


ARTICLE

Financial literacy, personal financial situation, and mental health among young adults in Sweden

Emma Samuelsson¹, Henrik Levinsson¹  and Richard Ahlström²

¹Department of Psychology, Lund University, Sweden and ²Department of Health Sciences, Mid Sweden University, Östersund, Sweden

Corresponding author: Henrik Levinsson; Email: henrik.levinsson@psy.lu.se

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Abstract

Financial literacy is today globally recognized as an essential life skill. However, many young adults have large debts due to consumption loans, and the situation in Sweden is escalating. Previous research has indicated a low financial literacy, and that the prevalence of mental illness is high within the group. In this report, we studied financial literacy, personal financial situation, and self-reported mental illness in a Swedish sample, comprising 2 057 respondents between 18 and 29 years. Our main findings indicate that financial literacy is lower than has previously been described, especially concerning knowledge about inflation. One in four reported they had consumption loans, one in three had loans to relatives, almost half of the respondents had perceived financial difficulties during the past year, and one out of ten had turned to the budget and debt advisor to receive help. Women showed lower financial literacy compared to men, indicating an important gender aspect. Our findings per se are sounding the alarm for policymakers to immediately pay attention in order to prevent the risk of becoming overindebted early in life. The present study highlights the urgent need to further study the complex relationship between financial literacy, personal financial situation, and mental illness among young adults.

Keywords: financial literacy; personal financial situation; mental health; young adults

1. Introduction

This report is based on an initial project in which we examine three important topics among young adults in Sweden: financial literacy, personal financial situation, and self-reported mental illness. The sample consists of 2 057 respondents aged 18–29 years. While the findings below are purely descriptive, we would like to illustrate some important and concerning statistics that might be useful for future research. The report is structured as follows: first, we provide a review of the literature on financial literacy, personal finances, and mental health among young adults. Here, we refer to previous global research as well as Swedish statistics. We then provide some illustrative statistics on financial literacy, personal finances, and mental health among young adults. Finally, we conclude with a discussion of the findings and relevant implications. We hope that the findings will form a basis for future studies concerning the relationship between financial literacy, personal finances, and mental health among young adults, a topic that has not been well covered in previous academic literature.

Compared with older people, financial literacy is low among young people, and the increase in short-term loans has been particularly large among young adults (Achtziger, 2022; Autio *et al.*, 2009; Hovee *et al.*, 2014; Houle, 2014; Lusardi & Streeter, 2023; Szilagyi, 2015). Young adults tend to have more unsecured debt, for example, due to overspending, compared to older adults (Achtziger, 2022), and are at higher risk of overindebtedness (Szilagyi, 2015).

Overindebtedness is a growing global and social problem that has increased along with consumer credit. It is also associated with a decreased level of both physical and mental health and can be considered as a public health problem (Achtziger, 2022; Autio *et al.*, 2009; Brown *et al.*, 2005; Cesar Leandro & Botelho, 2022; Lo & Harvey, 2011; Sweet *et al.*, 2018, Östergren *et al.*, 2022). The prevalence of short-term loans has increased dramatically, and according to Sweet *et al.* (2018), these loans should be considered as a risk factor for public health.

In the Swedish context, the situation among young adults is alarming. In a press release from November 2022, the Swedish Enforcement Authority (2022) stated that young adults have increasingly large debts with the Enforcement Authority, Sweden's government agency in charge of debt collection and enforcing court orders. Also, almost 3% of young adults aged 18–25 years have at least one unpaid debt with the Enforcement Authority, and these are mainly consumption loans. The increase has been particularly large among young women, especially due to online shopping.

Financial literacy is today globally recognized as an essential life skill (OECD & OCDE, 2020). In fact, financial literacy is even more necessary today, considering high inflation, for instance. Knowledge of inflation is a skill that is crucial when people are engaging in consumption and taking out loans, for example. Importantly, older generations who have former experience of inflation demonstrate more financial literacy compared to the younger generations who are being confronted with high inflation for the first time (Lusardi & Streeter, 2023). This of course could lead to financial hardship with negative consequences for the individual. Furthermore, the current credit market is characterized by an increase in easily accessible credit and credit loans (Lo & Harvey, 2011) by text, payment by installments, and subscription services. As Lusardi and Streeter (2023, p. 2) claim, "Online banking has made it easier for people to transfer money with a click."

In addition to the above problems concerning young adults' financial situation and increasing debt, there are also reports of a lack of financial literacy (Autio, *et al.*, 2009; Cision, 2019; Lusardi, 2015), as well as an increased incidence of mental illness (Centers for Disease Control and Prevention, 2019; Wikman, 2018; Office for National Statistics, 2014; Sommer, 2017; Twenge *et al.*, 2019; World Health Organization, accessed 2023). Below, we will report statistics on financial literacy, personal financial situation, and self-reported mental illness among young adults in Sweden. But first we provide a literature review of the three topics.

1.1 Financial literacy

The term financial literacy is established among researchers (Lusardi & Mitchell, 2011; Lusardi & Mitchell, 2014; Remund, 2010) and is used to emphasize the importance of the individual making well-informed financial decisions. According to the OECD (2019), financial literacy for the young is defined as follows:

Financial literacy is knowledge and understanding of financial concepts and risks, and the skills, motivation, and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial wellbeing of individuals and society, and to enable participation in economic life.

Previous studies have examined the relationship between financial literacy and financial behavior, among teenaged students (Zhu & Chou, 2018), Millennials (Kim et al. 2019), individuals without a college degree (Henager & Cude, 2019), and among adults (Chu et al., 2017; Robb & Woodyard, 2011). The results confirm that both subjective and objective financial literacy have an impact on financial behavior, and the level of financial literacy differs between men and women (Lind et al., 2020; Lusardi & Mitchell, 2017; Lusardi & Streeter, 2023; Tinghög et al., 2021). Men generally have better knowledge and more confidence concerning their finances than women.

In their study, Balasubramnian and Sargent (2020) studied the participants' inflated perceptions of financial literacy, operationalized as the gap between objective and subjective financial literacy. Inflated perception of financial literacy (large gaps), subjective financial literacy, and amount of financial education all had a major impact when predicting financial behavior.

