Psychological wellbeing and self-esteem in students across the transition between secondary school and university: A longitudinal study

Romualdas Malinauskas & Audrone Dumciene

Lithuanian Sports University, Lithuania

This longitudinal study investigated the psychological wellbeing and self-esteem of students during the transition between secondary school and university. The sample comprised 197 students (82 male; 115 female). The mean age of the students at the start of the study was 18.54 years ($SD = 0.78$). Students completed measures of psychological wellbeing (Ryff Psychological Wellbeing Scale) and self-esteem (Rosenberg Self-esteem Scale) during their final year of secondary school and again at the start of their university studies. Repeated measures (RM) multivariate analysis of variance (MANOVA) was used to investigate how transition status and gender affected aspects of psychological wellbeing and self-esteem. Multivariate analysis showed main effect of the transition from school to university on psychological wellbeing and self-esteem. Univariate analysis indicated that psychological wellbeing was higher at the start of university studies than during the final year of secondary school, but failed to confirm the effect of the transition on self-esteem. Gender by transition status interactions for two psychological wellbeing dimensions (autonomy and purpose in life) were found.

Keywords: psychological wellbeing, self-esteem, gender, transition status, students.

Researchers have investigated the transition from school to university in a number of ways and from different disciplinary perspectives, examining various aspects of students’ experience. Some researchers have focused on the impact of this transition on wellbeing (Aspinwall & Taylor, 1992; Gall, Evans, & Bellerose, 2000; Salmela-Aro, Kiuru, Nurmi, & Eerola, 2014) or self-esteem (Friedlander, Reid, Shupak, & Cribbie, 2007).

Aspects of psychological wellbeing

Recently, researchers have focused increasingly on psychological wellbeing (Fernandes, Vasconcelos-Raposso, & Teixeira, 2010; Kim, Kendall, & Webb, 2015; Schmitt, Branscombe, Postmes, & Garcia, 2014; Springer,

Corresponding author: romas.malinauskas@lsu.lt
Generally speaking, psychological wellbeing represents the state of individuals whose lives are going well. It represents a combination of feeling good and functioning effectively. Psychological wellbeing is compromised by extreme or enduring negative emotions which interfere with everyday functioning (Huppert, 2009).

This study uses Ryff’s (1989) definition of psychological wellbeing as optimal psychological functioning and experience. Ryff’s (1989) psychological wellbeing construct was based on a multidimensional model of psychological wellbeing rooted in theoretical research on normal development of personality. The model provides a holistic definition of psychological wellbeing. Psychological wellbeing amount to more than being free from stress and not having other psychological problems; it encompasses a theoretically and empirically derived set of indicators: positive self-perception, positive relations with others, environmental mastery, autonomy, and purpose in life. (Ryff & Keyes, 1995). Ryff (1989) constructed a measure of wellbeing organised in terms of six subscales: autonomy, environmental mastery, positive relations with others, purpose in life, personal growth and self-acceptance. Previous research (Bowman, 2010; Huppert, 2009) showed that the skills and perceptions that comprise psychological wellbeing are crucial to successfully engaging in meaningful relationships, navigating one’s environment and realising one’s full potential throughout one’s lifespan. The transition to university is characterised by changes in autonomy, environmental mastery, positive relations with others and purpose in life (Salmela-Aro et al., 2014) which implies that it would be valuable to apply a model of psychological wellbeing model which refers to these dimensions (Ryff & Keyes, 1995) in longitudinal research on a population undergoing the transition from school to university.

Aspects of self-esteem

The transition from secondary school to university often reduces contact with friends and family members (Hudd et al., 2000). It has been shown that having difficulty with the challenges of this transition may result in enduring changes in psychological resources, including self-esteem (Hudd et al., 2000; Friedlander et al., 2007).

Self-esteem or global self-esteem is defined as the emotional evaluation individuals make about themselves, which is generally in the form of approval or disapproval (Rosenberg, 1989). It indicates the extent to which individuals believe themselves to be capable, significant, successful, and worthy (Marsh, 1996). Self-esteem is a large part of adolescents’ understanding of self and is likely to fluctuate, as it is susceptible to internal and external influences during adolescence and youth (Erol & Orth, 2011). We chose to assess global self-esteem rather than specific aspects of self-esteem (for instance, academic self-esteem) in this study because whilst measures of specific aspects of self-
esteem are most relevant to behaviour, global self-esteem is most relevant to psychological wellbeing (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995).

