Stress and Health

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RESOURCES

Introducing Stress and Health

Student Project: Constructing a Family Health History
For an undergraduate health seminar, Kenneth Sumner assigns students the project of constructing a family health history. The assignment can be readily adapted for introductory psychology students. It can help students appreciate the biological, psychological, and social-cultural factors involved in their own health. In Sumner’s project, students are asked to (a) profile the physical and mental health status of at least 15 family members, (b) identify trends or patterns related to health and illness in their families, and (c) develop an action plan for maintaining good health.

For your students, you may want to scale down the project, limiting the profiles to, say, just parents and grandparents. For each profile, students should identify the relationship of the person to them; provide birth and death dates (if applicable); describe the person’s medical and psychological illnesses through life, including both chronic and nonchronic conditions; and suggest potential causes for the various conditions (biological, psychological, and social-cultural). Students may use the text as well as additional resources in identifying possible causes. (Sumner notes that adopted children, who may not know their biological parents, still find the project useful, because illnesses may be caused by behavioral, social, cultural, psychological, or environmental factors). Finally, students should develop an action plan, focusing on alterable behaviors (e.g., smoking, diet, exercise) to enhance their own health.


Stress: Some Basic Concepts

PsychSim 5: All Stressed Out
This activity provides an overview of the biopsychosocial nature of stress, including its everyday sources, the psychological and physiological impact of stressors, and how cognitive appraisal influences the coping process. The student interactively explores how differences in cognitive appraisal and coping style alter the stress experience.

Lecture/Discussion Topic: Early Stress at Home and Later Physical Problems
Continued exposure to threatening stressors, without the opportunity to resolve the stress productively, can
lead to negative health outcomes. Although most findings derive from research with adults, a recent study that will likely be of great interest to your students focused on female adolescents between the ages of 15 and 19 years old. The researchers sought to determine the extent to which early stressful family environments were related to changes in inflammatory processes in the body that might later cause physical problems.

Participants reported the extent to which they perceived their early family climate to be harsh (i.e., marked by high conflict, lack of emotional warmth, violence, and being sworn at or threatened). Then, three times over the next 18 months, participants reported the occurrence of life stressors and had blood samples drawn to assess three different aspects of inflammation.

Compared with young women from nonharsh families, young women raised in harsh family climates were found to have more reactive immune systems (showing greater levels of interleukin-6, a molecule known to orchestrate chronic inflammatory responses and mark immune activation). Women from harsh families also showed a relatively decreased sensitivity to the anti-inflammatory signals of cortisol. This was especially true when the women had recently experienced a major life event.

The implications of this study’s findings are far-reaching if they are validated in bigger-scale studies with larger, more representative samples. They suggest that early life experiences, such as ongoing stressful home environments, may shape immune system processes and set a trajectory for responses to immune challenges (microbes, injuries) in the future. They may be associated with the development of aging-related conditions like autoimmune disorders, cardiovascular disease, metabolic syndromes, and other chronic diseases.

Some questions to guide class discussion:
1. One problem in interpreting the results of this study is that the “harshness” of participants’ family environments was based on the participants’ own self-reports about their parents’ relationships with them, their parents’ parenting styles, and other relevant early experiences. How might the use of retrospective self-report measures like this threaten the researchers’ ability to draw cause-effect conclusions?
2. What kinds of interventions might be effective in breaking the trajectory toward chronic inflammation in the children from families with harsh climates? How would you design a study to investigate the effectiveness of such interventions?
3. What kinds of ethical issues might the authors of this kind of study have to face in conducting their research? How would those ethical issues differ if the researchers used animal participants instead of humans?


Classroom Exercises: Stress Level and Vulnerability to Stress
Handout 1, which assesses one’s general level of stress, is a good way to introduce the topic of stress. Reprinted from Jerry Adler’s helpful Newsweek article on stress, it is self-scoring, with means for different age groups appearing on the handout itself. For items 4, 5, 6, and 8, students should reverse the numbers of their responses (i.e., 4 = 0, 3 = 1, 2 = 2, 1 = 3, 0 = 4) and then, to obtain a total score, add the numbers in front of all 10 items. Alternatively, you can use Handout 2, a test developed by psychologists Lyle Miller and Alma Dell Smith of Boston University Medical Center. It is designed to measure susceptibility to stress and the factors that contribute to it. To obtain their total scores, students should add the numbers they placed in front of the 21 items, and subtract 21. Any number over 32 indicates a susceptibility to stress. A total score between 52 and 77 suggests serious susceptibility, and over 77 means extreme susceptibility.


Miller, L. H., & Smith, A. D. (1987, 1994). Susceptibility to Stress scale from Stress audit, version 5.0-OS.

Classroom Exercise: Stress Symptoms
Handout 3, designed by Roger Allen and David Hyde, provides a good introduction to the nature of stress and the broad range of physical responses to it. Stress can arouse and motivate us to conquer problems. When it is severe or prolonged, however, it may cause mental and physical harm.

The survey in the handout is self-scoring. Total scores between 0 and 35 indicate a low level of physical stress symptoms and little danger to long-term physical health. Scores between 36 and 75 are judged to be average and are associated with an increased likelihood of psychophysiological illness. However, there may be no immediate threat to physical health. Scores between 76 and 140 suggest excessive physical stress symptoms; respondents with such high scores should probably take deliberate action to reduce their level of stress and thus to ward off the possibility of psychophysiological disorder.

Classroom Exercise: The Stress Appraisal Measure

How stressed we feel depends on how we appraise events. For example, retirement may increase stress for one person and reduce it for another. Use Handout 4, Edward Peacock and Paul Wong’s Stress Appraisal Measure (SAM), to illustrate how appraisal mediates stress reactions. Peacock and Wong define appraisal as the process of evaluating or categorizing the personal significance of events.

The SAM was specifically designed to measure anticipatory stress; that is, it assesses perception of future rather than past events. The scale contains three primary appraisal dimensions: threat (the potential for harm/loss in the future), challenge (the anticipation of gain or growth from the experience), and centrality (the perceived importance of the event for well-being). The scale also contains three secondary appraisal dimensions that reflect an evaluation of coping resources: controllable-by-self, controllable-by-others, and uncontrollable-by-anyone. Finally, the instrument includes a general perceived stressfulness scale, which incorporates major conceptions of stress.

