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University connectedness among students and its measurement¹

The purpose of the study was to analyze the term of university connectedness and to prepare the Polish adaptation of the University Connectedness Scale – a tool for measuring university connectedness among students. The psychometric characteristics of the Polish version of the scale, named “Skala Poczucia Akademickiej Wspólnoty” (SPAW), were examined in a sample of 720 students. The structure of the SPAW was tested using exploratory and confirmatory factor analysis. The SPAW includes 18 items making up two subscales: support and belonging. Correlations between university connectedness and other variables support the diagnostic validity of the SPAW. The scale has both a good internal consistency and test-retest reliability. Overall, the SPAW is a reliable and valid tool which can be used to measure students’ university connectedness both for scientific and diagnostic purposes.

Keywords: pedagogy of place, sense of belonging, higher education, psychometrics, students, support, university connectedness

Introduction

Attending a university is a time of dynamic personality development, when adolescents prepare to adulthood, gaining more and more independence and decision-making ability (Arnett, 2000, pp. 469-470). Some students leave their families and move to another town, others start to work. Young people also learn

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to better manage their resources: time, attention, energy or money. They assume new social roles, which is connected with the increase in the number and scope of responsibilities. Another challenge is adapting to the university and meeting one's own and others' expectations concerning academic accomplishments. University time also promotes the broadening of social networks and establishing close interpersonal relations, including intimate relationships.

Because of all these factors, university is a significant place for a young person (Mendel, 2006, p. 21). Thus, it is important to find factors that would stimulate students' activity and positive development and would reduce stress and anxiety. The sense of connectedness may serve such functions. It can be defined as an expression of the individual's social identity formed under the influence of perceived and experienced similarities with other people, leading to identification with their goals, values and principles (Jarymowicz, 2000, p. 117).

One social group university students can identify with is the academic community. Based on the definitions of school connectedness, university connectedness can be conceptualized as the student's subjective sense of being accepted, appreciated, respected and supported by other university members and the sense of being part of the academic community (Blum, 2005, p. 16-20; Goodenow, 1993, p. 80).

An important component of university connectedness is the sense of belonging. Its source is one of the fundamental human needs: the need of belonging, motivating one to contact other people and form social relationships (Baumeister & Leary, 1995, pp. 499-501). The sense of belonging is expressed in perceiving oneself as an integral part of the community, sharing some characteristics with it or having characteristics that are complementary. A student with a high sense of belonging to the university feels that he or she fits there, is appreciated for his or her skills, and engages in the life of university community (Summers et al., 2002, pp. 53-64).

Another important element of connectedness is the perceived social support. It includes the person's knowledge and beliefs on where and from whom support can be found if needed, and the person's assessment of availability of social support networks (Sęk & Cieślak, 2006, p. 20). At university, academics, other students, non-didactic employees (e.g., dean's office workers, librarians, secretaries or porters) can serve as the source of support. The members of university community can provide students with different kinds of support: instrumental (e.g., learning various methods of studying, discussing the academic materials during office hours, consulting projects), information (institutions actively informing students about the possible paths of development (e.g., a career center or job consultancy), providing feedback on the student's progress, informing on institutions and organizations providing support in difficult situations), emotional (the ability to share supportive and calming emotions during the interaction process, expressing a positive attitude to the student, ensuring consultancy and psychological assistance to people who experience difficulties), material (ensuring a system of scholarships, assistance to disabled students, e.g., transportation to the university, help of assistants) and evaluation (confirming the student's importance and value for the university community). It has been documented that a high sense of social support in students contributes to their sense of belonging,

which is associated with stronger perception of the university as a community and self-identification as belonging to that community (Wilcox, Winn & Fyvie-Gauld, 2005, pp. 707-722).

Many studies have confirmed the health-positive effects of feeling connected to own school or university. The sense of belonging contributes to a high level of well-being, satisfaction with life and the sense of meaning of life (Haslam et al., 2009, pp. 1-23). It is also associated with better social functioning (Freeman, Anderman & Jensen, 2007, pp. 203-220), less frequent aggressive and criminal activities and substance abuse (Centers for Disease Control and Prevention, 2011). It also buffers negative effects of stress connected with the transition from high school to university (Brunwasser, 2012), which is especially important given the high levels of stress and depression among the contemporary students (Pasternak & Ochojska, 2016, pp. 87-100; Stallman & Hurst, 2016, pp. 128-134).