Concept of transition from school to university

Transition can be defined as a process of qualitative reorganisation of inner life and external behaviour (Huon & Sankey, 2000). The transition from secondary school to university is a major life change and will be stressful for many young people, particularly if it involves leaving home (Fisher, 1994), because it involves taking on new responsibilities (Robotham & Julian, 2006). This combines with the increased workload and time pressure new university students face because they have to adjust to changes in several life domains, for instance, they must deal with a new social environment (stress in students will be related to social factors), and maintain a high level of academic performance (stress in students will be related to academic expectations and performance) (Robotham & Julian, 2006). Increased stress may be due in part to the absence of an individual’s usual support network of friends and family (Hudd et al., 2000; Robotham & Julian, 2006) may explain, why the transition from school to university requires major adjustment across several life domains (Robotham & Julian, 2006). For this reason the concept of adjustment to transition (Gall et al., 2000) has been used in this study.

Implications for students’ wellbeing and self-esteem of the transition from school to university

Previous research (Gall et al., 2000) has shown that the transition from school to university represents a relatively acute stressor for students, and that the stress and impact on wellbeing are greatest when they start university. The same study (Gall et al., 2000) reported that students exhibited higher psychological wellbeing and self-esteem after a stressful transition than before. High self-esteem has been shown to be vital for making the transition to university successfully (Hickman, Bartholomae, & McKenry, 2000). A study by Salami (2011) found that high self-esteem predicted better adjustment (wellbeing is an aspect of adjustment; Gall et al., 2000) to university and there is evidence that psychological wellbeing is positively correlated with self-esteem (Fernandes & Vasconcelos-Raposo, 2008; Valkenburg, Peter, & Schouten, 2006). Individuals with low self-esteem may feel unhappy and dissatisfied (Hudd et al., 2000). Low self-esteem may hinder individuals from making the transition to adulthood successfully and jeopardise their psychological wellbeing (Ozben, 2013). Based on this evidence we considered it important to evaluate both psychological wellbeing and self-esteem during the transition from secondary school to university.
Concept of gender and gender differences in self-esteem and psychological wellbeing

One of the reasons this study is needed is that the available data in field gender differences in Self-Esteem and Psychological Wellbeing are somewhat contradictory. Some studies have reported no gender differences in psychological wellbeing (Okun & George 1984; Roothman, Kirsten, & Wissing, 2003) whereas others have found that women have greater psychological wellbeing than men (Horley & Lavery, 1995; Işiklar, 2012; Perez, 2012).

Research on students’ self-esteem has also produced somewhat contradictory findings. Some studies have found no gender difference in university students’ self-esteem (Erol & Orth, 2011; Işiklar, 2012) although other research on self-esteem indicates that men typically have higher self-esteem than women (Derdikman-Eiron et al., 2011; Moksnes & Espnes, 2012; Moksnes, Moljord, Espnes, & Byrne, 2010). A robust finding to emerge from a large number of studies, which have examined gender differences in self-esteem (for instance, Bleidorn et al., 2016; Kling, Hyde, Showers, & Buswell, 1999; Orth, Robins, & Widaman, 2012), is that males tend to report higher levels of self-esteem than females do during the transition from adolescence to young adulthood (Kling et al., 1999; Zeigler-Hill & Myers, 2012). The reported effect sizes typically range within the limits of small to medium effects (Bleidorn et al., 2016; Kling et al., 1999).

A study by Gall et al. (2000) indicated that women, despite having more resources, were more vulnerable (for instance, reported more stress, sought more social support than men) during the school-university transition. Research on psychological wellbeing and self-esteem among university students can help to improve our understanding of the relationship between psychological wellbeing and self-esteem during the school-university transition (Paradise & Kernis, 2002). One such study (Paradise & Kernis, 2002) reported that all six dimensions of psychological wellbeing as measured by Ryff’s (1989) Psychological Wellbeing Scale (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance) were positively associated with self-esteem.

This study

The aim of this longitudinal study was to investigate psychological wellbeing and self-esteem in students before and after they made the transition from school to university. We investigated the following specific questions: 1) Do psychological wellbeing and self-esteem differ before and after the transition to university? 2) Are there gender differences in psychological wellbeing and self-esteem levels in final-year secondary school students and or students starting university?

