Stress, Studying and Adjustment Problems

Edyta Dembińska, MD-PhD

Faculty of Psychotherapy of the Jagiellonian University Medical College

What is stress?

There is no one single definition of stress. The term is applied both in natural sciences and in psychology. Generally speaking, stress is the reaction of a human (as well as animal) body to various external and internal factors. Very diverse in their nature, these factors are called stressors and may be divided into two groups: physical and psychological.

According to one definition, stress is a combination of related processes that occur in a body in a general response to special, difficult, disturbing, threatening, unpleasant or harmful stimuli or situations called stressors. Psychological stress is defined by Lazarus as a special kind of a relationship between man and the environment that man sees as overwhelming or exceeding his or her resources and threatening his or her well-being.

Situations causing psychological stress include physical danger such as natural disasters (e.g. floods or earthquakes), risky sports or accidents and social situations that threaten the values and needs of social nature, adhered to or required by man (e.g. the death of a spouse, the loss of a job, the need to emigrate). Stress is caused not by negative experiences only. Psychologists Holmes and Rahe discovered that a stress reaction might also be triggered by life events with a potentially positive impact, such as entering into marriage, reconciliation with a partner, achievement of personal aims, school or university graduation or even holidays. In other words, a stressful factor is not just what we see as wrong or unpleasant but also what triggers a strong positive emotional reaction.

Stress is non-specific, which means that, regardless of the factor (stressor) that caused it, its fundamental mechanism is the same and the stress reaction sweeps through the entire body. Various mechanisms within our bodies are activated to increase its readiness to intense physical and psychological activity. The intensity of the physiological stress reaction matches its causes and wears down when it ceases

to be necessary. From the biological perspective, what is characteristic for the stress reaction is the activation of the glands secreting the so-called stress hormones. This network of related endocrine glands is called hypothalamic-pituitary-adrenal axis. Its activation leads to increased secretion of cortisol and adrenaline, also activated by the sympathetic nervous system innervating body organs, which is why the adrenaline level rises, too. Higher concentration of these substances causes changes that enable humans to take up greater and more effective efforts. It increases blood glucose concentration, blood vessels in muscles and the brain become dilated, heart rate accelerates, blood pressure rises, breathing becomes faster and blood coagulability increases. The central nervous system becomes activated, which improves the effectiveness of cognitive and motor functions. Functions that are unimportant for the body at this moment are suppressed. Concluding, stress is a defence mechanism developed by the human body in order to protect us against danger and enable us effective functioning. It enables full resource mobilisation in the face of danger, which makes us overcome our own limitations: we can run faster than usual and analyse the situation better. The stress reaction prepares our mind and body to immediate action. The release of stress hormones triggers a series of reactions in our bodies, which make us exceed our abilities. This is why some people prefer to work under pressure. They can think faster and function more effectively. This kind of stress, which works as a driving engine stimulating us, providing satisfaction, making us happy with what we have done and achieved, is called positive stress or eustress.

Positive and negative stress

For a long time now scientists have been looking for the qualities that differentiate positive stress, i.e. the one that enables us to solve problems effectively, from destructive stress, which often prevents us from acting. It is considered that short-term stress usually has positive impact (adaptational) while chronic stress is negative. Extended or excessively intense stress reaction is no longer an adaptational reaction and it has a negative impact on the body. It causes damage and triggers pathological processes. Long-term activation of the hypothalamic-pituitary-adrenal axis, the autonomic nervous system and other stress centres leads to negative effects. Resistance is reduced, cholesterol concentration rises, hypertension is maintained, memory is weakened, moods are down, fear and sleep difficulties arise, and appetite decreases. All this causes unpleasant physical symptoms and leads to the exhaustion of the body resources and, in the long term,

various illnesses. Permanent stress takes its toll both on our mind and body. Its results might include permanent fatigue, apathy, irritation, weaker concentration ability. The activity of the resistance system in the human body exposed to long-term stressors is reduced, which is why it becomes susceptible to infections. It may also experience problems with the functioning of the circulation, respiratory and digestive system.

Therefore, it may be assumed that only short-term stress is beneficial. This is when our bodies work at their full capacity, but they need to recuperate after some time. During the stress reaction the body taps into the resources in store, energy reserves, its chemical and emotional potential. After each mobilisation the body is exhausted and requires rest and recuperation.