Studies have proved that university connectedness supports positive attitudes to learning. It is associated with higher class attendance and higher probability of graduation (Hausmann, Schofield & Woods, 2007, pp. 803-839). It also contributes to better academic accomplishments, higher sense of efficacy and competence when studying, higher motivation to study, and devoting a greater amount of time for studying (Freeman et al., 2007, pp. 203-220; Zumbrunn et al., 2014, pp. 661-684). The importance of the sense of belonging for staying at university and having academic accomplishments is particularly important in the case of students with learning difficulties and other problems or belonging to minorities (Vaccaro, Daly-Cano & Newman, 2015, pp. 670-686).

Apart from exploring the benefits related to high university connectedness, it is also worth pointing to factors which determine its level. The basic factor is the relationships between the members of the university community. The most important is not the frequency of contacts but first of all their character and quality: these relationships should be based on trust, empathy and support.

The level of university connectedness is also determined by factors related to the educational process. There are many teaching practices promoting university connectedness, e.g., having high learning standards combined with the ability to keep students engaged during classes, encouraging them to ask questions, developing their interests, using cooperative methods of work and varied didactic methods as well as enhancing own ability to manage group and group processes (Blum, 2005, pp. 16-20; Centers for Disease Control and Prevention, 2011).

Students' engagement in activities related to the university (e.g., activity in student clubs or student council) and out of university (e.g., voluntary or charity work) also has a positive impact on the sense of connectedness (Kuh, 2009, pp. 5-20). Another important factor is the university's cultural offer for students, such as organizing musical and artistic events, and the available sports or entertainment facilities.

The sense of connectedness is influenced even by the university statistics. The bigger the university, the lower the sense of connectedness among students (McNeely, Nonnemaker & Blum, 2002, pp. 138-146). The infrastructure of the place, the appearance of buildings, the condition of rooms, the equipment, the decorations, etc. also play a part in the perceived sense of connectedness with the place. Seeing how other members of the university community care for such elements teaches one to take the responsibility for the venue, contributing to the engagement in creating it (Danilewicz, 2016, pp. 81-93).

Apart from factors concerning the atmosphere of the university, the sense of connectedness is also affected by students' individual characteristics. An important role is played by the qualities determined in childhood: attachment and early maladaptive schemas. For example, a study by S. Wilson and J. Gore (2013, pp. 178-198) showed that attachment to parents was a predictor of attachment to peers, which – through the association with the expected support from the members of the university community – was related to the sense of university connectedness. Another study carried out in Korea among 304 students aged 18-25 proved the role of early maladaptive schemas concerning the lack of relationships and rejection as predictors of the level of perceived connectedness to one's peers (Yoo, Park & Jun, 2014, pp. 1377-1394).

The level of connectedness is also determined by sociodemographic variables. The findings concerning the importance of gender are unclear. It has been suggested that differences between gender occur, not in the degree of perceived connectedness, but in different relational factors (especially the types and functions of the established social relationships) (Lee & Robins, 2000, pp. 484-491). The results of studies concerning the importance of age for the sense of connectedness are more consistent than in the case of gender: older students have a lower sense of connectedness than younger ones (McNeely et al., 2002, pp. 138-146). Another significant predictor is the socioeconomic status of the student's family of origin. Students from families with a higher financial status have a higher sense of school connectedness as compared with students from families with a lower financial status (Trusty & Dooley-Dickey, 1993, pp. 232-242). Moreover, among part-time students the level of attachment to the university is lower than among full-time students (Lee, 2017, pp. 1-18).