While there are contradictory findings that indicate that financial literacy can prove counterproductive (Moreira Costa et al., 2021), or have a very small effect and decay over time (Fernandes et al., 2014), recent studies support the relationship between financial literacy and financial behavior (Kaiser & Menkhoff, 2020; Lusardi & Streeter, 2023). For instance, a meta-analysis showed that the effects of such interventions are comparable with other kinds of educational and health interventions that aim to increase knowledge or change behavior (Kaiser et al., 2022).

The PISA study from 2012 (Lusardi, 2015) demonstrated that a large proportion of students from a variety of countries only have very basic financial skills, which poses an obstacle to executing financial tasks. As these students' insufficient financial knowledge only permits them to make the simplest financial decisions, the OECD emphasizes that improvement is essential.

A recent paper on financial literacy in the US (Lusardi & Streeter, 2023) points in the same direction; financial literacy is lower among young people (18–35 years) and increases with age. The study used the Big Three questions about financial literacy (see Method section) to measure the respondents' knowledge of 1) interest rates, 2) inflation, and 3) risk diversification. Concerning knowledge about interest rates, 58.5% answered correctly among the young, while knowledge about inflation was 33.8%, and knowledge of risk diversification was 29.9%. Fourteen percent answered all three questions correctly. While this study is the most recent from the US, please see Lusardi and Mitchell (2023), for a more general paper on financial literacy.

In Sweden, the Financial Supervisory Authority has the primary function of monitoring companies. The authority is responsible for strengthening the position of Swedish consumers through financial education and has accordingly published information on its website concerning projects that aim to improve financial knowledge.

However, financial literacy among Swedish teenagers is deficient (Cision, 2019). One in two did not have basic knowledge, resulting in their believing that they did not have the ability to make sound decisions concerning their personal finances. More than half of the teenagers were either hesitant about how to pay bills or reported not having enough knowledge about savings and pension savings. In addition, an increase in poor credit ratings was described among young adults.

Several times during the last two decades, the Swedish Financial Supervisory Authority has collected data from the Swedish population to describe the finances of Swedish households (Almenberg & Widmark, 2011; Schéle, 2018; The Financial Supervisory Authority, 2020a; The Financial Supervisory Authority, 2020b). In the latest survey, from 2020, a random sample consisting of 1 320 participants answered the Big Three questions to measure respondents' financial literacy. Of the entire sample, 87% answered the question on interest rates correctly, 76% answered the question on inflation correctly, and

73% correctly answered the question on risk diversification. The report also compared the Swedish results with those from five other G20 countries: Germany, the Netherlands, Canada, Norway, and Japan. The Swedes had the best results on the first and third question and were second behind Norway (80%) on the question about inflation. Among the other countries, Germany (58%) and Canada (also 58%) had the lowest results on the first question, and Japan (56%) had the lowest result on the second question. Japan (46%) also had the lowest result on the third question. With the exception of the Swedish statistics, the global data were collected in 2016.

The same report revealed that there were differences among the population when financial literacy was measured for different Swedish demographic groups. The statistics were presented by summarizing the score for the Big Three (and thereby receiving a number between 0 and 3). The knowledge was slightly better among men (2.6) than for women (2.4), among older adults (2.6) compared to young adults (2.4), and for those with higher education (2.6) compared to those who only had attended compulsory education (2.2). There were also differences between those with a higher income (2.7) and those with an annual income under SEK 200 000 (i.e. EUR 17 000 Euros) (2.3).

From the literature review above, we could infer that financial literacy among the young is low and that there are important age and gender differences to consider. At the same time, financial literacy is regarded as an essential life skill. The low level of financial literacy among the young is a challenge to manage since basic knowledge is even more necessary today, with respect to high inflation, for instance.

1.2 Personal financial situation

1.2.1 Loans for private consumption

According to statistics presented by FocusEconomics (2023), a leading provider of economic analysis and forecasts, the amount of money spent on private consumption from 2015 to 2019 has been increasing in Sweden, as it has in most European countries.

In Sweden, loans taken to finance private consumption are also growing. Between 2008 and 2019, the volume of smaller, unsecured loans (less than SEK 10 000 equivalent to EUR 850) increased by more than 1 000%, that is, to approximately EUR 4.5 billion. Simultaneously, the number of new loans has increased by more than 4 000% (Swedish Financial Supervisory Authority, 2020c). While the amount of money each person tends to borrow is usually relatively small, the risk of getting into future financial difficulties is high, as loans for consumption often have high interest rates. Almost 10% of those who take out new loans to finance private consumption end up in payment difficulties within five months. Inability to repay the loans could later result in both a record of nonpayment and debt collection demands (Swedish Financial Supervisory Authority, 2020c).

Concerning loans for private consumption, young borrowers and those with low income tend to have more payment difficulties than the average population. Young adults have twice the risk of getting into financial difficulties as they are often situated in the lower part of the income spectrum (Swedish Financial Supervisory Authority, 2021). High rents and other fixed costs combined with insufficient knowledge of personal finance are risk factors for young adults (Swedish Enforcement Authority & Swedish Consumer Agency, 2008).

A major problem with debts is that they tend to lead to more debts, creating a negative spiral that in the long run might result in inescapable poverty (Achtziger, 2022). For instance, research has demonstrated that the use of credit cards, instead of using cash, is associated with being less conscious of one's budget, especially among compulsive shoppers. Furthermore, low self-control is associated with compulsive buying and the use

of credit, which in turn could lead to debts and increased exposure to financial shocks (Achtziger et al., 2015; Cesar Leandro & Botelho, 2022; Gathergood, 2012; Lo & Harvey, 2011).

1.2.2 Perceived financial difficulties

An individual's personal financial situation may have a major impact on his or her opportunities in life. A worsened personal financial situation could result in financial limitations, the necessity to reduce one's consumption, limited opportunities to obtain loans (Betti et al., 2007; Lyons & Fisher, 2006), as well as social exclusion (Porter, 2012). In a Swedish report (Svea Ekonomi, 2019), 59% of young adults aged 18–29 years reported they had financial difficulties in terms of making ends meet. In the same age group, 35% spent beyond their means in order to maintain a facade of wealth.

In a report by the Swedish Financial Supervisory Authority (2020b), respondents aged 18–29 years were asked whether they could cope with an unforeseen expense of SEK 20 000 (approximately EUR 1 800) without taking out new loans or making other larger financial sacrifices. Twenty percent answered that they could not cope with such an expense, and 11% were unsure. Across the whole sample (aged 18–79 years), 12% were unable to cope and 8% were unsure.

