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Educational Pressure and Development of Study Addiction, Work Addiction and Other Mental Disorders

‘Shout it aloud, do not hold back.
Raise your voice like a trumpet.’

Isaiah 58:1

‘For the young, therefore, it is torture (i.) if they are compelled to receive six, seven or eight hours’ class instruction daily, and private lessons in addition. (ii.) if they are overburdened with dictations, with exercises, and with the lessons that they have to commit to memory, until nausea and, in some cases, insanity is produced.’

John Amos Comenius, a 17th-century educator
considered the father of modern education

‘His father was a broker and mother was a lawyer.
They had fat wallets which would get thinner and thinner,
as would their son after all them rehabs.’

Mata, *Patointeligencja*

Introduction

The first step to effective prevention and treatment of mental disorders is recognition of the problem. Psychopathology and its extreme consequences, for example, suicide, have been growing among young generations in Poland for decades. With-

out a genuine social dialogue, without listening to the voice of children and youth, without treating their needs seriously and respecting their emotions, and without the opinions of specialists and systematic scientific studies, we will not be able to identify the causes of this phenomenon. What is worse – as of today, there are no real and systematic actions to prevent the deteriorating mental health of young Poles and aimed at understanding it.

The social and economic transformations that have been taking place in Poland in recent decades may be crucial for the changes observed in the well-being of the discussed group. In particular, the paper's authors draw attention to the dynamic economic development, associated transformations of the labour market and the organisation of the education system, the unrecognised cost of which may include the deteriorating mental health of the Polish population, in particular its youngest members. This observation does not suggest that economic growth or the free market economy are harmful *in se*, but that the relentless drive to economic growth as a goal in itself, without accounting for the human needs and potential, paradoxically leads to the aggravation of well-being on the level of the population. This phenomenon has been well-documented, for example, among populations of the most dynamically developing Asian countries. There was an increase in deaths (including suicides), related to excessive workload (Tsui 2008), which is an effect of growing demands for employee efficiency, competition, globalisation, and lack of employment stability (Idris, Dollard, Winfield 2011). Labour market requirements, directly and indirectly, affect the system of education. To an increasing degree, it is organised according to a similar logic (about economisation of education, cf. Szkudlarek 2005), where the students and their reality are presented with the use of the dehumanised language of performance indicators (Melosik 2016). This leads to excessive educational pressure related to narrowly-understood criteria of efficiency and accomplishments (e.g., results in standardised tests). Dorota Klus-Stańska (2017) picturesquely dubbed it a 'fight for test-maniacal survival.' One of the well-documented consequences of functioning in an unstable environment replete with pressure and threats exceeding adaptation capabilities is a development of addiction to substances and behaviours as a form of coping with excessive stress (Goeders 2003; Sinha 2007, Tavolacci *et al.* 2013).

This paper aims to present the potential associations between educational pressure experienced by pupils and students and the development of mental disorders, among others of study and work addiction. Two sides of the problem will be discussed. The first one comprises the attempts to adapt to the considerably dehumanised system of education and organisation of professional work (ending with maladjustment, social marginalisation, etc.), while the second includes excessive efforts to accomplish this objective at the cost of physical and mental health, interpersonal relations and – paradoxically – productivity (namely com-

pulsively overloading oneself with work, conceptualised as work addiction and as study addiction among students). The starting point for the discussion is the understanding of the process of addiction (established in scientific literature) as closely related to ineffective coping with excessive stress. Both the failure of such adaptation and the excessive efforts at adjustment lead to many physical and mental health problems (anxiety, depression, abuse of psychoactive substances and addiction, etc.).

The authors of the paper present the relationship of educational pressure to mental health problems and psychopathology-related phenomena (e.g., suicide), analyse the present state of knowledge on work and study addiction, including similarities and differences between engagement in a given activity (work or study) and addiction to it.

The destructive impact of school is not a new issue in Polish pedagogy. One may even venture to say that it forms a certain leitmotif of modern thought about education and upbringing. It is particularly explored by researchers with a critical orientation. Similarly, the health consequences of study overload – including extreme ones, such as death (The New York Times 1900) and suicide (Zeng, Le Tendre 1998) – are well documented in scientific literature. The first mention of it can be traced back to the beginnings of the modern education systems (cf. Komeński 1956).

These arguments may be treated as a voice in the discussion on what is the actual (and not the assumed) impact exerted on students by the Polish education system and the dominant model of teaching, what type of graduates are 'produced' by schools, and what types of experiences young people acquire there (cf. Melosik 2016; Klus-Stańska 2017; Kwieciński 1992; Śliwerski, Kobierski 2008). This paper makes novel use of concepts and categories of clinical psychology related to behavioural addictions. The specific nature of study and work addiction consists in the fact that they concern activities commonly considered socially useful, worthy of respect and promotion among youth – as opposed to detrimental or dangerous ones (e.g., addiction to pornography, gambling, computer games, etc.). Research of such addictions – primarily study addiction – poses a challenge and possibly is a turning point in the social and economic conceptualisation of productivity. It shows that the existing systems regulating education and the labour market generate (apart from immeasurable human suffering) huge losses, not only by destroying human capital in a group of people who struggle with adaptation (e.g., children from environments with low socioeconomic status, dyslectics or persons with attention deficit hyperactivity disorder) but also among a considerable group of people – at times greatly talented – who make extraordinary efforts to adapt and to be productive. At the same time, it must be emphasised that students diagnosed with ADHD or dyslexia are often very talented (Bogdanowicz, Adryjanek 2008), their cognitive functioning is diverse (Hoogman *et al.* 2020; Chamberlain *et al.* 2018;

Gilger, Allen, Castillo 2016), and problems with adaptation often result from lack of adjustment of the education system to the nature of their functioning, needs, and resources. The sub-optimal organisation of education and the labour market may render the activities that we socially value the most (i.e., work and study) equally or even more destructive on the population level than socially stigmatised phenomena such as behaviours related to the use of psychoactive substances, gambling, computer games, or pornography (P.A. Atroszko 2018, 2019a).