This study makes a novel contribution to the literature, because other research in this field has only evaluated the effects of gender on the association between psychological wellbeing and self-esteem in university students.
(Ayyash-Abdo & Alamuddin, 2007; İşklar, 2012; Moshki & Ashtarian, 2010) or secondary schools students (Sarkova et al., 2013; Sarkova et al., 2014), whereas we also investigated the effect of the transition from school to university. We evaluated multiple aspects of psychological wellbeing (autonomy, environmental mastery, positive relations with others, purpose in life, personal growth and self-acceptance) in order to provide a comprehensive assessment of psychological wellbeing.

We investigated several specific hypotheses based on previous research.

**Hypothesis 1:** Students’ psychological wellbeing and self-esteem increase following the transition to university. This hypothesis was based on earlier research showing that students exhibited higher psychological wellbeing and self-esteem after a stressful transition (Gall et al., 2000). This study reported that although the transition was stressful, over time there was steady improvement in most aspects of adjustment including wellbeing and self-esteem (Gall et al., 2000).

**Hypothesis 2:** After the transition to university male students have higher psychological wellbeing and self-esteem than female students. This hypothesis was based on earlier study which reported that despite having more resources women were more vulnerable during the school-university transition (Gall et al., 2000).

**Hypothesis 3:** There are gender by transition status interactions with respect to psychological wellbeing and increase of psychological wellbeing across the transition is significantly greater for men than for women. This hypothesis was based on a study which reported well-being increased across post-high school transition and the increase of psychological wellbeing across post-high school transition was significantly greater for men than for women (Schulenberg, O’Malley, Bachman, Johnston, & Laetz, 2004).

**Method**

**Study design**

We used a longitudinal design. The same cohort of students of both genders was evaluated in the final year of secondary school and one year later during the first year of university study and measures for the psychological well-being and self-esteem were collected. A longitudinal design was chosen because we wanted to investigate changes in the target population (students going to university).

**Participants**

Participants were drawn from a randomly selected sample of five schools in Kaunas (Lithuania). The initial sample comprised 208 final-year secondary school students who indicated that had been admitted to university and 197 of these participants (82 male; 115 female) completed the second assessment (reasons for drop-out were refusal to complete the second assessment and drop-out from university). The final sample thus consisted of 197 students whose mean age at the start of the study was 18.54 years ($SD = 0.78$).
Instruments

Ryff Psychological Wellbeing Scale (RPWBS). The RPWBS was created by Ryff (1989) and later revised by Ryff and Keyes (1995). The 54-item scale was used in this study. The RPWBS consists of a series of items reflecting six aspects of psychological wellbeing (PWB): autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance (Ryff, 1989). Respondents are required to rate the items using a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The reported internal consistency of the subscales making up the 54-item scale ranges from .63 to .81. Like Sheldon and Lyubomirsky (2006), we calculated a total psychological wellbeing score by summing the scores for the six subscales. In this study the alpha coefficient for the total score was .84. The Lithuanian version of the RPWBS has a reported internal consistency of .79 (Cirtautiene, 2004).

Rosenberg Self-Esteem Scale (RSES; Rosenberg 1989). The Rosenberg scale is probably the most widely used method of measuring self-esteem (SE). It consists of 10 items to which responses are given using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), thus total score ranges from 10 to 40; high scores indicate high self-esteem. There is extensive evidence of the reliability and validity of the scale (Blascovich & Tomaka, 1991). In the current study a Cronbach’s alpha of .68 was found for the RSES total score, indicating acceptable internal reliability. The Lithuanian version of the RSES has an internal consistency value of .73 (Malinauskas, Klizas, & Sniras, 2008).

Personal information form. Participants were asked to provide information about gender, age and admission to university.

Procedure

Students were assessed in April 2014 and again in May 2015, exactly one year later. Data on age was collected at the first assessment. There were no gender differences in age ($t(195) = -1.72, n.s.$), total PWB score ($t(195) = 1.11, n.s.$), PWB dimensions (all n.s.) and SE ($t(195) = 1.26, n.s.$). Students’ email addresses were obtained from the school principal and the researcher emailed potential participants, explaining the aims of the study. Valid instruments should ensure that information about the study aims does not have a significant effect on study results. Email addresses were used to match and track responses. Participation was voluntary and no financial incentive was offered. Participants completed the assessment questionnaire (consisting of the instruments detailed above) by email in the Spring semester before and after they made the transition to university.

