



**Grzegorz Godawa**

<https://orcid.org/0000-0002-2283-3965>

The Pontifical University of John Paul II in Krakow, Poland

[grzegorz.godawa@upjp2.edu.pl](mailto:grzegorz.godawa@upjp2.edu.pl)

**Ewa Gurba**

<https://orcid.org/0000-0003-3838-6570>

The Pontifical University of John Paul II in Krakow, Poland

[ewa.gurba@upjp2.edu.pl](mailto:ewa.gurba@upjp2.edu.pl)

**Katarzyna Kutek-Sładek**

<https://orcid.org/0000-0003-0374-813X>

The Pontifical University of John Paul II in Krakow, Poland

[katarzyna.kutek\\_sladek@upjp2.edu.pl](mailto:katarzyna.kutek_sladek@upjp2.edu.pl)

## Level of Covid-19-Related Threats and Stress in Students in the Context of Their Personality Traits: Support Expected and Help Received

(pp. 501–519)

### Abstract

University studies during the COVID-19 pandemic are conditioned by many factors that evoke a sense of danger and stress. The purpose of the study was to investigate the situations during the COVID-19 pandemic perceived by students as threatening and to determine the relevance of students' personality traits in their assessments of the threats and severity of stress associated with the COVID-19 pandemic. Another aim of the research was to identify from whom they most frequently expect help in such situations. The following research problems were formulated. 1. Which situations related to the COVID-19 pandemic are rated most and least threatening by students? 2. Which personality traits described in the 'Big Five' theory (McCrae & Costa, 1987) protect students from experiencing grave threats and from experiencing higher stress in the COVID-19 pandemic? 3. What sources of support are received by students and offered by the University?

The study involved 149 first-year students of the Pontifical University of John Paul II in Krakow. The survey was conducted in February 2021. The following research tools were used in the study: a short questionnaire for measuring the Big Five personality traits (IPIP-BFM-20), the Perceived Stress Scale (PSS-10) and the Questionnaire on Types of COVID-19-Related Threats (TCT).

The results of the study showed the importance of: 1. selected personality traits, such as emotional stability, extroversion and conscientiousness, for students' assessment of the threat to the individual, and protection against the severity of stress experienced; 2. social support that young people receive from their loved ones, including mainly mothers and friends, and 3. support provided by the University.

*Keywords:* threat, stress, students, personality traits, support, COVID-19

## Introduction

Piotr Długosz, referring to research conducted at the beginning of the COVID-19 pandemic, calls young people the biggest losers of the pandemic (2020). This radical claim draws attention to the situation of young people, who experienced many psychosocial difficulties during their social isolation. Some of these young people are university students, for whom university education has taken an unexpected turn. One particular group of students are those who at the time of the pandemic were beginning the first year of their studies, which was basically conducted remotely.

In this study, we investigated the situations related to the COVID-19 pandemic that were experienced as threats by students commencing their studies at different faculties of the Pontifical University of John Paul II in Krakow. Another purpose of our study was to search for correlations between the intensity of students' personality traits and the threats and level of stress they identified. We were also interested to know from whom students expect and receive support in such situations.

### Young people during the COVID-19 pandemic

In psychology and pedagogy, adolescence is defined as the age in a transitional period from childhood to adulthood, striving towards reaching maturity in the course of development and socialisation (Steinberg, 2008). Nowadays, it is seen as necessary to distinguish an additional period, referred to as emerging adulthood, which falls between the ages of 18 and 29 and precedes adulthood. According to Arnett (2000), this concept is supported by the distinctive features of this period, such as searching for one's own identity, experiencing unlimited possibilities, instability, a focus on oneself and 'being between' adolescence and adulthood.

The pandemic caused by SARS-CoV-2 is one of the difficult situations of which there is no shortage in the lives of young people. These situations create a sense of insecurity, particularly acutely felt by young people. As research shows, the hierarchy of threats perceived by adolescents is usually dominated primarily by topical and exposed international events (Trempała et al., 2016). Such events undoubtedly include the announcement of the COVID-19 pandemic on 11 March 2020 (World Health Organization, 2020). It transcended the previous experiences of many adults, let alone young people. It marked the current lives of young people and became a factor that is likely to determine certain aspects of their future. This is reflected in the phenomenon referred to as the 'lockdown generation', which is meant to characterise these young people (Godawa, 2021).