Most studies on the determinants and effects of connectedness focused on elementary and high school students. Interest in this variable in the context of higher education has only grown in recent years. As a result, there are few instruments to measure connectedness in university settings. Studies on this issue among university students are usually carried out using the measures of general social connectedness or modified scales that are originally designed to measure the sense of connectedness among children and school students. Another common tendency is to treat connectedness as a unidimensional construct in spite of theoretical and empirical reasons to regard it as multidimensional (Hoffman et al., 2002, pp. 227-256).

To the author's best knowledge, there is no research tool to measure the level of connectedness among university students in Poland. Thus, the aim of this study is to fill in this gap by preparing the Polish version of the University Connectedness Scale (UCS) developed by Australian researchers H. Stallman and I. Shochet (2008), and testing its psychometric properties in a Polish sample.

Method

Participants

The total number of participants was 720 (including 489 women and 231 men). They were students of different universities in Silesian Voivodeship. The mean age of the participants was 20.62 ($SD = 2.37$). Most participants were doing full-time courses ($n = 609$). Almost 2/3 of the students lived together with their parents (or one parent), approximately 1/5 rented flats or rooms, more than 6% had their own flats

or houses, 5% rented rooms at student dormitories, 5 people lived with their grandparents, and 2 people, in children's homes.

Description of the University Connectedness Scale

The UCS includes two subscales: "support" and "belonging", making up the general scale: "university connectedness" (Stallman & Shochet, 2008). The scale consists of 18 items, 9 for each subscale. The items are assessed using a 7-point Likert scale (1 = "not at all", 4 = "some of the time", 7 = "all the time"). Eight items need to be recoded. The results of both subscales are calculated as the sum of the items they include. The general level of university connectedness is obtained by summing up the results of the subscales. The instrument has good ($\alpha = .85$) reliability and its validity has been confirmed (Stallman & Shochet, 2008; Stallman & Hurst, 2016, pp. 128-134).

When developing the Polish version of the scale, the author asked an English philologist, a Polish philologist and a psychologist fluent in English for a collaboration. Their task was to translate the UCS into Polish. Any discrepancies between the translations were discussed within the translators team. The final version of the translation was then back-translated by another English philologist. After some minor linguistic corrections, the experimental Polish version of the UCS (Skala Poczucia Akademickiej Wspólnoty – SPAW) was obtained. Then, the psychometric properties of the SPAW were tested.

Procedure

First, the questionnaires were handed out to 200 pedagogy students of the University of Silesia in Katowice. They were asked to distribute the questionnaires among other university students (the snowball method). All the participants received sets comprising the demographics section, the experimental version of SPAW, and other research instruments used to test the validity of the SPAW. The participants were asked to return the sets within two weeks of receiving them.

Results

Descriptive statistics

Table 1 presents the means and standard deviations for all items, two subscales and the scale of the SPAW calculated using the SPSS 24.0 statistical package. The mean level of perceived university connectedness was 85.40 points ($SD = 16.37$), with the theoretical range of the scale between 18 and 126.

The average level of perceived support was 40.65 points ($SD = 9.23$), and the mean level of sense of belonging was 44.75 points ($SD = 9.81$). For both subscales, the theoretical range of points was between 9 and 63. The *t*-Student test for two dependent samples showed that there was a significant difference between the subscales of perceived support and the sense of belonging ($t(719) = 11.30$; $p < .001$).