The study was approved by the Committee for Social Sciences Research Ethics of Lithuanian Sport University. The research was conducted in accordance with ethical guidelines and the legal code of the country in which the study was conducted.

Results

Descriptive statistics, namely means, standard deviations and mean differences ($D$s), were calculated. Skewness and kurtosis coefficients were calculated to assess univariate normality because MANOVA requires normally distributed data (Gravetter & Wallnau, 2000). As a rule of thumb, skewness and

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1 High school students generally finish their abitur in end of May. One month before finishing high school students are admitted to universities in Lithuania or to universities of other Europe countries.
Kurtosis coefficients between +1 and −1 are considered to indicate that data are normally distributed (Garson, 2012; Smedema, Catalano, & Ebener, 2010). Two-tailed Pearson product moment correlations are reported for all continuous variables.

Two (gender: male; female) × 2 (transition: before; after) repeated measures (RM) MANOVA was used to investigate the effects of transition and gender on psychological wellbeing dimensions and self-esteem. Preliminary tests were conducted to check for multicollinearity, sphericity, homogeneity of variance; the results indicated that there were no serious violations of the MANOVA assumptions. Wilk’s lambda was used to evaluate all multivariate effects; the significance level was set at .05. Effect sizes for F-statistics were expressed as partial eta-squared ($\eta_p^2$); this statistic ranges from 0 to 1 and represents the proportion of variance in the dependent variable which is explained by the independent (group) variable. According to Tabachnick and Fidell (2007) effect size based on $\eta_p^2 = .01$ corresponds to a small effect, $\eta_p^2 = .09$ corresponds to a medium effect, and $\eta_p^2 = .25$ represents a large effect. All statistical analyses were conducted using SPSS (version 19.0).

Table 1 presents means, standard deviations, skewness and kurtosis, and standard errors of skewness and kurtosis for all variables. All variables were checked for skewness and kurtosis and were considered to have acceptable distributions, thus making it possible to use RM MANOVA.

<table>
<thead>
<tr>
<th></th>
<th>Time point before the transition to university</th>
<th>Time point after the transition to university</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Autonomy</td>
<td>29.98</td>
<td>3.73</td>
</tr>
<tr>
<td>Environmental mastery</td>
<td>30.40</td>
<td>4.04</td>
</tr>
<tr>
<td>Personal growth</td>
<td>32.82</td>
<td>3.70</td>
</tr>
<tr>
<td>Positive relations</td>
<td>32.10</td>
<td>3.24</td>
</tr>
<tr>
<td>Purpose in life</td>
<td>32.86</td>
<td>3.78</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>30.36</td>
<td>3.76</td>
</tr>
<tr>
<td>Total PWB score</td>
<td>188.52</td>
<td>8.31</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>24.63</td>
<td>2.68</td>
</tr>
</tbody>
</table>


Pearson correlation coefficients were calculated to investigate the pattern of correlations between dependent variables and confirm the absence of multicollinearity. MANOVA is considered wasteful if dependent variables are very highly positively correlated or uncorrelated (Tabachnick & Fidell, 2007). Correlations between dependent variables are presented separately for the first (pre-transition) and second (post-transition) assessments in Table 2. The dependent variables were low correlated in positive direction.
Table 2
Correlations of dependent variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Autonomy</td>
<td>1</td>
<td>.14*</td>
<td>.12</td>
<td>.11</td>
<td>.19**</td>
<td>.16*</td>
<td>.51**</td>
<td>.10</td>
</tr>
<tr>
<td>2. Environmental mastery</td>
<td>.16*</td>
<td>1</td>
<td>.13</td>
<td>.16*</td>
<td>.10</td>
<td>.09</td>
<td>.46**</td>
<td>.08</td>
</tr>
<tr>
<td>3. Personal growth</td>
<td>.15*</td>
<td>.13</td>
<td>1</td>
<td>.12</td>
<td>.14*</td>
<td>.11</td>
<td>.44**</td>
<td>.17*</td>
</tr>
<tr>
<td>4. Positive relations</td>
<td>.09</td>
<td>.24**</td>
<td>.18*</td>
<td>1</td>
<td>.16*</td>
<td>.19**</td>
<td>.21**</td>
<td>.13</td>
</tr>
<tr>
<td>5. Purpose in life</td>
<td>.14*</td>
<td>.14*</td>
<td>.11</td>
<td>.14*</td>
<td>1</td>
<td>.18*</td>
<td>.33**</td>
<td>.11</td>
</tr>
<tr>
<td>6. Self-acceptance</td>
<td>.11</td>
<td>.13</td>
<td>.17*</td>
<td>.12</td>
<td>.13</td>
<td>1</td>
<td>.48**</td>
<td>.14*</td>
</tr>
<tr>
<td>7. Total PWB score</td>
<td>.25**</td>
<td>.44**</td>
<td>.35**</td>
<td>.42**</td>
<td>.39**</td>
<td>.39**</td>
<td>1</td>
<td>.17*</td>
</tr>
<tr>
<td>8. Self-esteem</td>
<td>.14*</td>
<td>.10</td>
<td>.11</td>
<td>.08</td>
<td>.12</td>
<td>.09</td>
<td>.14*</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes. Correlations below the diagonal are for Time point before the transition to university. Correlations above the diagonal are for Time point after the transition to university. \( N = 197 \). PWB is psychological wellbeing. *\( p < .05 \); **\( p < .01 \).