The paper was prepared based on desk research. The sources were Polish and international scientific publications pertaining primarily to work and study addiction and the relationship of educational pressure and the education system with psychopathology, historical sources, reports of international organisations (WHO, UNICEF), as well as reports of Polish public institutions (e.g., the Supreme Audit Office). The inspiration for the publication was the exceptionally destructive role of educational pressure exerted on Polish students, noticed by the authors. It is a problem underlying not only the study addiction, but also – as became apparent in the course of analysis of data pertaining to the mental health of the youngest – many other phenomena in the area of psychopathology, including suicides of children and adolescents.

Educational Pressure and Psychopathology

The quality of children's life in Poland is one of the lowest in the economically developed countries (UNICEF 2020). Insofar as the physical health and skills of the youngest Poles correspond (more or less) to the average values for the OECD countries, the level of their psychological well-being is particularly problematic (UNICEF 2020). It must be emphasised that the situation in other developed countries is also far from ideal or even satisfactory. Suicide, lack of satisfaction with life, obesity, and low social and educational competencies are becoming more and more frequent problems among children and youth in rich countries. For a number of years, a growing number of mental disorders and diseases has been observed in children and adolescents in Poland (Tabak 2014). Since the system of psychiatric care has not been prepared for such sudden growth in the number of persons needing support, it ceased to be efficient (Bójko, Maślankiewicz 2020). This phenomenon was dubbed the 'crisis of paediatric psychiatry' (Hoss *et al.* 2020; Murawiec 2020). However, Poland is no exception in this regard. The growing mental health crisis, especially among the young, has been observed in several developed countries around the world (WHO 2005), and is embedded in the general crisis of psychiatry (Katsching 2010). A particularly worrying phenomenon is the growing rate of suicide in the Polish population (Höfer *et al.* 2012; Kawecki 2019), including among children (Bąbik, Olejniczak 2014).

The potential determinants of mental health problems of young people are numerous (Kieling *et al.* 2011). In this context, significant risk factors include biological factors (genetic determinants, traumas, the impact of toxins, chronic diseases, obesity, etc.) and psychosocial factors related to the child's functioning in a family, school, and peer group (Tabak 2014). The second category includes the breakdown of family ties (including divorces, separation, and economic emigration of one or both parents abroad), lack of social support, the role of social media, and threats related to children's and youth's unrestrained access to the Internet (addiction to computer games, pornography, mobile telephones, social media, etc.), the growing pace of life, unhealthy diet (Joško-Ochojska, Lizończyk 2014; Kazimierska, Kinsner 2019; O'Neil *et al.* 2014), high level of social inequalities, the longer time and greater emotional engagement of parents in professional work and, finally, lack of social security of families (uncertainty of employment, changes in the labour market and, simultaneously, the high financial debt of families, etc.).

One of the greatest stress-generating factors in the life of young people is school and school education (Talik 2011). School stress is related to students health problems (Supranowicz, Wysocki 2010). In particular, stress and pressure intensification is observed during the matriculation exams (Ogińska-Bulik, Zadzorna-Cieślak 2014). The concept of school stress is complex because children experience it not only in the context of challenges set by education (grades, teachers' requirements, tests, or exams), but also, for example, in relations with peers or teachers (Sikora 2010). This paper refers primarily to the educational pressure, i.e., stress related to striving to accomplish a narrowly-defined educational success, understood as a high grade point average and an excellent result at external examinations.

Multiple factors point to the fact that educational pressure negatively affects not only the health but may even threaten the life of the youngest Poles. Most suicides of persons aged 10–19 happen in May (the time when year-end grades are given), and the fewest are during summer holidays – July and August (Napieralska *et al.* 2010). According to the researchers, this may suggest that one of the major causes of suicides among youth is school stress (Napieralska *et al.* 2010). This hypothesis is consistent with research results of both Polish researchers (cf. Makara-Studzińska 2013) and scholars from other countries, which indicate school failures as an important factor inducing young people to end their lives (Greydanus, Calles 2007; Mishra *et al.* 2013; Richardson *et al.* 2005). Improbable though it may seem, for many young people, educational success is literally a matter of life or death. In this respect, exaggerated (potentially unattainable) parental expectations play an important role (Bor *et al.* 2014; Klinger *et al.* 2015). It is worth noting that this is not a new phenomenon. It was already indicated in the pre-war Polish scientific literature that stress produced by school learning is a cause of suicide (Ziółkowska 2020). Modern researchers also draw attention to a broader range of

factors related to the school environment, which may be conducive to increased suicidal tendencies. They include rejection by peers, frequent changes of schools, high requirements of teachers combined with a lack of proper support for students, impersonal relations with teachers, school violence, conflicts with teachers and peers, problems with acquiring knowledge, or even a lack of classes that develop students' interests (Kołodziej *et al.* 2020).

