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Well-Being as a Factor Protecting Students' Engagement – Report from Polish-German Research after the COVID-19 Pandemic

Abstract

The COVID-19 pandemic has forced higher education students to change their academic functioning, as well as the process of their social integration. This study focuses on the impact of the pandemic on student well-being, engagement and commitment to the university. The research group comprises 184 students from two universities (Poland and Germany).

The research has shown that engagement with the university and the sense of commitment are negatively related to students' well-being before the pandemic. It has also been revealed that females show higher commitment and engagement regardless of the country.

Findings contribute to understanding student engagement during the COVID-19 pandemic.

Keywords: *commitment, engagement, management of the university, well-being*

The Pandemic Education –
Application for the Management at the University Level

The COVID-19 pandemic has significantly impacted all types of organisations. Analysts indicate that this situation triggered several social, educational, and economic changes (Nicola et al., 2020) regarding lifestyles, health, family, and professional functioning. Açikgöz and Günay (2020) indicated that the changes in educational and research sectors and the reactions of the governments to emerging situations, such as forced social distancing, self-isolation, and travel restrictions, led to the creation of new standards both in education, as well as in education management. The pandemic made hybrid education a norm, postulated by neuroeducation and cognitive science professionals for years prior, as the most effective form of education. D. A. Fitzgerald and D. Nunn (2020) identified some consequences, such as changes in family dynamics, increased interest in video gaming, and new habits in work and studying with the use of technology (Dickens et al., 2020). COVID-19 and the way of coping with its consequences changed many educational institutions in their work methods: the methods of communication, training, and employee and student management (control, monitoring, and support).

Nowadays, this generation experiences[1] education managers having to tackle the (macro and micro) economic and social risks and the risks associated with individual psychological processes of coping with this situation.

The crisis caused by the pandemic changed the functioning of individuals and communities in all areas of life. Education was particularly affected by the introduction of distance learning, and the student environment was affected by the disappearance of the usual forms of social interaction. The situation caused by the COVID-19 pandemic became one that no one could have predicted. This sudden experience of long-term risk and coping with it was a situation of crisis for many individuals, as well as institutions. These experiences highlighted the necessity to consider factors allowing for better coping with risk and uncertainty on an individual level (resilience, well-being) and on institutional and small-group levels (commitment, engagement).

The study aimed to recognise the impact of the pandemic on student well-being, which is important to student life. Student well-being has been linked to their

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[1] Currently, the pandemic situation has become an indispensable part of human life. For this reason, in literature some scientists started to use the term "pandemic stress" (WHO, 2019).

engagement and performance in activities (commitment to the university) and mental health (resilience). That knowledge can help the university as an organisation be aware of the students' changing emotional responses to crises and ensure visibility and accessibility of student support.

Theoretical Background of the Project

COVID-19 was described as an acute crisis. The management systems had always been expected to implement correct procedures. However, the circumstances and consequences of spreading the infection were beyond institutions' and leaders' control. The risk of error was high, and action and inaction could have significant negative consequences. Because of this, correct management in times of crises and uncertainty is crucial. During crises, leaders had to cope with unexpected and ambiguous reality. They had to present the complex scenarios (offensive and defensive), allowing them to ease the situation and give more time to prepare an adequate response (James & Wooten, 2005). The further aim of the study was to describe the implications to risk and stress management in the situation of adaptation during the COVID-19 crisis and re-adaptation after its end.

The COVID-19 pandemic permanently changed the context of work/study and the functioning of all organisations. Effective management of education systems in times of uncertainty refers to measures aiming to ensure effective planning and to implement and deliver education that provides the best possible conditions for high achievement for all students. In a situation of constant change, this approach requires recognising the multidimensionality of processes to change the education system. It also allows one to assume that the processes would not be linear. Andreas Schleicher's (2019) proposal was considered a basic assumption. Schleicher's paradigm of educational institution management, the project, and the well-being of its members, especially in the aspect aimed at improving involvement in the functioning of an organisation (university). His concept focuses on six areas and challenges in management in the time of uncertainty: support (understood as creating broad social support for change in education), developing potential (in the form of securing resources), current and professional knowledge and institutional solutions adapted to new tasks and responsibilities; proper management 'in the right place' (understood as recognising places where change can take place and be effective), the use of performance data as a collection of accurate and well-targeted data to monitor the system; construction of self-regulating systems as feedback; the effect of mutual interactions of all levels; whole-of-government approach (as

joint action of ministries and administrations at various levels in comprehensive reforms).