These threats undoubtedly involve the experience of stress. Stress is defined here as any situation that may disturb the balance between the living organism and its environment and that forces the individual to adapt to new conditions. This process involves mental effort and strain, which is determined by the human mental structure, an individual's personality structure, type of temperament and resources, as well as their ability to collaborate with others, sense of efficiency, defence mechanisms and ability to solve problems and seek help (Wojtczuk, 2020). Of these factors, personality traits play a special role. It is believed that the biologically determined factors which determine the personality structure, i.e. *extraversion* (vs *introversion*), *emotional stability* (vs *neuroticism*), *openness to experience*, *agreeableness* (vs *antagonism*) and *conscientiousness* (vs *lack of*

*direction*) are the main determinants of human behaviour (Lenkiewicz et al., 2016). Indeed, numerous studies have indicated that individual dispositions related to personality traits may serve as resources on which the assessment of a threat and the individual's response to that threat depends (McCrae & Costa, 1987). Thus, the extent to which students perceive the current pandemic as stressful may be related to their personality traits.

### University studies during the pandemic

Young people's experience of stress and their attempts to cope became particularly evident in the context of distance learning. As a result of the pandemic, distance learning ceased to be complementary to classroom teaching. By virtue of the decisions and regulations that were made during the pandemic, it became the primary – and periodically the only – form of education (Ministry of Education and Science, 2020). The actions of the authorities and academic teachers focussed on creating optimal educational conditions for students and ensuring the quality of the educational process (Pokhrel & Chhetri, 2021). The guidelines of the Ministry of Education and Science concerning education in universities and colleges in the 2020–21 academic year also drew attention to students' mental health needs and to providing them with psychological support after identifying the problems (Ministry of Education and Science, 2020).

Research conducted by Zbigniew Izdebski (2020) as shown that among the surveyed pupils and students, as many as 53% indicated that they had experienced periods of breakdown or mental crisis during the pandemic, 44% of the respondents in the 18–29 age group declared that they had more intensely felt periods of depression and depressive states and 41% said that they had felt loneliness more intensely. The stress caused by the situation made the educational process less effective, for example, by reducing student activity and commitment (Petrie et al., 2020). At the same time, students and lecturers rightly emphasised that university education is much more than transferring knowledge: it is all about valuable networking and interpersonal relations, which cannot be easily obtained remotely (Pawlina, 2020).

Bearing in mind the difficulties which were identified, it is worth paying attention to the situation of first-year students. The beginning of university studies is a time of high hopes and joy. Students meet a variety of people who instil their own interests in them. By attending university, new students become more responsible for their life and decisions. They get a taste of university life, which exceeds their previous experience (Maślanka et al., 2013). The first months at university are also marked by uncertainty, further enhanced by stress. Justyna Iskra (2016) lists the difficulties that are most commonly experienced by students, i.e. the fear of being unable to cope in a new situation or of meeting demands, envying others' achievements, needing to digest large amounts of difficult content in a short time, to master a new way of learning or to be independent, reacting to failures too emotionally and lacking an affirmation of their individuality. Adolescents' sense of intense threats from COVID-19 may lead to more risky behaviours and other activities in an attempt to find their own place in the 'new normality' (Łukaszewski, 2020).

First-year students studying under pandemic restrictions can expect support from the university to help them cope with the demanding tasks. They can expect the university to provide them with some ersatz normality and to show understanding with regard to the disrupted rhythm of daily functioning and the many difficulties associated with the pandemic and the related restrictions (Incubator of the University of Warsaw, 2021). Providing adequate support is a challenge that individual universities dealt with to varying extents using proven forms of assistance and creating new ones.

The purpose of the study was to identify the types of situations perceived by students as threatening during the COVID-19 pandemic and from whom they most frequently expect help in such situations. The relevance of students' personality traits for assessing the threats and severity of stress associated with the COVID-19 pandemic was also determined.