The fact that some students, for various reasons, cannot achieve the expected educational success in the existing education system is a problem. For example, persons with ADHD, dyslexia, social anxiety disorder (SAD), or struggling with other problems that make studying difficult are already in a disadvantaged position when forced to compete with fellow students. In the current system, psychomotor hyperactivity, reading difficulties, fear of being assessed by others, and fear of public appearances are conceptualised as deficits and disorders. There is no doubt that in their extreme form, these phenomena are a source of immense suffering for persons affected by them and are probably related to functional impairments. However, not all experts from the area of psychopathology agree with such a clearly negative understanding of the entire class of these phenomena, especially in the case when they are problematic only in a specific social context, are quite common in the general population and when they do not take extreme forms (Wakefield 2007). For example, dyslexia is not a problem in pre-literate communities, and fear of being negatively assessed by a group may be a normal adaptive response in societies where social exclusion is a threat to life. It must be emphasised that the consequences of school failures may be grave. It makes little sense to conclude that the fear of being assessed is unjustified and forms a mental disorder if, in the existing social system, the consequence of negative assessment of school accomplishments may lead to social marginalisation (Jaggers *et al.* 2016; Pardej 2016; Rocque, Snellings 2018). The life paths of individuals suffering from social anxiety, dyslexia, and ADHD show that those who were unable to adjust to the school system during adolescence more often experience problems adapting to adult life and finding their place in the labour market. Social anxiety is also related to a lower quality of life, compromised social functioning, and higher student dropout rates (Stein, Kean 2000). Furthermore, persons suffering from this disorder are more often unemployed in adult life and have lower income, which, due to obvious reasons, also affects their economic status (Patel *et al.* 2002). Students with ADHD have lower school accomplishments, more often experience problems with obtaining credits for a subject, and are more likely to drop out of school before graduation (Kent *et al.* 2011; M.L. Wise, B.L. Wise, Jones 2019). Similarly, dyslexia is not only a 'school' problem, but it exerts a particularly destructive impact on the entire life of persons affected, including their mental health, social and professional functioning, and satisfaction with life (Livingston, Siegel, Ribary 2018). In this sense, it may be concluded that the system of education is dehumanised, as it does not account for

the needs and the potential of all students (those with ADHD, SAD, dyslexia, or other special educational needs), even though compulsory education applies to all young people without any exceptions. The problem is not that some students have (potentially even innate) limitations and deficits, because this is a natural phenomenon that cannot be avoided. The problem is how the school affects such students and how it directs them into further adult life. For example, according to the available data, students with dyslexia tend to be socially stigmatised, considered less intelligent, lazy, or perceived as neglecting school education (Livingston, Siegel, Ribary 2018).

In a situation when school failures are related to social marginalisation, lower quality of life, and mental and physical health problems, it is not surprising that some students make extraordinary efforts to avoid what often tends to be called a life failure. Such persons try to be productive in their study and work at the cost of health, interpersonal relations, happiness, and – paradoxically – performance. Complete focus on work-related activities and uncompromising subordination of life to them leads to the development of compulsion to perform these activities. Lack of other sources for self-validation and constant fear of failure over time make a person unable to stop studying or working and deriving pleasure from other areas of life. This phenomenon is highly consistent with the behavioural addiction model and is conceptualised as work addiction (P.A. Atroszko 2019ab; P.A. Atroszko, Demetrovics, Griffiths 2019), while its early form is study addiction (P.A. Atroszko 2015; 2018; 2019a). Hence, it is not surprising that persons with ADHD and social anxiety are often included in this group (Andreassen *et al.* 2016; P.A. Atroszko 2015; 2018; 2019a; Atroszko *et al.* 2017; Marmet *et al.* 2019). It is they who may wish to avoid social marginalisation at any cost and reach success in the eyes of society. A recent study has shown that five out of six young women who are professionally active and who were diagnosed with eating disorders (anorexia or bulimia) fulfil the criteria for work addiction (P.A. Atroszko, Mytlewska, B. Atroszko 2020). Eating disorders are closely associated with cultural and social pressure concerning appearance and dysfunctional perfectionism. They also entail an exceptionally high risk of suicide and self-mutilation. Study and work addiction is also related to narcissism (P.A. Atroszko, Sawicki, Kamble 2019), a growing social problem closely related to the desire for higher social status and admiration.

Insofar as persons who manifest learning difficulties or lower intelligence could be cynically ‘written off’ in a society obsessed with socioeconomic success, the issue becomes slightly more complicated in the case of persons addicted to study and work. These individuals are highly diligent, hard-working, often talented and very talented, and frequently cherish prosocial values (P.A. Atroszko 2015, 2018, 2019a; P.A. Atroszko, Demetrovics, Griffiths 2019). In other words, these are persons whom every legislator, employer, headmaster and university rector should highly care about. These are individuals who may increase the chances of socioeconomic

success of a country, company, school, or university. Moreover, they could positively affect the general quality of social life by contributing to the improved functioning of social institutions. However, we let this immense human capital go to waste. Why is that? Possibly because we do not see how certain social, economic, and cultural processes harm the entire country's population, which is visible in the suicide statistics and demand for psychiatric care, exceeding the supply of the existing health care system.

Significance of Study and Work Addiction

Studies show that socioeconomic phenomena occurring in the environment of young people, such as a low standard of living, awareness of inequalities resulting from the perceptible differences in living standards, unemployment of parents, or inability to fulfil one's dreams due to lack of material assets, may be factors increasing the suicidal tendencies (Makara-Studzińska 2013). However, the pressure for socioeconomic success is detrimental not only to the poorest and the 'helpless' but also to the affluent, especially children from environments with high socioeconomic status. The cultural expression of this phenomenon is the success of the song *Patointeligencja*, which became immensely popular on YouTube at the end of 2019. It refers to the behavioural and mental problems of affluent youth. It seems to be a cry for attention to the phenomenon that has been well-documented in the scientific literature (Hanson, Chen 2007; Luthar, Becker 2002). In turn, on the statistical level, the expression of Polish pathology is the prevalence of work addiction, which is two to three times higher than in such countries as Norway, Denmark, and Switzerland (P.A. Atroszko, B. Atroszko 2020). What is more, Polish studies suggest that in terms of mental health, children of parents addicted to work function worse than children of those addicted to alcohol or children from broken homes (Polok *et al.* 2018). These analyses are consistent with the conclusions made in the 1990s by an excellent researcher on this issue, Bryan E. Robinson (2014), or the results obtained by other modern researchers (Shimazu *et al.* 2020). The most important factors affecting the suicidal attempts of youth include emotional rejection by close and important people, awareness of negative assessment by others, and loneliness (Makara-Studzińska 2013). In this context, family relations are essential, including problems in relationships with parents, such as emotional rejection, conflicts, severance of ties following the death of one or both parents, mother's or father's addiction to alcohol, or conflicts between parents. They are listed as some of the major causes of suicidal attempts among teenagers and mental health problems experienced by them (Namysłowska 2013).