Table 1
Descriptive statistics and discriminating power of the SPAW items

Item no.	Item	<i>M</i>	<i>SD</i>	Item-scale correlation	Item-total correlation
<i>University connectedness</i>		85.40	16.37		
<i>Support</i>		40.65	9.23		
2	Pracownicy biblioteki chętnie znajdują potrzebne mi książki/czasopisma.	4.13	1.83	.35	.29
4	Pracownicy uczelni są dla mnie życzliwi i przyjaźnie do mnie nastawieni.	4.80	1.40	.60	.28
7	Moja uczelnia wydaje się doceniać różnorodność (osobowości, zainteresowań itd.).	4.14	1.59	.51	.22
9	Wykładowcy są dla mnie dostępni również poza godzinami zajęć dydaktycznych (odpowiadają na wiadomości mailowe, są obecni na dyżurach itd.).	4.72	1.58	.58	.58
11	Wykładowcy są gotowi doradzić mi podczas przygotowywania prezentacji na zajęcia lub zaproponować mi lekturę na temat, który mnie interesuje.	4.58	1.50	.66	.51
15	Moja uczelnia oferuje bezpłatną pomoc, jeśli jej potrzebuję (np. pomoc psychologa, konsultacje z biurem karier, porada uczelnianego rzecznika praw studenta).	4.42	1.66	.56	.41
16	Wykładowcy są dla mnie dostępni, jeśli potrzebuję zapytać o moją pracę zaliczeniową/ projekt/ prezentację.	4.60	1.50	.74	.51
17	Większość moich wykładowców jest zainteresowana tym, co mam do powiedzenia.	4.38	1.46	.68	.54
18	Ludzie na mojej uczelni wiedzą, że umiem wywiązać się z powierzonych zadań.	4.87	1.41	.34	.49
<i>Belonging</i>		44.75	9.81		
1r*	Grupy zajęciowe na mojej uczelni są tak duże, że czuję się jak numer na liście.	3.07	1.73	.40	.63
3r	Czuję, że jestem zupełnie inny/a od reszty studentów.	3.67	1.76	.34	.58
5r	Nie czuję się doceniany/a na mojej uczelni.	3.17	1.60	.61	.52
6r	Nie mam możliwości przedyskutowania z wykładowcami treści, które mnie zainteresują.	2.90	1.62	.43	.65
8r	Czuję się tak, jak gdybym nie przynależał/a do tej uczelni.	2.94	1.74	.61	.71
10r	Moja uczelnia wydaje mi się chłodnym, nieprzyjaznym miejscem.	2.60	1.53	.63	.48
12r	Żałuję, że nie studiuje na innej uczelni.	2.74	1.79	.55	.65
13r	Czuję, że na mojej uczelni nikogo nie obchodzi.	2.79	1.69	.72	.62
14	Czuję się dobrze na mojej uczelni.	4.63	1.56	.60	.31

Note: *M* = mean; *SD* = standard deviation. * Items with the symbol "r" need to be recoded to calculate the final score.

The items are assessed on a 7-point Likert scale (1 = "not at all," 4 = "some of the time," 7 = "all the time").

Discriminating power

The item-scale and item-total discriminating power coefficients for each item of the SPAW are presented in Table 1. All the correlation coefficients exceeded .2, which shows that the SPAW items well differentiate between students in terms of their level of university connectedness.

Reliability

Internal consistency of the SPAW was calculated on the basis of data from the whole sample ($N = 720$). Cronbach's α coefficient was .82 for the "support" subscale, .84 for the "belonging" subscale, and .87 for the "university connectedness."

The absolute stability of the measure was tested on a sample of 98 students (60 women and 38 men); their mean age was 20.61, $SD = 1.98$. The respondents completed the SPAW twice: the first measurement took place at the beginning of the summer semester, and the second one, three months later. The absolute stability of the scale was .71 ($p < .001$) for the "support" subscale, .75 ($p < .001$) for the "belonging" subscale, and .77 ($p < .001$) for the "university connectedness." The obtained results prove the high reliability of the SPAW.

Validity of the SPAW

Exploratory and confirmatory factor analysis

In order to test the structure of the SPAW, exploratory and confirmatory factor analyses were performed. Exploratory factor analysis allows to identify factors/components in the data structure made by strongly correlated items. Confirmatory factor analysis is used to check whether the tested model, assuming a specific number and structure of factors, is confirmed by the data.

Exploratory factor analysis was carried out using the Principal Component Analysis (PCA) method. First, in order to check whether it is justified to perform PCA, coefficients testing correlation matrix properties were calculated: the determinant of the correlation matrix, Bartlett's test, and the Kaiser-Meyer-Olkin (KMO) measure. The results of these tests (the determinant of the correlation matrix = .001; Bartlett's test: $\chi^2(153) = 4716.48$; $p < .001$; KMO = .919) fully justified the use of PCA.