The most common situations when we have to deal with long-term stress are the ones when we are unable to eliminate the on-going stressful situation. It may also occur when stressful situations repeat very often and are hard to solve. There is evidence that there are also other differences between positive stress (eustress) and negative stress (distress): positive stress occurs in the situations over which, in our opinion, we have control. Destructive stress occurs when we lose control over events. Everything seems to depend on cognitive assessment, i.e. on the sense that we apply to stress.

Individual differences in response to stress

Not everyone reacts in the same way to similar events as it may depend on the person's individual susceptibility to stress. Even the weakest stimulus may trigger a stress reaction in man. Therefore it is not the force of the stimulus but its importance for a given person that determines whether something is stressful for us. People differ as to what they consider stressful. For one person, this might be a visit to the dentist, for another, the loss of someone dear.

Despite the fact that, from the physiological perspective, the stress reaction in all humans occurs by activating the pituitary gland, the behaviour and emotions of persons exposed to stress or their psychological response to stress may be very diverse. There are people who cry or shout, others have some physical symptoms, headaches or indigestion, some abuse psychoactive substances (alcohol, drugs). There are people who clam up while others cannot stop talking. There are also persons who do not demonstrate any signs of being under pressure. According to researchers, stress triggers three types of reactions: adaptational processes (general mobilisation, a specific reaction focused on combating stress, letting off steam in controlled forms), defensive reactions (fight, flight, changes in the perception and interpretation of reality) and destructive reactions (disturbances of cognitive processes, activity, uncontrolled emotional reactions). Depending on what kind of a reaction is dominant at a given moment in a given person, the response observed might be different.

Both stress and the factors that cause it cannot be eliminated from our lives but they may be minimised. We can make sure that our reaction to stress is a "healthy" one, i.e. adaptational. The first step is to find out what your reaction to stress is like, i.e. understand what causes it and how you react. When you find out what your reactions are, it will be easier to control them. From the psychological and social perspective, it is important to think about the situation causing stress: you need to identify it and think what you can do to change it as well as make sure you receive social support from your family and friends. From the perspective of our physiology, it is important to reduce the physical symptoms of stress by learning about various methods of relaxation, taking care of your sleep and balanced diet. It must be remembered that there is no ideal way of dealing with stress. The effectiveness of a method depends on the source of stress, the level of experiencing it and the qualities of a given individual such as his or her previous experiences, knowledge, intelligence or temperament. Everyone needs to find their own way of dealing with stress.

One may wonder why it is so important to make sure that the stress we experience does not become destructive. It has been observed that chronic stress may contribute to the development, maintaining or worsening of the course of many physical and mental illnesses. This applies to cardiovascular conditions, gastric problems, greater risk of infection, asthma, psoriasis as well as some mental health problems such as depression, anxiety disorders and psychosis associated with schizophrenia. It has long been common knowledge that is it better to prevent diseases than to treat them. This is why learning about the methods of dealing with stress and finding those that are the best for us is a long-term investment in our health.

Study-related stress

In a popular view, a student's life does not include many situations causing stress. Studies are rather associated with a lot of free time, parties and few responsibilities. Most people think that stress factors in a student's life accumulate only twice a year, during exams at the end of each semester. In fact, exams or tests are among many stressors that students need to deal with. Every day, they encounter numerous problems related to studying itself and other life problems such as financial difficulties, housing or family problems or the insufficient system of social support.

How to deal with exam stress

We already know that a little stress is indispensible to deal with any challenge, which includes exams. Stress increases the activity of our central nervous system so we can react, take in and process information faster. Moderate stress improves memory and concentration. We can learn faster and better deal with solving problems.

Unfortunately, stress is our ally only when it is not too intense and continues for a short period of time. If it lasts longer, i.e. we begin to feel it already a month before the exam, then, unfortunately, after the period of mobilisation, the next phase is exhaustion. We start to panic, each task seems difficult and impossible to solve. We are confirmed in our belief that we are not able to learn anything yet. If this anxiety is not tamed and we fail to return to the phase of mobilisation, other symptoms of the exhaustion phase appear, such as problems with memory, thinking and concentration, loss of rational thinking and problems with the association of facts. Just when we start to imagine the exam, we experience various physical and psychological symptoms such as a dry throat, accelerated pulse, trembling of hands, anxiety and tension.