Due to the exploratory nature of the study, the following research questions were posed.

1. Which situations related to the COVID-19 pandemic are rated most and least threatening by students?
2. Which personality traits described in the 'Big Five' theory (McCrae & Costa, 1987) protect students from experiencing grave threats and from experiencing higher stress from the COVID-19 pandemic?
3. What sources of support do the students receive?

Based on a literature review, the following hypotheses were formulated.

1. The number and severity of perceived threats correlates with the severity of stress experienced by young people.
2. *Extraversion, emotional stability and conscientiousness* are the personality traits that protect students from experiencing high levels of perceived threats or increased stress.
3. Students receive support mainly from their family members and other loved ones.

## Methods

### Participants

The study involved 149 first-year students of the Pontifical University of John Paul II in Krakow. Among the respondents, 81.2% were women and 18.8% were men.

### Research procedure and questions

The survey was conducted in February 2021 when Polish society was experiencing another wave of COVID-19-related morbidity and classes were online. An electronic questionnaire was made accessible to students for three weeks. Participation in the study was voluntary and completely anonymous.

## Research tools

The following research tools were used in the study:

1. A short questionnaire for measuring the Big Five personality traits (IPIP-BFM-20, an abbreviated Polish version [Topolewska et al., 2014] of Goldberg's IPIP-BFM-50) to determine the students' personality traits. The questionnaire consists of 20 items, forming 5 scales (*extraversion, agreeableness, conscientiousness, emotional stability and intellect*). The respondents evaluated each of the items – containing a description of a behaviour – by choosing one of the options: 1 – does not describe me at all; 2 – describes me a little; 3 – describes me moderately; 4 – describes me very well; 5 – describes me exactly.
2. The Perceived Stress Scale (PSS-10) developed by Cohen et al. (1983) and adapted by Juczyński and Ogińska-Bulik (2009) to measure the level of stress. The PSS-10 measures global perception of stress in a particular life situation, as well as coping difficulties and the intensity of negative emotions. It consists of 10 statements about subjective feelings related to personal problems and events, behaviour and coping styles. Responses are rated on a 5-point Likert scale (from never to very often). The scale was constructed to assess the intensity of stress related to one's living situation over the past month. It is based on the assumption that it is not the number of stressful events that determines the intensity of stress, but their subjective assessment.
3. The Questionnaire on Types of COVID-19-Related Threats by Gurba et al. (2021). It consists of 46 items describing situations related to the pandemic which, in the opinion of the students, might have been perceived as potentially threatening. On a 5-point scale (from not at all burdensome to very burdensome), the respondent rates the degree to which each of the situations described and related to the COVID-19 pandemic was burdensome and threatening for them. The demographics included questions about sex, age, family of origin and place of residence.

## Results

### *Perceived level of threat*

Basic descriptive statistics of the severity index and number of threats perceived by the respondents were calculated. The Kolmogorov–Smirnov test was applied to check whether the distributions differed from the theoretical normal distribution. The index of the intensity of perceived threats in the sample did not differ statistically significantly from the normal distribution, while the index of the number of perceived threats deviated from normality, showing features of clear left skewed (predominance of high scores) and leptokurtic distribution. Both indicators were strongly correlated with each other ( $r_s = 0.841$ ;  $p < 0.001$ ).

Based on the measures of central tendency, it can be concluded that the most intense threats among the students surveyed were concerns regarding

- a. obstacles to achieving life goals,
- b. a fear that their youth will not be as exciting as it was for previous generations,
- c. restrictions on life activity,
- d. the impoverishment of student life and
- e. anonymity in the student community.

The respondents were least concerned about

- a. more frequent conflicts with siblings,
- b. difficulties in romantic relationships and
- c. the need to help elderly family members.

### *Correlation between perceived threats and severity of stress around the COVID-19 pandemic*

In the study group, the level of stress was positively correlated with both the number ( $r=0.624$ ) and severity ( $r=0.488$ ) of threats experienced in the context of COVID-19. This means that the more threats related to



the pandemic and the more severely they were experienced, the more severe the stress experience by the students.

