Joining a Social Club or Buying a Planner?
What predicts subjective wellbeing amongst Swedish university students?
Acknowledgements

We, the authors, would like to thank all the participants in the study as well as all the lecturers who welcomed us into their classrooms. We would also like to thank Thomas Nordström and Andrejs Ozolins for their guidance regarding statistical analyses. For making our days brighter, we would like to thank the always smiling girl in the cafeteria at the university library. Last but not least, we give our supervisor Yvonne Terjestam a huge thank you for your commitment, words of wisdom and inspiration.
Abstract

Research suggests that university students are at risk for developing psychiatric symptoms, but there is a lack of research targeting wellbeing amongst students in Sweden. The aim of the study was to investigate the relationship between social- and cognitive resilience factors and subjective wellbeing in university students in Sweden. Participants were 396 full-time students. The protective factors, measured by means of the test Scale of Protective Factors (SPF-24), social support, social skills, planning and prioritising behaviour and goal efficacy, were entered into a multiple regression analysis (MRA) with subjective wellbeing, measured by the test Personal Wellbeing Index Adult (PWI-A), as the criterion variable. A significant model emerged with an explanatory power of 41%, indicating that social support, social skills and goal efficacy were significant predictors of subjective wellbeing. Furthermore, employed students rated their goal efficacy higher than unemployed students, and females rated their resilience higher than males. Moreover, results indicate that females and males, as well as students who studied at university to different extents, have similar levels of social support, goal efficacy and wellbeing. Limitations and implementations are discussed.

Key words: resilience, wellbeing, social support, social skills, planning, goal efficacy, university, students, Sweden
Sammanfattning


Nyckelord: resiliens, välmående, socialt stöd, sociala färdigheter, planerings- och prioriteringsbeteende, tilltro till att uppnå mål, universitet, studenter, Sverige
Enrolling at university may involve the start of a major life transition related to important psychological challenges. This is a time when young adults move out from their parents’ home and take on several new responsibilities related to adulthood for the first time (Statistiska centralbyrån, 2015, p. 9). Demanding changes may involve workload and daily life chores, competitiveness, living conditions, romantic relationships and social networks (Schmidt, 2012). The transition to university from high school often takes place at the same time as the transition from adolescence to early adulthood (Universitetskanslersämbetet, 2017, p. 28). The transition brings about a shift of authority from parent to child which in turn gives rise to changes in areas such as individuation and separation from parents and perception of self (Koepke & Denissen, 2012). The emerging adult is confronted by a discrepancy between their role as a child and their perception of who they aspire to be, their ideal self, creating a tension and need for confronting self-boundaries set by parents (Koepke & Denissen, 2012).

Lehmann (2012) examined 36 students’ perception of the transition from high school to university and found that the majority of the participants worried about their ability to become integrated and that they felt an increased level of uncertainty. Students did not perceive transition to university as an automatic process, but rather as a social mobility project. McMillan (2013) points out that a large part of the academic transition circles around the changes from the smaller teaching environment with well-known teachers to bigger lectures with many, and sometimes unknown, lecturers. Furthermore, the uncertainty regarding their expectations of academic life was shown to serve as a source of fear in new students. Anxiety was also shown to emerge from the new challenges which students are experiencing. In a study of 1,227 Irish university students Gibney, Moore, Murphy and O’Sullivan (2011) found that the less structured environment in universities is a major problem for first-year students, giving them anxiety related to time management.

Lehmann (2012) argues that students’ ability to accept the academic and social challenges of university life has an impact on the development of student roles. The characteristics of student roles are in turn associated with the students’ likelihood to succeed. Lehmann proposes that students are either committed, alienated or in a transition towards commitment or alienation during their time at university. The committed role is characterised by having clear goals, experience of socialisation and chance encounters at the university and is associated with an increased likelihood of self-perceived success. Lehmann suggests that committed students could have experienced habitus transformation in high school, increasing their ability of acceptance, and are thus better prepared for university. Moreover, previous
attachment to caregivers seem to influence students’ perception of ease of forming new relations and satisfaction with their friendships at university (Parade, Leerkes, & Blankson, 2010).

Emerging adulthood is associated with a turning point in cognitive, biological and social development characterised by rapid changes in these systems (Burt & Paysnick, 2012). This transitional period is also associated with the onset of psychiatric disorders such as depression (Hankin & Abramson, 2001). Fisher and Hood (1987) found, in a group of 100 students at a British university, that depression, obsession and absent-mindedness increased significantly following transition to university. Previous research suggests that rates of depression amongst university students are significantly higher than those in the general population (Ibrahim, Kelly, Adams, & Glazebrook, 2013). Although it is common for university students to make a shift directly from high school and make their debut as emerging adults, others may be new to or return to university studies after several years of professional experience.

Working part time or even full time is not uncommon amongst students. Having a job can have a positive effect on social networks but has also been shown to have a negative effect on students’ grade point average, GPA (Wang, Kong, Shan, & Vong, 2010). Dyrbye et al. (2010) discovered that students working for an income were half as likely to be resilient compared to their peers who were not working. Combining work with university studies predicts stress and has a negative effect on sleep and food routines amongst students (Taylor & Owusu-Banahene, 2010). Moreover, unemployed students have been shown to have higher life satisfaction than students working part time (Tang, Kim, & Tang, 2002).