As presented in the handout, the SAM permits the user to specify the event for appraisal. In early development of the instrument, Peacock and Wong asked research participants to appraise such stressors as a forthcoming examination, future unemployment, the possibility of contracting AIDS, and the possibility of a national disaster. You can specify that students appraise one of these or some other event. After students have completed their appraisal, you may want them to form small groups to share their evaluations: Small-group discussions are sure to highlight individual differences in the appraisal of life events. Or you can use a general class discussion to accomplish the same goal.

Students score their appraisals by calculating the mean for each subscale:

- Threat: Items 5, 11, 20, 28
- Challenge: Items 7, 8, 10, 19
- Centrality: Items 6, 9, 13, 27
- Control—Self: Items 12, 14, 22, 25
- Control—Others: Items 4, 15, 17, 23
- Uncontrollable: Items 1, 3, 18, 21
- Stressfulness: Items 2, 16, 24, 26

Peacock and Wong obtained the following means for four different events:

<table>
<thead>
<tr>
<th>Event</th>
<th>Threat</th>
<th>Challenge</th>
<th>Centrality</th>
<th>Control—Self</th>
<th>Control—Others</th>
<th>Uncontrollable</th>
<th>Stressfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam</td>
<td>2.6</td>
<td>3.0</td>
<td>3.6</td>
<td>3.9</td>
<td>3.7</td>
<td>1.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Unemployment</td>
<td>2.6</td>
<td>3.5</td>
<td>3.7</td>
<td>3.8</td>
<td>3.4</td>
<td>2.2</td>
<td>3.0</td>
</tr>
<tr>
<td>AIDS</td>
<td>3.2</td>
<td>2.5</td>
<td>3.5</td>
<td>3.1</td>
<td>3.3</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>2.8</td>
<td>2.3</td>
<td>3.6</td>
<td>3.2</td>
<td>3.3</td>
<td>2.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>


Classroom Exercise: College Undergraduate Stress Scale

The College Undergraduate Stress Scale (CUSS), Handout 5, was designed by Michael Renner and R. Scott Mackin for the purpose of illustrating life stress and its cumulative nature using events that are likely to be familiar to traditional-age college students. The scale is self-scoring. Renner and Mackin report scores ranging from 182 to 2571 and a mean of 1247 for 12,000 college students in the eastern United States. Although female students obtained significantly higher scores than males, this may be an artifact of the scale’s development. Most of the students used for item development and scaling were women and thus items that cause stress for female students may be over-represented.

You might also report or even attempt to replicate the results of Kenneth DeMeuse’s study investigating the relationship between life events and indices of class performance. Using the Social Readjustment Rating Scale (not the College Undergraduate Stress Scale), DeMeuse found a negative correlation between life stress scores and various indices of academic performance. Of those students experiencing 300 or more units of stress, 26 percent received Ds or Fs as final course grades. Of those students experiencing 150 to 299 or 0 to 149 units of stress, only 17 percent and 12 percent received Ds and Fs, respectively. DeMeuse concluded that the findings indicate that life events outside the classroom can directly affect students’ in-class performance.

To replicate DeMeuse’s findings, have your students complete the College Undergraduate Stress Scale...
Scale and correlate their scores with their grades thus far in the course. Do not expect high correlations! As DeMeuse notes, the relationship between life stress and performance is hardly a perfect one. Although all the correlations he examined were in the predicted direction, not all reached statistical significance.

Irwin Sarason and his colleagues have designed the Life Experiences Survey (LES), a 60-item questionnaire that includes 10 items specifically aimed at undergraduate experiences. (The survey is readily available on the Internet; see http://web.psych.washington.edu/research/sarason/files/LifeExperiencesSurvey.pdf or pp. 943–946 of the Sarason article listed below.) High LES scores have been associated with a higher frequency of physical and psychological distress. If time allows, you may want your students to complete the LES and review the research based on it.


Lecture/Discussion Topic: Tend and Befriend

Ask your students, “Do men and women respond to stress in the same way?”

The text notes that one important alternative to the fight-or-flight response, especially among women, is what Shelley Taylor and her colleagues call tend and befriend. Women are more likely than men to seek and give support. Kate Volpe provides a good overview of Taylor’s research, as follows:

The evolutionary significance of the fight-or-flight response for women is clear. If women fight, they may become injured and unable to care for offspring. Similarly, if they flee, they also leave offspring unprotected and forced to fend for themselves. The tend and befriend model states that stressed women devote more attention not only to caring for offspring and dependents but also to seeking support from others. After conducting a meta-analysis of 26 studies, the researchers found that in all but one case women sought social support from others in times of stress. The research also suggested that, compared with men, women are more likely to turn to other women such as close friends and relatives than to turn to their spouses for support.

In reviewing the literature for her research, Taylor found one study in which men and women asked to think about their spouses before experiencing a stressful event demonstrated different responses. Although males’ stress responses decreased, females’ significantly increased. Other lines of research suggest that married women experience higher levels of stress for a longer part of each day. Women’s autonomic arousal level remains elevated until 10 p.m., while men’s arousal drops after they leave work. “The net effect of marriage on men is very beneficial,” Taylor concluded. “It is estimated that the death rate of married men is 250 percent lower for a given time period than that of unmarried men.” However, for women, Taylor stated, “marriage is likely to be a wash in terms of health protection.”

Interviews with both parents and their children suggest that mothers and fathers respond differently to stress. When stressed by work overload, fathers were more likely to show social withdrawal. When stressed by interpersonal conflict, they tended to project their reaction outward by becoming argumentative. In contrast, mothers experiencing stress showed their children more love and affection. Although “tending” is sometimes draining, research indicates that those who give support also benefit themselves. “Giving social support is not biologically costly,” noted Taylor. “It may actually be helpful as the providers are receiving psychological and biological benefits as well.”

The biological underpinnings for “tend and support” may include the hormone oxytocin that is released in response to stress. In studies with animals, injected oxytocin reduces anxiety, enhances grooming, and promotes bonding (all tend and befriend behaviors). Because the hormone is enhanced by estrogen and inhibited by androgens, it is considered more influential in women.