***Correlation between the respondents' personality traits and the level of stress and the number and intensity of the threats***

The values of Spearman's *rho* correlation coefficient indicated that among the five personality traits analysed in the study, *emotional stability* was the most strongly negatively correlated with the number ( $r=-0.473$ ) and severity ( $r=-0.385$ ) of perceived threats and the level of stress related to COVID-19. *Conscientiousness* was negatively correlated with the number of threats ( $r=-0.196$ ) and the level of stress ( $r=-0.198$ ), while an increase in the intensity of the trait *extraversion* was accompanied by a decrease in stress level ( $r=-0.244$ ). The students with higher levels of *emotional stability*, *conscientiousness* and *extraversion* experienced lower levels of stress; higher levels of *emotional stability* were associated with fewer and less severe threats; and higher levels of *conscientiousness* were associated with fewer pandemic-related threats. No other statistically significant correlations were revealed.

**Table 1. Spearman's rho rank correlation coefficients for personality traits and level of stress vs the number and severity of threats (N = 149)**

Personality traits	Number of threats perceived	Severity of threats perceived	Level of stress
<i>Extraversion</i>	-0.047	-0.020	-0.244**
<i>Intellect</i>	-0.008	0.007	-0.134
<i>Emotional stability</i>	-0.473**	-0.385**	-0.738**
<i>Conscientiousness</i>	-0.196*	-0.151	-0.198*
<i>Agreeableness</i>	0.145	0.110	-0.132
Level of stress	0.624**	0.488**	1.00

\*  $p < 0.05$ ; \*\*  $p < 0.01$

### **Sources of support**

When asked about sources of support in difficult situations, two thirds of the sample group indicated friends ( $N = 98$ ; 65.8%) or declared that they get support from their mother ( $N = 96$ ; 64.4%); almost a third of the respondents indicated siblings ( $N = 44$ ; 29.5%) or a girlfriend or boyfriend ( $N = 41$ ; 27.5%), and one in four declared their father as a source of support ( $N = 39$ ; 26.2%); one in eight participants indicated a clergyman ( $N = 18$ ; 12.1%), and one in ten participants declared that they receive support from other, unclassified sources ( $N = 16$ ; 10.7%). The least frequently indicated source of support was husband or wife ( $N = 7$ ; 4.7%) (Table 2).

**Table 2. Sources of support in difficult situations**

Sources of support	N	%
girlfriend/boyfriend	41	27.5%
mother	96	64.4%
husband/wife	7	4.7%
father	39	26.2%
friend(s)	98	65.8%
clergyman	18	12.1%
other	16	10.7%

### **Discussion of results**

When embarking on the study, it was expected that those students who perceived a greater number of threats and more intense threats related to the COVID-19 pandemic would at the same time experience more severe stress. The results support this hypothesis. The level of stress experienced by the subjects was positively correlated with both the number ( $r=0.624$ ) and severity ( $r=0.488$ ) of the threats experienced. These correlations can be explained in the context of Lazarus and Folkman's theory (1984), which defines psychological stress as an internal state associated with a particular type of transactions between a person

and the environment that are appraised as exceeding the resources of the person and threatening their well-being. The cognitive appraisal of a situation as threatening is therefore a determinant of the experience of stress. Psychological stress refers primarily to demands that, according to the individual's evaluation, exhaust or exceed their capabilities and thus make adaptation difficult or even impossible.

Experiencing the aforementioned situations as threats that hinder young people's development can be understood in the context of the specific characteristics and needs of people in emerging adulthood, as listed by Arnett (2000). Difficulties in achieving life goals, remaining anonymous in the academic community and being limited in any activity constitute significant obstacles in the process of building one's identity and experiencing the 'unlimited possibilities' indicated by Arnett as distinctive characteristics of this developmental period. At the same time, as suggested by the results presented herein, situations such as more frequent conflicts with siblings, romantic relationships and the need to help older family members were least often selected as difficulties, while these same issues were perceived as significant threats by teenagers during social isolation at the beginning of 2020 (Gurba et al., 2021).