About half of Swedish young adults, aged 18 to 25, are enrolled at university (Folkhälsomyndigheten, 2014, p. 13). In spite of this, there is a lack of studies on wellbeing amongst Swedish university students. Of the existing studies examining psychological health the majority have targeted medical students. Research findings showed that Swedish medical students reported clinically significant symptoms of psychiatric diagnoses: 9.1% in a group of 408 individuals; 27% in a group of 80 individuals, respectively (Dahlin, Nilsson, Stotzer, & Runeson, 2011; Dahlin & Runeson, 2007). In a comparative study of 342 business students and 408 medical students the former showed significantly higher stress levels than the latter (Dahlin et al., 2011). Female students in both areas of study were more distressed than male students.
Several studies involving nursing students, enrolled at Swedish universities, focused on examining changes in psychiatric symptoms over time. A nationwide longitudinal study on 1,700 university students by Christensson, Runeson, Dickman, and Vaez (2010) revealed that levels of depressive symptoms significantly increased from first to third year. A report by Gustavsson, Jirwe, Frögéli and Rudman (2014) showed that the percentage of students with stress and burnout symptoms increased from 29.7% to 41% from first to third year in a sample of 1,500 students. Additionally, a study by Rudman and Gustavsson (2012) found that exhaustion amongst 1,702 students increased from 30% to 41% from the first to third year. Moreover, factors such as age, gender and household composition seemed to influence the levels of depressive symptoms (Christensson et al., 2010). Gustavsson et al. (2014) proposed two explanations for why levels of burnout symptoms increased over the years, namely that students are exposed to stressors over a long period of time with limited recovery time and/or students are exposed to an increasing amount of stressors during the years of study. Amongst several investigated stressors such as conflicting values, poor academic-related cohesion, high workload, unfair assessments and lack of recognition, the most notable stressor which also remained constant over time reported was the feeling of low influence over their study situation.

Development of psychiatric symptoms may lead to temporary or long-term absence from studies which consequently would have a negative impact on individual as well as societal levels. However, there are some important processes protecting the individual from negative impacts such as burnout or other mental illnesses.

**Resilience**

Resilience is commonly known as the ability to successfully adapt to changing demands, or quickly recover from stressful experiences in such a way that leads to a positive and normative outcome (Lazarus, 1993; Tugade & Fredrickson, 2004). Nonetheless, there is a lack of a standardised and operational definition of resilience (Davydov, Stewart, Ritchie, & Chaudieu, 2010).

There are currently three definitions of resilience adhering to three different orientations in which resilience is viewed as either an outcome, a process or a trait (Davydov et al., 2010; Hu, Zhang, & Wang, 2015; Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014). In an outcome-oriented approach, resilience is defined as a good outcome in the presence of adversity (Masten, 2001). Research aims to seek out and understand why
some individuals have good outcomes whilst others do not. According to a process-oriented approach, resilience is viewed as a dynamic process referring to the ability to adjust to and recover from stressful events (Hu et al., 2015). Advocates of viewing resilience as a trait on the other hand, assume that resilience is a personal trait which protects the individual from negative effects of adversity. When regarded as a trait, measures of resilience could be used to identify individuals at risk. In studies investigating trait resilience, factors such as adversity, age and gender seem to influence the relationship between resilience and mental health (Hu et al., 2015). The correlation between trait resilience and mental health was stronger for females than for males. They proposed that prior exposure to adversity may influence resilience and mediate the above mentioned relationship. Consequently, trait resilience may be composed by acquired as well as inherited contents. Although an operational definition of resilience is needed to perform research, resilience seem to be a complex construct and perhaps comprised by trait, process as well as outcome aspects. Resilience as a construct is thus challenging to investigate and results of previous research difficult to compare.

Tomyn and Weinberg (2018) found that, in their study on 1,000 young Australian adults aged 16 to 25, men were more resilient than women. On the other hand, Newsome, Vaske, Gehring, and Boisvert (2016) found in a study of 781 twin pairs that males were exposed to greater risks while females were more resilient. These contradictory statements may also be the result of different ways of measuring resilience.

Stanley and Bhuvaneswari (2016) investigated resilience in 73 students at a women-only college. Using the Connor-Davidson Resilience Scale (CD-RISC), a scale which is known to measure trait resilience (Hu et al., 2015), results showed that the level of resilience seems to increase from first to third year at university.

**Subjective Wellbeing**

Subjective Wellbeing (SWB) is a construct known as the subjective part of quality of life, separated from objective measures such as education, income or Gross Domestic Product, GDP (International Wellbeing Group, 2013; Tomyn & Weinberg, 2018). The SWB construct is characterised by a normally positive mood which is stable over time (Cummins, 2010). In everyday terms SWB can be spoken about as how good people feel about themselves and their life on an abstract and universal level (Tomyn & Weinberg, 2018). The purpose of the concept is to distinguish subjective from objective wellbeing since there is none or a very
weak relationship between those dimensions (International Wellbeing Group, 2013). Separate measurements are required in order to understand how individuals experience wellbeing.

