MAMMOTH MAGAZINE

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The Centre for Studies on Human Stress is dedicated to improving the physical and mental health of individuals by empowering them with scientifically grounded information about the effects of stress on the brain and body.

Youths… the Keys to Changing MENTAL-ities!

By Robert-Paul Juster & Marie-France Marin

The scholastic season is back in full force. Quite understandably, this means that many children are excited to return to class and discover new things, while others are utterly petrified of what the new scholastic year has to offer or unravel. Charlotte, 14 years old, is in crutches following a bike accident this summer. Furthermore, she has just arrived into a new neighborhood and is a little stressed by the impending return to school. All the same, she is confident that she will most likely make new friends, even if she cannot follow them around easily, given her temporary handicap.

On the other hand, things are a little different for Mark who is also 14 years old. He too did not have a particularly pleasant summer since he learnt, after much confusion and conflict, that he suffers from a mental illness — social anxiety disorder. Should he tell his friends why they have not heard from him? He dreads their reactions and fears being rejected and teased. Truth is, Mark might be sitting next to someone in class also suffering from a psychological difficulty without even knowing it. Indeed, one in five will experience a mental disorder at some point in their lives, so why stay silent?

Mental health is still a particularly taboo subject for society and this reality is not necessarily made any more encouraging or easy for the young who soak up information like sponges. As you probably know, one of the objectives of the Centre for Studies on Human Stress is to transmit scientific knowledge to the public. By informing people, we believe that we can contribute to the demystification of stress and mental disorders, and in so doing, help individuals and those close by to better live with this reality. That is why this issue of *Mammoth Magazine* is entirely devoted to the topic of mental health in the young.

Some may ask why this particular age group is important for preventing mental health disorders. Several problematic elements that contribute to the emergence of mental illnesses surface in adolescence. In fact, adolescence represents a period whereby youths are vulnerable and stress is a big player in shaping our brains. We must understand that mental disorders originate from the brain, which is still developing during adolescence. The frontal lobes, a region at the front of the skull and quite well developed in humans compared to other species, is in fact the last to mature and continues to develop until adulthood. This region plays an essential role in cognitive processes, personality, and helps us understand one another.

Youths… the Keys to Changing MENTAL-ities!

Additionally, whoever thinks of adolescence imagines growth spurts and raging hormones, many of which strongly and potently affect brain functioning. When hormones get out of whack, they can mess up loads of biological functions in an unhealthy manner. While hormones are secreted naturally and in abundance during adolescence, inherent vulnerabilities in the genetic code that determines how hormones are manufactured inside us can go wrong.

Moreover, hormones can affect sleep, which is yet another phenomenon that is not without its dramatic changes during adolescence. For instance, some stay awake as long as possible in amusement, while others are simply unable to close their eyes or sleep badly. Harmless? Maybe not. In his article, Dr. Roger Godbout, a researcher at the laboratory and clinic on sleep of the Fernand-Seguin Research Centre at the Rivière-des-Prairies Hospital site and additionally a professor in the Department of Psychiatry at University of Montreal, explains the complex phenomenon of sleeping. Eminent researchers throughout the world argue that sleep has an enormous role to play in mental health. In fact, high distress that keeps some tossing and turning at night is a key symptom in numerous mental disorders including depression and anxiety disorders.

Can we identify THE one cause of mental disorders? Now the answer to this question is rarely answered easily. In fact, like the majority of physical illnesses, it seems that a combination of genetic predispositions and environmental factors play a role in the development of mental disorders. Evidently, we cannot presently play around with genetics, but we can clearly have a positive impact on the environment of young ones. We have all heard of the Nature-Nurture debate, and this genetic versus environment divide no longer stands since BOTH interact.

One influential framework that captures this beautifully is the *diathesis-stress model,* which essentially says that if someone has a predisposition to, say depression because of genetic makeup, the disorder will more likely appear if the person is bombarded by stressful experiences. We also see that positive environments, such as the presence of strong social support networks, can actually suppress the risk of mental disorders in individuals with such dispositions.

Adolescence is a period when youths experience many different stressors. The scientific literature clearly shows that long-term stress, without necessarily being the cause, can *contribute* to the development of mental and physical disorders. It is impossible to eliminate stressors from youths lives, but we can without a doubt provide the knowledge and tools so that they can better adapt to stress. It is for this reason that the *DeStress for Success* program (see Issue 5 of Mammoth Magazine for more details) was created by the Centre for Studies on Human Stress.

Lyane Trépanier, a Master's student at University of Montreal of the Centre for Studies on Human Stress based at the Fernand-Seguin Research Centre of Louis-H. Lafontaine Hospital and Coordinator of the *DeStress for Success* program, has written an encouraging article on this project that was successfully piloted this year. You will therefore have the chance to learn about teenagers' opinions on this subject. Additionally, in the framework of this project, we asked adolescents to tell us what they knew about mental illnesses. Julie-Katia Morin-Major, a student from Maisonneuve-Rosement CEGEP student who undertook an internship this summer in the laboratory of Dr. Lupien, resumes for us the conceptions of youths on the topics of depression, substance abuse, and obsessive-compulsive disorder. In a second stage, Julie-Katia verified the responses of youths against those of experts in the domain. You will see that this is a fascinating article that will allow all to learn a little more concerning mental disorders.

Some might be surprised that even with numerous awareness campaigns circulating, mental health remains a big mystery. Yet, more and more resources are available. Are these being used by youths that need them? Sadly, the answer is far too little. There is still an important stigma attached to mental illnesses. Nathalie Wan, the Coordinator of the Centre for Studies on Human Stress, illustrates a portrait of the situation and explains how stigma associated with mental illness acts as an additional handicap for people who suffer from them.