In 2022, more than 393 000 Swedes were in debt, according to the Swedish Enforcement Authority, amounting to a total sum of more than SEK 100 billion (EUR 8.2 billion). Among Swedish young adults aged 18–25 years, more than 30 500 were in debt to a total sum of SEK 1.6 billion (EUR 130 million).

This statistical snapshot describes the current situation, but to further worsen the picture, more people are becoming indebted each year. In 2018, more than 113 000 Swedes were newly registered as being in debt, and a press release from the Swedish Enforcement Authority (2021) states that the number of Swedes applying for debt restructuring drastically increased in 2020. Contributing factors to a difficult financial situation, for example, involve unemployment, illness, and addiction. The number of applications for debt restructuring from young adults between the ages 18 and 30 years has increased sharply, and more than doubled.

1.2.3 Personal debts to relatives

Indebtedness can lead to conflicts with relatives (Masarik & Conger, 2017). Nevertheless, 4% of the Swedish population had debts larger than SEK 10 000 to relatives. Among young adults between 18 and 29 years of age, almost 40% had quarreled with relatives over their having spent more than they could afford. This was a considerably larger number than in other age groups (Svea Ekonomi, 2019). A majority of the lenders were parents, and since the loans often are unofficial without documented terms, close relationships could be affected.

From the literature review above, we could infer that loans taken out for private consumption are increasing among young adults. Many of them experience financial difficulties, and applications for debt restructuring have drastically increased. Taking out short-term loans could worsen the financial situation and must be taken seriously, especially since the level of financial literacy among the young is low.

1.3 Mental health among young adults

National and international reports have described a general increase of mental ill health among young adults, and that women are overrepresented (Lindbom, 2020; WHO, 2016). According to the Swedish National Board of Health and Welfare (2016), 10% of girls and

boys as well as young men have some form of psychiatric diagnosis. Among young women (aged 18–24 years) the prevalence is 15%. These numbers are increasing and so are diagnoses of depression and anxiety. In 2016, the prevalence of diagnoses among young women were 1.5% for depression and 2.6% for anxiety. The National Board of Health and Welfare also present statistics describing the consequences of early mental illness which include a higher risk of a need for psychiatric care, suicide attempts, and suicide. It can also lead to lower functional status and a lower level of education.

According to the Public Health Agency of Sweden (2022b), 57% of the respondents aged between 16 and 29 years reported having symptoms of worry, agitation, or anxiety. Of these, 15% reported having severe symptoms. In another report from the Public Health Agency of Sweden (2023), approximately 50% of women and 36% of men in the age range 16–25 years reported symptoms of worry, agitation, or anxiety and 29% reported that they feel quite or very stressed (41% among women and 19% among men). Furthermore, 17% of the young are estimated to have serious mental problems. According to another study carried out by the Public Health Agency of Sweden (2022a), one-third of young adults between 16 and 29 years reported that they are bothered by loneliness and isolation. In a report from the Swedish Red Cross (2021), 77% of young adults between 18 and 29 years reported that they had felt alone.

Previous research has indicated a relationship between mental illness and financial hardship. However, the direction of the relationship is complex and difficult to establish and is often interpreted as mutual, where both factors could be strengthening each other, resulting in a vicious cycle (Ahlström & Edström, 2015; Drentea & Reynolds, 2012; Holmgren *et al.*, 2019; Holzer *et al.*, 1986; Jenkins *et al.*, 2008; Levinsson & Jiborn, 2013; Levinsson *et al.*, 2023; Ljungqvist *et al.*, 2016; Mills, 2015; Ridley *et al.*, 2020; Swedish Enforcement Authority, 2021a). A Swedish report indicated that overindebted individuals were five times more likely to have anxiety and depression compared to the general population (Ahlström & Edström, 2015).

Debt is also related to physical ill health (Achtziger, 2022; Sweet *et al.*, 2018; Zhang & Kim, 2019). For instance, previous research has found that short-term loans are associated with inflammation, high blood pressure, and high body mass index (Sweet *et al.*, 2018).

The term financial strain is used to define an individual's subjective experience of his or her financial situation. For instance, the experience of debt is associated with psychological distress and mental illness (Frank *et al.*, 2014; Holmgren *et al.*, 2019; Stein *et al.*, 2013; Sweet *et al.*, 2018; Zhang & Kim, 2019). Importantly, the size of the debt does not seem to matter. Hence, it is not necessarily those with the largest debts who experience the most financial strain (Holmgren *et al.*, 2019). In a Swedish context, a report from Skandia bank (Cision, 2022) shows that 48% of the respondents felt stressed about their personal finances. Fifty percent felt that they were worrying more compared to a year earlier. The data were collected in October 2022.

From the literature review above, we could infer that mental health problems are increasing among young adults, and that one-third suffer from loneliness. Within the field of financial literacy and wellbeing, further attention is needed concerning financial difficulties and mental health among young adults. A great proportion of the young are worried about their finances.

1.4 Some research questions

Low financial literacy poses a threat toward the individual's personal financial situation. Today, loans taken out for personal consumption are more easily accessible while the terms are getting more complicated. According to the Financial Supervisory Authority, half of Sweden's teenagers do not possess, or do not think they possess, basic financial skills, which could lead to lasting difficulties from an early age. This may result in

long-term overindebtedness and the need for debt restructuring. Furthermore, there is a link between financial hardship and mental illness.

This report aims to describe the current level of financial literacy, personal financial situation, and self-reported mental illness among a Swedish sample of young adults between the ages of 18 and 29 years.

We hope that the implications of the potential findings will lay the foundation for future research to prevent young people from overindebtedness and mental health problems. The findings could also contribute to increased awareness among professionals who meet people in financial hardship in their work.

The following research questions were formulated:

1. What is the current level of financial literacy among the young adults in Sweden?
2. How are young adults in Sweden currently doing in terms of their personal finances?
3. What is the current state of self-reported mental illness among young adults in Sweden?

2. Method

2.1 Participants

The data were collected in 2021, and the participants were all young adults, here defined as being aged between 18 and 29 years. This age group was selected as the aim was to investigate the level of financial literacy, which might result in irreversible financial consequences at an early age.