To identify the optimum number of components, the Kaiser criterion and the scree diagram were applied. Both the Kaiser criterion and the scree diagram provided justification for identifying two components.

Promax rotation was chosen, because the correlation between the components was expected. The first component ("support") explained 34.35% variance, and the second ("belonging") – 12.05% variance (jointly: 46.40%). The analyses of pattern matrix and structure matrix showed that each component was loaded by nine items of the questionnaire. Item placement was consistent with the original instrument, i.e., all the items from the "support" subscale in the Australian version loaded the first component in the Polish

version, and all the items loading the “belonging” subscale in the original version made the second component in the Polish version (Table 2).

The SPAW items strongly loaded (i.e., correlation coefficients were over .4) the component they belonged to, and poorly loaded (i.e., correlation coefficients were below .2) the other one. The only exception was item no. 14 (“czuję się dobrze na mojej uczelni”), which loaded both components with a similar strength.

Table 2
Pattern matrix from the principal component analysis

Item no.	Support	Belonging
16	.86	
17	.77	
11	.76	
9	.73	
15	.73	
4	.65	
7	.57	
2	.53	
18	.48	
13r		.78
5r		.78
8r		.72
1r		.66
10r		.64
3r		.62
12r		.58
6r		.51
14	.45	.46

Note. The table presents the factor loadings for the SPAW items. Only factor loadings over .4 are included. The items marked with “r” need to be recoded.

In the next step of the analyses, confirmatory factor analysis was performed. In accordance with the original version of the tool, the hierarchical model made up of two factors (“support” and “belonging”) and a higher-order factor (“university connectedness”) was tested. The calculations were performed using the AMOS 24.0. statistical package.

In order to test if the model fitted the data well, the criteria of goodness of fit were calculated in the next step of the analysis. The following criteria were used: goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), incremental index (IFI) and root mean square error of approximation (RMSEA). A model is regarded as acceptable if the values of GFI, AGFI, CFI and IFI criteria exceed .90, and RMSEA is below .08 (Awang, 2012, p. 71).

Figure 1 presents the results of confirmatory factor analysis. The following values of criteria of goodness of fit were obtained for the SPAW: GFI = .918, AGFI = .904, CFI = .908, IFI = .911, RMSEA = .062. Thus, the model can be regarded as fitting the data well.

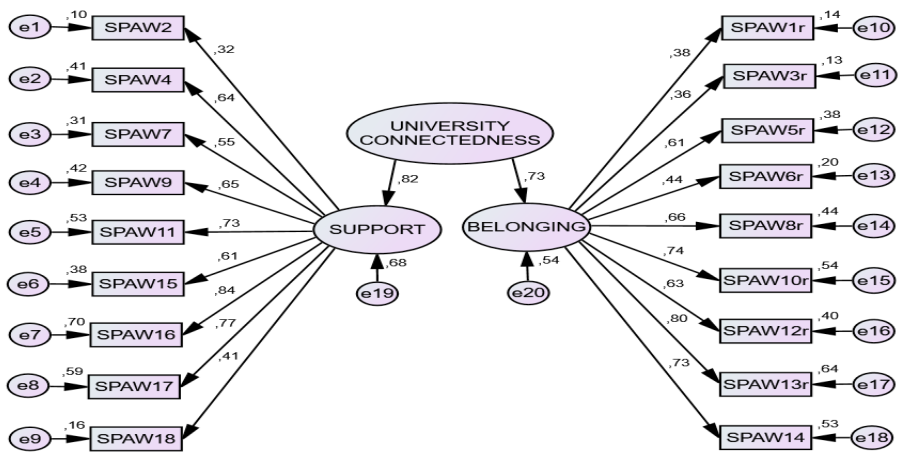


Fig. 1. Results of confirmatory factor analysis

Note. The rectangles in the confirmatory model mean observable variables, i.e., the 18 items of the SPAW. The ovals mean latent variables: “support” and “belonging” (subscales) and “university connectedness” (a higher-order factor). They are theoretical constructs which are not directly measurable. The letter “e” refers to the variance of errors of each SPAW items and both subscales.