Several studies have shown a relationship between resilience and wellbeing. Tomyn and Weinberg (2018) found a positive correlation between resilience and subjective wellbeing using the CD-RISC and Personal Wellbeing Index (PWI), a measurement assessing subjective wellbeing. No gender differences in subjective wellbeing were found. The idea that there were no significant gender differences in subjective wellbeing was supported by Ridner, Newton, Staten, Crawford, and Hall (2016) who targeted 568 college students and instead found a decrease in their self-rated subjective wellbeing during the first semester, followed by an increase towards the end of the year. Lee et al. (2017) investigated the effects of resilience on quality of life through multiple regression analyses (MRA) in a group of 68 patients with bipolar disorder compared with a control group of 68 healthy individuals. Their model showed that the CD-RISC score significantly predicted quality of life, with a beta value of .40, in the control group. The model was claimed to explain 44% of the variance in quality of life.

A study examining self-rated health behaviours, physical and psychological health and quality of life amongst Swedish university students, showed that students’ behaviours were comparable to those of student populations in other parts of Europe as well as in the United States (Vaez & Laflamme, 2003). The study also showed that female students reported healthier lifestyles and higher self-ratings of their quality of life than male students. Both psychological and physical self-rated health had strong correlations with self-rated quality of life. Schmidt (2012) performed a study on 152 Swedish university students and found that male students rated their health significantly higher than female students. Results regarding gender differences in wellbeing amongst Swedish university students are somewhat contradictory, and due to the limited number of studies any conclusion should be drawn with caution.

**Protective Factors**

A common method for studying resilience is to observe and measure social, cultural, biological and psychological factors, which in previous research has shown to be determinants of resilience and thus regarded as protective factors (Davydov et al., 2010; Hughes, Lee, McDonagh, O’Leary, & Higgins, 2012; Southwick et al., 2014). Out of several social and cognitive factors, social support, social skills, planning behaviour and self-efficacy are
considered to have a protective quality (Hughes et al., 2012) and are also highly relevant in an academic setting.

**Social support.** Social support has been shown to be a predictor of subjective wellbeing (Brannan, Biswas-Diener, Mohr, Mortazavi, & Stein, 2012; Zhou & Lin, 2016) as well as quality of life (Hwang et al., 2017) in student populations. However, depending on the cultural context, support from different social networks seem to differ in their contribution to wellbeing when compared (Brannan et al., 2012; Hwang et al., 2017). Support from family seem to be a predictor of life satisfaction in Iranian, Jordanian and American university students, while support from peers seem to be a predictor of positive mood in Jordanian and American university students (Brannan et al., 2012) as well as a predictor of quality of life in Korean university students (Hwang et al., 2017). Gender may also moderate the relationship between social support and life satisfaction (You, Lim, & Kim, 2018). Thus, it is important to take into consideration that the social network of importance in regards to wellbeing may be subject to individual and cultural differences when assessing the effects of social support.

**Social skills.** Social skills refer to both verbal and non-verbal aspects of communication. Social skills increase the probability of an individual receiving sufficient social support by enabling social relations. Enrolling at university often involves change of social networks and students have to rely on their social skills to build a new social network. In an academic setting students are engaged in team work which also require a certain amount of social skills. Previous research suggests that female students have a significantly higher level of social skills compared to male students (Malinauskas, Dumciene, & Lapeniene, 2014; Ozben, 2013) and that senior-year students tend to have better confidence in their social skills than first-year students (Malinauskas et al., 2014).

According to Riggio (1986), a social skill is a constellation of several basic skills such as emotional and social sensitivity, emotional and social expressivity and emotional and social control. These more basic skills interact with one another to determine a more general sense of an individual’s social skill. How an individual’s social skill is perceived and evaluated is greatly influenced by the cultural norms in which the social interaction takes place.

A myriad of previous research has focused on examining negative effects of the absence of social skills, as this is a common problem in many psychiatric disorders such as depression and schizophrenia (Segrin & Taylor, 2007). Social skills have been shown to be negatively correlated with loneliness (Ozben, 2013) and perceived stress (Segrin, Hanzal, Donnerstein, Taylor, & Domschke, 2007) in both female and male university students.
Additionally, social skills have been shown to be positively correlated with subjective wellbeing (Malinauskas et al., 2014; Ozben, 2013; Segrin & Taylor, 2007). Sufficient social skills are also thought to have a positive effect on self-esteem (Riggio, Throckmorton, & DePaola, 1990).

**Planning and prioritising behaviour.** One of the cognitive traits considered to be protective in an academic setting is the ability to plan one’s actions and making the right priorities. Ponce-Garcia, Madewell, and Kennison (2015) stated that there is a relationship between resilience and the ability to plan and organise. Bajaj and Pande (2016) pointed out that university life often is perceived as hard and demanding, which may require good skills to plan and prioritise in order to succeed. Studies have shown that goal setting and planning skills can be taught, and that those skills correlate with subjective wellbeing (MacLeod, Coates, & Hetherton, 2008). A similar relationship was suggested by Prenda and Lachman (2001), who found that future planning predicted life satisfaction. Besides, results showed that males were more future oriented than females. Furthermore, Prenda and Lachman, found that if the participants approximated their social support as high they also reported engaging in a more future-oriented planning.