To achieve as representative a sample of the target group as possible, we consulted the Swedish research company Enkätfabriken (<https://www.enkatfabriken.se/>). The company uses web panels to recruit respondents who have agreed to participate in surveys, for instance, in quantitative research projects. The company also uses direct recruitment with probability sampling, where a sample of respondents is selected at random from a suitable sampling frame. These people are then asked if they want to be on the panel. In data collection, selections and quotas are created with the aim of achieving a representative sample of the target group by having access to background data, such as gender, age, and geographic location.

The participants were all part of an online panel with more than 200 000 members put together by the external distributor. Apart from the age restrictions, the inclusion criteria were that the respondents could read and understand Swedish, which was the language used for the survey, and that they had online access. The goal of the project was to collect data from 2 000 respondents. In total, 2 057 respondents completed the survey before it was closed. One thousand and fifty-nine of the participants were men and 998 were women. The average age was 24 years. See Table 1 for statistics describing the participants. Note that some of the groups in Table 1 are small, for example, job-seekers and the self-employed. Hence, these statistics should be used with caution.

2.2 Design and procedure

The report is based on an explorative cross-sectional study. The design of the survey was inspired by previous research but also contained established scales as well as questions formulated by the research team. To increase the probability of formulating relevant variables, advisors from the budget and debt advisor service, provided by law by Sweden's municipalities, were invited to share their experiences. The survey was constructed in the

Table 1. Demographic data on the participants (n = 2 057)

Characteristics	N	%	M	Min-max
Sex				
Male	998	48.5		
Female	1 059	51.5		
Age			23.6	18–29
Completed education				
Compulsory education	255	12.4		
Further education/upper secondary education	1 032	50.2		
Higher education	770	37.4		
Marital status				
Single	917	44.6		
In a relationship	986	47.9		
Other	154	7.5		
Accommodation				
Homeowner	429	20.9		
Tenant–ownership apartment	386	18.8		
Rented apartment	843	41.0		
Lodger/sub-letting	73	3.5		
Living with parents	279	13.6		
Employment status				
Employed full-/part-time	959	46.6		
Self-employed	156	7.6		
Student	632	30.7		
Job-seeker	202	9.8		
Source of income				
Salary from work	1 121	54.5		
Benefits	215	10.5		
Student loan	440	21.4		

online survey tool Qualtrics (<https://www.qualtrics.com/>) and distributed over two weeks in October 2021.

2.3 Measurements

The questionnaire included a spectrum of questions and measurements about financial literacy, personal financial situation, and mental health. Only those measures used in the current analyses are described. As stated above, the survey contained established scales and questions formulated by the research group. The survey also contained several background questions to provide information on demographic variables of the respondents such as gender, age, level of education, marital status, accommodation, employment, and source of income.

2.3.1 Financial literacy

To measure financial literacy, the Big Three questions (Lusardi & Mitchell, 2011) were used. This battery consists of three questions and measures respondents' understanding of 1) interest rates, 2) inflation, and 3) risk diversification. The Big Three comprise the following questions:

1. Suppose you had 100 Swedish kronor¹ in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
 - a) More than 102 Swedish kronor (correct answer)
 - b) Exactly 102 Swedish kronor
 - c) Less than 102 Swedish kronor
 - d) Don't know
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
 - a) More than today
 - b) Exactly the same
 - c) Less than today (correct answer)
 - d) Don't know
3. Is the following statement true or false? "Buying a single company's stock usually provides a safer return than a stock mutual fund."
 - a) True
 - b) False (correct answer)
 - c) Do not know

The Big Three are also used by the Swedish Financial Supervisory Authority (Almenberg & Widmark, 2011; Schéle, 2018; Financial Supervisory Authority, 2020a; Financial Supervisory Authority, 2020b). In former studies, they have been used to provide a clearer picture of the level of financial literacy within the Swedish population, as well as to compare Sweden to other countries. For all three questions the respondent has the option to answer "Don't know." Answering "Don't know" was in this report considered as an indication of lack of financial literacy (see Lusardi & Streeter, 2023).

2.3.2 Personal financial situation

To investigate respondents' personal financial situation, three items were formulated, which aimed to provide a picture of the young respondents' current financial situation: whether they had debts by means of consumption loans taken more than 18 months ago, whether they had perceived financial difficulties during the past year, and the prevalence of personal debts to close relatives. The items were answered either with "Yes" or "No."

In addition, three more items were formulated: choice of payment online (paying instantly/by invoice within 30 days, paying on credit after more than 30 days/partial payment), ability to cope with an unforeseen expense of SEK 20 000 (approximately EUR 1 800) without taking new loans, or making other larger financial sacrifices, and having asked for help or support concerning one's personal financial situation.

2.3.3 Financial strain and mental illness

To capture the psychological and subjective aspects of respondents' financial situation, two items about financial strain were formulated: "How psychologically stressful have you

¹ 100 Swedish kronor is approximately 9 euros.

found your financial situation in the past year?” and “How much time have you spent worrying about your financial situation in the past year?” Both items were answered on a Likert scale ranging between 1 and 5, where 1 indicates low financial strain/no time at all and 5 indicates high financial strain/a large amount of time.

2.3.4 *The Hospital Anxiety and Depression Scale (HADS)*

The Hospital Anxiety and Depression Scale (HADS) is a self-report rating scale and was used to measure probable anxiety and depression. HADS is divided into two subscales: Anxiety and Depression (HADS-A and HADS-D). No maximum score for the entire HADS is calculated. Each subscale consists of seven questions. The participants are instructed to answer the questions based on how they have felt during the past week on a Likert scale ranging from 0 to 3. On each subscale, there is the possibility of receiving a result between 0 and 21 points. A score of 0–7 points indicates that clinical anxiety/depression is probably not present, 8–10 points indicate that clinical anxiety/depression may be present and 11–21 points indicate that clinical anxiety/depression is likely to be present. These guidelines have also been used in Swedish and international research (Bodlund, 1997; Lisspers *et al.*, 1997). In the present report, we used 11 points as a cutoff for probable mental illness. However, there is no sharp boundary between those who suffer from anxiety and/or depression and those who do not (Zigmond & Snaith, 1983).

HADS has demonstrated good internal reliability ($\alpha = 0.80$ to $\alpha = 0.93$), and strong correlation with other scales like the Beck Depression Inventory (BDI) and General Health Questionnaire (GHQ) (Bjelland *et al.*, 2002; Herrmann, 1997; Lisspers *et al.*, 1997). In this report, the internal reliability was estimated at $\alpha = 0.79$ for the HADS-A and $\alpha = 0.75$ for HADS-D.