Lecture/Discussion Topic: Hassles and Uplifts

Richard Lazarus and his colleagues have suggested that the petty annoyances, frustrations, and unpleasant surprises we experience every day may add up to more grief than life’s major stressful events. Such hassles may range from getting stuck in a traffic jam or losing a wallet to arguing with a son or employer. Lazarus argues that the impact of hassles on our physical and mental health depends on their frequency, duration, and intensity. Furthermore, a person’s response to a given hassle depends on a variety of factors: personality, coping style, and how the rest of the day has gone. Lazarus writes, “Psychological stress resides neither in the situation nor the person; it depends on the transaction between the two. It arises from how the person appraises an event and adapts to it.”
The counterparts to daily hassles are daily uplifts: pleasant and satisfying experiences like hearing good news, getting a good night’s sleep, solving a difficult problem. Lazarus reasons that just as hassles may cause physical and psychological changes that may result in illness, uplifts may serve as emotional buffers against those disorders. For example, they may serve as breathers or restorers when psychological resources have been run down during stressful periods.

What are the most common hassles and uplifts in life? To a large degree, it depends on whom you ask. For a group of 100 White, middle-class, middle-aged men and women, the 10 most frequent hassles and uplifts were, in order of frequency, as shown below.

### Hassles
1. Concern about weight
2. Health of family member
3. Rising prices of common goods
4. Home maintenance
5. Too many things to do
6. Misplacing or losing things
7. Yardwork or outside home maintenance
8. Property, investment, or taxes
9. Crime
10. Physical appearance

### Uplifts
1. Relating well with your spouse or lover
2. Relating well with friends
3. Completing a task
4. Feeling healthy
5. Getting enough sleep
6. Eating out
7. Meeting responsibilities
8. Visiting, phoning, or writing to someone
9. Spending time with family
10. Home pleasing to you

You might ask your students for their own list of hassles and uplifts. One sample of college students reported the following.

### Hassles
1. Troubling thoughts about the future
2. Not getting enough sleep
3. Wasting time
4. Inconsiderate smokers
5. Physical appearance
6. Too many things to do
7. Misplacing or losing things
8. Not enough time to do the things you need to do
9. Concerns about meeting high standards
10. Being lonely

### Uplifts
1. Completing a task
2. Relating well with friends
3. Giving a present
4. Having fun
5. Getting love
6. Giving love
7. Being visited, phoned, or sent a letter
8. Laughing
9. Entertainment
10. Music

To measure the effects of hassles and uplifts, Lazarus had participants fill out physical and mental health questionnaires at the beginning and the end of the year. As predicted, hassles turned out to be much better predictors of psychological and physical health than major life events. The more frequent and intense the hassles people reported, the poorer their overall health. Major events did have some long-term effects, but in the short term, hassles seemed more strongly correlated with health. Lazarus suggests that major life events may affect us indirectly through the daily hassles they provoke. Divorce, for example, might force an inexperienced man to make his own meals and it might compel a woman to repair a leaky faucet.

Two other results are noteworthy. First, the negative relationship between hassles and health was particularly strong for men. Second, contrary to expectations, uplifts did not seem to have much of a buffer effect. In fact, for women, uplifts seem to have a negative effect on psychological health.


Wilson, C. (2003, February 5). A mere 10 seconds can stretch a smile for a lifetime. *USA Today*, p. 1D.

**Lecture/Discussion Topic: Stress and Economic Change**

Both the American Psychological Association’s 2008 Stress in America survey and a landmark Gallup-Healthways poll (conducted throughout 2008 into 2009) demonstrated how an economic downturn affects our physical and emotional health. Money proved to be the top stressor for Americans.

Data for the APA poll was collected in late September 2008, just as the stock market was plunging and before the U.S government passed the $700 billion bailout package. Interestingly, women were more likely than men to report feeling stress about finances. Among other APA results (compared with results of a poll conducted one year earlier) was the finding that feelings of fatigue, irritability and anger, and sleeplessness had increased in most people. Americans did not appear to be coping well with their increased stress as almost half of Americans reported overeating or eating unhealthy foods to manage stress. Others reported drinking alcohol or smoking to deal with stress. A total of 58 percent said they would be uncomfortable seeking professional advice to help manage stress or stress-related problems.

The Gallup-Healthways poll produced an Emotional Health Index (EHI), a measure that weighed negatives such as depression, worry, and stress against the positive feelings a person experienced the day before the survey. Among the poll’s highlights:

— Stress shot up over 2008, peaking in the fall and winter. The 10 least happy days of 2008 were all in the last quarter.
— Emotional well-being dropped overall, driven mostly by declines in mental health for the poorest people
— Americans’ moods were ultra-sensitive to economic news. Well-being dropped dramatically on days when the stock market lost big and with reports of high jobless claims.
— A state’s EHI (West Virginia was lowest; Hawaii was highest) correlated with higher rates of death from serious ailments such as heart disease.
— There were few racial differences, but Hispanics, the nation’s largest and fastest growing minority, had the worst emotional health all year long.


**Stress and Cancer**

**Lecture/Discussion Topic/Lecture Break: Stress Affects Cancer Treatment, Too!**

Research has shown that stress puts animals at greater risk for developing cancer. The link is less reliable in humans. However, the very fact that stress can weaken the immune system (especially in the face of accumulated or prolonged stressors) is cause for concern among cancer patients, their families, and the medical professionals who treat them.

Recent scientific evidence suggests that stress is associated with increased levels of a protein called heat shock protein 27 (Hsp27) that seems to hinder cell death by allowing cells to repair themselves even after DNA damage. This cellular survival in the presence of Hsp27 is desirable for cells in organs such as the heart, but it is bad news if it occurs in cancer cells. Indeed, researchers found that cultured cancer cells were able to resist the effects of DNA damage resulting from radiation by pausing other processes to repair themselves when they were in the presence of Hsp27. Factors that silenced this stress-induced protein were found to enhance cell death.

Hsp27 levels are known to increase after any intense or prolonged physical activity, especially exercise. Levels reach their peak after about 48 hours. Although the research was conducted on cells cultured in a laboratory, based on their findings, the researchers urged medical professionals to advise cancer patients to avoid stress or exertion for at least a couple of days prior to the start of cancer therapy so as not to reduce the benefits of treatment. They expressed concern that stress might “trigger recurrence of cancer cell growth.”

Have your students discuss the findings from this study, either in small groups or individually in a brief writing assignment. If the findings of this study are replicated and found to be reliable, they will have strong bearing on treatment protocols for cancer patients.