**Goal efficacy.** It has been shown that the ability to have confidence in, and set and reach goals are positively related to resilience (Ponce-Garcia et. al, 2015). Therefore, it can be argued that goal efficacy has several similarities to self-efficacy and self-esteem which in turn have been shown to be components of the resilience construct. In an intervention programme, with the aim to enhance resilience, changes in self-efficacy showed a large mediating effect on resilience over a long-term basis (Yu, Lam, Liu, & Stewart, 2015). Balgiu (2017) investigated potential predictors of resilience and obtained an MRA model with an explanatory power of 23% in which self-esteem significantly could predict resilience with a beta value of .194.

Protective factors interact with one another to determine how well an individual is able to withstand negative effects of stress in certain situations (Southwick et al., 2014). Ponce-Garcia et al. (2015) request a deeper investigation of the relationship between protective factors in the development of measurements of resilience rather than just examining the presence or absence of resilience. This is the first study that examines the above mentioned protective factors and their ability to predict subjective wellbeing in a Swedish student population.
Aim and Hypotheses

The aim of the study was to seek further knowledge regarding a presumptive relationship between trait resilience, subjective wellbeing and demographic factors amongst Swedish university students. The following hypotheses were stated:

1. Social support, social skills, planning and prioritising behaviour and goal efficacy predict level of subjective wellbeing.
2. There are gender differences in resilience and subjective wellbeing.
3. There are group differences in resilience and subjective wellbeing between academic years.
4. There are group differences in resilience and subjective wellbeing between employed and unemployed students.

Method

Participants

Participants were 396 full time undergraduate and graduate students at a medium sized university in the south of Sweden. Criterion for inclusion was being a Swedish speaking fulltime student. A criterion for listwise exclusion was met if a participant had failed to answer more than one item on any of the same factor of the SPF-24 scale (Scale of Protective Factors) or had failed to answer items exceeding ten percent of the entire SPF-24 or PWI-A (Personal Wellbeing Index - Adult) questionnaire. Two participants were excluded due to meeting this criterion. Another criterion for listwise exclusion was met if participants showed consistent minimum or maximum scores on all domains of the PWI-A as suggested by the developers (International Wellbeing Group, 2013). Six participants were excluded due to meeting this criterion. After exclusion of these eight individuals, there were 388 remaining participants (female n = 238, male n = 150), aged 19 to 55 (M = 24.35, SD = 4.985).

The sample comprised 207 first year students, 105 second year students and 76 third year or graduate students. Some of the participants were employed: 133 worked 1 - 10 hours per week; 57 worked 11 - 20 hours per week; 12 worked 21 - 30 hours per week; and 2 worked more than 30 hours per week. The remaining 184 students were unemployed. Frequencies regarding faculty distribution over academic years are found in Table 1.
Table 1

Numbers of Respondents from Each Faculty Distributed over Academic Years.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>1</th>
<th>2</th>
<th>3+</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Technology</td>
<td>65</td>
<td>19</td>
<td>7</td>
<td>91 (23.5)</td>
</tr>
<tr>
<td>Faculty of Social Sciences</td>
<td>110</td>
<td>26</td>
<td>64</td>
<td>200 (51.5)</td>
</tr>
<tr>
<td>Faculty of Health and Life Sciences</td>
<td>26</td>
<td>12</td>
<td>4</td>
<td>42 (10.8)</td>
</tr>
<tr>
<td>The School of Business and Economics</td>
<td>6</td>
<td>48</td>
<td>1</td>
<td>55 (14.2)</td>
</tr>
</tbody>
</table>

Materials

A questionnaire containing three sections was developed. The first section had four questions regarding information on students’ demographics, namely gender, age, academic year and employment status. Due to few participants reporting working to a greater extent, a decision was made to transform the employment status variable into a dichotomous variable, with two levels: employed ($n = 204$) and unemployed ($n = 184$). The two remaining sections consisted of established scales measuring resilience, SPF-24 (Ponce-Garcia et al., 2015), and subjective wellbeing, Personal Wellbeing Index Adult (International Wellbeing Group, 2013), both translated into Swedish by the authors of the present study.

Scale of Protective Factors. Scale of Protective Factors (SPF-24) is a questionnaire developed and used to measure trait resilience and at a factorial level assessing social factors: Social Support and Social Skills; and cognitive factors: Prioritising and Planning Behaviour and Goal Efficacy (Ponce-Garcia et al., 2015). The scale consists of 24 items, of which each factor comprise six items. The items are formulated as statements, such as the Social Skills item “I am good at starting new conversations” (in Swedish: “Jag är bra på att starta konversationer”), to which participants’ level of agreement was self-rated using a 7-point Likert scale ranging from 1, disagree completely (in Swedish: tar helt avstånd), to 7, agree completely (in Swedish: instämmer helt).

Items exemplifying the remaining factors Social Support, Planning and Prioritising Behaviour and Goal Efficacy, in subsequent order, are “My friends and/or family, are supportive of one another” (in Swedish: “Mina vänner och/eller min familj stödjer varandra”), “When working on something, I set priorities before I start” (in Swedish: “När jag arbetar med något gör jag prioriteringar innan jag sätter igång”) and “I am confident in my ability to solve problems” (in Swedish: “Jag litar på min egen problemlösningsförmåga”). The total score of SPF-24, and each factor of the SPF-24 were calculated by using the participants’ respective mean scores.
Validity and reliability. The developers of the SPF-24 obtained Cronbach’s alpha values as follows: Social Support .86; Social Skills .92; Planning and Prioritising Behaviour .89; and Goal Efficacy .89 (Ponce-Garcia et al., 2015). The scale was also checked for external validity by comparing it with two well-established measures, CD-RISC and the Resilience Scale (RS). The psychometric values indicate that the three scales measure the same construct (Ponce-Garcia et al., 2015).