In research conducted by the organisation More In Common, the opinion of 51% of the young people surveyed was that people's concern for each other increased during the pandemic (2020). The research shows that one year after the announcement of the COVID-19 pandemic, young people entering university were mainly concerned about its consequences in their private lives, especially the obstacles to their personal life goals. Going to university and getting an education is one such goal, which means that young people's concerns translate into a fear of losing the excitement of youth, missed activities, impoverished student life and the new anonymity of the student community. Although the subject of young people's concern is changing, it is worth stressing the chronic nature of the fears experienced by young people during the months of the pandemic (Grzelak & Żyro, 2021). It seems that the consequences of this prolonged state may be permanent in their lives. The permanency of such difficulties also makes it difficult to identify forms of assistance.

Individual dispositions related to personality traits can act as resources on which an individual's assessment of and response to a threat depend (McCrae & Costa, 1987). Therefore, based on research in the literature (Bakker et al., 2006; Conrad & Matthews, 2008; Fayard et al., 2012), it was assumed that selected personality traits, such as *emotional stability*, *extraversion* and *conscientiousness*, may be important in the assessment of the degree of threat to the individual, and may protect against the intensity of the stress experienced. The results of the correlation analysis for the intensity of these personality traits and the number and intensity of threats and the level of stress experienced by the students in the survey confirmed these expectations. Among the relevant personality traits, *emotional stability* turned out to be the most strongly correlated with the number (-0.473) and intensity (-0.385) of the threats experienced and the level of stress (-0.738). Emotionally stable individuals have the ability to control their emotions, which provides them with resilience in dealing with difficulties and experiencing stress (McCrae & Costa, 1987). By protecting against potential social conflicts, *emotional stability* can foster closeness in social relationships. These relationships, in turn, provide support and protection against increased stress and may contribute to young people experiencing fewer pandemic-related threats (Gurba et al., 2021; Luthar et al., 2015).

*Conscientiousness* is another of the personality traits that was considered to be 'protective' against experiencing threats and severe stress. The individuals who are more conscientious were less likely to experience threats (-0.196) and experienced less severe stress (-0.198) related to the COVID-19 pandemic. This is supported by research findings which suggest that individuals with greater conscientiousness report fewer daily problems (Gartland et al., 2012; Murphy et al., 2012) and experience negative emotions to a lesser extent (Fayard et al., 2012). Conscientious individuals have clear-cut goals and strong determination and take their responsibilities seriously, which means that they can view difficult situations as challenges that motivate them to take action, consequently leading to lower stress levels.

Numerous studies suggest that *extraversion* reduces the strength of the stress experienced (Bakker et al., 2006; Penley & Tomaka, 2002). A similar,

although rather weak, correlation between the intensity of *extraversion* and the level of stress (-0.244) was found in this study. Extroverted people usually have an extensive network of social relationships that can provide support in difficult situations, and thus protect against experiencing severe stress (Dunkel-Schetter & Bennett, 1990). Furthermore, extraversion promotes risk-taking – which involves underestimating risks – and leads to a lower perception of stress as a result. The weak correlation found in the study may be due to the specificity of the risks associated with the COVID-19 pandemic, as the restrictions limited social contact and limited the ‘utility’ of extraversion in the respondents’ interpersonal contacts.

### **Support provided to students at the Pontifical University of John Paul II in Krakow**

The outbreak of the COVID-19 pandemic coincided with the commencement of the two-year project called ‘University Without Barriers’ at the Pontifical University of John Paul II (2020–2021). The aim of the project was to eliminate barriers in access to education at the university. One of the activities was to open the Interdisciplinary Counselling Centre, in collaboration with the Polish Association of Disabled People and the Office for Students with Disabilities at the Pontifical University of John Paul II in Krakow. It provided assistance primarily to students and doctoral students, but also employees, their families and all who felt the need to obtain advice and support (Interdisciplinary Counselling Centre, 2020). The free consultations and support included legal counselling, social and vocational counselling, psychological consultations, crisis intervention, conflict counselling, mediation, spiritual counselling and support, IT and new media counselling, psychological consultations, speech therapy, pedagogical therapy, EEG biofeedback training and counselling on working with students with disabilities (Interdisciplinary Counselling Centre, 2020). The activity of the centre started and developed during the pandemic restrictions, so almost all consultations took place in real time through the MS Teams platform. In order to facilitate the transfer of information,

a website was launched for the project with information on support (University without Barriers, 2020). Consultations and other forms of assistance were provided in compliance with the data protection regulations and the ethical dimension of providing assistance.