In the study, a group of students was chosen who, on the one hand, can be treated as members of an organisation but also as adepts of a specific career group. Experiences gained at the university can form a base for their future career functioning and other organisations. Because of that, how students engage and commit to the university is important, as it results in achievements in education and their attitude towards their future organisations and their members. Previous research in the field has shown that higher well-being determines greater engagement in work and higher affective commitment to the organisation (Tinline & Crowe, 2010).

From the organisations' perspective, the engagement and commitment of their members are related to exceeding the surface-level obligations and showing initiative, which increases efficiency. Research regarding psychosomatic health showed that higher engagement results in lower anxiety and stress in organisation members (Simbula & Guglielmi, 2013).

(Work) engagement is the basic attitude of an individual towards the job they perform and is also described as 'positive, giving satisfaction, state of mind related to work' (Schaufeli & Bakker, 2003). Three components of engagement were distinguished – vigour (related to energy), dedication (related to the sense of importance of the engagement) and absorption (related to concentration on the job).

Commitment characterises the members' relations with their organisation and can be described by several dimensions (affective, continual, and normative). Meyera and Allen (1977) described these three commitment dimensions defining the member's will to leave a given organisation or, otherwise, to remain in it.

Well-being is also a factor protecting against burnout. Individuals experiencing a high sense of well-being have better interpersonal relationships, are more involved in the organisation, have a greater sense of effectiveness and higher life satisfaction (Ngjela et al., 2023). Studies conducted among teachers have shown that those who feel a high level of well-being present positive attitudes towards their professional responsibility and social role, are characterised by a high degree of commitment to what they do, are devoted to their work, cooperate with others and have the ability to critically reflect on their work (Rosbut & Farreli, 1983; Schaufeli et al., 2008).

Resilience is often treated as an individual resource, including self-control, self-efficacy, resourcefulness, sense of humour, valuation and coping with events. On the other hand, coping with the implementation of developmental tasks was

combined with building resilience, which is connected with well-being (Connor & Davidson, 2003).

It turned out that not only resilience but gender, education level, level of study and place of residence are important in coping with pandemic stress (Prowse et al., 2021; Verseeg et al., 2022; Wang et al., 2020). Their studies showed not only differences between females and males in their ways of coping and the importance they placed on their relation to the university but also the importance of the level of study (year of study) at the start of the pandemic and its relation to the coping processes from both an individual, as well as organisation-functioning perspective (achievements).

In connection with the above assumptions, in order to recognise the engagement of students with the university, the following research question was formulated:

1. What are the determinants of the manifested engagement to the organisation (university) and students' perceived general mental well-being at the end of the pandemic?

Based on the collected theories and the results of empirical research, the following hypotheses have been put forward:

H1. Commitment to the university and engagement to the university are associated with well-being and resilience.

H2. During the pandemic, students differed in their level of perceived well-being.

H3. Place of living, gender and level of study WERE related to the level of resilience, commitment to studying or engagement to the university.

Research Methodology

The study procedure and sample

The study engaged two universities: BTU in Cottbus (Germany) and UZ Zielona Góra (Poland). The research project was submitted for evaluation to the Ethics Committee. Students were informed and encouraged to complete the questionnaires. The respondents were informed about the purpose of the study, its voluntary nature and anonymity. The study group consisted of 184 individuals (N=184), of whom 94 were from Poland and 90 from Germany.

All statistical analyses were performed using IBM SPSS version 28.0 for Windows. The level of statistical significance was set at $p<0.05$. First, descriptive statistics were performed for variables. Second, Pearson's and Spearman's rank tests

were used to estimate the correlation between variables. Then, paired comparison, the Durbin-Conover test, and the Kruskal-Wallis-H-test were conducted to test potential differences. A linear regression was calculated to predict the level of engagement based on socioeconomic variables, resilience, commitment, and well-being. The results were similar to the ones in the r-Pearson test.

Research Tools and Variables

The research model distinguished variables such as a sense of well-being, commitment and engagement to the organisation, the level of resilience and gender, and the level of study and place of living. The tools described below were used to examine these variables (Table 1):

Table 1.

Research goal	Variable	Tool
Examination of well-being before, during, in the declining phase of the pandemic and now	Mental well-being in terms of life satisfaction	Cantril Ladder (1965)
Determining the level of resilience	Resilience	CD-RISC (2003)
Examining the level of organisational engagement from a retrospective perspective: 2 years ago, in February, and at present	Organisational engagement	UWES (2003)
Examining the level of commitment to the organisation	Commitment y	ACNCS (1997)
Gender, residence, age, year at university	Demographic data	Data charts and questions

Cantril Ladder was designed to measure overall life satisfaction (Self-Anchoring Scale & Cantril, 1965). Cantril counted on the dominant role of cognitive processes in creating a general statement/appraisal of life by the subject. The respondent answers the question: "Where is your current life on this ladder?", where 0 is the worst life situation imaginable, 10 is the best situation. In that study, the respondents did the Cantril ladder three times: evaluate the situation before the COVID-19 pandemic, now, and in the future in 5 years).