A Principal Component Analysis was conducted to examine the validity of the factor structure of the translated SPF-24 scale in the present study. The obtained factors and their inherent items in the model are consistent with the factors defined by the developers of the scale (Ponce-Garcia et al., 2015). Cronbach’s alpha values for the factors in present study are: Social Support .80; Social Skills .91; Planning and Prioritising Behaviour .89; and Goal Efficacy .85. The values exceed the cut point of .7 recommended by Brace, Kemp, and Snelgar (2009, p. 368) and the reliability of the factor structure is therefore to be considered as adequate.

Personal Wellbeing Index. The Personal Wellbeing Index - Adult (PWI-A) is a questionnaire developed and used to measure subjective wellbeing (International Wellbeing Group, 2013). The scale consists of nine items, one of them used as a control variable to test construct validity. The remaining eight items represent different domains and are meant to contribute with unique variance to quality of life. The eight domains of PWI-A are: Standard of Living, Personal Health, Achieving in Life, Personal Relationships, Personal Safety, Community-connectedness, Future Security, and Spiritual or Religious Beliefs (International Wellbeing Group, 2013).

The use of the domain Spiritual or Religious Beliefs is however problematic according to the developers (International Wellbeing Group, 2013). The domain has showed to be non-significant (not contributing towards life satisfaction as a whole) in some cultures and is advised not to be included in the core set of domains that form PWI-A. In the questionnaire the domain was however included, as it could be easily removed if not contributing to subjective wellbeing in the sample.

The items were formulated as questions, for example “How satisfied are you with what you are achieving in life?” (in Swedish: “Hur nöjd är du med vad du uppnår i livet?”). The questions were answered on an 11-point Likert scale ranging from 0, no satisfaction at all (in Swedish: inte är nöjd alls), to 10, completely satisfied (in Swedish: fullständning nöjd). The
The total score of PWI-A was calculated by using the participants’ respective mean score of the scale.

**Validity and reliability.** Internal validity of the PWI-A was examined in a standard multiple regression analysis (MRA) in order to determine that each of the items contribute with unique variance to the control variable of the scale in the present study. The significant model had an adequate fit and explained 53% of the variance in the control variable Satisfaction with Life as a Whole (Adjusted $R^2 = .529$). This is in line with what was predicted by the authors of the scale (International Wellbeing Group, 2013). The domains Spiritual or Religious Beliefs and Personal Safety made no unique contribution to the variance in the control variable, which is consistent with results found in an Australian population. Additionally, the domain Community-connectedness did not contribute to variance in the control variable which is inconsistent with previous research.

Cronbach’s alpha coefficients ranged from .70 to .85 in studies made in Australian samples (International Wellbeing Group, 2013). In the present study, the Cronbach’s alpha obtained was .85 for the eight item scale, while the value for the truncated seven item scale, with the domain Spiritual or Religious Beliefs omitted, was .87.

**Procedure**

Gathering of data was done by contacting university staff responsible for courses and programmes in order to get in touch with the students. Students were then orally informed of the aim of the study, that participation was voluntary and that participation could be called off at any time while completing the questionnaire. The students were also informed that by completing and handing in the questionnaire, they consented to participate in the study. At some occasions students arrived late for their lecture and the presentation preceding the data collection was already started. For this reason, these students were not allowed to participate in the study, due to the risk of missing ethical or practical information. Less than ten students were excluded for this reason. Additionally, less than fifteen students were missing due to leaving the classroom prior to the collection. The completed questionnaires were immediately collected. The whole procedure was managed by the authors of the present study and took about 10 minutes. The study was presented to Etikkommittén Sydost, a research ethics committee, and was approved without any further investigation as it did not present any ethical problems.
Data Preparation

Handling of missing data. In circumstances where participants had filled in the questionnaire incorrectly, following actions were made: where participants had filled in multiple values on one or more items, the mean of the concerned values was used; where participants had chosen an in-between value on one or more items, the mean of the two closest values was used. Where participants had missed to answer one or more items completely, the item was analysed and examined to identify a possible pattern or stochasticity. The total amount of cases with missing values were 34.

A pattern of missing cases was identified regarding the one item assessing satisfaction with spiritual or religious beliefs on the PWI-A questionnaire, which had 17 cases with missing values. Due to this item failing to make a significant contribution to overall satisfaction with life, the item was omitted from further analyses as advised by the International Wellbeing Group (2013).

Remaining missing values were replaced with the mean score of the total of responses on each of the concerned item. Cases which had values replaced with mean scores were 20. One participant had not reported age and in this case the field was left blank.

Accuracy of data sheet. Data were organised in a matrix and proofread by checking a randomised selection of 10% of the cases. An online software, True Random Number Generator (Randomness and Integrity Services, n.d.), was used to randomly select cases for proofreading which was conducted by comparing the data sheet with the physical questionnaire. The two authors of the present study worked with this in order to achieve a redundant process. An accuracy rate of 100% was obtained.