Overwork, depression and anxiety, alcohol abuse, death as a result of health complications, as well as professional burnout related to work addiction (Griffiths,

Demetrovics, P.A. Atroszko 2018), conditional interest in children among workaholics (e.g., focus on children's accomplishments, high requirements; Robinson 2014) or simply limited contact as a result of long hours spent at work – these are only some of the factors that may affect the problematic relationship of a work-addicted parent with a child. The children of workaholics also run a higher risk of work addiction, which guarantees the generational transmission of pathology (Kravina *et al.* 2014).

Lack of psychological and psychiatric support for individuals from environments with low socioeconomic status could be theoretically explained by low care for the poorest and the most neglected on the level of the society and the state and, consequently, low financial expenditures on support for these groups. However, growing mental health problems in the group of affluent social groups cannot be explained in this way. In this situation, a question has to be asked: why do rich people and their children experience severe consequences of mental health problems? Why does the prevalence of multiple psychological and behavioural problems in this social group not differ notably in comparison to persons from the poorest environments? One of the theoretical models that may be of use in explaining these phenomena (to a certain degree) is the addiction model. A defining characteristic of addiction is loss of control over behaviour. The significance of conceptualisation of these problems in the context of work and study addiction allows for understanding why we have not been able to control them for decades. This also explains such phenomena as the high predominance of work addiction among managers, who are not a poor social group (P.A. Atroszko, B. Atroszko 2020). Emphasis on productivity, material success, and high social status may lead to the loss of control over engagement in work or study in people who are susceptible to it, just like the social and media emphasis on beauty standards is one of the most important risk factors for the eating disorders among women (P.A. Atroszko, Mytlewska, B. Atroszko 2020).

Another key aspect of addiction is the mechanism of denial. Over 90% of addicted persons never recognise the problem and do not seek support (Goldstein *et al.* 2009). In turn, this allows for explaining why, despite regular signals in the form of reports about the status of psychiatric care in Poland (Moskalewicz, Kiejna, Wojtyniak 2012; Komisja Ekspertów przy Rzeczniku Praw Obywatelskich [Experts' Committee by the Polish Ombudsman] 2014; Sekcja Ochrony Zdrowia Narodowej Rady Rozwoju [Health Protection Section of the National Development Council] 2016; Najwyższa Izba Kontroli [the Supreme Audit Office] 2020), absolutely nothing changes, and the situation worsens year by year. The determinants of the crisis of psychiatry in Poland are complex. Yet in the present situation, one issue is the most astonishing: nobody asks why psychopathology is systematically growing among the youngest generations in Poland. What mechanisms contribute to the fact that, despite the improving material condition of the society, the psychological quality

of life of the next generations is deteriorating? Why is psychopathology quite common in affluent groups? In this situation, one can speak about denial on the level of society. Stigmatisation of mental disorders is often a problem, and such disorders are perceived as a problem of persons who are 'shiftless' or 'weak.' The issue is conceptualised in such categories as how to increase the number of beds at child and adolescent psychiatric wards and how to encourage more physicians to take up the psychiatric specialisation. Obviously, this has to be done, but this is a manifestation of thinking limited to the question: 'How to do more?' – how to be more productive in this area, overlooking the broader context of the phenomenon. In turn, it seems that the key question we should be asking in this situation is: how to prevent and reduce psychopathology among the youngest? This calls for understanding its source. The psychiatric care system has not been effective for years, and it seems practically impossible to solve its problems with a never-ending increase in the number of hospital beds and specialists – especially since even this is not done to a significant degree. At present, there are fewer than two psychiatrists per one thousand minor patients in the majority of Polish regions (Najwyższa Izba Kontroli 2020). Clearly, integrated efforts aimed at understanding the origins of this situation are required. These should rely on the research policy of the state (emphasis on studies aimed at understanding and counteracting these processes), improvement of the system of education and prevention programs on the population level, including education of specialists in these areas. Obviously, an increase in expenses on psychiatric care is absolutely necessary.

Attention should also be drawn to another aspect of the problem. Physicians, nurses, and other healthcare professionals have a high risk of work addiction and show high professional burnout (West *et al.* 2016; Imo 2017; Walkiewicz, Sowińska, Tartas 2014). Burnout is an established factor negatively influencing the quality of performed work, worsening it (Salvagioni *et al.* 2017) and, in the case of physicians, increasing the number of medical errors made (Tawfik *et al.* 2018). Polish medical doctors, similarly to Japanese ones, officially recognised overwork as the primary cause of death when physicians die after very long shifts (lasting longer than 24 hours; Ogólnopolski Związek Zawodowy Lekarzy [Doctors' Trade Union of Poland] 2017; Hiyama, Yoshihara 2008; Uehata 2005). The inefficiency of the Polish medical care system probably has multiple determinants. However, it seems highly probable that a high prevalence of diseases and disorders resulting from overwork and occupational stress at the population level (Atroszko, Demetrovics, Griffiths 2020) is one of its important sources. This phenomenon shows a potentially important aspect of the dynamics of work addiction and its consequences. Namely, a relatively high prevalence of work addiction in a population may cause an increase in the incidence of diseases and disorders related to it, including among children and youth (directly as an effect of parents' problems and indirectly as a consequence of study addiction), which, in turn, may overburden other systems (health care, social

support institutions, education, etc.). Next, it may aggravate these problems, creating a vicious circle of overwork and its consequences. It seems highly probable that a considerable part of the present-day crisis of paediatric psychiatry may be an effect of this mechanism.