Everyone deals with stress in a different way and uses different strategies to minimise it. The list below includes a number of suggestions how to deal with stress before the exam so that it does not become destructive. These strategies may turn out to be more or less suitable for you. Try out the ones you have never thought about so far.

- Do not think about a good result but about how you can achieve it.
- Plan your work: divide the material into large modules first, and then into smaller parts. Plan for sufficiently long breaks in between them. In this way, if you are slightly delayed studying one part of the material, you will

manage to learn the next one as planned. The plan will enable you to have a feeling of control over your studying.

- When studying, underline the important information so that you can easily go back to it. Make notes, the best are atypical graphic notes to involve both hemispheres of your brain.
- When reviewing the material, try to use the techniques that facilitate memorizing, i.e. when studying the structure of the heart imagine yourself that you are travelling in it observing the ventricles, the atria and the aorta.
- Beware of "over studying": make breaks while studying, after 3 hours of constant cramming your remembering skills deteriorate and you have problems with concentration.
- Do not forget relaxation: if your anxiety and nervousness arises, stop studying for a while. Do some physical exercise, listen to music that usually relaxes you, take a bath or a massage. Meet friends or go to the cinema. You can also learn more professional relaxation techniques, e.g. various breathing exercises or imagination techniques.
- Do not forget about physical effort: exercise is our ally that enables us to release mental tension. It does not matter what discipline you choose, just a walk, a bike ride or a swim will do. The most important is that exercise makes you feel good.
- Do not forget about the sufficient amount of sleep: try to sleep 6-8 hours per day. It is essential because your body and the central nervous system in particular recuperate at night. Also, what you have learnt on that day becomes reinforced.
- Remember about the balanced diet: eat fruit and vegetables, drink a lot of fluids because your brain needs fuel while you are studying. Eat products rich in, above all, vitamin B and magnesium, potassium and calcium, which are necessary for the nervous system to work. Do not exaggerate with caffeine or other stimulants because they increase the depletion of vitamin B12, B6 and magnesium, which reduces your body's resistance to stress.
- Do not infect others with anxiety: avoid those who panic, especially when you are studying in a group. Study together with others only until the moment facts are discussed and stop when other people start to panic. It is better to take a break at that moment instead of participating in collective winding-up.
- Do not compare yourself to others: the fact that your friend reviews the material for the fourth time or started studying much earlier does not mean

that you will be much worse prepared. Everyone should study at their own pace.

- Find out about the details of the exam beforehand: where and when it will take place, how many questions you will receive, whether you will have time to prepare answers. The more you know about it, the smaller the chance that something will surprise you and the feeling that you have full control over the course of events will enable you to stay calm during the exam.
- The day before the exam, remember to prepare all the things you need the next day. Stop studying and spend a relaxing day outside, in nice company. Get enough sleep.
- Take care of your image and outfit: prepare a few different outfits for different weather the day before. The way you look is extremely important, if you are pleased with it, your self-esteem and self-confidence will automatically go up.
- Avoid parties just before the exam, if you pass, you will celebrate and enjoy yourself. An all-night party with alcohol the day before the exam is a self-defeating strategy, you will not be in a good shape on the next day and your chances of success are much smaller.
- Eat something before leaving home but do not overindulge yourself. Both an empty stomach and the one that is too full will be your enemy on that day.
- Do not panic just before the exam. This is a typical pre-exam symptom when you think that you know nothing five minutes before entering the room while others around you are excellently prepared. Remember that most people feel this way. Do not listen to other students, they may say different things, but they are just as scared as you.
- Think positive: remember about your strengths, after all you have already passed many exams in your life. Focus on what you have learnt, not on what you do not know.

During the exam

- Do not think about grades, focus on the task: think you can do it or solve it best.
- If you received questions to which you do not quite know the answers, do not panic. Remember that you have been a student for a while, you have extensive knowledge and there is a good chance that you know the answers but you temporarily lost access to them.

- First, deal with the questions/tasks that you know how to answer/solve and leave the more complex ones or the ones you are not sure of until the end.
- Remember about breathing! It sounds little inventive but some of us practically stop breathing in a stressful situation and do not know that in this way they limit their oxygen intake and thus intellectual resources.

Stress related to the end-of-semester exams happens only twice a year but just like any other stress reaction, it may become a reason for the intensification of the existing physical and mental health problems. Exams, however, are not the only stressors that occur in a student's life. There are so many potentially stressful situations that it would be hard to describe them all.