In addition, to establish a probable prevalence of mental illness among the young, they were asked whether they lived with a psychiatric diagnosis (“Yes” or “No”). It was optional to specify which diagnosis. The survey did not require that a diagnosis had been confirmed by medical staff.

2.3.5 *De Jong Gierveld Loneliness Scale (DJGLS)*

De Jong Gierveld Loneliness Scale (DJGLS) measures self-reported loneliness and consists of two subscales: Social Loneliness and Emotional Loneliness (de Jong Gierveld & van Tilburg, 1999). The scale contains a total of 11 questions, 5 of which are positively worded and 6 negatively worded. The positively worded questions measure Social Loneliness and the negatively worded questions formulated measure Emotional Loneliness. DJGLS can be used to estimate loneliness as a global aspect. The respondents’ score is divided into four groups: not lonely (0–2 points), mildly/moderately lonely (3–8 points), severely lonely (9–10 points) and very severely lonely (11 points). The internal reliability ranges between $\alpha = 0.80$ and $\alpha = 0.90$ for the full scale (and for the two subscales). In the present report, the internal reliability of the scale was measured as $\alpha = 0.82$ for the entire scale. DJGLS correlates with other variables such as depression and low self-esteem, which suggests that the scale can be used to estimate loneliness as a global aspect (Cramer & Barry, 1999).

In this report, DJGLS was used in its entirety. The cutoff value of 8 points has been used to divide the sample into two groups: Severely lonely and very severely lonely (at least 9 points), and not lonely and mildly/moderately lonely (8 points or less).

3. Results

Below, we present and discuss the findings, as well as limitations, future directions, and relevant implications. We close with some concluding remarks.

Table 2. Summary statistics for the Big Three financial literacy questions

	Full sample (%)	Male (%)	Female (%)
(A) Interest question			
More than 102 (correct)	62.5	63.3	61.7
Exactly 102	12.1	15.7	8.7
Less than 102	8.5	10.5	6.6
Don't know	16.9	10.4	23.0
(B) Inflation question			
More than today	18.5	20.6	16.4
Exactly the same	20.1	22.9	17.5
Less than today (correct)	33.0	38.3	28.0
Don't know	28.4	18.1	38.1
(C) Risk question			
True	16.9	23.6	10.6
False (correct)	47.2	51.9	42.7
Don't know	35.9	24.4	46.7
(D) Cross-section consistency			
All correct	19.9	24.4	15.7
Non correct	21.4	18.6	24.1

3.1 What is the current level of financial literacy among young adults in Sweden?

3.1.1 Financial literacy of the sample

To measure the level of financial literacy, the sample were asked to respond to the Big Three questions. Responses to the questions are summarized in Table 2. As can be seen, financial literacy within the sample is quite low. 62.5% of the young respondents answered the interest rate question correctly, but more than 20% answered incorrectly, and 16.9% did not know the answer. There is a small gender difference where more men answered the question correctly, but the biggest difference is seen among those who did not know the answer. While 1 in 10 men chose this response, as many as 23% of the women did not know the answer.

The lowest knowledge is seen concerning inflation, where only one-third of the sample answered correctly. Among women, only 28% chose the correct answer while as many as 38% did not know the answer. The risk diversification question had three answer options (one fewer than the other two). Despite this, less than half of the sample answered correctly. There was also widespread uncertainty, nearly half of the women chose “Don't know.”

Overall, 20% of the sample answered all three questions correctly, but there are gender differences, where men generally had better knowledge, with one in four having three correct answers. Accordingly, there were more women (24%) than men (19%) who did not answer any of the three questions correctly. Also, for all three questions more women than men chose to answer “Don't know.”

3.1.2 The financial literacy of different demographic groups

To further investigate the level of financial literacy, the sample was divided by age (two groups), education, and employment status. The statistics presented in Table 3 clarify that

Table 3. Distribution of responses (%) to the Big Three by age, education, and employment status

	Interest		Inflation		Risk		Overall	
	Correct	DK	Correct	DK	Correct	DK	All correct	None correct
Full sample	62.5	16.9	33.0	28.4	47.2	35.9	19.9	21.4
Age								
18–24 years	59.1	18.0	29.8	29.4	43.8	36.3	16.7	22.1
25–29 years	66.7	15.5	37.0	27.2	51.4	35.4	24.0	20.6
Education								
Compulsory education	55.3	23.1	24.3	32.5	41.2	38.4	12.2	27.5
Further education/upper secondary education	59.6	19.5	31.4	33.2	44.9	40.3	17.2	23.5
Higher education	68.7	11.4	37.9	20.6	52.2	29.2	26.1	16.6
Employment status								
Employed full/part time	67.9	12.9	33.7	25.0	51.2	30.2	22.5	18.1
Self-employed	44.9	15.4	25.0	13.5	42.9	21.8	8.3	25.6
Student	64.2	18.4	37.3	30.5	49.4	38.3	23.1	19.3
Job-seeker	48.5	25.2	27.2	38.1	31.7	53.0	12.4	36.1

there are differences among the demographic groups. The older age group, which comprised those aged 25–29 years, had a higher percentage of correct answers to each of the Big Three. Also fewer chose to respond “Don’t know.” In the younger age group, nearly one in four had no correct answers, while in the older group, this number was one in six. Only 30% of the younger people answered the inflation question correctly. This is an even lower number than for the full sample.

The participants had different levels of completed education. On all three questions, those with the highest level of education (higher education) had a higher percentage of correct answers than those with a lower level of education. Among those who had only completed compulsory education, only a quarter answered the inflation question correctly. For those who had completed higher education, the figure was 38%. Also, uncertainty was more widespread among those with lower levels of education compared to those with the highest level. Concerning employment status, only 8.3% of the self-employed answered all three questions correctly. Generally, we can also see that the self-employed as well as the job-seekers had lower financial literacy.

3.1.3 Lack of financial literacy

To further examine the participants who lack financial literacy, all those who answered all three questions incorrectly were gathered into a joint group (referred to as Group 1). As previously stated, answering “Don’t know” was considered an indication of lack of financial literacy (Lusardi & Streeter, 2023) and was treated as an incorrect answer. The descriptive statistics for Group 1 were then compared to the statistics for the entire sample, which can be seen in Table 4. In summary, the individuals in Group 1 consisted of more women, were slightly younger, had a lower level of education, and consisted of more self-employed as well as more job-seekers. There were also fewer full-/part-time employees and fewer students in Group 1.