We refrain from talking about mental health problems, we are often afraid of others' reactions, we fear becoming alienated from the rest of the group, from being rejected or becoming a victim of ridicule. We also see that the terminologies we use in early life (e.g., retarded, psycho, maniac) can further imprint in people's minds negative connotations concerning mental illnesses. For instance, these derogatory terms are often the verbal weapons of choice used to tease and taunt students deemed different.

*See **Youths…** on page 8*

Sleep in Adolescents: A Question of Rhythm!

By Dr. Roger Godbout, Ph.D.
Translator: Robert-Paul Juster

We sometimes ask ourselves: "Is sleep useful for something? It seems to me like it is not, since our eyes are closed, and we do not really know what is going on during this time!" For sure, there are dreams, and there are nightmares! There is also the fact that we are recuperating…in fact, there are enormous amounts of actions going while we sleep, although sophisticated tools and techniques are often required in order to describe them. People that we see at the Clinic of Sleep Disorders at the Rivière-des-Prairies Hospital, our laboratory's research findings on sleep, in addition to those of our colleagues from all over the world, demonstrate that sleep is most likely associated to multiple functions, some physical and others psychological, but all sleep perturbations can have harmful consequences.

A question of timing

The sleep-wake cycle is a part of an ensemble of our biological and psychological functions that go through maximums and minimums one time per day, or what we call circadian rhythm (*circa:* about; *die:* 1 day). These circadian rhythms follow light-dark alternations maintained by the appearance and disappearance of the firmament sun. Other than the sleep-wake cycle, we also count as examples of these rhythms core temperature that passes a maximum during the day and a minimum during the night, the secretion of growth hormones that appear as spikes at the beginning of the night and reach their minimum during the day, the secretion of cortisol (stress hormone) which is most elevated upon the first waking moments that progressively decreases until it reaches its bottom threshold at the beginning of the night, the excretion of different electrolytes and toxins that each vary in their own way, etc. Thus, we are carried to sleep when core temperature drops most abruptly, and we are brought to wakefulness when central temperature begins to climb since these synchronizing rhythms fluctuate one with the other (see Figure 1).

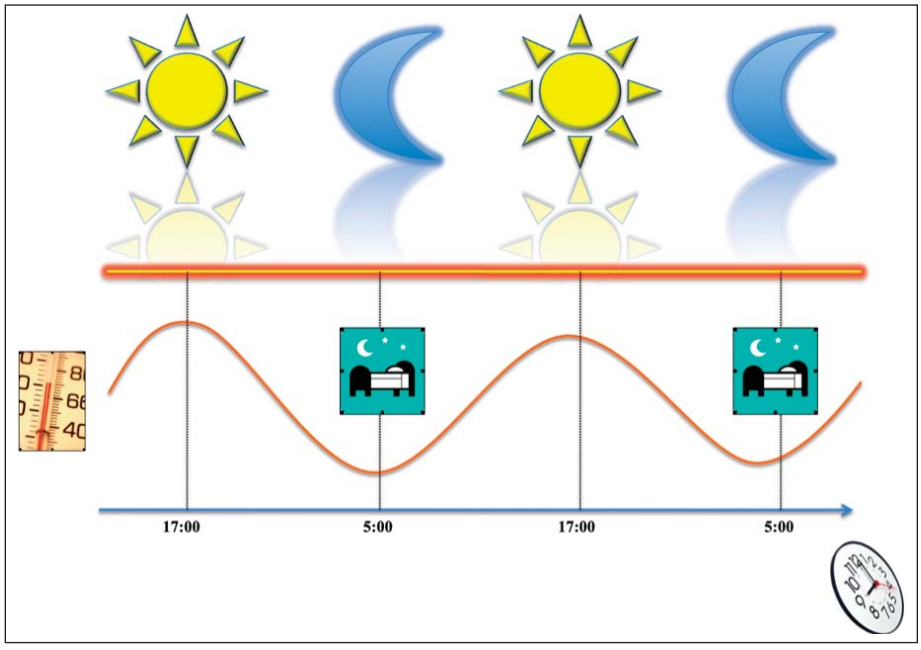


Figure 1. Adapted from: BENOIT, O. (1984). *Physiologie du sommeil.* Paris : Masson.

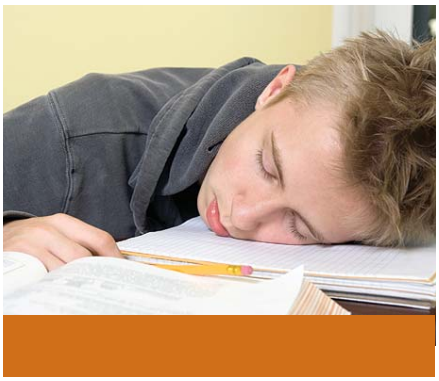
[…] sleep is most likely associated to multiple functions, some physical and others psychological, but all sleep perturbations can have harmful consequences.

Circadian rhythms are controlled by external and internal factors (or synchronizers). External synchronizers are numerous and the best known is light, although everyone also knows a somewhat less sympathetic external synchronizer like the alarm clock! The principal internal synchronizer is a "biological clock" situated in the center of the brain in the anterior part of the hypothalamus called the "suprachiastic nucleus". This tiny structure consists of cells functioning together like clockwork, which exert a determining role in the temporal organization of our behaviors, namely the bedtime and awakening moments. External and internal synchronizers function together: light directly influences biological clocks. Thus, we are more likely to sleep when it is dark and we are more likely to wake up when it is light out.

