while the latter category included persons doing full-time housework, being retired, unemployed or receiving disability benefits. Also in the regression analysis, relationship status was treated as living with spouse/cohabitating versus not living with spouse/cohabitating. Population size of place or city was categorized as less than 2000 persons, 2000-19.999 persons, 20.000-99.999 persons, and 100.000 persons or more.

Statistical analyses

Due to missing data on the GSE scale, five responders were initially excluded from the present study, leaving a sample of 1787 participants for analysis. For all subsequent analyses, participants were excluded in the case of missing values on the relevant variables

(listwise deletion). The data were analyzed using SPSS for Windows version 24 (21). Differences in general self-efficacy levels between groups were assessed by the independent *t*-test and one-way analysis of variance (ANOVA) as appropriate. For post-hoc multiple comparisons between groups, the Tukey Honest Significant Difference (HSD) was applied. Further, a multivariate regression analysis was conducted, using the GSE scale score as the dependent variable. Independent variables were included in two subsequent blocks. Block 1) included age, gender, education, employment status, relationship status, and population size of place of residence. Block 2) included the interaction terms age x gender, age x education, age x employment, gender x education, and gender x employment. Effect sizes (*ES*) were calculated as Cohen's *d* and as standardized beta weights (β), and $d > 0.50$ and $\beta > 0.30$ were considered relevant as medium size effects. The level of significance was set at $p < 0.05$ and all tests were two-tailed.

Ethics

No person-identifying information was collected. Those who consented to participate did so by returning their completed questionnaires in a sealed envelope. Prior to commencing the study, the appropriate ethics committee was consulted and, due to the anonymous data collected, no formal ethical approval was required.

Results

Sample characteristics and general self-efficacy

The mean age of the participants was 53.2 years (*SD* = 16.6 years) and there was a higher proportion of females (53.1%) compared to males. The distribution of the GSE scores is shown in Figure 2. Fifty participants (2.8 %) obtained the highest possible total score of 40, whereas five participants (0.3 %) obtained the lowest possible total score of 10. The sample mean score was 29.0 (*SD* = 6.2). The data did not have a normal distribution and were

slightly skewed towards higher scores (*skewness* = -0.44, *SE* = 0.06, Kolmogorov-Smirnov test $p < 0.001$). However, deviation from the normal distribution curve was only modest (Figure 2). As also non-parametric tests for the analyses reported in Table 1 produced essentially the same findings as were found with the parametric tests, we proceeded with parametric statistical procedures.

FIGURE 2 ABOUT HERE

The GSE scores of the participants, in relationship to their sociodemographic characteristics, is shown in Table 1 and Table 2. The age group analysis revealed an effect of age on GSE among the participants. However, the multiple comparisons showed largely similar levels between the groups, excepting the oldest – participants of 71 years of age or higher had significantly lower levels than the four youngest age groups, but similar to those between 61 and 70 years of age (*d* ranging 0.13-0.32). Differences between other age groups were not statistically significant.

Men had a higher level of GSE compared to women (*d* = -0.21). Those with the highest level of education (college or university ≥ 4 years) had higher GSE levels than those with less education (*d* ranging -0.21- -0.55). Participants who were in paid work had higher GSE levels than those who were retired, received disability pension, were unemployed or reported housework as main employment (*d* ranging -0.33- -0.52), but had GSE levels similar to those enrolled in education ($p = 0.89$). Relationship status did not influence the level of GSE in the participants ($p = 0.64$). The analysis relating general self-efficacy levels to the population size of the participants' place of residence revealed a statistically significant effect. However, the multiple comparisons showed no significant differences between the groups.

TABLE 1 AND TABLE 2 ABOUT HERE

In the total sample (see Table 2), those in the age group 18-30 with higher education had the highest mean GSE score (M = 30.6). Conversely, those in the age group ≥ 71 years without higher education had the lowest mean score (M = 27.3). The same pattern occurred for men: the highest mean GSE score was found among those 18-30 years with higher education (M = 33.1), whereas the lowest mean score was found among those ≥ 71 years without higher education (M = 27.6). For women, the highest mean GSE score was for age group 41-50 years with higher education (M = 30.1), whereas the lowest mean score was for the age group 51-60 years without higher education (M = 26.0). See Table 2 for further details about GSE levels in different sociodemographic groups.