Sphericity is one of the assumptions of univariate RM MANOVA. The assumptions of Mauchly’s test of sphericity were met because the repeated measures variables had only two levels. Homogeneity of variances was assessed with Levene’s test and found to be satisfactory (for all variables \( p > .05 \)).

RM MANOVA was used to investigate how the transition to university affected psychological wellbeing scores and self-esteem. The results are summarised in Table 3.

Table 3
Means (M) and standard deviations (SD) for psychological wellbeing (PWB) dimensions and self-esteem across groups and transition to university

<table>
<thead>
<tr>
<th></th>
<th>Time before the transition to university</th>
<th>Time after the transition to university</th>
<th>Univariate tests of RM MANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males (M ± SD)</td>
<td>Females (M ± SD)</td>
<td>Males (M ± SD)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>30.93 ± 3.76</td>
<td>29.30 ± 3.57</td>
<td>31.14 ± 4.40</td>
</tr>
<tr>
<td>Environmental mastery</td>
<td>31.01 ± 3.65</td>
<td>29.98 ± 3.65</td>
<td>32.73 ± 4.50</td>
</tr>
<tr>
<td>Personal growth</td>
<td>32.44 ± 3.75</td>
<td>33.09 ± 3.75</td>
<td>34.43 ± 4.35</td>
</tr>
<tr>
<td>Positive relations</td>
<td>32.08 ± 3.33</td>
<td>32.11 ± 3.33</td>
<td>33.23 ± 4.25</td>
</tr>
<tr>
<td>Purpose in life</td>
<td>32.35 ± 3.22</td>
<td>33.22 ± 3.22</td>
<td>34.64 ± 4.25</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>30.49 ± 3.68</td>
<td>30.27 ± 3.68</td>
<td>30.54 ± 4.21</td>
</tr>
<tr>
<td>Total PWB score</td>
<td>189.29 ± 7.99</td>
<td>187.96 ± 8.64</td>
<td>196.71 ± 10.06</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>24.92 ± 2.83</td>
<td>24.43 ± 2.56</td>
<td>25.40 ± 2.57</td>
</tr>
</tbody>
</table>

Notes. * \( p < .05 \); ** \( p < .01 \).
Overall RM MANOVA revealed a large main effect for transition ($F(7, 189) = 9.99, p = .000$; Wilk’s $\lambda = 0.73; \eta_p^2 = .27$). A multivariate test indicated that gender did not affect either psychological wellbeing dimensions and self-esteem ($F(7, 189) = 2.04, p = .052$, Wilk’s $\lambda = .93$). Overall RM MANOVA results showed a significant effect for the transition by gender interaction ($F(7, 189) = 2.79 p = .009$; Wilk’s $\lambda = .91; \eta_p^2 = .09$).

Univariate tests of RM MANOVA confirmed effects of transition on six dependent variables (Table 3). Simple main effects analysis showed that students reported higher autonomy ($D = 1.14, p = .008$), environmental mastery ($D = 1.88, p = .000$), personal growth ($D = 1.37, p = .001$), positive relations ($D = 1.15, p=.004$), purpose in life ($D = 1.15, p=.005$) at the post-transition assessment. Follow-up univariate analysis revealed a medium effect ($\eta_p^2 = .24$) of transition on total psychological wellbeing score ($D = 7.43, p = .000$). Univariate tests indicated that gender did not affect psychological wellbeing and self-esteem ($p's > .05$) although there was a trend towards higher self-esteem in male students. RM MANOVA univariate analyses for transition by gender interactions revealed effects on these dependent variables: autonomy ($F(1, 195) = 4.75; p = .030, \eta_p^2 = .02$) and in purpose in life ($F(1, 195) = 8.13; p = .005, \eta_p^2 = .04$).