What would your students recommend cancer patients do in the days preceding chemotherapy or radiation treatments? What kinds of stress-reducing strategies should they follow?


**Stress and the Heart**

**Lecture/Discussion Topic/Lecture Break: Stress Affects Cancer Treatment, Too!**

You may want to extend your discussion of stress and the heart with an account of research at Johns Hopkins University on what some have dubbed “broken heart syndrome.” Brought on by sudden emotional stress...
caused by the death of a loved one, a bitter conflict, or even a surprise party, the condition, called stress cardiomyopathy, causes temporary heart failure.

During a four-year period, researcher Ilan Wittstein and his colleagues studied 19 patients who were hospitalized after such shocks. Most were older women in their sixties. One experienced symptoms an hour after narrowly avoiding a car accident, another fell ill within two hours of being involved in a bitter argument, and a third reported symptoms four hours after a surprise party. The grief or fear experienced stimulated the body to produce adrenaline that stunned the heart muscle, leaving it temporarily unable to contract. The reduced pumping caused chest pains, shortness of breath, and other symptoms similar to a heart attack. However, stress cardiomyopathy is not the same thing as a heart attack, which occurs when a blood clot in a coronary artery cuts off circulation to the heart muscle.

According to the researchers, shortly after the patients experienced the emotional event, they recorded very high blood levels of stress hormones (including adrenaline). In fact, the levels were 2 to 3 times higher than those in heart attack victims and 7 to 34 times above those of healthy people. Some were placed on life support to keep their blood circulating.

Patients diagnosed with the condition were all previously healthy and had no history of heart disease. Blood tests showed normal levels of topopin, an enzyme released when cells are damaged in a heart attack. Most important, all recovered, and magnetic resonance imaging of their hearts indicated no permanent damage.


Lecture/Discussion Topic: Type A and Type B Personalities

Handout 6, developed by Paul Insel and Walton Roth, provides a way to assess Type A and Type B personalities. Scoring instructions are included on the handout.

First identified by San Francisco cardiologists Meyer Friedman and Ray Rosenman, Type A behavior has two main components. Friedman states, “First, there is the tendency to try to accomplish too many things in too little time. Second, there is free-floating hostility. These people are irritated by trivial things; they exhibit signs of struggle against time and other people.”

A key difference between Types A and B is that the former seem to react to several types of stress with larger increases in pulse rate and blood pressure. In one study, which included both personality types, research participants were forewarned that they would receive electric shock for errors on a difficult task: recalling long strings of numbers read aloud only once. Under this stressful condition, Type A individuals showed a significantly higher increase in pulse rate and blood pressure than did Type Bs.

There are also contrasting patterns in social behavior. Type As tend to be more impatient with others and become angry when other people hold them back in any way. In general, Type As report feeling less comfortable around others than do Type Bs. They prefer to work alone rather than as a team, and they seem to resent being told what to do. Types As are more ready to do the opposite of what is demanded of them.

What about Type A and work performance? Type As seem to work faster even when no pressure or deadline is involved. They complain less about hard work and report being less tired when it is finished. However, Type As do more poorly on tasks requiring patience or careful, considered judgment. Interestingly, surveys indicate that most members of top management are Type Bs, not Type As. Perhaps As don’t survive to make it! More likely, however, the impatient, hurried style of Type A is not compatible with the skills needed of top-level executives. In summary, Baron suggests that Type As do better on tasks involving time pressure or solitary work. Type Bs may do better on tasks requiring complex judgment, accuracy rather than speed, and working as part of a team.

Here’s an interesting footnote you may want to share with your class regarding the life of Meyer Friedman, co-discoverer of the link between Type A behavior and heart disease. Eric Wargo reports that Friedman described himself as a Type A personality and wound up suffering a heart attack at age 55. He decided to change his lifestyle in accordance with his own discoveries. To get in touch with his slow, patient, and creative side, Friedman read Proust’s languid seven-volume Remembrance of Things Past three times. By training himself to relax and enjoy life he lived to the ripe old age of 90.


Classroom Exercise: Hostility and Its Alleviation

Research suggests that the Type A’s toxic core is negative emotion, especially hostility (a potent form of anger). Redford Williams’ The Trusting Heart: Great News About Type A Behavior provides a good source of lecture material on overcoming the hostile and cynical elements of Type A behavior. After showing how hostility and cynical mistrust seem to be the lethal aspects of the Type A syndrome, Williams suggests that
the route to a more trusting heart requires three things. First, Type As must reduce cynical mistrust of others. Second, they must reduce the frequency and intensity with which they experience anger, frustration, irritation, and rage. Third, they must learn to treat others with kindness and consideration and to develop their assertiveness skills for unavoidable situations. In summary, Type As must change certain thoughts, feelings, and actions.

To reach these goals, Williams proposes the following 12-step program for the Type A personality.

1. Monitor your cynical thoughts. Keep a hostility log, noting when and where you become cynical and angry, as well as who or what stimulates the cynical thoughts. The log will reveal the kinds of situations that stir these thoughts.
2. Confession is good for the soul. Let someone close to you know that you recognize you have a problem with hostility and want to enlist that person’s support in an effort to change. (This is also an act of trust directed toward another person.)
3. Stop those thoughts! As soon as you realize you are having cynical thoughts, yell to yourself (or aloud if no one is around) “Stop!” Surprisingly, those thoughts will become less frequent.
4. Reason with yourself. When cynical thoughts arise as you stand in a bank line, begin a silent speech: “All right, you suspicious person, don’t assume that harmless little old lady deliberately intended to slow down the line by forgetting her pen and asking the teller to fill out her deposit slip. . . .”
5. Put yourself in the other person’s shoes. Looking at life through another’s eyes will quickly convince you that your suspicions are ridiculous. Empathy and anger are incompatible.
6. Learn to laugh at yourself. You can use humor to deflect your cynical mistrust and defuse your anger. Remember, though, it should be laughter at yourself. Laughing at the expense of others is just another expression of cynicism.
7. Learn to relax. If you can’t stop your thoughts with the earlier steps, call on another powerful technique: meditation. You will need to practice it regularly and at times when you aren’t even “stressed out.” Relaxation will draw your mind’s eye from the habitual pattern of cynicism.
8. Practice trust. Begin looking for opportunities to trust someone in which, if it doesn’t work out, no harm is done. More often than not, you will find that your trust has been warranted.
9. Learn to listen. Learn to keep your mouth shut until others have finished speaking. Your attention will communicate that you value other people and their ideas.
10. Learn to be assertive. Calmly tell others what is bothering you about their behavior and why. Self-assertion is a constructive alternative to aggression.
11. Pretend today is your last. The nitpicking things that trouble you will seem less important. Recognizing the shortness of life puts matters in proper perspective.
12. Practice forgiving. Letting go of resentment lifts the weight of anger from your shoulders. Rather than blaming others, try to understand the emotions of the one who has wronged you.