Correlations between the SPAW and other variables (criteria)

In order to test the diagnostic validity of the SPAW, the relationships between university connectedness and other variables were examined. The following research tools were used to measure the criteria:

- Perceived Stress Scale (PSS-10; Juczyński & Ogińska-Bulik, 2009, pp. 11-22). The scale is made up of 10 questions measuring the intensity of stress within the last month. The items are assessed using

- a 5-point Likert scale (0 means "never," 1 – "almost never," 2 – "sometimes," 3 – "fairly often" and 4 – "very often"). In the present study, Cronbach's α coefficient of reliability was .88.
- Penn State Worry Questionnaire (PSWQ; Janowski et al., 2009, pp. 41-51). The questionnaire includes 16 items describing worry as a trait. The items are assessed using a 5-point Likert scale with the following responses: "very typical of me," "quite typical of me," "neutral," "not very typical of me" and "not at all typical of me". Cronbach's α coefficient in the present study was .94.
 - General Health Questionnaire (GHQ-28; Makowska & Merecz, 2001, pp. 191-264). GHQ-28 is made up of four scales (A. Somatic symptoms, B. Anxiety and insomnia, C. Social dysfunction, D. Severe depression), each scale including seven items. The items are assessed using the following response categories: "better than usual," "same as usual," "worse than usual" and "much worse than usual". The scoring of 0-3 was used. Cronbach's α coefficient for the whole instrument was .92 and for individual scales was between .71 and .91.
 - Mental Health Continuum – Short Form (MHC-SF; Karaś, Ciecuch, & Keyes, 2014, pp. 104-109). MHC-SF includes three subscales: emotional (hedonic) well-being, psychological well-being and social well-being. The responses are given using a 6-item scale ("never," "once or twice," "about once a week," "about 2 or 3 times a week," "almost every day," "every day"). In the present study, Cronbach's α coefficient was .93 for the general mental health well-being, whereas it ranged from .84 to .90 for the subscales.
 - Academic Motivation Scale (AMS; Vallerand et al., 1992, pp. 1003-1017). The scale measures students' motivation to study. It comprises 28 items measured on a scale from 1 to 7 (1 – "Does not correspond at all," 7 – "Corresponds exactly"). The AMS includes seven scales: three types of internal motivation (oriented at knowledge, at accomplishments, and at stimulation), three types of external motivation (external regulation, internalized regulation and identified regulation) and amotivation. The reliability of the scales calculated with Cronbach's α coefficient ranged from .82 to .90.
 - Multidimensional Inventory – Learning Profile of a Student (MI-LPos; Atroszko, 2015). The aim of this tool is to measure study addiction and the risk factors of its occurrence. The questionnaire comprises 36 items assessed with a 5-point Likert scale (1 = "very rarely," 2 = "rarely," 3 = "sometimes," 4 = "often" and 5 = "very often"). The questionnaire is made up of nine scales. The level of study addiction is calculated as the sum of four of them: 1. neglecting the spheres of life unrelated to studying, 2. study overload, 3. compulsion and 4. ignoring health problems. The other scales are used to measure the risk factors of study addiction (5. tendency to escape from personal problems to studying, 6. pleasure of studying, 7. dysfunctional perfectionism in studying) or allow to identify the types of dependent people or stages of dependence (8. level of energy and 9. self-efficacy in studying). Cronbach's α coefficient for the general level of study addiction was .86, whereas it ranged from .72 to .90. for the scales of MI-LPos.

- Single questions measuring study engagement and study satisfaction: “At the moment, to what extent are you engaged in your studies?” and “At the moment, to what extent are you satisfied with your studies?” The participants provided responses on a 7-point Likert scale in which 1 means “I am not engaged at all” or “I am not satisfied at all” and 7 – “I am very much engaged” or “I am very much satisfied”. Previous studies have confirmed the reliability and validity of single items to test engagement and satisfaction (Łukowicz et al., 2017, pp. 41-49; Wanous, Reichers, & Hudy, 1997, pp. 247-252).
- A single question concerning the number of hours devoted to studying apart from classes at university. This measure had already been used in earlier educational research projects, in which its reliability and validity had been confirmed (Atroszko, 2015).