Work Addiction: Current Status of Knowledge

Compulsive overworking has been officially recognised as a psychiatric problem since the mid-20th century. It is one of the symptoms of obsessive-compulsive personality disorder (OCPD) in the 'Diagnostic and Statistical Manual of Mental Disorders' (DSM, APA 2013), which is called anankastic personality disorder (APD) in the International Classification of Diseases (ICD; at present, in line with ICD-11, anankastia in personality disorders). One of the symptoms of this personality disorder refers to excessive devotion to work and productivity at the cost of one's family and social relations, as well as leisure and free time. Classifications of diseases and disorders evolve intensely, and one problem is described under different names and classified in various ways as our understanding of it improves. The first version of DSM-I (APA 1952) described the problem of compulsive personality with such features as 'excessive capacity for work' and 'lack of normal ability to relax' (APA 1952: 37). Compulsive need for productivity was among the symptoms of OCPD since DSM-III (APA 1980) and the symptoms of APD since ICD-8. In medical literature, it was often called 'workaholism.' Along with the dynamic development of understanding of behavioural addictions, it was noted that the model of loss of control over engagement in work probably better fits the behavioural addiction framework and may be conceptualised as work addiction (P.A. Atroszko 2019ab). OCPD/ anankastia is probably an important risk factor in such a case. Symptoms of OCPD include perfectionism (e.g., care for social standards, obligations and standards of good and bad, scrupulous care for details, fixed, systematic daily routines, excessive planning and scheduling, emphasis on organisation, order, and cleanliness) and emotional and behavioural constraint (e.g., stubbornness and lack of flexibility, risk avoidance, perseverance). However, work addiction is manifested in a way that is not characteristic of personality disorder (e.g., withdrawal and loss of control).

Over the last two decades, particularly in the last ten years, significant progress has been made in studies on work addiction and its conceptualisation (P.A. Atroszko, Griffiths 2017). It resulted in a debate in the 'Journal of Behavioural Addictions' in which many leading international researchers on this topic took part (Andreassen, Schaufeli, Pallesen 2018; Kun 2018; Lior, Abira, Aviv 2018; Loscalzo, Giannini 2018a; Malinowska 2018; Quinones 2018; Sussman 2018; Tóth-Király, Bóthe, Orosz 2018). Among the authors were researchers who recently

published review papers about this issue (Andreassen 2014; Andreassen, Pallesen 2016; Griffiths, Demetrovics, P.A. Atroszko 2018; Quinones, Griffiths 2015; Sussman 2012). Following the discussion, several general conclusions were formulated. First, work addiction is a genuine problem bearing the features of a mental disorder, as evidenced by the compiled data. Second, there is a sufficient amount of data now to confirm its negative consequences, in particular, impaired functioning of clinical significance. Third, there is evidence that in some people, work addiction persists for an extended time and is not only a temporary behavioural pattern. Fourthly, its causes are not limited to personality factors, and further studies are needed on risk factors on the meso level (e.g., related to the work organisation) and the macro level (e.g., cultural or socioeconomic, cf. P.A. Atroszko, Demetrovics, Griffiths 2019, 2020).

Furthermore, a general definition of work addiction was proposed (P.A. Atroszko, Demetrovics, Griffiths 2019). It was based on the behavioural addiction model, is consistent with the previous definitions, and aims at facilitating systematic and integrated studies on the diagnostic criteria of work addiction and their validation. Such commonly accepted criteria would allow for further systematic analysis of the phenomenon, including a more detailed estimation of its prevalence. The new general definition, also specifying some symptoms, is as follows:

Work addiction is characterized by a compulsion to work and preoccupation with work activities leading to a significant harm and distress of a functionally impairing nature to the individual and/or other significantly relevant relationships (friends and family). The behavior is characterized by the loss of control over the working activity and persists over a significant period of time. This problematic work-related behavior can have varying intensity from mild to severe (P.A. Atroszko, Demetrovics, Griffiths 2019: 9)¹.

Studies relying on the best available methodology for measuring work addiction indicate that its prevalence ranges from 6.6% to 20.6%, depending on the country (Andreassen *et al.* 2014; Lichtenstein *et al.* 2019; Marmet *et al.* 2019; Orosz *et al.* 2016), and in Poland, it was 17.4% (P.A. Atroszko *et al.* 2017). It is more prevalent than the majority of addictions, and OCPD/ anankastia is the most frequent personality disorder in the general population (3%–8%) and among clinical groups. Both disorders manifest a strong relation to stress and professional burnout. Overwork and occupational stress are considered risk factors for diseases and disorders that commonly affect people (e.g., cardiovascular diseases, depression, diabetes; Banai, Tamakoshi 2014; Virtanen *et al.* 2012). In this context, it may be assumed that compulsive overwork may be indirectly responsible for a considerable portion of

¹ Unless specified otherwise, Polish translations provided by authors of the paper.

occupational burnout and the global burden of disease. A general model of associations among work addiction, OCPD, burnout, and global burden of disease was proposed, along with their potential determinants on the micro, meso, and macro levels (P.A. Atroszko, Demetrovics, Griffiths 2020). WHO defines occupational burnout

as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions:

- feelings of energy depletion or exhaustion;
- increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and
- reduced professional efficacy (WHO 2019).

At present, occupational burnout reaches the level of an 'epidemic,' particularly in healthcare professions (Imo 2017; Panagioti *et al.* 2017), as well as in the tertiary education system. Its high prevalence is observed, among others, among doctoral students (Levecque *et al.* 2017; Nature 2019). Its symptoms are noticeable in students as early as secondary school (Walburg 2014).