Connor-Davidson Resilience Scale (CD-RISC, Connor Davidson, 2003) The 10-item scale comprises 10 out of 25 original items from the CD-RISC-10 scale. A respondent's total score can range from 0–40.

Ultrecht Work Engagement Scale (UWES, Schaufeli & Bakker, 2003). Work engagement is a state of mind associated with vigour, dedication, and absorption. The respondents give their answers on a 7-point scale, assessing the frequency of occurrence from "Never" to "Always" (meaning "every day").

Affective Continuance and Normative Commitment Scales (ACNC, Mayer & Allen, 1997). The questionnaire consists of subscales that measure three components of commitment: normative, affective and continuance. The statements refer to feelings and beliefs that describe the employee's relationship with the organisation. The questionnaire has a 7-point scale, where 1 means: *I completely disagree*, and 7 means *I completely agree.*

Results

The descriptive analyses showed that the students' commitment to the organisation was low (they committed to the university once or several times a month). Only about 20% of students were engaged several times a week or every day. Well-being was lower than before the pandemic, but it was still on an average level (on average 6 out of 10). The level of engagement was also, on average, level (Table 2).

Table 2. Descriptive statistics of the results

	Mean	Median	SD	Mini-mum	Maxi-mum	Skewness	SE	Kurtosis	SE
						Skewness		Kurtosis	
Engagement	50.71	50.00	19.13	16.00	86.00	.171	.179	-.823	.356
Well-being before the pandemic	6.89	7.00	2.04	3.00	10.00	-.117	.179	-1.014	.356
Well-being now	6.65	7.00	2.15	2.00	10.00	-.217	.179	-.651	.356
Well-being in 3 years	8.33	9.00	1.82	2.00	10.00	-1.215	.179	1.466	.356
Resilience	33.46	33.50	10.50	14.00	50.00	-.049	.179	-1.101	.356
Commitment	45.67	45.50	24.37	6.00	142.0	1.514	.179	3.959	.356

Source: authors' own study.

As the output of the results, the verification of hypothesis 1 was done. It can be summarised that engagement to the university and commitment to the organisa-

tion are related to the sense of general mental well-being expressed in the cognitive appraisal of happiness and resilience.

The research showed that engagement to university and the sense of commitment were negatively related to students' well-being before the pandemic and positively correlated with all dimensions of commitment. In addition, commitment was also related to the current resilience of students (Table 3).

The results verify the H1: engagement to the university is related to the level of student commitment and, unexpectedly, negatively related to the level of their well-being before the pandemic. In indirect form, it is positively connected with resilience because it relates to well-being and commitment.

Table 3. Determinants of engagement and commitment

	engagement	commitment
Well-being before	-.279***	.345
Well-being now	-.054	-.08
Well-being in 3 years	-.083	.064
Resilience	-.044	.214**
Commitment	.519***	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$
Source: authors' own work.

During the pandemic, students differed in the level of perceived general well-being. The analyses confirmed H2 only partially because there were no statistically significant differences between well-being now and in the past (well-being now M=6.65; Md= 7, well-being before M=6.89, Md=7, $\chi2$= 1.71, p= .09; paired comparison, Durbin-Conover test). The students defined their expected well-being in 3 years significantly higher (paired comparison, Durbin – Conover test, well-being in 3 years M=8.33; Md= 9, $\chi2$= 14.14, $p < .001$).

The H3 was connected with place of living, level of study and gender of students. In the face of the results, the hypothesis has not been confirmed because the research results have shown that females are significantly more engaged and are more committed to studying than males and that this applies especially to older students (2nd and 3rd year) are more commitment than students from 1st year (Tables 4 and 5). Moreover, the place of residence is related to commitment (the closer to the university, the higher the commitment was).

Table 4. Relationships between place of residence, age and level of resilience, commitment, and engagement to university

Spearman's rank correlation			
	Resilience	Commitment	Engagement
level of study	.134**	.277***	.183**
Place of living	-.53	.312 ***	.062

$* p < .05, ** p < .01, *** p < .001$
Source: authors' own work.