The project's activities, including those of the Interdisciplinary Counselling Centre, will be evaluated after the project is completed; nevertheless, it can be assumed that it was an adequate response on the part of the university to the significant range of students' needs. A special group consisted of first-year students of various faculties of the university. The knowledge obtained through the research points towards different needs and ways of reacting to threatening situations depending on students' personality traits; it was this knowledge that made the specialists aware of the need for an individual approach to each person in need of help. Referring to the difficulties, needs and expectations of students in the research material being analysed here, it should be noted that the opportunity to talk to professionals facilitated a reflection on life goals and ways of achieving them during the pandemic. It also provided an opportunity to jointly search for ways to counteract limitations in different kinds of activities. The provided support partially reduced the anonymity among the new community. The students' use of different forms of assistance provides evidence of an interest in it.

## Conclusion

The results of the study, although based on a relatively small group of respondents, allow us to state that for first-year students of various fields of study at the Pontifical University of John Paul II in Krakow, the COVID-19 pandemic was associated with a sense of threat resulting from restrictions that disrupted their life goals and the development of free activity, and created impoverishment and anonymity of life in the student community. These situations make it difficult for adolescents to fulfil one of the most important tasks of this phase of development: building a mature identity. It turned out that the more serious threats young people

perceived, the stronger stress they experienced, which confirms the assumptions of the transactional stress theory developed by Lazarus and Folkman (1984). The results of the study once again show the importance of the social support young people receive from their loved ones, mainly mothers and friends. However, not everyone can always count on such support; therefore, assistance was provided at the Pontifical University of John Paul II in Krakow for all students experiencing any problems directly or indirectly related to the COVID-19 pandemic.

## References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469–480. doi: <https://doi.org/10.1037/0003-066X.55.5.469>
- Bakker, A. B., Van Der Zee, K. I., Lewig, K. A., & Dollard, M. F. (2006). The relationship between the big five personality factors and burnout: A study among volunteer counselors. *Journal of Social Psychology*, *146*(1), 31–50. doi: [10.3200/SOCP.146.1.31-50](https://doi.org/10.3200/SOCP.146.1.31-50)
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385–396. doi: <https://doi.org/10.2307/2136404>
- Conrad, M. A., & Matthews, R. A. (2008). Modeling the stress process: Personality eclipses dysfunctional cognitions and workload in predicting stress. *Personality and Individual Differences*, *44*(1), 171–181.
- Długosz, P. (2020). *Raport z II etapu badań studentów UP. Opinia na temat zdalnego nauczania i samopoczucia psychicznego* [Report from the second stage of research conducted among students of the Pedagogical University of Krakow: Opinions about distance learning and mental well-being]. <https://ifis.up.krakow.pl/wp-content/uploads/sites/9/2020/06/Raport-Studenci-UP-II-etap.pdf>
- Dunkel-Schetter, C., & Bennett, T. L. (1990). Differentiating the cognitive and behavioral aspects of social support. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Wiley series on personality processes. Social support: An interactional view* (pp. 267–296). John Wiley & Sons.
- Fayard, J. V., Roberts, B. W., Robbins, R. W., & Watson, D. (2012). Uncovering the affective core of conscientiousness: The role of self-conscious emotions. *Journal of Personality*, *81*, 1–32. doi: [10.1111/j.1467-6494.2011.00720.x](https://doi.org/10.1111/j.1467-6494.2011.00720.x)
- Gartland, N., O'Connor, D. B., & Lawton, R. (2012). Effects of conscientiousness on the appraisals of daily stressors. *Stress & Health*, *28*, 80–86. doi: [10.1002/smi.1404](https://doi.org/10.1002/smi.1404)
- Godawa, G. (2021). Sposoby radzenia sobie Lockdown Generation w czasie pandemii SARS-CoV-2. Implikacje edukacyjne [Coping strategies used by the lockdown generation during the SARS-CoV-2 pandemic: Educational