The WHO Global Plan of Action on Workers' Health (2008–2017) and Comprehensive Mental Health Action Plan (2013–2030) determine proper rules, objectives, and strategies of implementation aimed at supporting mental health in the workplace (WHO 2019). However, attention was drawn to the fact that these plans in no direct way refer to the problem of work addiction, and particularly they ignore such circumstances as self-employment (in Poland there are approx. 3 million sole proprietorship businesses, which constitute approx. 20% of the labour market, a figure similar to many other countries). The specific program of implementation of WHO plans could benefit from the inclusion of the issue of work addiction.

One of the recent theoretical advancements is a postulate that work addiction may develop during school education and undergraduate studies and pertain to compulsive school work/studying (P.A. Atroszko 2013, 2015; B. Atroszko, P.A. Atroszko 2013; P.A. Atroszko *et al.* 2015; Griffiths, Demetrovics, P.A. Atroszko 2018). It is consistent with the findings that addictions generally develop in adolescence. Differentiation of study addiction as a specific research area is of great significance for three primary reasons. First, it accounts for the specific compulsive need to perform work-related behaviours in relation to studying (and functioning of education systems), which may show certain differences compared to the population of professionally working individuals. For example, research clearly shows a higher prevalence of study addiction among female students (e.g., over three times more frequent among female secondary school pupils) than male students (P.A. Atroszko 2015; Wróbel 2020). Such pronounced differences are not observed in the professionally working population. Second, the validity of the measurement of study

addiction with the use of tools for work addiction is limited. Hence, it was necessary to create valid and reliable measurement tools reflecting the specific process of studying (P.A. Atroszko 2015; P.A. Atroszko *et al.* 2015; Wróbel 2020). Third, effective prevention of this phenomenon requires preventive programs at the population level, accounting for the needs of young people and their specific functioning in the education system. Therapeutic interventions should also consider factors related to the developmental period of life of young people experiencing negative consequences of compulsive overworking.

In this context, a special problem that the WHO has not distinctly identified is the role of education systems. They may be a source of risk factors of compulsive overwork on the macro level (e.g., the policy of standardised tests and emphasis on narrowly-understood educational success, the general culture of competition) and the meso level (e.g., class climate, learning styles, school management), contributing to study addiction (cf. P.A. Atroszko, Demetrovics, Griffiths 2020). Early prevention is probably one of the best practices for limiting the harm that results from this problematic behaviour.

Study Addiction: Current Status of Knowledge

Study addiction has been formally defined in the scientific literature only recently, and the process of its strict conceptualisation is ongoing in the clinical literature (P.A. Atroszko 2013, 2015, 2018, 2019a; B. Atroszko, P.A. Atroszko 2013; Wróbel 2020). However, compulsive and excessive studying understood *implicite* as a form of work addiction has been investigated among students for almost thirty years, primarily as part of the validation studies of psychometric tools used to measure work addiction (P.A. Atroszko 2010; Chamberlin, Zhang 2009; Robinson 1999; Spence, Robbins 1992; Sussman *et al.* 2014; Sussman *et al.* 2015; Tsai *et al.* 2016; Villella *et al.* 2011). Study addiction is conceptualised as an early form of work addiction (P.A. Atroszko 2015, 2018, 2019a; P.A. Atroszko *et al.* 2015; Griffiths, Demetrovics, P.A. Atroszko 2018). Hence, it may be defined analogously:

Study addiction is characterized by a compulsion to study and preoccupation with study activities leading to a significant harm and distress of a functionally impairing nature to the individual and/or other significantly relevant relationships (friends, family). The behaviour is characterized by the loss of control over the studying activity and persists over a significant period of time. This problematic study related behaviour can have varying intensity from mild to severe (P.A. Atroszko, Sawicki, Kamble 2019: 2).

Longitudinal studies confirmed the relationship between study addiction and work addiction after graduation and the initiation of professional work (P.A. Atroszko

et al. 2016a) and similar temporal stability of both phenomena (P.A. Atroszko *et al.* 2016b). Both of them display seven main symptoms of addiction (salience, mood modification, withdrawal, tolerance, relapse, internal and external conflicts, as well as health problems and other problems related to functioning), and are related to a greater preoccupation with a given activity (study/work) and longer time devoted to it, key personality features (higher neuroticism and conscientiousness, as well as Type A Personality), lower level performance, deterioration of general health, reduced quality of life, sleeping problems and higher perceived stress (P.A. Atroszko 2015; P.A. Atroszko *et al.* 2015; P.A. Atroszko, B. Atroszko 2019; P.A. Atroszko *et al.* 2019; Lawendowski *et al.* 2019).

Research on the prevalence of study addiction relying on methodology analogous to that of research on work addiction has shown that it was 6.4% among Polish students in a convenience sample gathered during university classes and 14.2% in an online sample in Poland, and 9.7% in Norway (P.A. Atroszko 2015). In the population of students of Polish music academies, who are particularly vulnerable on account of their high level of perfectionism and frequently limited social support, the prevalence was 16% (Lewandowski *et al.* 2019). Among students of Polish secondary schools, it was 15.4% (Wróbel 2020), while in secondary schools in India, it was 7% (Bisht, Godiyal 2018).