Table 5. Gender vs. engagement and commitment

Kruskal-Wallis test			
	χ^2	df	p
Engagement	15.7	3	<.001
Commitment	16.5	3	<.001

Source: authors' own work.

Discussion

The study aimed to diagnose the state of students' well-being and their commitment and engagement to the University after COVID-19. Determining young people's commitment, engagement, and well-being level at the beginning of their professional careers makes it possible to define the potential and possible actions to correct their participation in the environment.

The descriptive analyses show that students' commitment to the organisation is low (they get engaged in university once or several times a month). Only about 20% of the students engage in university several times a week or every day. Moreover, the study showed that the well-being, engagement, and commitment levels in females were statistically higher than in males. These results agree with the literature, which highlights the effects of gender in the creation of coping mechanisms against pandemic stress (Prowse et al., 2021). The study has also proved that commitment increases among older students and is greater among those who live in bigger towns and closer to the University. It is related to accessibility and the possibility of direct participation and physical involvement. Again, these results agreed with the literature (Fitzgerald & Nunn, 2020; Nicole et al., 2020). Thus, the

pandemic overlapped with natural processes and did not change commitment and attachment in older people and individuals living in bigger towns. Moreover, the pandemic is related to the decrease in commitment and engagement among individuals with lower physical access to university. Thus, this data is strategic in planning future participatory interventions and early community building, i.e., in first-year students (Kohls et al., 2021). Therefore, special care should be extended to students who spent their first and second years of their studies in long-distance education.

Current well-being is at the pre-pandemic level and can be described as average. The previous research among the teachers in the pandemic showed that respondents' higher sense of well-being was associated with a better rate of distance education (Ngjela et al., 2023). The research showed that engagement to the university was related negatively to students' well-being before the pandemic. Intensive research on the involvement in professional activity, its determinants, and consequences, including health ones, make the theoretical concepts explaining this area of human functioning very popular. It could mean that, from the time perspective, students who were characterised by a higher sense of well-being before the pandemic experienced negative consequences of education during the pandemic system. Therefore, it can be concluded that they were the ones who most likely experienced the highest level of frustration related to the lockdown of universities and the isolation from social life. The obtained results are very interesting from the management perspective of students' frustration. The differences in the area of students' well-being reveal natural processes of coping with the situation and show that, from a long-term perspective, the consequences of the pandemic can be corrected naturally. Students' expected sense of well-being rose, showing they are optimistic about the future. It was also confirmed in other scientific studies (Hjern & Hull, 1982).

Based on the research, the assumptions about the determinants of commitment to university have been verified. Furthermore, the study's results underlined that engagement to the university after the pandemic was directly connected with commitment (it is worth emphasising that commitment and engagement were higher among older students) and indirectly with well-being and resilience. It is worth saying that the commitment was connected with the individual way of coping of students. Some results showed that university support provided by instructors and administration plays a mediating role in the relationship between the perceived impact of COVID-19 on degree completion and student well-being (Versteeg et al., 2022). The result of 'older students' would be connected with previous engagement and commitment.

Limitations

The present study has a remarkably high sample size and applies to most standardised measurements. Several statistical tests had been applied, but due to the explorative character of the analysis, multiple testing and path analysis were considered not to be an issue.

Conclusions

The study aimed to recognise the impact of the pandemic on student well-being and, as a result, increase students' awareness of the relationship between engagement to the university and individual mental health after the pandemic. Moreover, if possible, to design corrective actions as recommendations to rebuild their engagement in a similar crisis. The study showed that well-being and resilience were negatively related to commitment to university – underlining that previous experience and social life were very important and affected the engagement to the university.

The research underlined the environmental factors (distance from the university, gender, year of the study) as important to students' functioning. According to Schleicher's model (2019), the starting point (diagnosis of the situation) was recognised in the study. The results showed the possibility of educational institutions undertaking actions to increase students' well-being and engagement to the university.

These findings show the need and suggest a solution to increase commitment and prepare social support. It also shows the possibility of proper management to make the university an 'aware' institution (Kim & Ployhart, 2014) in times of risk and uncertainty.

From this perspective, the experience gained during COVID-19 draws the attention of organisations' leaders, including educational institutions, to the areas of commitment and engagement of their members in a situation of an unknown and uncertain future. It also gives a basis to implement actions to increase people's awareness, resulting in an increase in engagement and growth of the engagement areas of the university as an organisation to offer individuals' support.

These actions should be undertaken as the means for the organisations to cope with dynamic changes in the environment and new challenges at any time so that the organisation members are not left passive and withdrawn, but included in rebuilding and creating resources.

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