Lecture/Discussion Topic: Type D Personality

Negative emotions, including anger, pessimism, and depression, can be toxic. Johan Denollet has proposed that a Type D personality, marked by negative affectivity and social inhibition, is inversely correlated with cardiovascular health. Handout 7 assesses a Type D disposition. (The measure is adapted from a longer 14-item scale that Denollet and his research team have used in their research.) Adding the numbers circled in response to statements 1, 3, 6, 8, 10, 11, and 14 provides the negativity affectivity score; adding the numbers circled in response to statements 2, 4, 5, 7, 9, 12, and 13 provides the social inhibition score. Negative affectivity scores of 10 or higher combined with social inhibition scores of 10 or higher suggest a Type D personality. Studies indicate that the potential social and emotional problems associated with this personality syndrome are linked with increased chances of developing heart disease.

In research with 300 patients in a cardiac-rehabilitation program in Antwerp, Belgium, Denollet’s research team found that within 10 years 27 percent of the Type D patients had died (mostly of heart disease or stroke), compared with 7 percent of the others. In another study in the Netherlands, Susanne Pedersen and her research team followed 875 patients who had received stents to open their coronary arteries. The results indicated that Type D patients were more than four times as likely as their counterparts to experience a heart attack or death within six to nine months of the procedure.

Denollet suggests that Type D personality is not a psychological disorder but rather a collection of normal human traits: “There are many Type D individuals who are living healthy lives and functioning quite well.” Moreover, the distress that is associated with negative affectivity and social inhibition can be alleviated. Even the most distress-prone person can learn to
cope with stress and defeat negative thoughts through psychotherapy. And a good marriage can be an antidote to social inhibition, especially if one’s partner feels at ease with others. Lifestyle changes, including exercise and a healthy diet, reduce almost anyone’s risk of a heart attack. Finally, as Michael Miller observes, the Type D test itself can help people own up to their fears and frustrations because taking it does not involve any embarrassing social interaction.


Promoting Health

*Lecture/Discussion Topic: The Health Belief Model*

Although it is better to practice preventive medicine—to behave in ways that maintain our health—treating illness is also an important part of promoting health. You may want to precede your discussion of ways of promoting health with a brief explanation of the health belief model. Shelley Taylor suggests that this model has been the most influential approach to understanding people’s actual use of health services. According to this model, two factors predict whether a person will seek treatment: (1) the degree to which a person perceives a threat to his or her health, and (2) the degree to which he or she believes that a particular health measure will effectively reduce that threat.

Perceived threat is a function of general health values (e.g., my physical health is the most important thing to me), specific beliefs about one’s vulnerability to a particular disorder (e.g., polio has not yet been eradicated), and beliefs about the severity of the consequences (e.g., polio can paralyze). Belief in the efficacy of treatment includes one’s feelings that the benefits of seeking treatment exceed the costs (although polio vaccinations are uncomfortable, they do prevent polio). Taylor notes that only people who believe that they are susceptible to polio, that polio has severe consequences, and that vaccination is effective against polio will go to a health service to be vaccinated.

I. K. Zola has identified at least three other “triggers” that may send a person for treatment. First, an interpersonal crisis that threatens relationships with friends or close relatives may lead the patient to seek help. For example, if a husband is “always tired,” his wife may insist he do something about his constant fatigue. Second, social interference may lead to action. For example, symptoms that threaten valued activities such as the taking of a vacation may prompt one to seek treatment. Finally, social sanctioning, such as when an employer insists that a symptomatic individual either seek treatment or return to work, may lead the employee to finally seek help.


Lecture/Discussion Topic: The Theory of Reasoned Action

The question of when people take action to promote their own health reflects psychology’s more general concern with the question: When do people translate their beliefs and attitudes into action? The theory of reasoned action and its extension, the theory of planned behavior, address this broader issue and are discussed in the Therapy unit in these resources. Because these theories have been successful in predicting a variety of health behaviors, including participation in cancer screening programs, condom use, taking of vitamins, use of oral contraceptives, and breast and testicular self-examinations, you may choose to introduce them now.

Coping With Stress

*Classroom Exercise: Differences in Thinking Styles*

The Thinking and Language unit includes an activity in which students fill out a questionnaire regarding whether they are analytical/rational or intuitive/experiential thinkers (p. 514). If you did not use it then, you might want to use it now in relation to problem-focused and emotion-focused coping.

*Classroom Exercise/Critical Thinking Break: Reflecting on What We Really Do When We Are Stressed*

To make a discussion of coping mechanisms relevant to students’ lives, give them an opportunity to reflect upon what they do when they are feeling tension and the need to respond to stressors in their lives. This exercise should be completed in small groups. Have students respond to this question before you begin your lecture and before you introduce the Coping With Health Injuries and Problems Scale (Handout 8) or the Coping With Stress Scale (Handout 9).

Part 1. Have each group member describe the primary coping mechanism/behavior/strategy that he or she
tends to rely on the most when experiencing stress. Specifically, each group member should
a. name the specific behavior or set of behaviors he or she uses to handle stress.
b. explain how well his or her primary coping strategy works in helping to handle stress.
c. indicate why he or she believes this strategy is effective or not effective, and what makes it so.
d. indicate whether he or she feels the need to make some adjustments in handling stress. If so, what kinds of adjustments would he or she like to make?

Part 2. Each group member should complete and score the Coping With Health Injuries and Problems Scale (Handout 8) and the Coping With Stress Scale (Handout 9). As a group, review the subscale scores each group member earned on each questionnaire.
a. For each questionnaire, which subscale had the highest score for each group member?
b. Do the highest subscale scores for each person match up with the primary coping mechanism/behavior/strategy identified for Part 1?

Part 3. What similarities or differences did you observe among the group members in strategies, scores, or desired adjustments for the future?