Various frameworks enable differentiation between healthy and unhealthy engagement in a specific behaviour (e.g., Vallerand 2015). Yet it must be emphasised that study addiction fits well into the diagnostic criteria of a behavioural addiction. Phenomenologically, it manifests as compulsive behaviour, shows relationships with impaired functioning, and remains stable in time. These are some of the key criteria for differentiating mental disorders from healthy forms of behaviour or temporary problems (cf. P.A. Atroszko 2019ab; P.A. Atroszko, Griffiths 2017; Griffiths, Demetrovics, P.A. Atroszko 2018; P.A. Atroszko, Demetrovics, Griffiths 2019). It was suggested that study addiction may be a specific form of obsessive-compulsive disorder (Loscalzo, Giannini 2018ab). However, after an in-depth analysis of these suggestions, it was shown that the data seem more consistent with the model where obsessive-compulsiveness underlies some (but not all) symptoms of work/study addiction. It was initially proposed that some forms of OCPD may be reclassified as work/study addiction (P.A. Atroszko 2018, 2019ab; P.A. Atroszko, Demetrovics, Griffiths 2019). However, more studies are necessary to understand this problematic behaviour's nature and its various forms and basic risk factors.

Study Addiction as an Ineffective Stress-Coping Strategy

Study addiction is conceptualised as ineffective stress coping strategy whose intended (but not achieved) goal is to satisfy students' basic needs (P.A. Atroszko 2015).

The proposed theoretical model was initially validated in extensive and systematic cross-cultural studies (P.A. Atroszko 2015, 2018, 2019a; Lawendowski *et al.* 2019). It assumes a unique interaction between temperamental and personality dispositions (e.g., high tendency to experience negative feelings; high conscientiousness) and early experiences in the family and social environment that may have caused low self-esteem, a sense of inadequacy and unsatisfied basic psychological needs (e.g., autonomy, competence, a sense of belonging; Deci, Ryan 2000). Furthermore, these risk factors may first contribute to the development of other disorders, such as SAD, ADHD, or OCPD (P.A. Atroszko 2018, 2019ab). Hence, study addiction may be compensatory behaviour for coping with these as well as other disorders and behavioural and emotional problems. This model is still being developed and refined (cf. P.A. Atroszko, Lawendowski 2020; Wróbel 2020). Through social learning and the impact of cultural standards and values, vulnerable individuals may develop a conviction that hard work leads to success, ensuring sympathy and respect of others, thus satisfying the need for relationships with other people and belonging. Also, the needs for autonomy and competence may be satisfied as part of activities related to the process of studying. The model also assumes that persons prone to study addiction grow up in environments that do not develop effective ways of coping with stress and personal problems, for example, by social support, especially a loving and accepting family atmosphere or re-evaluation of a difficult situation. Parents of such persons are frequently addicted to work or have other addictions. At the same time, they show perfectionistic expectations with respect to their children or are over-protective towards them. Robinson (2014) has systematically studied family dynamics in work addiction since the 1990s and has shown, among others, that work addiction may be compensatory behaviour in response to a chaotic home environment.

High conscientiousness, which is a distinctive feature of persons who are addicted to studying, in the initial stages may allow them to take steps aimed at accomplishing better results in studies. Good grades, praise from teachers and parents, scholarships and prizes, admiration of peers, or simply satisfaction with mastering the material or skills are some of the positive reinforcements which initially make studying pleasurable and satisfactory. What is more, studying is immensely engaging cognitively and may be a way to escape negative emotions caused by unsolved personal problems. It has found substantiation in studies showing that among components of engagement, absorption (it refers to full concentration and happiness while engrossed in studying, when time passes quickly and it is difficult to disengage from the activity) is most closely associated to study addiction (cf. P.A. Atroszko, B. Atroszko 2019; Loscalzo, Giannini 2020). Yet with time, unsolved problems accumulate and contribute to an increase in the level of experienced stress. The initial positive emotions fade away and are replaced by negative feelings of anxiety and irritation when a person tries to stop studying (P.A. Atroszko 2015).

Over time, studying becomes the only source for satisfying needs for autonomy, competence, and relatedness. Fixation on this single area of life and a strong need to be successful in it leads to additional stress, as the lack of accomplishment entails total failure and undermined self-esteem. Hence, studying ceases to be a pleasant activity and becomes an uncontrolled compulsion because a person has to study to confirm his/her value, and no alternative ways to satisfy these three needs have been developed. Compulsion leads to further disregard for other spheres of life, especially relations with family and friends, as well as neglect of health problems due to excessive effort put into studying. Furthermore, studying as such does not bring benefits proportional to the effort made. Fear of loss of sympathy and respect as a result of showing incompetence by making mistakes causes the person to be overly focused on insignificant details and devote too much time to managing them. Consequently, it creates a disparity between effort and unsatisfactory results, which causes additional stress.

In the context of this model and the subject matter of this paper, the results of studies indicating that study addiction is related to relatively lower socioeconomic status are very important (P.A. Atroszko 2013; B. Atroszko, P.A. Atroszko 2013). It is consistent with the expectation that conscientious and hard-working persons, in the face of a relatively worse – in comparison to other people – socioeconomic situation, would make correspondingly greater efforts to change their social and material status. It seems to be a natural and principally positive phenomenon. At the same time, the threat lies in the complete subordination of life to a single goal, which may potentially be a source of new problems in the long term.

Relationship Between Study Addiction and Study Engagement

One of the key concepts necessary to understand the process of studying and student behaviour is 'study engagement.' It is defined as a multi-dimensional construct and has multiple conceptualisations. Nevertheless, the components common for the majority of theoretical approaches describe positive emotions related to studying, identification with the activity, readiness to invest a significant amount of time and effort in it, and a high level of concentration during studying (Appleton, Christenson, Furlong 2008; Schaufeli, Salanova *et al.* 2002).