To interpret transition status by gender interaction for autonomy, estimated marginal means were plotted (Fig. 1). From Fig. 1 it is evident that the lowest levels of autonomy occur for females before transition to university and highest levels of this dimension of psychological wellbeing occur for females after transition. It can be seen that females seemed to have the largest change of autonomy across the transition while rates for males increased at a much lower rate.

![Estimated marginal means of autonomy dimension](image-url)

*Figure 1.* Interaction between gender and transition status on autonomy
From Fig. 2 it is evident that for the purpose in life dimension males have the lowest levels before transition to university and highest levels after transition. As illustrated in Fig. 2, gender groups exhibited different patterns of changes of this psychological wellbeing dimension across the transition and males seemed to have the largest change of purpose in life across the transition while rates for females increased at a much lower rate.

![Estimated marginal means of purpose in life dimension](image)

### Discussion

The aims of this study were to examine students’ psychological wellbeing and self-esteem before and after the transition to university and to investigate gender differences. Comparative analyses enabled us to identify multivariate and univariate associations among transition status, gender, psychological wellbeing and self-esteem. A multivariate test indicated that transition affects psychological wellbeing dimensions and self-esteem (a large main effect $\eta_p^2 = .27$).

Hypothesis 1, that psychological wellbeing and self-esteem are higher after the transition to university, was confirmed in for the case of psychological wellbeing but not self-esteem. The transition had positive effects on overall psychological wellbeing and the following specific aspects of psychological wellbeing: autonomy, environmental mastery, personal growth, positive
relations and purpose in life. The effect sizes for the observed differences ranged from small ($\eta^2_p = .04$) to large ($\eta^2_p = .24$). Transition had small effects ($\eta^2_p = .04$) on autonomy, environmental mastery ($\eta^2_p = .08$), personal growth ($\eta^2_p = .06$), positive relations ($\eta^2_p = .04$) and purpose in life ($\eta^2_p = .04$) and the large effect on overall psychological wellbeing ($\eta^2_p = .24$). Our findings on the improvements in mastery, autonomy, competence in managing the surrounding context and attitude to the present self following transition support Gall et al.’s (2000) claim that university students possess the ability to cope adaptively with their stressful transition events as time passed from time starting university. The results of this study are in line with another study which found that students scored better on measures of wellbeing in the Spring semester than in the Autumn (Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010). The results are also consistent with a study showing that university is predominately anxiety-provoking, and students’ psychological wellbeing is lower after starting university, but then rises during the first year of university study (Cooke, Bewick, Barkham, Bradley, & Audin, 2006). The fact that participants exhibited higher levels of psychological wellbeing after stressful transition than before the transition is in line with concept of adjustment by Gall et al. (2000).

Hypothesis 1 was not supported with respect to self-esteem; we found that the students in our sample had similar levels of self-esteem in the Spring semesters before and after the transition to university. The finding that participants’ self-esteem was similar before and after what one would expect to be a stressful period conflicts with an earlier study (Gall et al., 2000) which found that students experienced the greatest stress when they started university and that this was also the time of maximum impact on self-esteem, but that as time passed they experienced steady improvement in most aspects of adjustment including self-esteem. The lack of support for hypothesis 1 in this study may be due to the fact that our second assessment of self-esteem was carried out some weeks before final examinations. It could be explained by possible self-esteem instability, which is negatively related to expectations of students before final examinations (in the present study in Spring semester) (Fukuzawa & Yamaguchi, 2013). Our results could be explained in terms of psychological distress because it is a strong negative predictor of self-esteem (e.g., Shahar & Davidson, 2003; Shahar & Henrich, 2010). Another potential explanation of the lack of effect on self-esteem could be related to the broadness of the construct (global self-esteem) which was measured. Perhaps some aspects of self-esteem have increased, while others have decreased, leading to an overall insignificant effect. The findings of the present study could be also explained by the fact that students who transfer directly from secondary school to university are more likely to have a difficult time if their self-esteem is based on external sources (Arndt, Schimel, & Cox, 2006), but as we relied on a single measure of global self-esteem we are unable to evaluate this possibility in our sample. If Arndt et al.’s (2006) notion were to be confirmed it would be grounds for encouraging secondary schools to focus
on promoting students’ intrinsic sense of self-worth. It is important to note, however, that our results are at least somewhat inconsistent with a study which found that self-esteem declines from adolescence to the college period (18–22 years) (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002), the effect was small (Cohen’s $d = -.05$), although the authors did not offer an explanation for the decline in self-esteem during adolescence.