Adjusted associations with general self-efficacy

The results from the multivariate analysis is displayed in Table 3. In block one of the multivariate regression analysis, three variables showed independent associations with GSE. Higher GSE was associated with male gender (β = -0.12, $p < 0.001$), higher education (β = 0.15, $p < 0.001$), and being employed (β = 0.14, $p < 0.001$). The model was statistically significant (F = 20.6, $p < 0.001$), explaining 6.6 % of the GSE variance.

When including the interaction terms in the second block, the association between education and GSE was weakened and no longer statistically significant. However, the associations between GSE and gender (β = -0.49, $p < 0.001$) and between GSE and work (β = 0.44, $p < 0.001$) increased markedly. The interactions between age and gender (p = 0.02) and between age and work status (p = 0.004) indicated that the associations between gender, work and GSE were moderated by age, as illustrated in Figure 3 and Figure 4. Essentially, the associations between male gender, being employed and higher GSE were stronger in the

younger age groups. The full model was statistically significant ($F = 13.0$, $p < 0.001$), explaining 7.6 % of the GSE variance.

TABLE 3, FIGURE 3 AND FIGURE 4 ABOUT HERE

Discussion

This study showed that those over the age of 71 had lower levels of GSE than those in younger age groups. Similarly, men, those with higher education, and those in paid work showed higher levels of GSE compared to their counterparts, but for the most part, the differences had a small effect size. Relationship status was not associated with general self-efficacy among the participants, whereas the overall significant effect of population size of the participants' place of residence was not statistically significant in the multiple comparisons. The multivariate analysis revealed strong associations between male gender, being employed and higher GSE, and age moderated the associations between gender, employment and GSE.

Comparisons with other countries

We found a slightly skewed GSE score distribution with more scores at the higher end of the scale, which is in agreement with the findings from a previous cross-cultural study (15). As most persons would be inclined to have higher scores, this means that it will be easier to detect important individual differences in GSE among those who have scores in the lower range. GSE in the Norwegian population ($M = 29.0$) was similar as in the large international sample studied by Scholz and co-workers ($M = 29.6$) (15). However, Scholz' international sample showed very large variations between the countries: GSE was lowest in the sample from Japan ($M = 20.2$) and Chinese Hong Kong ($M = 23.1$), and highest in Costa Rica ($M = 33.2$) followed by Denmark ($M = 32.9$). Asian countries (collectivist cultures) tend to value

effort and hard work, whereas Western countries (individualistic cultures), including Norway, tend to place stronger emphasis on ability and competence, the latter more closely associated with the GSE construct (15).

General self-efficacy in different sociodemographic groups in Norway

In the current sample, the effect of age was specifically pertaining to the oldest age group. Comparing the GSE levels between participants in the different age groups, the only significant finding was the lower mean score among those of 71 years or older, compared to the participants in practically all of the other age groups (see Table 1). This result contrasts the notion of general self-efficacy as an age-independent construct, as well as some of the empirical findings in support of this notion (15). On the other hand, Leganger and coworkers found considerably higher GSE scores in the adult sample than in the sample of 18-year old adolescents (17). In the adult sample, they found no bivariate relationship between age and GSE, but among those with the lowest level of education, higher age was associated with lower levels of GSE. Thus, the impact of age appears to be ambiguous and may depend on a range of other factors. In line with the reasoning put forth in another Norwegian study (22), we examined whether one such moderating factor could be the generally lower education level among the older participants. As shown in Table 2, a larger proportion of the participants in the oldest age group had no higher education experience, and having higher education was indeed associated with higher GSE scores (Table 1). However, this reasoning was not supported from the multivariate analysis, as the interaction between age and education was not statistically significant (Table 3).

Being retired from work was the case for 95.5 % of the oldest participants, and the unadjusted analysis revealed significantly higher GSE levels among those who were employed compared to those who were not (Table 1). As having a worker role has been associated with higher GSE levels in several studies (23, 24), we wondered if the lack of a

worker role among participants in the oldest age group had an impact on their GSE scores. The interaction between age and work was statistically significant, indicating that the association between work and GSE scores was moderated by the participants' age. At the same time, the direct association between employment and higher GSE increased markedly. An important finding of the study is therefore that the worker role is of great importance for GSE among persons in the Norwegian general population. When persons in the older age groups are at risk of experiencing lower GSE, this appears to be much instigated by their loss of the worker role. What should also be taken into account is the health condition among the participants in the oldest age group. Generally, health problems increase in older age, and GSE levels among persons with health problems tend to be lower compared to the levels in general population samples (e.g., 16). Thus, more health problems among the participants in the oldest age group may contribute to explain their lower GSE levels. However, the interaction effect might be of even greater importance towards the younger end of the age continuum. It could be speculated that at younger age, when people are generally supposed to be able and productive, being outside of work may have a stronger negative influence on GSE (see Figure 3).