Correlation coefficients between university connectedness and the other variables are presented in Table 3. University connectedness was positively correlated with well-being, internal motivation to study, the sense of self-efficacy in studying, the level of energy, pleasure of studying, study engagement, study satisfaction and time devoted to studying. A positive correlation between the SPAW and external motivation (identified regulation) was also found². The sense of university connectedness was negatively correlated with the intensity of stress, the level of trait worry, symptoms of mental disorders, amotivation, study addiction and dysfunctional perfectionism in studying. The obtained results support the validity of the SPAW.

To compare the strength of correlation coefficients between the sense of support and belonging and the criteria involved in the study, the formula proposed by J. Steiger (Steiger’s Z test; 1980, pp. 245-251) was used. The calculations were carried out using a calculator published by M. Hoerger (2013). The correlation with internal motivation oriented at knowledge and stimulation proved to be stronger for support than for belonging (Table 3). By contrast, the sense of belonging correlated stronger than perceived support with “negative” measures: the intensity of stress, worry, symptoms of mental health disorders, amotivation, study addiction and dysfunctional perfectionism in studying.

² This relationship is not surprising, given the assumptions of the self-determination theory by E. Deci and R. Ryan (2000), in accordance with which, out of all the types of extrinsic motivations, identified regulation is the most similar to intrinsic motivation; cf. Deci & Ryan, 2000.

Table 3
Relationships between university connectedness and other variables

Variables	University connectedness	Support	Belonging	Z
Perceived stress (PSS-10)	-.29***	-.20***	-.29***	2.46*
Trait worry (PSWQ)	-.28***	-.15***	-.27***	3.25**
Symptoms of psychiatric disorders (GHQ-28)	-.29***	-.17***	-.34***	4.69***
Physical symptoms	-.27***	-.17***	-.31***	3.83***
Anxiety and insomnia	-.17***	-.10**	-.20***	2.67**
Social dysfunction	-.12***	-.08*	-.14***	ns
Severe depression	-.28***	-.12**	-.36***	6.62***
Well-being (MHC-SF)	.35***	.29***	.31***	ns
Emotional	.29***	.22***	.27***	ns
Psychological	.28***	.25***	.22***	ns
Social	.35***	.27***	.32***	ns
Academic motivation (AMS)				
Intrinsic motivation-knowledge	.32***	.30***	.24***	ns
Intrinsic motivation-accomplishment	.22***	.24***	.13***	2.96**
Intrinsic motivation-stimulation	.15***	.19***	.07	3.19**
Identified regulation	.25***	.23***	.18***	ns
Introjected regulation	.06	.11**	.04	ns
External regulation	.07	.07	.05	ns
Amotivation	-.39***	-.19***	-.46***	7.75***
Characteristics of learning (MI-LPos)				
Study addiction	-.12**	-.01	-.18***	4.51***
Neglecting the spheres of life unrelated to studying	-.07	-.14***	-.12**	ns
Study overload	-.14***	-.02	-.21***	5.06***
Compulsion	-.12**	-.02	-.17***	3.98***
Ignoring health problems	.04	.10*	.04	ns

Self-efficacy in studying	.30 ^{***}	.26 ^{***}	.25 ^{***}	ns
Tendency to escape from personal problems to studying	-.04	-.02	-.06	ns
Dysfunctional perfectionism in studying	-.25 ^{***}	-.07 [*]	-.33 ^{***}	7.10 ^{***}
Pleasure of studying	.12 ^{**}	.11 ^{**}	.09 [*]	ns
Level of energy	.31 ^{***}	.24 ^{***}	.29 ^{***}	ns
Study engagement	.32 ^{***}	.30 ^{***}	.25 ^{***}	ns
Study satisfaction	.50 ^{***}	.40 ^{***}	.46 ^{***}	ns
Number of hours devoted to studying	.10 ^{**}	.11 ^{**}	.06	ns

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; ns = not significant.