**Classroom Exercise: Coping With Health Injuries and Problems Scale**

How do we respond to health problems? The study of coping with health problems has evolved into a major area of research. You can use Handout 8, the Coping with Health Injuries and Problems Scale (CHIP), designed by Norman Endler and his colleagues, to discuss alternative coping strategies. (Handout 9, described in the next exercise, focuses more specifically on how we cope with stress.) The researchers’ primary goal was to create a reliable and valid multidimensional coping inventory that describes responses to a wide variety of health problems of varying duration and severity. Research on the scale has identified four major coping strategies that are assessed by separate subscales. Students’ total score is simply the total of the numbers preceding subscale items according to the following breakdown.

Items 2, 6, 10, 14, 18, 22, 26, and 30 assess palliative coping. This strategy involves a variety of self-help responses aimed at alleviating the unpleasantness of the situation. These responses are attempts at self-care and include lay beliefs about the nature of the illness or problem. Mean scores of 22.72 and 24.79 were obtained for men and women, respectively.

Items 3, 7, 11, 15, 19, 23, 27, and 31 assess instrumental coping. This involves task-oriented responses such as actively seeking out health information or seeking medical advice. It is closely associated with problem-focused coping, which is described in the more general coping literature. Mean scores of 28.72 and 29.54 were obtained for men and women, respectively.

Items 1, 5, 9, 13, 17, 21, 25, and 29 measure distraction coping. These strategies involve attempts by a person experiencing a health problem to think about more pleasant experiences, engage in unrelated activities, or seek the company of others. This type of coping is related to what is called “avoidance” in the more general coping literature. Mean scores of 20.16 and 22.00 were obtained for males and females, respectively.

Items 4, 8, 12, 16, 20, 24, 28, and 32 measure emotional preoccupation coping. These responses involve fixation with the emotional consequences of the health problems. Important aspects of emotional preoccupation appear to overlap with the more general construct of rumination in the coping literature. Researchers have often found a positive relationship between emotion-oriented coping behaviors and the level of psychological distress that patients experience, as well as length of time it takes to recover from illness. Mean scores of 28.76 and 29.41 were obtained for males and females, respectively.


**Classroom Exercise: Assessing Coping Strategies**

To help students understand the distinction between problem-focused and emotion-focused coping, you might distribute Handout 9, which has been used in research by Charles Holahan and Rudolf Moos. The questionnaire identifies 32 coping strategies; some are clearly problem-focused (“Made a plan of action and followed it”) and others are emotion-focused (“Tried to reduce tension by exercising more”). After completing the scale, you might ask volunteers to indicate which strategies they believe to be most effective, either in their own specific case or in general. Holahan and Moos believe that their strategies can be defined in terms of active-cognitive (active efforts to construct thoughts to help cope with the problems), active-behavioral (active efforts to change the situation), and avoidance (trying to keep the problem out of awareness). The score for each set of coping strategies is the sum of the scores for the items indicative of that strategy. Active-cognitive is assessed by items 1, 6, 7, 10, 11, 15, 20, 21, 23, 26, and 29. Active-behavioral is measured by items 2, 3, 5, 8, 12, 13, 17, 18, 22, 25, 28, 31, and 32. Avoidance is indicated by items 4, 9, 14, 16, 19, 24, 27, and 30. Respondents can calculate their means for each subscale to determine what strategy they tend to use more. The research by Holahan and his colleague suggested that women used active-behavioral and avoidance strategies more than men. No sex differences were found in the use of active-cognitive
strategies. Those who used active-cognitive and active-behavioral approaches tended to be easygoing and less anxious. They also tended to be self-confident. Those who used avoidance tended to be more depressed and anxious. They also suffered greater physical stress. Finally, avoiders had less education, financial resources, and family support.

In using this scale, Jerry Burger found that people who were high in their desire for control generally seemed to rely on more active strategies, such as trying to make things work and obtaining information and advice from friends. In comparison to low-desire-for-control people, they made a greater effort to deal with their problems. Researchers suggest that active strategies are typically more effective than avoidant strategies, and problem-focused strategies are more effective than those that attempt to deal only with emotional distress. This would mean that high-desire-for-control people are more effective in coping with their problems than are those with a low desire for control. At the same time, it is clear that the effectiveness of a given strategy depends on many situational variables. For example, faced with situations that are inherently uncontrollable, people who feel compelled to master a stressful situation may be less likely to cope than those with no such pressing need.


**Lecture/Discussion Topic: Stress, Positive Emotion, and Coping**

Susan Folkman and Judith Tedlie Moskowitz observe that even in the midst of acute or chronic stress, people experience positive emotion. In monitoring gay men who were the primary caregivers of partners with AIDS for up to five years, they found that the caregivers reported positive and negative moods equally. How could they experience positive emotions during such difficult circumstances? Folkman and Moskowitz identified the following three important classes of coping mechanisms.

*Positive reappraisal* is a cognitive process in which people focus on the good in what is happening or what has happened. The meaning of a situation can change as people perceive personal growth and recognize how their own efforts can benefit other people. In studying AIDS-related caregiving, such positive reappraisal was associated with positive emotion during both caregiving and after the death of the partner.

*Problem-focused coping* involves thoughts and instrumental behaviors that manage or solve the underlying cause of distress (see the Classroom Exercise: Assessing Coping Strategies). Although such coping is usually considered maladaptive when there is no personal control, study of the caregivers highlighted that even situations that appear uncontrollable may still have controllable aspects. For example, in the weeks prior to the partner’s death—a period of profound lack of control—the caregiver often created the “to-do” list, that is, performing seemingly mundane tasks such as getting a prescription filled or changing the partner’s bed linen. Such trivial tasks foster feelings of efficacy. The caregiver often benefited from the positive feedback from his partner or from others involved in the partner’s care.

*Creation of positive events* involves infusing ordinary events with positive meaning. Reflecting on a compliment that was offered in passing or pausing to take note of a beautiful sunset provided momentary respite from the ongoing stress. Month after month, more than 995 of the caregivers’ notes remembered positive events in the midst of some of life’s most trying circumstances. These events might not even have been noticed in less stressful times. In fact, the caregivers not only noted such events when they occurred serendipitously but also often deliberately created them. Such humor not only proved tension-reducing but often helped build social bonds in the darkest moments.