Data Analysis

Hypothesis testing. All analyses were performed in Statistical Package for the Social Sciences (IBM SPSS Statistics 25). To test the hypotheses, the α-level chosen was 0.05.

Hypothesis 1 (“Social support, social skills, planning and prioritising behaviour and goal efficacy predict subjective wellbeing”) was tested using a standard multiple regression analysis (MRA). The assumptions for MRA, stated by Field (2009, pp. 220) were met. The inference test Shapiro-Wilk suggested that the standardised residuals did in fact differ from normality. However, as advised by Field (p. 139) as well as Tabachnick and Fidell (2014, p. 114), due to a large sample size a visual inspection of the distribution of standardised residuals is more trustworthy and thus recommended. The visual inspection suggested that
residuals were normally distributed with a tendency towards negative skewness. It was concluded that the distribution of residuals met the assumption required to perform MRA.

Hypothesis 2 (“There are gender differences in resilience and subjective wellbeing”) was tested by using Mann-Whitney U-tests due to several of the variables differing from normality.

Hypothesis 3 (“There are group differences in resilience and subjective wellbeing between academic years”) was tested by using Kruskal-Wallis test and Mann-Whitney U-tests due to several of the variables differing from normality.

Hypothesis 4 (“There are group differences in resilience and subjective wellbeing between employed and unemployed students”) was tested by using Mann-Whitney U-test due to several of the variables differing from normality.

Results

Hypothesis 1 (“Social support, social skills, planning and prioritising behaviour and goal efficacy predict subjective wellbeing”) was tested by means of a standard MRA. Predictor variables entered were Social Support, Social Skills, Planning and Prioritising Behaviour and Goal Efficacy (comprising the SPF-24 scale), and the criterion variable was PWI-A. A significant model emerged, $F(4,383) = 67.372, p < .001$, that explained 41% of the variance in PWI-A (Adjusted $R^2 = .407$). Three of the four factors of the scale SPF-24 were significant predictors of the subjective wellbeing scale PWI-A. The three factors, Social Support, Social Skills and Goal Efficacy, were all positively related to PWI-A. The SPF-24 factor Planning and Prioritising Behaviour was not a significant predictor of PWI-A. Table 2 provides information on the regression coefficients for the predictors entered into the model. Correlations amongst variables entered into the model are found in Table 3.

Table 2

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$b$</th>
<th>SE $b$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support</td>
<td>.466</td>
<td>.075</td>
<td>.267***</td>
</tr>
<tr>
<td>Social Skills</td>
<td>.408</td>
<td>.065</td>
<td>.284***</td>
</tr>
<tr>
<td>Planning and Prioritising Behaviour</td>
<td>.052</td>
<td>.066</td>
<td>.037</td>
</tr>
<tr>
<td>Goal Efficacy</td>
<td>.442</td>
<td>.078</td>
<td>.277***</td>
</tr>
</tbody>
</table>

*** $p < .001$. 

17
Table 3

Correlation Coefficients for the Variables Entered into the Model Used to Examine the Relationship Between SPF-24 and PWI-A.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PWI-A</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Social Support</td>
<td>.460***</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Social Skills</td>
<td>.513***</td>
<td>.404***</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Planning and Prioritising Behaviour</td>
<td>.327***</td>
<td>.233***</td>
<td>.272***</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>5. Goal Efficacy</td>
<td>.478***</td>
<td>.249***</td>
<td>.401***</td>
<td>.541***</td>
<td>—</td>
</tr>
</tbody>
</table>

*** p < .001.

Hypothesis 2 (“There are gender differences in resilience and subjective wellbeing”) was tested by means of the non-parametric Mann-Whitney U-test. Results showed that female students scored significantly higher than male students on the factors Social Support, \( (U = 15256.00, z = -2.42, p = .016, r = -.12) \); Planning and Prioritising Behaviour, \( (U = 13573.50, z = -3.98, p < .001, r = -.20) \) and on the total score of SPF-24, \( (U = 15387.00, z = -2.29, p = .022, r = -.12) \). There were no significant gender differences in the Social Skills or Goal Efficacy factors, nor in the total score of PWI-A. Medians, minimum and maximum values for the variables are found in Table 4.

Hypothesis 3 (“There are group differences in resilience and subjective wellbeing between academic years”) was tested by a Kruskal-Wallis test. No significant academic year differences in the SPF-24 factors, SPF-24 total score or PWI-A were found. The Kruskal-Wallis test was followed up with post hoc tests in form of separately performed Mann-Whitney U-tests. After Bonferroni correction (Field, 2009, p. 565), no significant differences in resilience or subjective wellbeing were found between years of academic studies. For medians, minimum and maximum values, see Table 4.