There exists a second influence that makes it such that we tend to sleep at one moment rather than at another and have more or less consolidated sleep: it is the quantity of wakefulness before bedtime, something we call "homeostatic pressure". Indeed, the moment we awaken in the morning we begin to accumulate a sleep debt. For the first three or four hours, this debt is easy to support but after 16 or 17 hours without interruption, this strain becomes more burdensome. Our preferred time to sleep occurs the moment the command for sleep is executed by the internal circadian biological clock that has nearly reached its maximum influence and the homeostatic pressure has become difficult to support further. Each of us has personal characteristics in this regard: there are early-birds and there are night-owls! Thus, early-birds are those who have a diminution in core temperature and levels of certain hormones that are more rapidly attained than night-owls, who in turn show drops in core temperature that are more delayed than the average person. You will not be surprised to learn that adolescence is marked by a large proportion of night-owls in comparison to the general population. In fact, the moment where rhythms are consolidated and that naps have disappeared from our habits at the end of childhood, circadian biological rhythms tend to

Toddlers (1-2 years old)	11 hours, plus one diurnal nap of 2 hours. No deprivation.
Preschool age	11 to 12 hours per night. Half have naps. Not too many deprivation issues.
School age	About 10 hours. Good sleepers. No more naps. Sometimes deprived.
Adolescents	Need 9 1/2 hours but sleep only 8 1/2 hours!
Adults	Need about 8 hours but only sleep about 7 during the week and 7 1/2 on weekends.

Table 1. The need for sleep according to age.



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adopt a late phase, which explains why the window of opportunity for the arrival of sleep often occurs quite later in the night and even sometimes at the beginning of the night.

To each their own

After recognizing that there are factors that denote moments of wakefulness or sleep, we can ask ourselves: what is the quantity of sleep that I need? In fact, the need for sleep varies according to age and shows an evolution over time: see the Table 1 above.

We know the numbers on this table are not extremely precise since there are enormous differences from one individual to the other. In fact, large-scale investigations on important samples demonstrate that while the national average of total time slept is 7 ½ hours, there are more than 20 % of adults who sleep less than 6 hours and 15 % of adults who sleep more than 9 hours; we would probably observe the same variability in adolescents.

One of the best ways to know one's chronotype and one's needs in quantity of sleep is to use a "sleep schedule". Several examples are available on the Internet and an example is illustrated below.

With this exercise, we can measure the difference between our tabulated nights constrained by school and work schedules and our more lax nights, namely weekends. We would do well to remember that the larger the difference between week – weekend is, the greater the risk of having functional difficulties at school or at work is increased since each Monday we need to reset our circadian rhythm to the imposed schedule. Some advice? Do not tolerate a stretch of more than 120 minutes between the time of sleep during the week and the weekend, and do not sleep less than 8 hours per night. One of the consequences of this recipe is that if we want to sleep more on weekends we must also sleep more during the week in order to not dig too big a gap… Easy? Do the test and share your experiences with friends!

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Some advice? Do not tolerate a stretch of more than 120 minutes between the time of sleep during the week and the weekend, and do not sleep less than 8 hours per night.

Sleep Schedule — Complete each day, in the morning

Name: Week of: 2

Date	Bedtime	Time awakening	Time taken to fall asleep (in minutes)	Nocturnal awakening		Sleep quality (1 to 10)*	Wakefulness quality (1 to 10)*
				Number	Total time (in minutes)		

* Sleep and wakefulness quality: 1 = poor, 10 = excellent.

If you believe you are suffering from a sleep disorder, you must consult a health professional at school or at work in order to obtain useful information.

Aggression and Peer Victimization in Children

A Researcher's Profile: Dr. Mara Brendgen, Ph.D.

By Robert-Paul Juster

Dr. Mara Brendgen studies the manifestation of aggression and victimization by taking the individual, family, teachers, and peers into account. Upon obtaining a doctorate in Psychology and Education from the Freie Universität Berlin, Dr. Brendgen pursued post-doctoral studies with the Research Unit on Children's Psychosocial Adjustment at the University of Montreal and at the Centre for Research in Human Development at Concordia University. She is currently an associate professor in the Department of Psychology at the University of Quebec in Montreal and conducts research at Sainte-Justine Hospital Research Centre. In order to understand who is more likely to become a bully and/or a victim, Dr. Brendgen and collaborators have been following youths as they develop. This article summarizes an interview about her fascinating research findings and the field of youth aggression and victimization.

In order to understand who is more likely to become a bully and/or a victim, Dr. Brendgen and collaborators have been following youths as they develop.

International surveys alarmingly report that about 30% of children are the victims of bullying, taunts, and rejection. Likewise, Dr. Brendgen's studies show that about 71% of children between the ages of 3 and 6 are not victimized; however, 25% are vulnerable and another 4% are chronically victimized. According to Dr. Brendgen, *physical aggression* (e.g., hitting or kicking) decreases from childhood to adolescents, although *social aggression* (e.g., spreading nasty rumors about someone) increases as youths become increasingly adept at using complex social and language skills to bash their peers. In this day and age, the use of technologies like cellular phones, email, and websites like You Tube® make it all the more easy to become a victim of social aggression, and for the aggressors to escape punishment. Social aggression persists into adulthood taking increasingly complex shapes such as harassment and alienation that increase stress throughout life.