The men in the sample had higher levels of GSE compared to the women (see Table 1), and considering the interaction between age and gender, this was particularly the case among those in the younger age groups (see Figure 4). In their cross-cultural population study (15), contrastingly, Scholz and coworkers found only a negligible effect of gender. However, our result is consistent with the results of other studies showing higher GSE levels among men compared to those of women (17), and consistent with the generally lower levels of subjectively reported health complaints among men (25). Widening the scope of this argument, a tendency to focus on health complaints may also be associated with lower GSE. Moreover, we wondered if an interaction between gender and work could contribute to

explain gender differences in GSE scores, but this was not found in the current sample. Instead, the independent association between male gender and higher GSE increased in strength after controlling for interactions (Table 3). Thus, as shown in Figure 4, men had higher GSE compared to women across all age groups, but the gender difference was more outspoken amongst those of younger age.

Study limitations

Because of the cross-sectional study design, causality should not be inferred when interpreting the results. The response rate of 36 % may put the sample's ability to represent adequately the study population into question, but response rates about this magnitude to mailed public health surveys are commonly experienced (26). A high response rate may serve to indicate good quality of the data provided, and non-response error may be inferred in cases where characteristics of responders and non-responders are different. In the present study, no significant differences in mean age or gender proportions were found between responders and non-responders. The distribution of persons living in rural and urban areas were also similar between responders and non-responders, thus reducing the risk of biased results due to socio-economic and cultural influences. The gender proportions in the sample varied according to age groups: In relation to the number of female participants in the respective age groups, there were fewer men in the younger age groups and more men in the older age groups. Overall, however, when comparing the study sample with Norwegian population statistics regarding employment (19), education (27) and relationship status (28), we consider the differences to be minor and our findings to be fairly representative of the Norwegian population.

Conclusion

Male gender and being employed were related to higher levels of GSE among persons in the general population in Norway. Most associations showed small effect sizes, whereas the

adjusted associations between male gender, being employed and higher GSE bordered towards moderate effect sizes. Older persons may be at risk of lower GSE, but not because of their higher age in and of itself – rather, the risk appears to come from their retirement from work and presumably more health problems. In younger age groups, being male and being employed appear to have a stronger influence on higher GSE levels, compared to the impact of these factors in the older age groups.

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Table 1. General self-efficacy in relationship to sociodemographic characteristics of participants

Characteristics	General self-efficacy *M (SD)*				
	n		*F*	*p*	*d (95 % CI)*
Age group	1767		5.09	< 0.001	
18-30	208	29.7 (6.4)		< 0.01	0.32 (0.23-0.41)
31-40	186	29.4 (6.1)		< 0.05	0.28 (0.19-0.38)
41-50	356	29.6 (6.0)		< 0.01	0.31 (0.22-0.41)
51-60	353	29.2 (5.9)		< 0.05	0.25 (0.16-0.35)
61-70	397	28.4 (6.1)		0.48	0.13 (0.03-0.22)
71 + (reference)	267	27.6 (6.7)			
Gender	1774	*M (SD)*	*t*	*p*	*d (95 % CI)*
Men	831	29.6 (5.9)	4.35	< 0.001	-0.21 (-0.31- -0.12)
Women	943	28.3 (6.4)			
			F	*p*	*d (95 % CI)*
Education	1774	*M (SD)*	18.2	< 0.001	
Elementary school, 7-10 years	142	27.1 (6.6)		< 0.001	-0.55 (-0.64- -0.45)
Secondary school or equivalent	493	27.6 (6.4)		< 0.001	-0.48 (-0.57- -0.38)
High school or equivalent	190	28.6 (6.4)		0.002	-0.31 (-0.41- -0.22)
College/university < 4 years	438	29.3 (5.9)		0.02	-0.21 (-0.30- -0.11)
College/university ≥ 4 years (reference)	511	30.5 (5.8)			
			F	*p*	*d (95 % CI)*
Employment	1770	*M (SD)*	15.8	< 0.001	