Hypothesis 4 (“There are group differences in resilience and subjective wellbeing between employed and unemployed students”) was tested by a Mann-Whitney U-test. There were no significant differences in SPF-24 total score or PWI-A between students who were employed and unemployed. Although, a difference appeared in the factor Goal Efficacy \( (U = 16223.00, z = -2.312, p = .021, r = -.12) \), where employed students scored significantly higher than those who were unemployed. There was a tendency to a statistical significant difference in the Social Skills factor \( (U = 16644.50, z = -1.93, p = .054, r = -.10) \), where employed students scored higher than their unemployed peers. No other noticeable group difference was detected. For medians, minimum and maximum values, see Table 4.
Table 4
Medians (with Minimums and Maximums) for Scores on Tests Used in the Study: the Four SPF-24 Factors, SPF-24 Totals, and PWI-A Totals.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Social Support</th>
<th>Social Skills</th>
<th>Planning and Prioritising Behaviour</th>
<th>Goal Efficacy</th>
<th>SPF-24</th>
<th>PWI-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>5.67 (1.50, 7.00)</td>
<td>5.50 (1.67, 7.00)</td>
<td>5.00 (1.83, 7.00)</td>
<td>5.33 (2.00, 7.00)</td>
<td>5.33 (2.71, 6.92)</td>
<td>7.43 (2.43, 9.71)</td>
</tr>
<tr>
<td>Male</td>
<td>5.42 (2.00, 6.83)</td>
<td>5.50 (2.00, 7.00)</td>
<td>4.67 (2.33, 7.00)</td>
<td>5.00 (2.00, 7.00)</td>
<td>5.25 (3.06, 6.50)</td>
<td>7.50 (1.43, 9.71)</td>
</tr>
<tr>
<td>Academic year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5.50 (3.00, 7.00)</td>
<td>5.50 (2.00, 7.00)</td>
<td>4.83 (1.83, 7.00)</td>
<td>5.33 (2.00, 7.00)</td>
<td>5.25 (3.17, 6.58)</td>
<td>7.43 (1.43, 9.71)</td>
</tr>
<tr>
<td>2</td>
<td>5.67 (2.00, 6.83)</td>
<td>5.50 (1.67, 7.00)</td>
<td>4.83 (1.83, 7.00)</td>
<td>5.00 (2.00, 7.00)</td>
<td>5.21 (2.71, 6.54)</td>
<td>7.57 (2.57, 9.71)</td>
</tr>
<tr>
<td>3+</td>
<td>5.67 (1.50, 6.83)</td>
<td>5.50 (3.00, 7.00)</td>
<td>5.08 (2.33, 7.00)</td>
<td>5.42 (3.33, 7.00)</td>
<td>5.44 (2.79, 6.92)</td>
<td>7.43 (3.43, 9.71)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>5.50 (2.00, 7.00)</td>
<td>5.58 (1.67, 7.00)</td>
<td>5.00 (1.83, 7.00)</td>
<td>5.50 (2.00, 7.00)</td>
<td>5.29 (2.71, 6.58)</td>
<td>7.57 (1.43, 9.71)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>5.50 (1.50, 6.83)</td>
<td>5.33 (2.33, 7.00)</td>
<td>4.83 (1.83, 7.00)</td>
<td>5.18 (2.00, 7.00)</td>
<td>5.29 (2.79, 6.92)</td>
<td>7.43 (2.14, 9.71)</td>
</tr>
<tr>
<td>Sample total</td>
<td>5.50 (1.50, 7.00)</td>
<td>5.50 (1.67, 7.00)</td>
<td>4.83 (1.83, 7.00)</td>
<td>5.33 (2.00, 7.00)</td>
<td>5.29 (2.71, 6.92)</td>
<td>7.43 (1.43, 9.71)</td>
</tr>
</tbody>
</table>

Discussion

Hypothesis one was partially confirmed. The model indicates that social support, social skills and goal efficacy are predictors of subjective wellbeing in a Swedish student sample. The results are thus consistent with previous research (Brannan et al., 2012; Zhou & Lin, 2016). However, planning and prioritising behaviour does not predict subjective wellbeing which is inconsistent with previous research and makes the finding difficult to explain (Prenda & Lachman, 2001).

Hypothesis two was partially confirmed. Female students having higher levels of resilience, which is explained by higher levels of both social support and planning and prioritising behaviour than male students, is consistent with previous research (Newsome et al., 2016). Results also indicate that female and male students have similar levels of wellbeing and the protective factors social support and goal efficacy. The gender differences in resilience do not seem to carry over into subjective wellbeing, even though resilience is shown to predict subjective wellbeing. Regarding wellbeing and gender, research shows contradictory results (Ridner et al., 2016; Schmidt, 2012; Tomyn & Weinberg, 2018; Vaez &
Laflamme, 2003). There are however reasons to be somewhat careful comparing results from studies conducted in different cultures.

Hypothesis three was rejected. There not being any differences between academic years regarding resilience and subjective wellbeing is inconsistent with previous work suggesting that resilience increases from first to third year in university (Stanley & Bhuvaneswari, 2016) and that senior students tend to have more confidence in their social skills than first-year students (Malinauskas et al., 2014).

Findings are also inconsistent with previous research suggesting different patterns of decrease in subjective wellbeing or increases in symptoms supposedly negatively related to wellbeing (Christensson et al., 2010; Gustavsson et al., 2014; Rudman & Gustavsson, 2012). These studies examining psychological health amongst Swedish students have targeted medical students and operationalised wellbeing as the absence of psychiatric symptoms, whereas the present study examined students from different faculties and operationalised subjective wellbeing as the satisfaction with several domains related to wellbeing. Results are therefore difficult to compare. Moreover, factors that could affect students’ overall wellbeing, previously examined by Gustavsson et al. (2014), such as lack of influence, are possibly not captured by the PWI-A scale. It is important to note that this is a cross sectional study and that no conclusions can be drawn regarding changes in wellbeing over the years in the same group of individuals.