Becoming a student entails both joy and stress

You went to study your dream specialisation at a university in a big city. You are excited about your new place to live, new friends, your first independent decisions and leaving your family home. You see university study as the fulfilment of all your dreams. But in fact, the start of university study is not just a streak of pleasures.

In the late 1960s two American researchers, Thomas Holmes and Richard Rahe, developed a questionnaire about stressful life events. The list also included such situations as the beginning of university study, the change of living conditions, the change of personal habits, the change of a place of living, the change of the frequency of family meetings, the achievement of personal aims, the change of responsibilities and the change of the way of resting. The total amount of stress units related to these events is 186, which, according to the authors of the questionnaire, means there is a 40% higher risk of developing a stress-related illness. Thus, it comes as no surprise that the first year of university in an alien city may be a cause of intense stress and bring both mental and physical health problems.

It is not an easy task to list the most important sources of stress related to the start of university study because these will be different situations for each student. First of all, stress will be related to the need to adapt to the new life situation of starting a more independent life and making many decisions. People who leave their family homes and go to completely new places will have greater difficulties. Finding your own place in new surroundings will definitely take some time, in particular, if you have left a small town to move to a busy and bustling metropolis. The life of a university student is different than the life of a secondary school student as you are required to demonstrate greater independence and know your way around what is often a complex university structure. Leaving a family home and moving in with people you do not know will also become a source of new challenges, just like the need to manage your own budget. The feeling of loneliness, which accompanies you when you leave your old place of residence and old friends, may increase psychological difficulties caused by the need to adapt to a new place. How to deal with a new situation such as starting university and what situations may be difficult for freshmen?

Finding your own place in an unfamiliar environment

If you start university in a city that is completely alien to you, this situation may be the cause of anxiety for you and the source of the feeling of being lost. In this kind of a situation it is good to come to a new place of residence a few days before your classes begin and find out more about your whereabouts. During these few free days you will have the time to find out about how to get to university and where the canteen or the library is. When you know how to get to the places that are important for you and how much time it takes, you will avoid unnecessary anxiety in the first days of study. You may also take this time to walk around the city itself and become familiar with it, find places where you can rest (e.g. a park, swimming pool or cinema) or do shopping.

As a freshman you do not know yet how your university and its administration work. If you know someone who is studying here, ask him or her about what should be remembered and what to expect. Usually, at the beginning of your first year as a student, you will have to meet a variety of formal requirements and collect various documents, e.g. your student's ID which entitles you to discounted rates. Do not forget about it.

Finding a safe harbour

You will have to find a place to stay in a new city. Fortunately, university towns offer many flats or rooms to rent as well as places in traditional dormitories. The place where you will live for the next year or even longer is very important. It will be your safe harbour where you will study, rest or, possibly, meet friends. It should be close to the university so that you do not spend too much time commuting. The selection of the right place, if you decide to live outside the dormitory, may take some time, which is why you should start looking sufficiently early, at least one month before the start of your classes. Do not pick the first place you will see. Take your time and consider a few offers. Make a list of their advantages and disadvantages. Pick the one that has the most advantages.

Usually, life in a students' flat means that you have to go on well with your flatmates. If you go to university in an alien city and have no friends you could live with, you are most likely to end up with complete strangers. Every day contacts with them may be a source of potential conflicts. This is why it is good to arrange such matters as your share in the rent, the amount paid for utilities and the division of chores (e.g. how often you will have to clean the bathroom or the kitchen if this is your common space) at the very start. Even after you agree on some rules governing your life together, it may turn out that the life with people whose habits are different from yours may be a source of conflicts. This will be a test of your adaptability to new living conditions as well as your ability to get on well with others and negotiate.