**Classroom Exercise: Perceived Control**

Introduce the issue of personal control with Handout 10, the Multidimensional Health Locus of Control (MHLC) Scales designed by Kenneth Wallston and his colleagues. These scales will help you to preview the locus of control concept presented in the Personality unit that internals believe they can control their own fate, whereas externals believe their fate is determined by chance or other external forces. While a person may generally be an internal (or an external), he or she may have different views of control over a specific area. For example, a person who feels in control in terms of academic work may be an external with regard to major illness.

The first six items measure internal health locus of control (one feels personal control over his or her health), items 7 through 12 assess “powerful others” health locus of control (e.g., physicians may control one’s health), and the last six items measure chance health locus of control (health is due to fate, luck, or chance). Students simply add up the numbers in the blanks. Scores between 23 and 30 on any subscale indi-
cate strong support of that dimension. Scores between 15 and 22 reflect moderate support; scores between 6 and 14 suggest low support.

What can we actually do to control our health? Joseph Matarazzo gives specific advice.

1. Get 7 to 8 hours of sleep every night.
2. Eat breakfast every day.
3. Get your weight to a normal level.
4. Don’t smoke.
5. Use alcohol moderately or not at all.
7. Wear seat belts.
8. Don’t drive at excessive speeds.
9. Learn good diets and follow them.
10. Find a physician with whom you can communicate.

In an interview in Psychology Today, Judith Rodin discussed the importance of a sense of control in elderly persons, particularly those in nursing homes. She reports that seemingly trivial environmental changes, such as allowing them to choose when to see a movie or how to arrange their room, significantly improved their health and psychological well-being. Even the death rate dropped. Rodin and Ellen Langer have also tried to enhance the elderly’s sense of control by teaching them new and more diverse coping strategies. The elderly were instructed to set a goal and to articulate a strategy for achieving it. Those taught such skills not only developed a greater sense of control, but also had much lower levels of the stress hormone cortisol. They developed fewer illnesses, and any chronic conditions they had were less likely to worsen. Rodin notes that a wonderful thing happened while she was running the study. After a local newspaper story reported that a neighboring state paid $10 a month more to the elderly, three of the people in the experimental group went to the state capital to petition their own legislature for changes. The coping-skills training was critical to these improvements. Another group, given just as much sympathetic attention but no training, showed little change.

The significance of perceived control was also evident in a study by Richard Schulz, in which nursing home residents were visited by college students once a week, on average. Some of the elderly could schedule these visits, whereas others were only informed when they would occur. A third group was visited but without even being told when the visits would be. After two months, those who could schedule the visits were rated as happier and healthier and required less medication than residents in the other groups. Those for whom the visits were predictable were better off than those who were left uninformed.

The principle extends, of course, beyond the nursing home. Researchers had new health-club members indicate their preferred exercise activity. Later, all were given that activity to participate in, but only some were told that their choice had determined the assignment. Others were led to believe that their own preference had been irrelevant. Those in the “personal control” condition more faithfully followed the exercise program during the ensuing six weeks.


Lecture/Discussion Topic/Classroom Exercise: Locus of Control

Handout 11 is the personal efficacy subscale of Delroy Paulhus’ Locus of Control measure. It measures one’s sense of control in personal achievement situations; two other subscales measure control in interpersonal encounters and in social and political matters. Researchers find that respondents’ sense of personal control may vary across different situations. To score, have students reverse the numbers they placed before statements 3, 6, 7, 8, and 10 (i.e., 1 = 7, 2 = 6, 3 = 5, 5 = 3, 6 = 2, 7 = 1). Then they should add the numbers in front of all 10 items. Jerry Burger reports that for a sample of college students, the means were 51.8 and 52.2 for males and females, respectively.

Considerable research has been done on the locus of control concept. Internals not only believe that they can control their own destinies, but in fact they are more effective in influencing their environments. Researchers consistently find that internals receive higher grades and better teacher evaluations than do externals. Although this is true across ages, the relationship is particularly strong for adolescents. Internals feel more responsible for their achievements, believe that studying will pay off, and generally seem to have a better idea of how to prepare for an exam. They are more likely to attribute their grades to their abilities or effort and thus are more likely to study for the next exam. Given the task of changing others’ beliefs, they are more successful. In one study, for example, internals proved more persuasive in altering college students’ attitudes toward fraternities and sororities. Internals themselves, however, seem to be less susceptible to control and influence from others. They are particularly resistant to subtle forms of attempted influence. Internals are less likely to conform and are not as likely
to respond to the prestige of a message’s source as are externals. Internals are, however, more accepting of information when it has merit. Just as internals are more effective in controlling their social world, they also seem to exhibit greater self-control. Among those who attempt to quit smoking, internals show fewer relapses. They are also more likely to engage in physical exercise, better at losing weight, more apt to use seatbelts, and more likely to practice preventive dental care. As hospital patients, they are likely to know more about their medical condition and to be less satisfied with the amount of information they receive from physicians and nurses. Although many studies find a positive correlation between internality and health, it is not always true. Julian Rotter noted that behavior is a function of both expectancy and value. Thus, believing that your actions affect your health is not enough. One must also place a high value on good health if one is to take appropriate action.

What fosters internality? Research suggests that family environments characterized by warmth, protection, and nurturance are likely to lead to an internal locus of control. Furthermore, consistent parental behavior is positively correlated with internality. Ordinal position in the family also seems to affect locus of control. Generally, first-born and earlier-born children tend to be more internal. Conversely, persons with limited access to social power or material resources often develop external orientations. Minority membership and lower socioeconomic status are associated with externality.

Hostages and prisoners of war often report that the most debilitating aspect of their experience was the uncertainty of their fate and the loss of personal control over their environment. The sense of helplessness may lead to physical illness, sometimes even death. Every effort will be made by these people to maintain some sense of control. Among the Americans held captive by Iranian students in the early 1980s, one hostage would save a small bit of food and then offer it to anyone who came to his cell. That strategy had the effect of turning the cell into a living room and the hostage into a host welcoming visitors.

While it may be better to be internal than external, internality also has limits. To believe one can control everything is maladaptive. Some Jews in Nazi Germany who were forewarned of disaster remained, believing they could control their fate. Believing one can control the uncontrollable may also lead to unwarranted self-blame when success does not come.