One of the conceptualisations relies on a model of work engagement and encompasses three dimensions: 1) vigour (willingness to invest a significant amount of time and effort in studying and associated mental resilience), 2) dedication (a sense of purpose, excitement, and pride experienced in relation to studying) and 3) absorption (strong focus and being completely engrossed in learning, so that time passes quickly and it is difficult to disengage from this activity; Schaufeli, Martinez *et al.* 2002; Schaufeli, Salanova *et al.* 2002). Studies on this conceptual-

isation showed that work addiction and high engagement in work differ in terms of determinants and consequences. Despite it, there are some common features encompassing significant time and effort devoted to the activity (Clark *et al.* 2016; Di Stefano, Gaudiino 2019). There is an overall consensus that work addiction is a different phenomenon than engagement in work. However, more studies are needed to specify in detail when engagement becomes excessive and detrimental, transforming into addiction (P.A. Atroszko, Demetrovics, Griffiths 2019; Di Stefano, Gaudiino 2019).

The conceptualisation of the relationship between study engagement and study addiction is based on theoretical postulates and empirical findings concerning the association between work addiction and engagement (P.A. Atroszko 2015, 2018). It assumes common elements in the form of considerable time and effort put into studying. On the other hand, it specifies different regulatory mechanisms (engagement is related to a sustainable lifestyle and positive emotions, while addiction is determined by obsession and study compulsion and negative emotions related to it) and determinants and consequences. All previous studies have shown that study addiction is positively related to study engagement, as the significant amount of time and effort put into them is their common feature (P.A. Atroszko 2015; P.A. Atroszko, B. Atroszko 2019; P.A. Atroszko, Sawicki, Kamble 2019; P.A. Atroszko *et al.* 2015; Lawendowski *et al.* 2019; Wróbel 2020). Moreover, an in-depth analysis of the relationship between the dimensions of study engagement and study addiction has shown that the absorption component was most clearly related to addiction (P.A. Atroszko, B. Atroszko 2019; Loscalzo, Giannini 2020).

Given this common component, it is of great importance to separate the effects of healthy and pathological commitment when investigating a high level of effort and/or time put into studying. In other words, the negative effects of addiction must be set apart from the positive effects of engagement. Otherwise, the results of studies may be biased and misleading, suggesting that engagement may have negative consequences and addiction may lead to positive effects. For example, some studies seem to show that study addiction may be positively related to academic performance measured by a higher grade point average (P.A. Atroszko 2015; P.A. Atroszko *et al.* 2015). However, when students' engagement in studying is controlled, study addiction always shows a negative or no relation with the grade point average (P.A. Atroszko 2015; P.A. Atroszko *et al.* 2015; Lawendowski *et al.* 2019; Wróbel 2020). Another example refers to the study which showed a positive correlation between the component of study engagement and the component of competitiveness from Type A Personality, which is related to the risk of cardiovascular disease (P.A. Atroszko, B. Atroszko 2019). This association was not significant when study addiction was included in the regression model.

In light of our knowledge, currently, almost none of the studies on study engagement carried out around the world take into account this key distinction,

which makes the interpretation of results highly problematic. Improvement of education of young people and development of positive attitudes to studying seem impossible as long as teachers, psychologists, and psychiatrists, as well as legislators, will not differentiate between healthy study engagement and pathological study compulsion.

Conclusions

There is no doubt that strong educational pressures are related to students' stress and mental health disorders. This phenomenon reflects a more general tendency to focus on narrowly-defined productivity and economic success on the level of the entire population, which may result in excessive pressure, both in the work environment and the education system. Addictions are closely related to ineffective coping with excessive stress. On the one hand, many students may develop mental disorders due to educational failures. On the other hand, an inappropriate approach of education systems to such phenomena as, for example, dyslexia, ADHD, or social anxiety may result in school failures, including school dropout, and in the future, may lead to unemployment, job instability, homelessness, and crime. This group of problems may be collectively classified as failure to adapt to the system of education and subsequently to the labour market organisation. A separate category of problems encompasses the situation of people who make excessive efforts, striving for adaptation and success in the existing system of education and work at the cost of physical and mental health and – paradoxically – productivity. These are often individuals with ADHD, social anxiety, and other mental health problems, as well as from environments with a low socioeconomic status, which indicates a compensatory role of these efforts. Such persons are characterised by a compulsive relation to learning and work-related activities, conceptualised as addiction. These problems generate huge individual, social, and economic costs. A practical implication of these conclusions is the necessity of reforming the education system and the organisation of the labour market (e.g., improvement of employment conditions, including stability and proper remuneration), not only to reduce human suffering but also to improve social functioning, including reduction of costs of social and medical care, as well as economic productivity. Depression, caused by work-related stress, costs the European Union countries approx. EUR 617 billion annually (Hasard *et al.* 2014: 7). This is more than Poland's gross domestic product. The cost of depression in Poland exceeds PLN 1 billion annually, most of which is the cost of absenteeism from work (Gałązka-Sobotka 2014). Other costs refer, among others, to somatic diseases (cardiovascular, muscle and skeletal system-related, diabetes, etc.), as well as immeasurable indirect expenses, such as those related to mental disorders of children of people experiencing depression, other mental disorders, and diseases

resulting from occupational stress. These data suggest that our understanding of productivity requires serious reflection and review. The first step in this direction may be accepting the fact that hard work and diligence in studying, so much valued by us, may also have its negative side and may be not only a solution to the existing problems but also a source of new ones.

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Summary

Educational Pressure and Development of Study Addiction, Work Addiction and Other Disorders

Educational pressure and the development of study addiction, work addiction and other disorders The article presents the relationships between the pressure on school and aca-

demic achievements felt by pupils and students with the development of study addiction, work addiction and the progression of other mental disorders and phenomena from the area of psychopathology (such as suicide). The current state of knowledge on work addiction and study addiction was analyzed, and the similarities and differences between engagement in an activity (work or study) and addiction to this activity were discussed. In particular, the theoretical and practical importance of the conceptualization of the problems of the deteriorating mental health of the young generation in terms of addiction to work and study, as well as their relation to the obsession with socioeconomic success was presented.

Keywords

educational pressure, psychopathology, school stress, study addiction, work addiction

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