In paid work (reference)	1076	29.7 (5.8)			
In education	90	30.3 (6.2)		0.89	0.10 (0.01-0.19)
Retired	460	27.7 (6.5)		< 0.001	-0.33 (-0.42- -0.23)
Disability pension	111	26.4 (6.9)		< 0.001	-0.52 (-0.61- -0.42)
Housework/unemployed	33	26.8 (7.6)		0.05	-0.43 (-0.52- -0.34)
		M (SD)	*F*	*p*	*d (95 % CI)*
Relationships	1772		0.64	0.64	
Spouse/partner (reference)	1280	29.0 (6.1)			
Unmarried/single	230	29.2 (6.7)		0.99	0.03 (-0.06-0.12)
Divorced/separated	97	28.9 (6.4)		> 0.99	-0.02 (-0.11-0.08)
Widow/widower	76	27.9 (6.6)		0.57	-0.17 (-0.27- -0.08)
Steady relationship	89	28.9 (6.0)		> 0.99	-0.02 (-0.11- 0.08)
		M (SD)	*F*	*p*	*d (95 % CI)*
Population size	1763		3.16	0.02	
Fewer than 2000 (reference)	357	28.3 (6.4)			
2000-19.999	487	28.6 (6.3)		0.86	0.04 (-0.05-0.14)
20.000-99.999	424	29.4 (6.3)		0.06	0.18 (0.08-0.27)
More than 100.000	495	29.3 (6.0)		0.08	0.16 (0.07-0.26)

Note. Effect sizes (ES) are provided as Cohen's *d*. *P*-values indicate probability of differences between groups by *t*-tests (gender) or by one-way ANOVA (age group, education, employment, relationships and population size). General self-efficacy scores range 10-40, where higher scores indicate higher general self-efficacy. Reference categories indicate the category against which all other categories are tested in the one-way ANOVA.

Table 2. Mean GSE scores by age, gender and level of education

	Women mean scores (SD)		Men mean scores (SD)		Total sample mean scores (SD)	
Age categories		Level of education		Level of education		Level of education
(years)	All	(low [bottom] or high)	All	(low [bottom] or high)	All	(low [bottom] or high)
All	28.3 (6.4)	29.6 (6.0), *n* = 517	29.6 (5.9)	30.4 (5.6), *n* = 432	29.0 (6.2)	30.0 (5.9), *n* = 949
	n = 944	26.8 (6.6), *n* = 424	*n* = 831	28.7 (6.1), *n* = 397	*n* = 1787	27.8 (6.4), n = 826
18-30	28.4 (6.7)	29.6 (6.2), *n* = 75	32.3 (5.1)	33.1 (5.1), *n* = 31	29.7 (6.4)	30.6 (6.1), n = 106
	n = 137	26.9 (7.0), *n* = 62	*n* = 72	31.7 (5.0), *n* = 41	*n* = 209	28.8 (6.7), n = 103
31-40	28.9 (6.3)	29.2 (6.4), *n* = 88	30.2 (5.7)	31.6 (5.1), *n* = 43	29.4 (6.1)	30.0 (6.1), n = 131
	n = 117	28.0 (5.9), *n* = 29	*n* = 69	27.8 (6.0), *n* = 25	*n* = 186	27.9 (5.9), n = 54
41-50	29.2 (6.1)	30.1 (5.6), *n* = 124	30.2 (5.7)	30.8 (5.4), *n* = 91	29.6 (6.0)	30.4 (5.5), n = 215
	n = 208	27.8 (6.7), *n* = 84	*n* =148	29.3 (6.2), *n* = 57	*n* = 356	28.4 (6.5), n = 141
51-60	28.5 (6.2)	30.0 (5.7), *n* = 108	29.9 (5.6)	30.7 (5.1), *n* = 101	29.2 (5.9)	30.3 (5.4), n = 209
	n = 178	26.0 (6.3), *n* = 69	*n* = 173	28.8 (6.0), *n* = 72	*n* = 353	27.4 (6.2), n = 143
61-70	27.8 (6.5)	29.7 (6.0), *n* = 85	28.9 (5.8)	29.6 (5.9), *n* = 101	28.4 (6.1)	29.6 (5.9), n = 186
	n = 177	26.1 (6.4), *n* = 91	*n* = 220	28.4 (5.7), *n* = 119	*n* = 397	27.4 (6.2), n = 210
≥ 71	27.0 (6.8)	27.1 (6.9), *n* = 36	28.1 (5.8)	28.7 (6.2), *n* = 61	27.6 (6.7)	28.1 (6.5), n = 97
	n = 123	27.0 (6.8), *n* = 86	*n* = 143	27.6 (6.8), *n* = 81	*n* = 267	27.3 (6.8), n = 168

Note. Low education is ≤ 12 years, whereas high education is ≥ 13 years.