Table 4. Comparison between those who lack financial literacy and the full sample

	Group I (%)	Full sample (%)
Sex		
Male	42.2	48.5
Female	57.8	51.5
Age		
18–24 years	57.6	55.8
25–29 years	42.4	44.2
Education		
Compulsory education	15.9	12.4
Further education/upper secondary education	55.1	50.2
Higher education	29.0	37.4
Employment status		
Employed full/part time	39.5	46.6
Self-employed	9.1	7.6
Student	27.7	30.7
Job-seeker	16.6	9.8

Regarding the first research question in this report, the financial literacy of the sample is low among young adults. The question about interest rates is the one that most participants answered correctly (63%). Regarding the question about inflation, the result in the present study is considerably low (33%). This might be due to the fact that financial literacy is generally lower in young adults compared to the general population.

In an international comparison, the financial literacy of the Swedish population appears to be good in relation to other countries, such as Germany, Canada, and Japan. In the present report though, the results are comparable to some other G20 countries for at least two of the Big Three (interest rate and risk-diversification). However, the result on the inflation question (33%) stands out compared both to national statistics and statistics from other G20 countries. Compared to the data presented in the recent study from the US (Lusardi & Streeter, 2023), we can see that the statistics concerning inflation are similar to our data (around 33–34%), while knowledge of risk diversification in particular is higher in the present report, and knowledge of interest rates slightly higher. This is also the case when we compare those who answered all three questions correctly. One should note that the age groups are different in the two samples. However, knowledge about inflation is very low in both samples.

The existence of low financial literacy even at an early age is reported in Cision (2019). Every second Swedish youth between the ages of 13 and 18 years lacks basic knowledge of personal finance which could partly explain the level of financial literacy among young adults. The young also have limited financial experience compared to older people.

The fact that those with a lower level of education had lower financial literacy is worrying and in line with previous research (Lusardi & Mitchell, 2011). As the PISA study demonstrated (Lusardi, 2015), many students from a variety of countries only have very basic financial skills, and the OECD emphasizes that improvement is essential to increase financial wellbeing. In a wider perspective, lack of financial literacy can have consequences and affect behavior.

Table 5. Summary statistics of personal financial situation divided by demographic groups

	Consumption loans (%)	Perceived financial difficulties (%)	Personal debts to close relatives (%)
Full sample	26.3	46.4	29.6
Sex			
Male	32.0	44.1	33.2
Female	21.1	48.6	26.2
Age			
18–24 years	25.9	46.4	29.9
25–29 years	27.0	46.4	29.2
Education			
Compulsory education	33.7	52.2	38.4
Further education/upper secondary education	24.2	47.5	29.0
Higher education	26.8	43.1	27.4
Employment status			
Employed full/part time	28.9	43.8	28.6
Self-employed	51.3	42.9	44.2
Student	18.7	44.1	25.8
Job-seeker	22.3	61.4	35.1

In this report, men had a higher level of financial literacy compared to women, which was also seen in the Financial Supervisory Authority's statistics as well as in previous research. Financial uncertainty among women can be seen in this report too. More women than men answered that they did not know the answer to the Big Three, which could be explained either by lower financial literacy or by lower self-confidence in making financial decisions (Bucher-Koenen *et al.*, 2021). It might also be the case that women make financial decisions in the household to a lesser extent (Almenberg & Säve-Söderberg, 2011; Tinghög *et al.*, 2021).

3.2. How are young adults in Sweden currently doing in terms of their personal finances?

3.2.1 The personal financial situation of the sample

To gain knowledge about respondents' personal financial situation, questions were asked concerning debts in terms of consumption loans, perceived financial difficulties, and personal debts to close relatives. These figures are presented in Table 5. When asked whether they had debts in the form of consumption loans taken out more than 18 months ago, 26% answered that they did. When asked whether they had perceived financial difficulties during the past year, 46% of the participants answered that they had. Finally, the sample was asked about the current prevalence of personal debts to close relatives which 30% reported that they had.

More men than women have taken out consumption loans and have personal debts, while more women than men report perceived financial difficulties. We can also see that

Table 6. Summary statistics on additional financial variables by demographic groups

	Paying after 30 days/partial payment	Ability to cope with an unforeseen expense of SEK 20 000			Asked for financial help/support		
		Yes	No	Unsure/ DK	Budget and debt advisor	Relatives	Other
Full sample	9.1	47.6	34.0	18.3	10.0	20.6	5.3
Sex							
Male	10.1	48.3	35.6	16.1	13.8	21.0	5.9
Female	8.2	47.0	32.6	20.4	6.4	20.1	4.7
Age							
18–24 years	9.1	46.1	32.6	21.3	11.8	19.6	6.5
25–29 years	9.2	49.6	35.9	14.5	7.7	21.8	3.7
Education							
Compulsory education	12.5	38.8	35.7	25.5	17.3	17.3	6.7
Further education/upper secondary education	9.5	43.4	35.7	20.9	7.0	20.4	5.3
Higher education	7.5	56.2	31.3	12.5	11.7	21.8	4.8
Employment status							
Employed full/part time	8.1	54.6	32.4	12.9	9.4	21.1	3.3
Self-employed	10.9	51.3	37.8	10.9	23.7	28.2	10.9
Student	7.8	44.1	31.6	24.2	8.4	15.7	5.2
Job-seeker	13.4	32.7	40.6	26.7	8.4	30.7	7.9

the figures are higher for those with lower levels of education. Based on the present data, there are small age differences for all three questions.

3.2.2 Additional financial variables

Statistics on additional financial variables are presented in Table 6. There are small differences concerning paying after 30 days/partial payment but slightly higher among job-seekers and those who have completed elementary school. When asked if their household would be able to cope with an unforeseen expense of SEK 20 000 (approximately EUR 1 800) without taking out new loans or making other larger financial sacrifices, more than one-third (34%) answered that they would not be able to pay for this expense within the next couple of weeks. Just under a third of the job-seekers could cope with an unforeseen expense. Interestingly, almost one in five did not know if they are able to cope with an unforeseen expense.