Our results do not support Hypothesis 2, that after the transition to university male students have higher psychological wellbeing and self-esteem than female students. A multivariate test indicated that gender did not affect psychological wellbeing and self-esteem and univariate analyses also indicated that gender did not affect psychological wellbeing and self-esteem. These findings are consistent with Fang and Galambos’s (2015) argument that students of both genders are likely to be vulnerable to threats to their self-worth and may have difficulties adapting when they leave their familiar school environment and start university. The findings of the present study are in consistency with the similar results of other researchers, particularly Ayyash-Abdo and Alamuddin (2007), Işiklar (2012), and Coelho, Marchante, and Jimerson (2016), who showed no differences in self-esteem with respect to gender and findings of Okun and George (1984), and Stamp et al. (2015), who showed no differences in psychological wellbeing with respect to gender. However, our results are at least somewhat inconsistent with a study which was carried out in a sample of Filipino college students and found that females showed higher scores in two aspects of psychological well-being (positive relations and purpose in life), except for the aspect on autonomy (Perez, 2012) although the effects were small (effect sizes ranged from Cohen’s $d = .28$ to Cohen’s $d = .43$) and potential explanation of these results could be related to the intercultural differences.

Hypothesis 3, that there are gender by transition status interactions with respect to psychological wellbeing and increase of psychological wellbeing across the transition to university is significantly greater for men than for women, was partially confirmed. It was revealed in the present study that gender interacts with transition status in their effects on autonomy (effect size was small, $\eta^2_p = .02$) and gender interacts with transition status in their effects on purpose in life (effect size was also small, $\eta^2_p = .04$) but hypothesis 3 was confirmed only for one psychological wellbeing dimension – purpose in life, because increase of purpose in life scores across the transition was significantly greater for men than for women. Our result supports the research findings of Schulenberg et al. (2004). It has been shown, while there were some significant gender differences across post-high school transition (between age 18 and ages 19–20) with respect to wellbeing, gender – transitions groups interactions on wellbeing were in large part non-significant because the links between transitions groups and wellbeing appear to be fairly pervasive and do not vary as a function of gender in all cases (Schulenberg et al., 2004). It is a potential explanation, why the interaction was found only for some aspects of psychological wellbeing and not for others.
Limitations and future research

The strengths of this study are the longitudinal design and relatively large sample. The study has some limitations. First, the study design makes it difficult to draw conclusions about causality. Second, the post-transition assessment was carried out only in the Spring semester, when students had been at university for nine months, rather than immediately after the transition to university. In order to minimise this limitation, the study would have had to employ more than two waves for measuring of wellbeing and self-esteem in students during the transition between secondary school and university. Gall et al. (2000) measured wellbeing at four points during the academic year. The third limitation of the present research is that we relied on a single measure of global self-esteem. Although the RSES is the most commonly used measure of self-esteem, there are other measures that might have provided a more nuanced assessment. Future researchers may want to consider including domain-specific measures of self-esteem as a complement to the RSES. It might be particularly informative to use instruments which assess extrinsic self-esteem or academic self-esteem in order to determine whether positive personality features offer some protection against the detrimental consequences of the stress of the school-university transition (Besser & Zeigler-Hill, 2014). Fourth, only a limited set of variables was investigated: gender, transition status, psychological wellbeing and self-esteem; in future the design could be expanded to include other psychosocial variables such as self-efficacy, perceived social support and perceived stress.

Conclusions

Multivariate analysis showed main effect of the transition from school to university on psychological wellbeing or self-esteem. Univariate analysis revealed that students had higher psychological wellbeing in the Spring of their first year of university than in Spring of their final year of secondary school; however self-esteem was similar before and after the transition from school to university. There were no gender differences for either of the constructs. Gender by transition status interactions for two psychological wellbeing dimensions (autonomy and purpose in life) were found.

References


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