Table 3. Linear regression analysis showing associations with general self-efficacy (*n* = 1746)

Independent variables	Model 1		Model 2	
	β	*p*	*β*	*p*
Age	-0.02	0.63	0.04	0.63
Gender	-0.12	< 0.001	-0.49	0.001
Education	0.15	< 0.001	0.12	0.16
Employment	0.14	< 0.001	0.44	< 0.001
Relationships	-0.01	0.62	-0.00	0.96
Population size	0.02	0.42	0.02	0.52
Explained variance	**6.6 %**	**< 0.001**		
Age x gender			0.24	0.02
Age x education			-0.03	0.81
Age x employment			-0.27	0.004
Gender x education			0.14	0.09
Gender x employment			0.02	0.73
R^2 change			**1.0 %**	**0.002**
Explained variance			**7.6 %**	**< 0.001**

Note. Table content is standardized beta weights and their corresponding *p*-values, showing independent associations with general self-efficacy. Variable coding: male (0), female (1); education < 13 year (1), education ≥ 13 years (2); without employment (0), employed (1); not living with spouse/partner (0), living with spouse/partner (1); higher values on age and population size are higher age and larger population, respectively.

Figure 1. Flowchart showing the inclusion of the participants

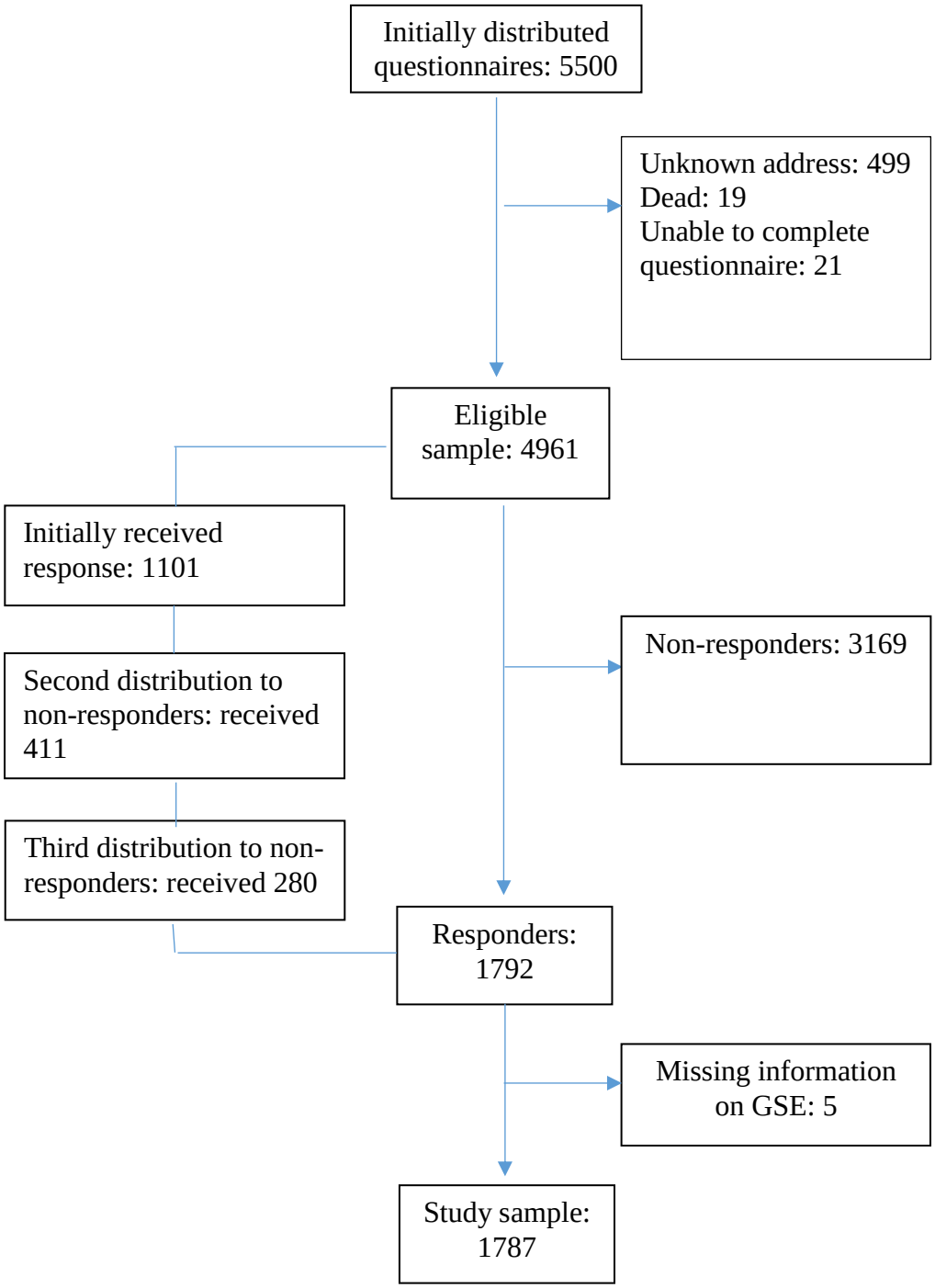


Figure 2. The distribution of GSE scores in the total sample (*n* = 1787)