Aggression and victimization represent potent stressors that can have severe repercussions for youths' mental and physical health both in the short and long-term. For example, *internalizing problems* (e.g., withdrawal, anxiety, inhibition) and *externalizing problems* (e.g., aggression, hyper-activity) in youth's early life can increase risk of depression, delinquency or substance abuse later on. An article by Anderson and colleagues from the late 1980s reported that 10 to 20% of school-aged children show depressive symptoms and 1 to 3% suffer from clinical depression. It is therefore essential to dissect all the risk and protective factors that render individuals more vulnerable or resilient. The dynamic between the bully and the victim, however, is extremely complex, as are the multiple ways of studying them.

One effective approach is through *twin studies,* whereby the likelihood of some outcome is compared between pairs of identical twins, who share 100% of their genes, and fraternal twins, who share about 50% of the same genes. Researchers can then determine the relative contribution of genetic versus environmental factors and sometimes even the interaction between the two that can strengthen or weaken the observed phenomenon. For example, environmental stressors like parental divorce might increase the risk of depression more strongly in those with a genetic susceptibility towards developing depressive symptoms.

Dr. Brendgen's studies show that genetic effects, environmental effects, and the interactions between the two differ markedly for internalized and externalized problems. Under certain conditions of stress (specifically rejection and victimization by the peer group), internalizing behaviors appear even in those without genetic vulnerabilities; demonstrating the power of the environment in this case. This is remarkable since it means that, at least in young children, stressful experiences with the peer group might cause internalizing problems independently of genetic risk factors. On the other hand, with regards to externalizing problems, peer victimization triggers genetic effects and leads to aggression especially in those individuals with a genetic disposition to aggressive behavior. This is a *diathesis-stress effect,* since those with a genetic risk for aggressive behavior seem to be more affected by the stress of peer victimization.

Bear in mind that externalized behaviors like reactivity, impulsivity, and aggression – and sometimes also internalized problems like anxiety - might be both a cause and consequence of peer victimization. This means that youths might be more innately aggressive and therefore become rejected and victimized by others, or they might become more aggressive as a result of being rejected or taunted. Encouragingly, popular and well-liked children who have a genetic susceptibility to be aggressive are less likely to express this hostility, showing how positive experiences with peers can dampen the chances of being nasty. This is an example of an *environmental suppression effect,* since a genetic propensity was shut down before it surfaced.

Who is most at risk of being aggressive? The chances of using physical aggression or social aggression are the same when it comes to genetics. However, how this genetic makeup is expressed is to a large part determined by the environment. For instance, youths living in low socioeconomic status neighborhoods are more likely to display physical

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aggression, partly perhaps because they simply live in rougher areas. When it comes to social aggression, however, some research suggests it is the opposite case, with wealthier, more advantaged individuals being the culprit. It seems that social aggression is more prevalent in those with stronger communication skills, while the opposite could be said for physical aggression. Both physical and social aggression are also considerably influenced by the aggressiveness of family members and friends who may model or reinforce such behaviors.

In sum, there seems to be a developmental progression from physical, to verbal, to indirect aggression.

In regards to sex differences in aggression and victimization, girls are not only less likely than boys to become victims, but those girls who are victimized are also at risk of becoming aggressive themselves only if they have a genetic susceptibility for aggressive behavior. In contrast, boys are more likely to become aggressive when harassed by their peers regardless of genes. As boys are socialized to be tough and masculine, it might simply be more acceptable for them to react aggressively when attacked. Because girls are more likely to be scolded for aggressive behavior than boys, they may only react with aggression to harassment by peers when they already have a genetic disposition to aggressive behavior.

A recent publication by Dr. Brendgen and colleagues revealed that those who use social aggression do not have a lack of social cognitive skills (reasoning and the ability to process other's states of mind) since they are aware of their actions and the hurt they inflict. Perhaps most frightening of all is that some children with highly developed language or social cognitive skills lack empathy towards others, and these children are especially likely to use social aggression. In sum, there seems to be a developmental progression from physical, to verbal, to indirect aggression.

What can be done to correct this serious problem before it progresses and spirals out of control?

Dr. Brendgen proposes several key solutions and argues that it is during the early years of life that positive changes can be made. First, parents need to be informed and educated about the seriousness of this problem - that actually starts earlier than elementary school. Secondly, parents need to be made aware of the stress signals and physical signs of their children being bullied or socially rejected. As children get older, about half of them will not talk about what is going on to their parents, so parents need to be alert. Thirdly, friends are a huge protective factor against aggression and victimization. Workshops and information on how to develop social skills and how to make and maintain friendships are needed. There is safety in numbers as they say, since we are less likely to be aggressed when two or more. Having prosocial friends that can diffuse and negotiate situations with bullies is therefore a positive buffer. Parents should therefore try to foster friendships with prosocial friends. Fourthly, it is very important to foster communication between parents and teachers since the latter are in a position to directly intervene.

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Globally, the whole school needs to be involved with policies that minimize aggression. This is not solely all about the bully-victim dyad. Rather, the whole classroom is implicated as peers' reactions to bullying play an important role in determining whether peer victimization continues or not. For example, the majority might not allow aggression by rejecting the bully, others might encourage bullying by cheering a bully on, and even others might be the protectors of victims by defending them from bullies. Fortunately, improved school policies worldwide make it increasingly unacceptable to allow peer victimization at school.

Dr. Brendgen's future research will examine how genetic and environmental factors influence the physical and mental health outcomes of bullies and victims as they reach adolescents and eventually, adulthood. A collaboration with Dr. Sonia Lupien and other top researchers from Universities across Quebec will also examine the role of stress hormones in the development of internalizing and externalizing problems. Recent advances in molecular genetics research have even begun to allow the identification of specific genes that increase one's risk of internalizing and externalizing problems. Examining how these specific genes interact with environmental stressors such as peer rejection or victimization will be an important focus of future research. With continued research and the development of policies that apply research findings to the population at large, we will be one step closer to reducing aggression and victimization that harms youths worldwide.