Hypothesis four was partially confirmed. Employed students show higher levels of goal efficacy than unemployed students. The relationship between employment status and goal efficacy was previously not examined at a factorial level, but previous findings state that employed students were half as likely to be resilient compared to unemployed students (Dyrbye et al., 2010). Regarding goal efficacy in the present study, this seems however not to be true due to employed students scoring higher than unemployed. The present findings could be discussed in regards to Lehmann’s (2012) theory on different student roles, in which the committed student role is characterised by clearly set goals. A high level of commitment could be considered an asset when balancing studies and work. Possible explanations for differences in goal efficacy between employed and unemployed students may be that individuals with a high level of goal efficacy may be more likely to engage in part-time work, in line with a trait-approach to resilience, and/or that working students may increase their level of goal efficacy as a result from their experience of balancing studies and work, in line with a process-approach to resilience. Data suggest, with a tendency towards significance, that
there is a difference in social skills between employed and unemployed students which speaks in favour of the idea expressed by Wang et al. (2010) that employment could have a positive effect on social networks.

Findings regarding wellbeing are inconsistent with previous research since several studies have shown lower levels of wellbeing amongst employed students compared to those who were unemployed (Dyrbye et al., 2010; Tang et al., 2002; Taylor & Owusu-Banahene, 2010). Previous research also suggests that the reason for a student seeking employment may have a mediating effect on the level of positive or negative consequences of engaging in part-time work (Wang et al., 2010). In Sweden the majority of students at universities do not need employment as a source of income due to governmental student finances. Thus, students in Sweden may be engaged in part-time work for reasons which do not cause any significant effects on wellbeing. Consequently, the extent of working hours could still have an effect on subjective wellbeing in the present sample, although not detectable when comparing employed and unemployed students.

**Limitations**

Limitations regarding generalisation of the results can be derived from the method of sampling, procedure of collecting data and methodological design. There was an imbalance between the numbers of participants representing each faculty distributed over academic years. The sample also only included Swedish-speaking students who were enrolled in on-campus courses or programmes. The findings can therefore not be generalised to a population including distance students or non-Swedish speaking students. In case there were any students absent from the lectures due to symptoms related to physical or mental health, and thus did not participate in the study, this would most likely have affected the results and expressed a less nuanced picture of the levels of resilience and/or subjective wellbeing. The current sample is limited to one university, making generalisation of the findings to other universities difficult.

Due to the non-standardised environment (i.e. lecture halls and classrooms) students’ self-ratings may have been affected by sitting close to each other or having the opportunity to converse whilst completing the questionnaire. Although presenting the purpose of the present study in the same format and with the same information to the university staff, there is a possibility that some classes were given different information about the study by their lecturer.
prior to data collection, making it a possibility that some students may have decided not to participate and therefore not have been present at the time of data collection.

Additionally, due to the translation of the two scales, the instruments were not yet validated. To confirm the accuracy of the measurements assessed by the Swedish translations of the scales, studies comparing the scales with well-established ones measuring the same constructs are needed. The questionnaire comprises self-rated resilience and subjective wellbeing items making social desirability, as well as over- or under rating, possible sources of error.

Other variables potentially related to resilience and/or subjective wellbeing, such as socioeconomic status, nationality or parents’ education were not included in the study. There may also be relevant protective factors other than those examined in this study, which might predict subjective wellbeing.

Finally, it is important to take into consideration that a multiple regression analysis assumes linear correlations in the model, but linear correlations are not always applicable in real life. A quantile regression analysis may result in a model better suited to reality, identifying a possible non-linear correlation. The rather small effect sizes observed in the Mann-Whitney U-analyses should also be taken into consideration when interpreting the results as well as prior to conducting future research. The cross-sectional nature of the present study gives little insight into the stability of results over time as only one point of measure was analysed.

**Conclusions**

Results indicate that social support, social skills and goal efficacy predicts subjective wellbeing in a Swedish university sample. Female students report higher levels of social support, planning and prioritising behaviour and total resilience compared to male students. Despite the limitations mentioned, this is the first study providing information on protective factors as predictors of subjective wellbeing in a Swedish university sample.

The findings could serve as a step towards creating interventions seeking to promote resilience amongst students and prevent the development of psychiatric symptoms. A focus on promoting resilience and thus strengthening wellbeing amongst students may prevent long term absence from university, failing exams, falling behind and making a comeback difficult.

Wellbeing may in turn promote positive development and learning as well as increase the likelihood of students experiencing their time at the university as pleasant. Interventions
could comprise courses, encouraging social clubs, workshops and buddy programmes seeking to improve social support networks and interactions amongst students.

**Future Research**

A randomised and nationwide sample of students would improve the generalisability of future research. Furthermore, the present study is a cross-sectional study, and thus the reliability could be improved by repeated measures. Future research could also further explore other protective factors and their relation to well-being.
References


https://www.folkhalsomyndigheten.se/contentassets/42a5882b2540492bb6b1fd1163726c84/studenter-och-hog-alkoholkonsumtion-webb.pdf