Surviving until the end of the month

Starting university and leaving home to go to another city is often the first step towards independence, also with regard to making decisions about your own expenses. Maybe, for the first time in your life, you will be deciding how much funds you spend and what you spend them on. Financial difficulties might be yet another source of stress in a student's life, which is why you should be cautious planning your budget in the first few months and record all your expenses in a notebook or computer. Even apparently small sums (a notebook, sandwich or donut) spent often may become the reason for a large gap in your budget. To practice, try to estimate the amount on the bill before you enter the supermarket. When you arrive at the cash register, check if it was higher than your forecast. Avoid borrowing money because it may be a source of problems in the future. Think in a long-term perspective and consider whether a given purchase is currently necessary or whether you may wait with it. Always have an "emergency fund". In this way you will avoid the stress related to unexpected expenses. Usually, after a few months you will find out how much money you need to live from the first until the last day of the month and you will be able to plan your expenses in a more flexible way. You might also want to find a parttime employment to make what is missing in your budget. Balancing work and study

may also become a source of potential stress. This problem, in particular, affects the students of weekend programmes or those who are unable to obtain financial support from their families and have to cover their expenses themselves.

Studying is not all, there is also leisure

Being a student is not all about studying, you also need leisure time and entertainment, which will help your body to better deal with challenges. Make sure that you can find the time and opportunities to continue your passions pursued so far. Do not forget about walks or other forms of physical exercise. Large university cities usually have a lot to offer in terms of spending your free time. It is good to take care of it from the very start of your studies. Consider joining a students' special interest club, sports team or students' organisation as they are active at most universities. In this way you will be able to develop your passions and, at the same time, meet people with interests similar to yours.

In good company

The time of being a student is usually associated with entertainment, good company and partying, but, in fact, having a group of good friends has yet another dimension. Having close relationships with other people, being able to talk openly about your problems or just spend good time together is the condition of our psychological wellbeing. It is especially important in the time of increased psychological tension such as the first year of university. This is why you should make sure to have company from the very start. If you are a person who has difficulty with making new friends easily, try to stay in touch with your old friends. Find a place where you will be able to pursue your passions (a sports club, discussion club or language school) because you may meet new people whose interests and way of thinking is similar to yours, which will facilitate making friendships.

What if this is not enough?

You are a first year student, you deal with many problems every day and can feel that the pressure related to it slowly starts to overwhelm you. Despite your best efforts you are unable to relax, you are sad and worry that you will not manage, possibly, you find it difficult to focus on studying and planning the coming days, you cannot sleep either and maybe you have suicidal thoughts.

You might be suffering from an illness classified as an adjustment disorder. This disorder is characterised by states of subjective tension and emotional difficulties that arise during the period of adjusting to serious life changes, i.e. when starting university. Causes of an adjustment disorder may also include other life changes such as the death of a close person, the birth of a child, the loss of work, emigration, a failure in the achievement of an important personal aim, the loss of the group of friends one has had so far. Depending on the individual's susceptibility to stress, the risk of an adjustment disorder may increase. It is common among the general population with the incidence of as much as 20%. Symptoms may vary. They include emotional symptoms such as sadness, helplessness, inability to experience pleasure, outbursts of crying, anxiety, fear, concerns, problems with sleep, appetite loss, problems with concentration, the feeling of being overwhelmed by the situation, the loss of motivation to action, suicide thoughts and conduct disorder symptoms, which include: picking up fights, avoiding family and friends, ignoring bills to be paid, reckless driving, limited ability to perform everyday duties, playing truant and vandalism. Conduct disorder symptoms are the dominant among youth and children. The most common are a low mood (sadness) or anxiety, sometimes both at the same time.

Experiencing these problems is not a reason for embarrassment or hiding your condition, they may affect everyone who is in a difficult life situation and exposed to extended stress. These symptoms usually appear up to a month after the change of the life situation or the occurrence of a stressful situation and disappear within 6 months. An adjustment disorder often subsides without any psychiatric or psychological intervention. But if the symptoms are severe, they persist and disrupt the person's functioning, a short-term therapeutic intervention might be required. If you feel that the situation overwhelms you and you cannot fulfil your responsibilities at university, you have suicide thoughts, do not hesitate to contact a psychological centre.

Assistance is provided, above all, in the form of a short-term therapy with an aim to solve problems that caused the loss of psychological balance or to adjust to the new life situation. The therapist will help you to identify how you cope with stress and learn to use your psychological resources in dealing with problems. You might need to learn more effective methods of coping with stress, including relaxation techniques. The treatment might involve temporary use of medications, most often

anti-depressants. Of course, drugs will not solve your problems but you will feel better and it will be easier for you to cope with stressful situations. The treatment of adjustment disorders is usually short, enables you to return to the optimal level of functioning quickly and, primarily, prevents the negative effects of long-term stress and enables you to better deal with it in the future.