So What Did *Teens* Think of the *DeStress for Success Program?*

By Lyane Trepanier

The results are in! Young teens told us what *they* thought of the *DeStress for Success* program. The program began piloting at the start of the 2008-2009 academic year at two schools in the Montreal area to over 500 students in grades 6 and 7. The workshops were conducted as part of a larger study on stress in young teens, which included psychological and physiological measures. This pilot project was led by Dr. Sonia Lupien, Research Director of the Fernand-Seguin Research Center of the Louis H. Lafontaine Hospital, and Founder and Director of the Centre for Studies on Human Stress. and to teach them healthy coping strategies that will have a positive impact well into adulthood. With this in mind, Dr. Sonia Lupien saw an opportunity to disseminate important information on stress, obtained from years of research, to teens through workshops in schools. "There has been far too little research done on stress in teenagers. It is time that we as scientists turn our attention toward teens to better understand what stresses them and teach them healthy coping strategies. The *DeStress for Success* program is our answer to this need", says Dr. Lupien.

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STATISTICALLY SPEAKING

- 80 % of students who responded said that they found the lessons learned in the *DeStress for Success* workshops useful.
- 90 % of students affirmed that they have a better comprehension of stress since their participation in the program.
- 80 % of students would recommend the *DeStress for Success* program to their friends.

We are happy to report that the program was received with much excitement and enthusiasm. Both the students and the presenters learned a great deal about the stressors teens face in today's world. Before we get to what these teens had to say, let me recap the reasons for creating the program, and what we have been up to since the launch of the *DeStress for Success* program in the fall of 2008.

The need for stress education

The *DeStress for Success* program aims at educating children and adolescents about stress and its impact on cognitive and emotional processing. Specifically, the program is designed to educate young teens on the effect stress has on learning, memory and mental health, how to recognize it, as well as train them on ways to cope with stress.

This project was developed after our previous studies revealed that transitioning from elementary to high school induces a large increase in the stress hormone cortisol, regardless of the child's socioeconomic status. These results are important because other studies also report an increase in the development of depression and/or suicidal thoughts around this age. Still others have shown that elevated stress levels, with the accompanying rise in circulating cortisol, are important predictors of the development of depression in children and adolescents. It is the goal of the *DeStress for Success* program to provide youths with a solid understanding of stress

The *DeStress for Success* workshops were offered during class time via five weekly 40 minute visits to two schools. Each visit presented an interesting topic on stress that included fun and engaging activities for students to reinforce the ideas presented. Students were encouraged to express their creative side in the workshops by performing in role playing games their own sketches depicting stressful life events. These sketches were our most popular workshop activity!

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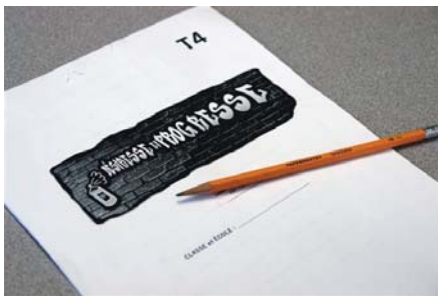
All of the activities were designed to increase the student's self-knowledge, which is an essential part of the program, since different things stress



different people in unique ways. Therefore, although the NUTS model outlines the four universal elements of stress (**N**ovelty, **U**npredictability, **T**hreat to the self, and low **S**ense of control), any given situation will not be perceived in the same way and not all the elements of the N.U.T.S. model will apply for each individual. Not only was it important to teach kids to know when they are likely to feel stressed, but also how their minds and bodies respond to stress. The last two *DeStress for Success* workshops equipped the students with new "stress buster" coping strategies and explained the importance of turning to the *right* people for social support. Workbooks and visual aids helped the youths outline who they could safely turn to in times of stress, which is one of the key coping strategies. Finally, about two weeks after the last workshop, we asked students to tell us what they thought of the *DeStress for Success Program* and they had a lot to say…

Interesting feedback!

As researchers, we are interested in the long-term impact of the program, but we first needed to

know what information students retained in the short-term. That is why we asked youths to complete questionnaires that asked them to recall the "three most important things they learned from the workshops." Most of the respondents said 1) the NUTS model, 2) the various coping strategies and 3) the difference between social support and social pressure. This is great news because it means that the key messages of the program were received and retained.

What is next?

After a successful first year of the program, the Centre for Studies on Human Stress plans to extend the project one more year, and offer the workshops at two new schools in the fall of 2009. We are also in the process of analyzing heaps of data coming from questionnaires, stress hormones, and cognitive tasks collected during testing sessions.

The 2009-2010 academic year will be the last year of phase I of the program, which involves members of the research team giving the workshops. The *DeStress for Success* project will soon be entering phase II, which involves training educators to teach the program within their own schools. Given the positive reception of the program last year, we expect to attract more interested educators who wish to give their own students the lifelong skills and information needed to help their kids master stress in practical and healthy ways.

Coming up in the next issue of *Mammoth Magazine…*

Stress and Socioeconomic Status: Wealth and Health

The current economic climate has sent shivers down all our spines. While we were all hit in some way, many disadvantaged individuals find it difficult to even open a bank account. Vast distributions in wealth and opportunity have a tremendous effect on stress and health. In our next Mammoth Magazine issue, we will bring together a rich literature on stress and socioeconomic status. Articles will include (1) an overview of this research field, (2) how social dominance and hierarchies, as seen in animals, relate to humans and strongly impact our health, (3) how disadvantages in early life biologically embed one's risk for diseases later on in life, (4) and finally how living in lower socioeconomic status neighborhoods can increase symptoms of asthma.