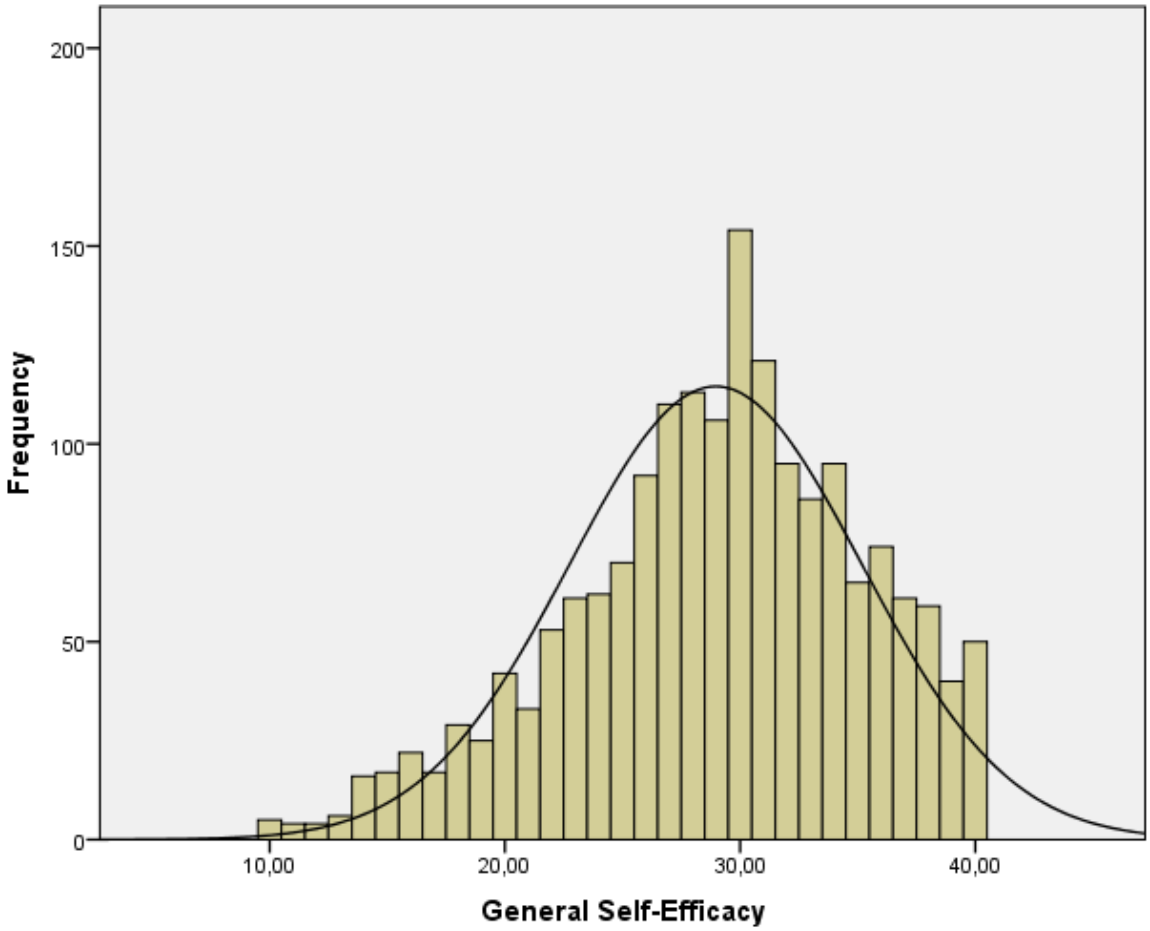
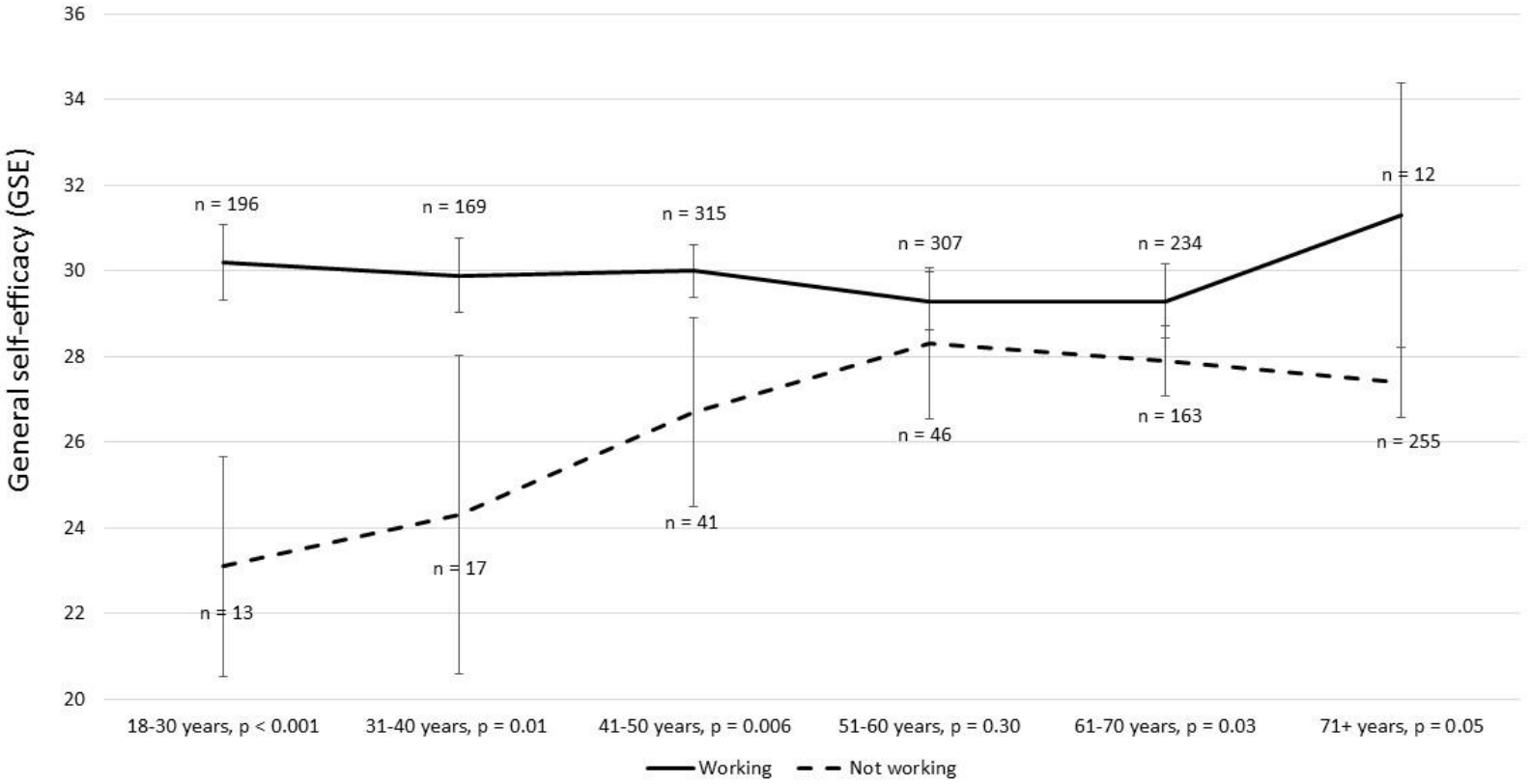
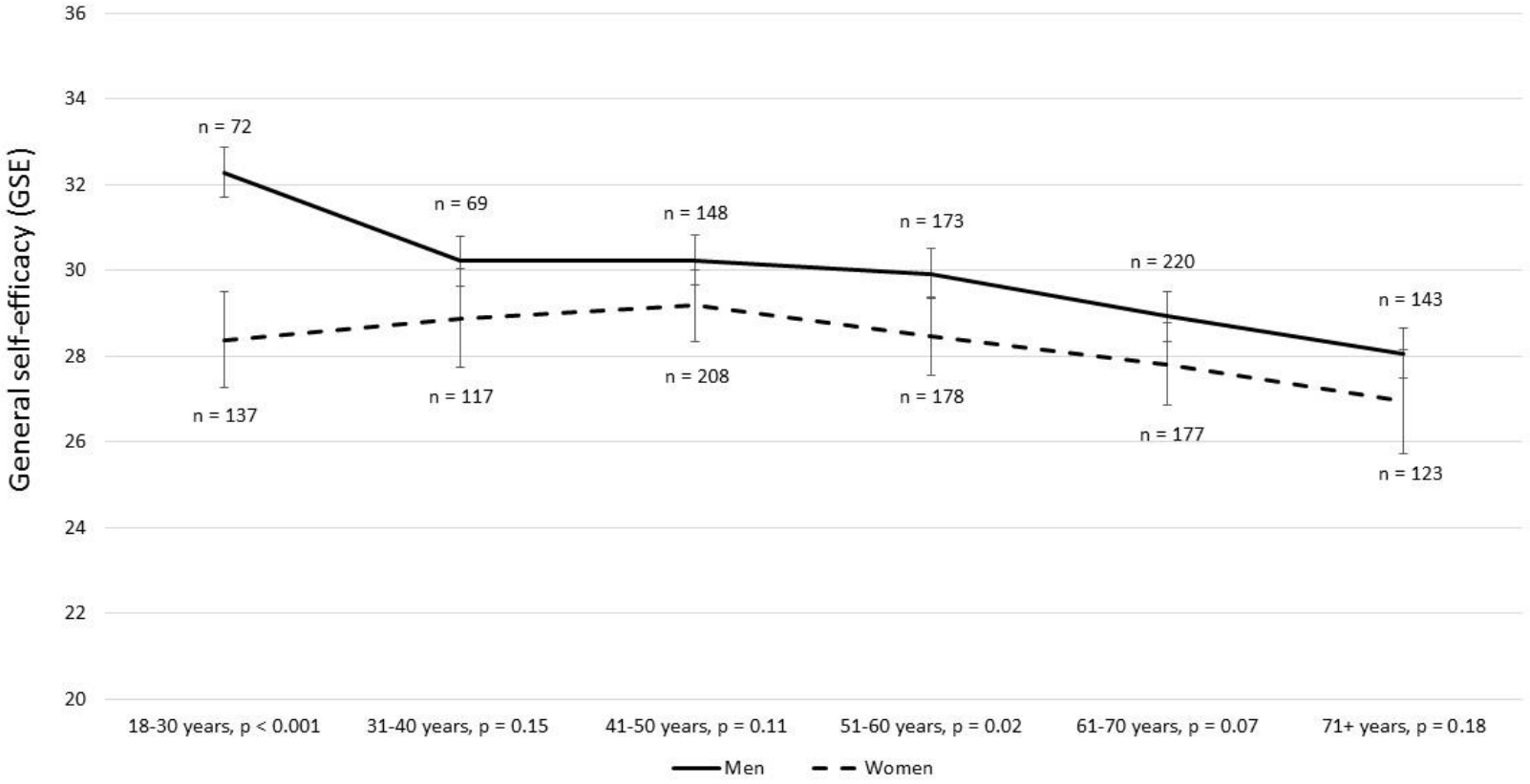


Figure 3. The association between work and GSE moderated by age



Note. GSE score differences within age categories by work status (independent *t*-tests). Error bars are calculated from the formula SE*1.96.

Figure 4. The association between gender and GSE moderated by age



Note. GSE score differences within age categories by gender (independent *t*-tests). Error bars are calculated from the formula SE*1.96.