University connectedness and sociodemographic variables

Differences in university connectedness between female and male students, and full-part students and part-time students were calculated using the *t*-Student test. To examine correlations between age and university connectedness, Pearson's correlation was used. For gender, the only difference at the statistical tendency level was observed for perceived support: its level was slightly lower for female students than for male students ($M_f = 40.21$, $SD_f = 9.07$; $M_m = 41.57$, $SD_m = 9.51$; $t(718) = -1.84$; $p = .066$). For age, significant though weak correlations were found: the older the students were, the lower sense of university connectedness they had ($r = -0.08$; $p = .026$) and the less support they perceived ($r = -0.09$; $p = .016$). Full-time students had a higher general sense of university connectedness ($M_{ft} = 86.20$, $SD_{ft} = 16.15$; $M_{pt} = 81.28$, $SD_{pt} = 16.95$; $t(716) = 2.907$; $p = .004$) and a higher sense of perceived support ($M_{ft} = 41.31$, $SD_{ft} = 8.98$; $M_{pt} = 37.17$, $SD_{pt} = 9.69$; $t(716) = 4.38$; $p < .001$) than part-time students.

Discussion

The Polish version of the University Connectedness Scale, named the SPAW, is a reliable and valid instrument. It can be used both in research and, as an auxiliary tool, to diagnose students' functioning at university as part of psychological counselling.

The study suggests that despite many social changes occurring in the contemporary world (Melosik & Szymański, 2016, pp. 7-8; Leppert, 2005, pp. 87-101), the sense of university connectedness is still an important element of students' functioning, contributing to their well-being, mental health and attitude to studying. It seems, then, that in spite of these numerous changes, university has not yet become a non-place

(Augé, 2010; Bauman, 2004, pp. 17-31), being a casual space only allowing for momentary, incidental and superficial experiences. Instead, it still has its identity, relational and historical character of a significant place.

Taking into consideration the multiple benefits of the sense of university connectedness — at the individual, institutional and social level — the academic circle should be vividly interested in the opportunities to reinforce it. One way is to influence its modifiable determinants, such as the attitude of academics and other university workers, the working methods, care for strengthening relationships between students, a system of support, available equipment and its usability, the offer of extracurricular classes, etc.

In this context, it should be emphasized that the university's responsibility is not only to carry out strictly educational goals but also to ensure the opportunities for multi-aspect development of students and academic personnel alike. As stated by the author of critical pedagogy of place, D. Gruenewald (2003, p. 627):

Recognizing that places are what people make them—that people are place makers and that places are a primary artifact of human culture—suggests a more active role for schools in the study, care, and creation of places. If human beings are responsible for place making, then we must become conscious of ourselves as place makers and participants in the sociopolitical process of place making.

In accordance with these words, care for the formation of a valuable community is both a responsibility and a privilege of all university members.

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Streszczenie

Poczucie akademickiej wspólnoty wśród studentów i jego pomiar

Celem badania była analiza pojęcia poczucia akademickiej wspólnoty oraz przygotowanie polskiej adaptacji the University Connectedness Scale – narzędzia służącego do pomiaru poczucia akademickiej wspólnoty wśród studentów. Właściwości psychometryczne polskiej wersji skali, nazwanej Skalą Poczucia Akademickiej Wspólnoty (SPAW), przetestowano w próbie 720 studentów. Struktura polskiej wersji narzędzia została zbadana przy użyciu eksploracyjnej i confirmacyjnej analizy czynnikowej. SPAW składa się z 18 pozycji tworzących dwie podskale: wsparcie i poczucie przynależności. Korelacje z innymi zmiennymi potwierdzają trafność diagnostyczną SPAW. Zgodność wewnętrzna i stabilność bezwzględna narzędzia okazały się dobre. Podsumowując, SPAW jest rzetelnym i trafnym narzędziem, które może być wykorzystywane do pomiaru poczucia wspólnoty wśród studentów zarówno w celach naukowych, jak i diagnostycznych.

Słowa kluczowe: pedagogika miejsca, poczucie przynależności, edukacja wyższa, psychometria, studenci, wsparcie, poczucie akademickiej wspólnoty