- implications]. In A. Klimska & M. Klimski (Eds.), *Przyszłość polskiej szkoły: alert pedagogiczny* (pp. 18–28). Adam Marszałek Publishing House.
- Grzelak, S., & Żyro D. (2021). *Jak wspierać uczniów po roku epidemii? Wyzwania i rekomendacje dla wychowania, profilaktyki i zdrowia psychicznego* [How to support students after a year of epidemic? Challenges and recommendations for upbringing, prevention and mental health]. Instytut Profilaktyki Zintegrowanej.
- Gurba, E., Senejko, A., Godawa, G., & Kalus, A. (2021). Closeness to parents and experiencing threats with COVID-19 mediates the link between personality and stress among adolescents. *International Journal of Environmental Research and Public Health*, 18(12), 6358. doi: 10.3390/ijerph18126358
- Incubator of the University of Warsaw (2021). *Nauczanie zdalne. Oswojenie (nie)znanego. Wpływ pandemii COVID-19 na szkolnictwo wyższe* [Remote Learning. Taming the (Un)known. Impact of COVID-19 on higher education]. <https://www.delab.uw.edu.pl/raporty/nauczanie-zdalne-oswojenie-nieznanego>
- Interdisciplinary Counselling Centre. (2020, December 14). *Uczelnia bez barier Uniwersytetu Jana Pawła II w Krakowie* [University Without Barriers at the Pontifical University of John Paul II in Krakow]. <https://uczelniabezbarier.upjp2.edu.pl/centrum-wsparcia/intersyscyplinarne-centrum-poradnictwa-3.html>
- Iskra, J. (2016). Trudności doświadczane przez studentów a ich obraz siebie [Difficulties experienced by university students and their self-image]. *Scientific Bulletin of Chełm – Section of Pedagogy*, 2, 46–53.
- Izdebski, Z. (2020, October 27). *Zdrowie, relacje w związkach i życie seksualne Polaków* [Health, relationships between couples and sexual life of Poles]. University of Warsaw. <https://www.uw.edu.pl/zdrowie-relacje-w-zwiazkach-i-zycie-seksualne-polakow>
- Juczyński, Z., & Ogińska-Bulik N. (2009). *NPSR – Narzędzia Pomiaru Stresu i Radzenia Sobie ze Stresem* [Tools for measuring and coping with stress]. Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. Springer.
- Lenkiewicz, K., Srebnicki, T., & Bryńska, A. (2016). Mechanizmy kształtujące rozwój osobowości i jej zaburzeń u dzieci i młodzieży [Mechanisms shaping