In total, almost 36% of the sample answered that they had asked for help or support concerning their private financial situation. Most of those had either contacted a budget and debt advisor (10%) or a relative (21%). Seeking help from a budget and debt advisor is more common among the younger respondents, men, and those who have only completed compulsory education. Notably, quite a high proportion of the self-employed reported they had asked for help.

Regarding the second research question in this present report, more than one in four participants had debts in the form of consumption loans taken out more than 18 months ago, and almost 50% of the sample had perceived financial difficulties during the past year. According to a report from Svea Ekonomi (2019), 59% of young adults aged between 18 and 29 years reported they had financial difficulties in terms of making ends meet, which means that our findings are in line with national statistics. This confirms that a significant proportion of young adults are in a difficult financial situation, which is probably one of the reasons why applications for debt restructuring are increasing (Swedish Enforcement Authority, 2021b). Consumption loans can result in large costs over time as they often involve a high effective interest rate, and for young adults, who often have a relatively low income, these costs can be difficult to repay.

Another factor to take into consideration is that unemployment among young adults, in Sweden, as well as in other European countries, is currently relatively high (Ekonomifakta, 2022; Szilagyiova, 2015). Importantly, unemployment can lead to a need to take out loans, not only for sudden events but also to cover everyday/regular expenses (Szilagyiova, 2015).

In our report, 3 out of 10 reported that they had personal debts to close relatives. While it was not asked whether these were loans from parents, partners, or other relatives, private debts can lead to conflicts and thus have a major impact on social relations (Masarik & Conger, 2017). Young adults who are already at risk of ending up in difficult financial situations also risk straining their social relationships.

The Swedish Enforcement Authority (2021b) reports a drastic increase in applications from young people (aged 18–30 years) seeking debt restructuring, which is a sign that many are already finding themselves in financial difficulties early on. This can also be seen in the present report, where more than one-third had asked for help or support concerning their financial situation. The majority of those had either contacted the budget and debt advisor (10%) or a relative (21%).

Asking for help could be seen as a constructive way to handle financial difficulties, but the large number could also be indicating that many have limited finances as well as low financial literacy. Many young adults have increasing expenses when moving away from home, and the current situation with increased inflation and high interest rates could further worsen this situation. Having a financial buffer to ensure the ability to pay for unforeseen expenses may be much more important now than before. The fact that more than one-third stated that they would not be able to cope with an unforeseen expense of SEK 20 000, and that nearly 20% did not know whether they would be able to do so, is worrying. The figures are higher compared to the report from the Swedish Financial Supervisory Authority, where 20% were not able to cope with such an expense and 11% did not know whether they would be able to.

3.3. What is the current state of self-reported mental illness among the young adults in Sweden?

The incidence of probable clinical anxiety and depression for the entire group was estimated at 51% for anxiety and 21% for depression and is presented in Table 7. This can be related to Swedish national statistics from the Public Health Agency of Sweden (2022b) where 57% of the respondents aged 16–29 years reported having symptoms of worry, agitation, or anxiety, with 15% of these reporting severe symptoms. For depression, the statistics are based on clinical diagnoses by the healthcare system, where 5% reported having such diagnoses. However, the numbers are difficult to compare since they use different definitions of mental illness, and HADS is a self-report questionnaire which may affect the results. We can also see that the scores were higher among those with the lowest completed education, the self-employed and job-seekers, and slightly higher among women and the younger age group.

Table 7. Summary statistics of self-reported mental health by demographic groups

	Anxiety (%) (HADS-A \geq 11)	Depression (%) (HADS-D \geq 11)	Anxiety and/or depression (%)
Full sample	50.9	20.6	55.7
Sex			
Male	47.9	22.1	55.0
Female	53.6	19.2	56.3
Age			
18–24 years	52.2	22.3	57.5
25–29 years	50.8	18.5	53.4
Education			
Compulsory education	58.8	30.2	65.5
Further education/upper secondary education	50.9	19.7	55.5
Higher education	48.2	18.7	52.6
Employment status			
Employed full/part time	47.9	16.6	51.4
Self-employed	60.3	32.1	71.8
Student	48.9	19.1	53.3
Job-seeker	60.4	30.7	66.8

Self-reported diagnoses were in general more common than in national data (see Table 8). While the figures are relatively high, we can see that more women than men reported that they are living with a psychiatric diagnosis, which is in line with previous reports. Notably, more women than men reported several diagnoses. Psychiatric diagnoses were also more common among those with the lowest completed education, and within this group, neuropsychiatric diagnoses were more common. This is also the case among the self-employed.

In line with data from the Public Health Agency of Sweden (2022a), nearly one-third reported severe/very severe loneliness (see Table 9), and this was more common among women and job-seekers. The levels concerning the two aspects of financial strain did not differ in general, but as can be seen, women, the older age group, and job-seekers reported slightly higher numbers on both questions. In relation to the current situation in Sweden, it is likely that the level of financial strain has increased since the time of our survey. As the report from Skandia indicated, respondents were more worried about their personal finances (in October 2022) compared to the year before.

Regarding the third research question formulated in the present report, we can see that the incidence of self-reported mental illness is quite high among young adults and for all variables investigated: probable anxiety and depression, living with a psychiatric diagnosis, and perceived loneliness. Our data indicate that this is more common among women, those with low education, and job-seekers. Notably, many of the self-employed are reporting probable anxiety and depression as well as psychiatric diagnoses. In the future, it would be interesting to study this group in more detail.

The high level of self-reported mental illness among the young adults should be interpreted with caution but is at the same time worrying, since early mental illness may

Table 8. Summary statistics of self-reported diagnoses

	Psychiatric diagnoses (%)	Affective (%)	Neuropsychiatric (%)	Anxiety (%)	Several diagnoses (%)
Full sample	33.7	5.2	6.5	3.9	6.7
Sex					
Male	29.7	3.1	8.2	1.2	2.3
Female	37.6	7.1	4.9	6.5	10.9
Age					
18–24 years	35.1	4.3	7.1	4.3	6.0
25–29 years	32.0	6.3	5.7	3.5	7.6
Education					
Compulsory education	51.8	5.9	11.8	5.1	11.0
Further education/upper secondary education	33.3	6.0	6.3	3.8	8.2
Higher education	28.3	3.8	5.1	3.8	3.2
Employment status					
Employed full/part time	29.3	5.0	6.2	2.8	4.9
Self-employed	46.2	1.9	11.5	1.9	1.3
Student	30.9	4.4	5.4	5.9	6.3
Job-seeker	42.6	7.4	6.9	4.0	12.4

have negative consequences with a higher risk of a need for psychiatric care, suicide attempts, and suicide. According to the Swedish National Board of Health and Welfare (2016), it can also lead to a lower functional status and a lower level of education, which in turn could result in a vulnerable financial situation and in limited living conditions.