Throughout, we will present international research findings in addition to crucial studies being conducted by eminent Quebec scientists and specialists. As you will see in a little while, socioeconomic status is an essential component of health and well being.

Youths… *(continued from page 2)*

How many stories have come across in the media this year of youths pulling pranks and ruining someone's self-esteem and reputation? Admittedly youths, let them be bullies or victims, do not necessarily immediately suffer from mental disorders following aggressive behaviors. These experiences can nevertheless contribute to isolating them from the rest of the group, augmenting their stress, and their vulnerability to develop mental disorders ranging from delinquency to depression. Robert-Paul Juster, a Master's student at McGill University based at the Centre for Studies on Human Stress of the Fernand-Seguin Research Centre at Louis-H. Lafontaine Hospital, conducted an interview with Dr. Mara Brendgen, specialist on aggression and victimization in early life. His article illustrates the profile of this passionate researcher and explains interesting findings on this widespread phenomenon.

On this note, we wish you a pleasant read and hope that you enjoy this issue of Mammoth Magazine as much as we enjoyed putting it together! We ultimately hope to inform you and further desensitize mental health. Do not hesitate to approach the subject with your children, your friends, your colleagues, everyone! Mental health affects us all, small and big, men and women, rich and less rich. It is by uniting and communicating without prejudice or reservation that we will be able to demystify this subject. In this manner, all will profit as the burden of so-called "abnormality" is normalized through knowledge and compassion.

Experts to the rescue: *Do youths really know what mental health problems are all about?*

By Julie-Katia Morin-Major

As part of the *DeStress for Success* program, we believed it was important to learn what youths thought and know about mental health problems. This is why we asked 176 youths to answer a questionnaire on this subject. After going through their answers, we clearly saw that youths have some misconceptions about certain mental health problems such as depression, drug addictions and obsessive-compulsive disorder (OCD). They are not, however, the only ones to uphold these images. In fact, we often hear that individuals who suffer from OCD are scared of everything or that tobacco addiction is not a drug addiction. Myth or reality? To answer all these questions and to learn more about mental health problems, we interviewed four mental health experts.

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Depression

Currently, depression touches about 10 to 15 % of adolescents, a number that grows constantly every year. As we face this troubling trend, it is important to inform children and adolescents about this disorder and help them learn how to detect it. After analyzing the questionnaires, we can state that 88 % of the youths had some idea about what depression is. Although they were good at detecting symptoms, they ignore that girls are twice as likely to experience depression.

88 % of the youths had some idea about what depression is.

Most surveyed youths thought depression had something to do with being sad or tired. They also thought it was accompanied by a loss of interest, the impression that everything is going wrong and even suicidal ideas. According to Dr. Stéphane Kunicki, head of the intensive care unit at Louis-H. Lafontaine Hospital, they are not wrong. Actually, depression is defined by two main criteria that include sadness and anhedonia (lack of interest). Depression is also accompanied with certain criteria such as tiredness, thoughts of death, lack of self-confidence and appetite changes.

The psychologist Isabelle Lajoie likes to use the following image to help people understand how depression is experienced: "Picture yourself with a friend in front of a breathtaking scenery. Unfortunately, your friend is wearing very dark glasses. Even if you describe how the colors are vivacious, he/she will not understand because they see everything in dark shades. It is the same thing for someone who suffers from depression. No matter how beautiful, fun and stimulating life really is, the person who suffers from depression cannot see it this way because he/she does not live things the same way".

In brief, even if depression is a taboo subject these days, probably because it is not well understood and stigmatized, youths can still correctly identify many signs and symptoms of this disorder. However, other mental health problems are not as well understood by adolescents.

Substance abuse

Even though substance abuse starts during adolescents or early adulthood, only 45 % of youths have heard of this disorder. Many of them think that substance abuse is when an individual consumes drugs, cigarette or alcohol to a point where he/she intoxicates themselves. Dr. Stephane Potvin, researcher at Fernand-Seguin Research Center, explains that substance abuse consists of abuses and dependences on certain substances. These can be depressants (e.g., alcohol), stimulants (e.g., cocaine, amphetamine) or hallucinogens (e.g., cannabis, PCP, magic mushrooms). Are youths right to think that tobacco is included as part of these substances? "Yes, in the same ways as cocaine and cannabis", says Dr. Potvin. Some experts are starting to think that eating fast food in an abusive and incontrollable way would be a considered substance abuse as well.

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Obsessive-compulsive disorder (OCD) is not well known by youths. Actually, only 16% of them had their own opinion of this disorder.

But what leads to substance abuse? Many youths mentioned that it is caused by peer pressure. Dr. Potvin agrees that peer pressure is a very important factor, but we cannot ignore other factors such as socioeconomic status, culture and genetic predispositions. To avoid these pressures, Dr. Potvin thinks that it is important to know that there are many things in life that are *cool* to do that do not bring about all the disadvantages of drugs.

Dr. Potvin brings up a few important facts about substance abuse and youths. In fact, many of you may be surprised to hear that boys are two times more at risk than girls to become substance abuser. Also, it is important to know that you can eventually become a substance abuser after only one consumption, depending on one's predispositions.