- the development of personality and personality disorders in children and adolescents]. *Psychiatria Polska*, 50(3), 621–629. doi: <http://dx.doi.org/10.12740/PP/36180>
- Luthar, S. S., Crossman, E. J., & Small, P. J. (2015). Resilience and adversity. In R. M. Lerner & M. E. Lamb (Eds.), *Handbook of Child Psychology and Developmental Science* (7th ed., Vol. 3, pp. 247–286). John Wiley & Sons.
- Łukaszewski, B. (2020). Strategie adaptacyjne polskiej młodzieży w sytuacji izolacji społecznej [Adaptative strategies of Polish youths in social isolation]. *Spółeczeństwo, kultura, wartości*, 17–18, 1–9. [https://www.researchgate.net/publication/350322212\\_Strategie\\_adaptacyjne-polskiej-mlodziezy\\_w\\_sytuacji\\_izolacji\\_spolecznej](https://www.researchgate.net/publication/350322212_Strategie_adaptacyjne-polskiej-mlodziezy_w_sytuacji_izolacji_spolecznej)
- Maślanka, E., Mroczka, D., Ostrowska, A., Szczupaj, A., & Wit, J. (2013). Rola uczelni w procesie adaptacji studentów pierwszego roku [The role of the university in the process of adaptation of first-year students]. In L. Gajos (Ed.), *Studencka Konferencja Naukowa* (pp. 1044–1056). WSPiA Publishing House.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the Five Factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52, 81–90. doi: 10.1037/0022-3514.52.1.81
- Ministry of Education and Science. (2020, November 26). *Środowiskowe wytyczne dotyczące działalności uczelni w roku akademickim 2020/21 w związku ze stanem epidemii w Polsce* [Environmental guidelines for the activity of universities in the 2020–21 academic year due to the epidemic in Poland]. <https://www.gov.pl/web/edukacja-i-nauka/srodowiskowe-wytyczne-dotyczace-dzialalnosci-uczelni-w-roku-akademickim-20202021>
- More In Common. (2020). *Wpływ COVID-19 na społeczeństwo* [The impact of COVID-19 on society]. <https://www.moreincommon.com/media/p4hmctco/more-in-common-the-new-normal-poland-pl.pdf>
- Murphy, M. L. M., Miller, G. E., & Wrosch, C. (2012). Conscientiousness and stress exposure and reactivity: A prospective study of adolescent females. *Journal of Behavioral Medicine*, 36(2), 153–164. doi: 10.1007/s10865-012-9408-2
- Pawlina, K. (2020). Wszechobecne komunikatory – łączą czy izolują? [Ubiquitous communicators – do they connect or isolate?] In *Nauczanie po pandemii. Nowe pytania czy nowe odpowiedzi na stare pytania?* (Mark Dietrich Institute

- of Contemporary Civilization Problems Series, pp. 111–116). SGGW Publishing House.
- Penley, J. A., & Tomaka, J. (2002). Associations among the Big Five, emotional responses and coping with acute stress. *Personality and Individual Differences*, 32(7), 1215–1128. doi: [https://doi.org/10.1016/S0191-8869\(01\)00087-3](https://doi.org/10.1016/S0191-8869(01)00087-3)
- Petrie, C., Aladin, K., Ranjan, P., Javangwe, R., Gilliland, D., Tuominen, S., & Lasse, L. (2020). *Spotlight: Quality education for all during COVID-19 crisis* [hundRED Research Report #01]. United Nations. <https://hundred.org/en/collections/qualityeducation-for-all-during-coronavirus>
- Pokhrel, S., & Chhetri, R. (2021). A literature review on impact of COVID-19 pandemic on teaching and learning. *Higher Education for the Future*, 8(1), 133–141. doi: <https://doi.org/10.1177/2347631120983481>
- Steinberg, L. (2008). *Adolescence* (8th ed.). McGraw-Hill.
- Topolewska, E., Skimina, E., Strus, W., Ciecuch, J., & Rowiński, T. (2014). Krótki kwestionariusz do pomiaru Wielkiej Piątki IPIP-BFM-20 [The short IPIP-BFM-20 questionnaire for measuring the Big Five]. *Roczniki Psychologiczne*, 17(2), 367–402.
- Trempała, W., Pazderska, A., & Rajek, M. (2016). Młodzi dorośli wobec współczesnych zagrożeń dla bezpieczeństwa – refleksje empiryczne [Attitudes of young adults towards modern threats to safety: Empirical reflections]. In F. Pierzchalski & J. Golinowski (Eds.), *Socjotechnika lęku w polityce* (pp. 353–388). UKW Publishing House.
- University Without Barriers. (2020). Uczelnia bez barier Uniwersytetu Jana Pawła II w Krakowie. [uczelniabezbarier.upjp2.edu.pl](http://uczelniabezbarier.upjp2.edu.pl)
- Wojtczuk, A. (2020). Pandemia koronawirusa – zmiana w świecie. Zagrożenia dla zdrowia psychicznego i szanse rozwojowe [The pandemic – change in the world: Mental health hazards and development opportunities]. *Student niepełnosprawny. Szkice i rozprawy*, 20(13), 101–113. doi: 10.34739/sn.2020.20.10
- World Health Organization. (2020, March 12). *WHO announces COVID-19 outbreak a pandemic*. <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/3/who-announces-covid-19-outbreak-a-pandemic>