As was seen, self-reported diagnoses are more common than shown in national data. However, the sample might include respondents undiagnosed due to comorbidity or long waiting times to receive care and might also include those who do not seek or receive care.

4. Limitations

The design of the survey has a number of limitations. Using a web panel as a method could be problematic in terms of whether the sample studied is representative of the target group. While the survey company aimed to achieve a representative sample of the target group (based on selections and quotas), there might be selection bias as well as social desirability bias. For instance, some people are more likely to agree to participate, and items about mental health and personal finances could be associated with shame and therefore influence the answers. Since the respondents' anonymity was guaranteed, we believe that this potential problem was mitigated, and there is no need to address missing data.

Data collection was carried out in October 2021, during the COVID-19 pandemic, which could influence the results. But more pandemics are likely to be expected in the future. Furthermore, the financial situation in Sweden and other European countries and the US,

Table 9. Summary statistics on self-reported loneliness and financial strain

	Severely lonely/ very severely lonely (%) (DJGLS > 8)	Financial strain (1-5)	
		Strain past year	Worry past year
Full sample	27.0	3.22	3.21
Sex			
Male	22.3	3.15	3.11
Female	31.4	3.28	3.30
Age			
18–24 years	26.1	3.18	3.18
25–29 years	28.2	3.27	3.26
Education			
Compulsory education	25.9	3.27	3.22
Further education/upper secondary education	29.1	3.26	3.28
Higher education	24.7	3.14	3.12
Employment status			
Employed full/part time	25.2	3.19	3.18
Self-employed	17.3	3.23	3.20
Student	26.7	3.12	3.13
Job-seeker	39.1	3.54	3.49

with increased inflation and high interest rates, has worsened since our measurement, and we do not currently know whether the peak has yet been reached.

In this report, we measured mental illness in terms of anxiety and depression using a standardized measurement scale (HADS), and psychiatric diagnoses are self-reported. We also asked if respondents were living with a psychiatric diagnosis. We are aware that mental illness can be defined and measured in several different ways. A consequence of this can be difficulties in comparing different studies with each other.

5. Future research and practical implications

The results are descriptive, and this report provides statistics measured at a specific time. Hence, it is not possible to draw any causal conclusions. In future research, we would welcome correlational and registry-based studies to increase knowledge about the relationships between financial literacy, personal finances, and mental health among young adults.

In future research, we believe it would be important to further study gender differences, the role of social media in relation to attitudes to consumer loans, as well as gambling and online shopping behavior. Concerning gender differences, most samples comprise students and there are not many studies that focus on women (Hoeve et al., 2014). In a recently published Swedish study, it was found that overindebtedness is more common among adult women (Östergren et al., 2022). Considering this finding and the

statistics presented here, we would welcome studies that take gender perspectives into consideration. Concerning social media, previous research has indicated that social comparison among adolescents and young adults is significantly associated with materialistic values and compulsive buying (Islam *et al.*, 2018). It is important to gain a deeper understanding of the attitudes and the driving forces among young people to take consumption loans, and under what circumstances.

Regarding attitudes to debt, financial support from parents is associated with having less debt. On the other hand, attitudes to debt correlate with debt, and “pro-debt” attitudes among parents are associated with their youths having debt (Hoeve *et al.*, 2014). In a Swedish study, it was found that respondents being uncomfortable with debt correlated with their parents’ attitudes toward debt. The authors reflected whether attitudes toward debt might be transmitted from parents to children (Almenberg *et al.*, 2021). Would it then be plausible to talk about a “heredity” factor as an explanation of getting into financial hardship? Nevertheless, recent studies support the relationship between financial literacy and financial behavior and that educational interventions are effective (Kaiser & Menkhoff, 2020; Lusardi & Streeter, 2023).

Society has a responsibility to prevent young adults from ending up in long-term indebtedness. Financial literacy is a highly current topic and should really be taken seriously since many are now navigating a challenging financial situation, and inflation is now much higher than in the past. Additionally, due to the development of the financial market, with more payment alternatives for consumption, financial literacy is more important than ever. Long-term saving and management of one’s capital can be essential to secure a good pension in later life, or to have a buffer to set aside for unforeseen expenses. It can be difficult for someone with low financial literacy to make favorable financial decisions. Various types of subscriptions (such as mobile and streaming) and easily accessible consumption loans could constitute a risk factor for severe financial difficulties.

We also know from previous research that financial hardship and mental health are associated, and there has been an increase in the number of cases involving young adults at the Swedish Enforcement Authority. It is therefore important to pay attention to the target group studied above. From a societal perspective, we believe it is important to raise awareness and start talking about and also daring to ask about “financial health,” for instance, among professionals who meet individuals in financial hardship in their work, such as psychologists, psychiatrists, and social workers. We believe there is a need to establish more easy and direct pathways in Sweden, for instance, between the budget and debt advisor service and the healthcare system, such as primary care and psychiatry.

6. Concluding remarks

The present report reveals concerning statistics about the level of financial literacy, personal financial situation, and mental health problems of young adults in Sweden. There are also gender differences which are important to consider. The statistics also indicate that the level of financial literacy is likely to be worse than previous reports and studies have shown, especially concerning knowledge of inflation. Notably, 1 in 4 young people have loans for consumption, 1 in 3 have loans to close relatives, almost half of the respondents perceive financial difficulties, and 1 in 10 has turned to a budget and debt advisor for help. This is in line with the reports indicating a drastic increase in applications from young people applying for debt restructuring and reports that the situation is escalating among young adults in Sweden.

There is likely to be a relationship between financial literacy, personal finances, and mental health. These relationships need to be explored in future work. However, the

present findings per se are already sounding the alarm for policymakers to immediately pay attention in order to prevent the risk of becoming overindebted early in life.

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Competing interests. None.

Ethical statement. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. This work has been performed in full accordance with the Swedish Ethical Review Act, and all procedures involving human subjects were approved by the ethics committee at the Department of Psychology, Lund University. Written informed consent was obtained from all participants, and anonymity was guaranteed through the Qualtrics survey tool.

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