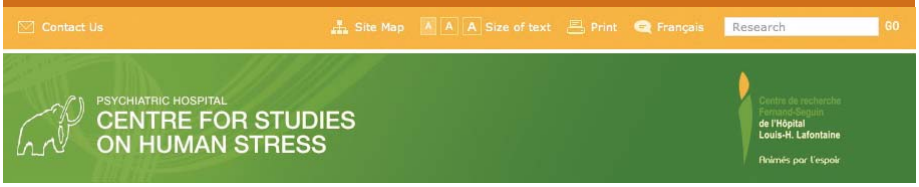
To sum up, just about half of adolescents have a good idea of what substance abuse is all about. It is important to remember that the consumption of certain substances (ex.: tobacco, alcohol, cannabis) is sometimes wrongly trivialized. This is why it is important to continue promoting awareness and minimize the potential repercussions of the first consumption.

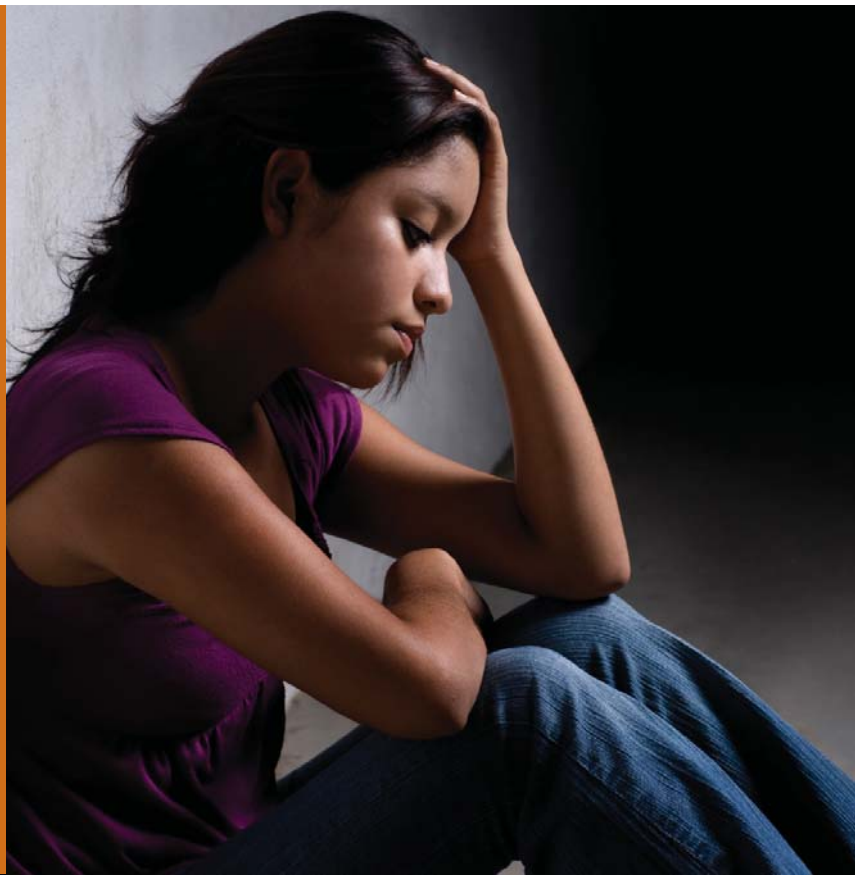
Obsessive-compulsive disorder

Obsessive-compulsive disorder (OCD) is not well known by youths. Actually, only 16 % of them had their own opinion of this disorder. Most of the kids answered that people who suffered from OCD were scared of everything. We asked Audrey Bertrand, doctoral student under the supervision of Dr. Kieron O'Connor at the Fernand-Seguin Research Center to enlighten us on this disorder unknown by adolescents.

First of all, it is false to believe that people who suffer from OCD are afraid of everything. These individuals have specific debilitating obsessions and compulsions that are not generalized. Obsessions are recurrent thoughts or images that are uncontrollable. For example, it can be obsessions of contamination, symmetry or death. These are often paired with compulsions, which are actions or behaviors to counter the obsessions. The compulsions appear to be washing of hands very often, organizing objects in a symmetrical manner or constantly repeating a sentence related to the obsession.

You may consult the complete report, wich also includes the subject of schizophrenia and anxiety disorders in the section for the general public of our website: www.humanstress.ca.





Above all, do not forget that you are not alone; mental health disorders touch 20 % of the population. Do not hesitate to talk about it.

It is interesting to note that the age of onset for the first symptoms is between 6 and 15 for boys and 20 to 29 for women. Furthermore, OCD affects about 2 % of youths, and so, is less frequent than depression and substance abuse. This may explain why children know less about this disorder.

To conclude, many mental health disorders start during adolescence or at the beginning of adulthood. This is why it is important for kids and their relatives to know and understand the different mental health disorders. After analyzing all the answers of the adolescents, we observed, at least in part, that some aspects of disorders remain unknown. In order to quickly detect the emergence of the first symptoms and to be able to receive the appropriate medical or psychological treatment, it is important to demystify and destigmatize mental health disorders. Above all, do not forget that you are not alone; mental health disorders touch 20 % of the population. Do not hesitate to talk about it.

Breaking the silence: Stigma as a barrier to treatment

By Nathalie Wan

Spend an afternoon amongst teenagers and you most probably will not describe them as 'shy' as you listen to them share their views on the latest celebrity gossip, fashion trends, or their most recent iPod download or MySpace blog entry. Teens tend to be blatantly open to express their opinion on any topic that is important to them. But for one important issue — their mental health — teens are remaining silent.

Stigma hurts

Stigma can be seen as a 'mark' or stain on someone's reputation. People with mental illness often feel they are stigmatized because of their condition and are often burdened with negative, hostile or fearful reactions from people. Teens often say they have been verbally or physically abused or bullied as a result of their mental health condition. "Crazy", "disturbed", and "psycho" are just some of the derogatory terms that a group of college students answered to when asked what sorts of words or phrases they might use to describe someone who experiences mental health problems.

More than 70% of adolescents who suffer from a mental health problem do not receive the treatment they need.

More than 70% of adolescents who suffer from a mental health problem do not receive the treatment they need. New research suggests that one of the major reasons why many teens do not seek treatment for their depression is their concern about stigma and the reactions of their family members.

Stigma prevents teens from treatment

The statistics on the public's view of mental illness is a powerful reminder of the stigma that people with mental disorders endure. Due to the extent of harmful attitudes toward people with mental illness, it is not surprising that negative emotions and attitudes have a marked effect on teenagers' willingness to seek medical treatment for their mental illness. Young people often feel that mental illness is embarrassing and often avoid talking about these issues.

Stigma is a widespread discrimination that continues to add to the disability of people with mental illness. To catch a snapshot of its effects in Canada, in 2008, the Canadian Medical Association reported these unsettling results:

- 46% believe that a diagnosis of mental illness is merely an "excuse for poor behavior and personal failings"
- 10% think that people with mental illness could "just snap out of it if they wanted"
- 42% would no longer socialize with a friend diagnosed with mental illness
- 55% would not marry someone who suffered from mental illness
- 25% are afraid of being around someone who suffers from serious mental illness
- 50% would not tell friends or coworkers that a family member was suffering from mental illness. 72% would discuss cancer, and 68% diabetes.
- 50% think alcoholism and drug addiction are not mental illnesses
- 11% think depression is not a mental illness
- 50% think that depression is not a serious condition

In comparison to adults, adolescents are often particularly resistant to seeking counseling. Teenage boys and girls have different attitudes with regards to their willingness to use mental health services. Gender socialization, the manner in which boys and girls are raised in society to conform to the male role or female role may play a part in the differences found. Most research reports that adolescent boys seek professional mental health services less frequently than girls.

In a recent study carried out with 8th graders, more girls than boys turned to a friend for help for

"Crazy", "disturbed", and "psycho" are just some of the derogatory terms that a group of college students answered to when asked what sorts of words or phrases they might use to describe someone who experiences mental health problems.

an emotional concern, whereas more boys turned to a family member first. Boys had less mental health knowledge and experience and higher mental health stigma than girls. Furthermore, girls were twice as likely as boys to report willingness to use mental health services since girls identified mental health service seeking as a sign of strength. According to a 2006 study by Chandra and Minkovitz, parental disapproval of mental health services and perceived stigma were the main explanations for the differences found between teen girls' and boys' use of medical treatment.

[...] parental disapproval of mental health services and perceived stigma were the main explanations for the differences found between teen girls' and boys' use of medical treatment.

Reduce stigma - raise treatment

Lack of medical treatment sought out by adolescents will continue to have detrimental effects as the number of teens with mental illness continues to rise. Mental health problems among children and youth are predicted to increase by 50% by the year 2020. Treatment is crucial as teens with untreated depression are more likely to have social and school problems, drug and alcohol abuse, teen pregnancy, and go on to experience adult depression and mental disorders and possibly suicide.

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Given the recognition that stigma is an astounding barrier to mental health service use among adolescents and adults, addressing negative views early in the teenage years could help to prevent the delays in treatment later in life, and even lessen the disparities between teenage girls and boys in mental health service use. When we look to the future of treatments for mental illness, it is important to keep in mind the notions of early intervention and prevention.

Reducing stigma is one of the key factors that would greatly improve the lives of people with a mental illness. Since negative attitudes about mental illness are apparent in children as young as 5 years of age, it can be argued that mental health education is crucial in providing positive change to attitude and outlook.

Breaking down stigma

Schools can play a key role in destigmatizing mental illness by promoting its importance to teenagers. Physical fitness, health, and sports are overtly encouraged and promoted amongst adolescents. From physical education to afterschool soccer, softball, or hockey, school curriculums require that teenagers participate in physical activities. However, mental health education is not an integral part of an overall school program. Mental health is arguably as important as physical health and the issues should be addressed as such.

A study with 14 and 15 year old teenagers showed that those who received just six 50-minute lessons on mental heath problems such as stress, depression, self-harm and eating disorders displayed significantly more sensitivity towards people with mental health problems. Children from a very young age believe that mental health problems are personal failures and those who receive psychological treatment are to be despised. This study shows that teaching 14- and 15-year-olds about mental health difficulties helps to reduce stigma.

Parents and teens should not be afraid of what people might say or think about seeking treatment. Since teenagers' treatment decisions greatly involve their parents, teenagers, together with their parents, should draw upon the many resources available. Doctors, as well, have an important role in that their ability to address all the perceived barriers of stigma can have an effect on the teenager's own ability to recognize and acknowledge their mental illness, and do something about it. It is important that parents are informed that left untreated, mental disorders can result in damage to self-esteem, poor school performance, problems with relationships and even suicide. Talking to teens about mental illnesses can be seen as an opportunity for parents to provide their children with information, support, and guidance.

We can each play a vital role in breaking down the stigma of mental health so that teenagers can break out of their silence and seek the treatment they need.

Mental health is arguably as important as physical health and the issues should be addressed as such.

With heightened awareness regarding the damages brought about by the stigma of mental health, and the importance of not judging, but rather understanding, talking and listening to our adolescents, we will be taking the necessary steps forward toward a better understanding of the challenges faced by those living with mental illness. We can each play a vital role in breaking down the stigma of mental health so that teenagers can break out of their silence and seek the treatment they need.

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