**Feature Film: The Shawshank Redemption, Perceived Control, and Reciprocal Determinism**

A clip from this popular film starring Tim Robbins powerfully illustrates how differing perceptions of control can affect our physical and psychological well-being. Beginning at 57:03 minutes (Scene 16 on the DVD), Brooks, the prison librarian, is paroled after 50 years at Shawshank. Instead of welcoming this news, Brooks is distraught and threatens to slit a fellow inmate’s throat just so he can stay. Finally released, he experiences total loss of control over his environment. Unsuccessful even as a grocery bagger, he commits suicide. The scene immediately shifts to Andy, who back at Shawshank has been writing the state legislature each week for support of a new prison library. His years of letter-writing have paid off with a check and new books. Even in this dehumanizing setting he still has control of his fate. Relishing his success, he violates prison rules when he plays a classic recording, one of his new acquisitions, over the prison loudspeakers. After two weeks in solitary, his sense of personal control and optimism remain undimmed. Over the dinner table with his fellow inmates, he gushes hope, claiming that “We need it so we don’t forget . . . that there are places in the world that aren’t made out of stone, that there’s something inside that they can’t get to, that they can’t touch. It’s yours.” The clip, which ends at 112:44 minutes (through Scene 20 on the DVD), demonstrates that those who perceive control over their environment experience much less stress and experience a greater sense of well-being. Brooks and Andy show very different responses to their environments. Clearly, persons and situations interact, as Albert Bandura’s concept of reciprocal determinism suggests.

**Classroom Exercise: Savoring**

You can extend your discussion of perceived control over negative events to Fred Bryant’s research on savoring, a form of perceived control over positive events. Handout 12 represents his Savoring Beliefs Inventory (SBI). The scale assesses respondents’ perception of their ability to derive pleasure through anticipating upcoming positive events (Items 1–8), savoring positive moments (Items 9–16), and reminiscing about past positive experiences (Items 17–24).

Students can calculate their scores for the total scale and for each of the three subscales. They should reverse their responses to the odd-numbered items \(7 = 1, 2 = 6, 3 = 5, 4 = 4, 5 = 3, 6 = 2, 7 = 1\), then add all the numbers for all the items to obtain a total scale (totals can range from 24 to 168). For each subscale, the total can range from 8 to 56. Higher scores reflect a stronger belief in the capacity to savor positive experiences through anticipation, present enjoyment, and reminiscence.
SBI scores are positively correlated with extraversion, optimism, internal locus of control, life satisfaction, reported self-control behaviors, and self-esteem. They are negatively correlated with neuroticism, guilt, hopelessness, depression, and the frequency of unhappy and neutral affect. The SBI was validated by relating students’ savoring scores to their affect and behavior in anticipating, enjoying the actual experience of, and looking back on their Christmas vacation.

Martin Seligman (2002) laments how the rush of contemporary life as well as our future-mindedness keeps us from savoring the present moment. Read Joe Veroff’s reflections on his grown children’s letters to understand the difference savoring makes:

I find a quiet moment when I can linger a bit with them, and read them in order and let the words roll very slowly over me like a long warm gentle shower. I read each one slowly. Sometimes they are highly sentimental, and yet I can’t hold back the tears. Sometimes they are profoundly insightful about what has been happening to them and the world around them, and I am amazed. I can almost feel the children gathered in the room in which I am reading. (p. 108)

By adding clarity and vividness to experience, savoring contributes directly to well-being and happiness. Without attention and awareness, fleeting but important moments pass by. In reflecting from the Columbia shuttle a few days before its scheduled landing, mission specialist Laurel Clark described her delight at the simple, unexpected wonder of a sunset in space: “There’s a flash; the whole payload bay turns this rosy pink,” she observed. “It only lasts about 15 seconds and then it’s gone. It’s very ethereal and extremely beautiful.”

Can students recall having such a moment—a perfect surprise? Oprah Winfrey shared having experienced such a beautiful moment. It involved a walk down a Santa Barbara lane, a hummingbird, and the smell of orange blossoms. It was one of those rare times, she related, that she could say she was truly happy. A mere 10 seconds, suggests Craig Wilson, can stretch a smile for a lifetime. We all have the opportunity at one time or another, but whether we are wise enough to catch the moment may be another matter.


Wilson, C. (2003, February 5). A mere 10 seconds can stretch a smile for a lifetime. *USA Today*, p. 1D.

Classroom Exercise: Assessing Self-Control

Actively controlling or self-managing our behavior potentially reduces stress. *Self-control*—the ability to control impulses and delay gratification—predicts good adjustment, better grades, and social success. Moreover, students who plan their day’s activities and who then live out their plans are at low risk for depression.

June Tangney and her colleagues designed Handout 13 to assess people’s level of self-control. To score their responses, students should first reverse the numbers they placed in answer to statements 2, 3, 4, 5, 7, 9, 10, 12, and 13 (i.e., 1 = 5, 2 = 4, 3 = 5, 4 = 2, 5 = 1), then add the numbers in front of all items to obtain a final score. Scores range from 13 to 65, with higher scores reflecting greater self-control. The average (mean) score for a large sample of undergraduates was about 39.5.

Tangney’s research team reported that respondents with higher scores on the scale enjoy higher self-esteem and are less anxious (as well as less depressed). They have stronger social skills, demonstrate greater empathy, and are less vulnerable to alcohol abuse and eating disorders. When they do transgress, they are more likely to take responsibility for their actions.


Classroom Exercise: Satisficers Versus Maximizers

Barry Schwartz has claimed that “an excess of freedom” in today’s Western cultures has contributed to decreasing life satisfaction. Schwartz has also suggested that the way people make choices affects their sense of well-being.

In considering life’s many choices—from selection of toothpaste to that of college—some of us ask, “Is this alternative acceptable?” Others are more likely to wonder, “Is this the best?” *Satisficers* set “good enough” as their criterion for outcomes. For *maximizers*, outcomes must be optimal. Barry Schwartz and his colleagues designed Handout 14 to assess these two contrasting orientations to choosing goals.

To score, students should simply add the numbers they circled. Total scores range from 13 to 91, with higher scores reflecting a greater tendency to be a maximizer, trying to get the very best or absolute most out
of every situation. Several samples of adults obtained a mean score slightly above 50.

In some cases, maximizing is the better strategy for making decisions. For example, in responding to a serious health threat, seeking and settling only for the best treatment increases your chances of survival. Maximizers plan more carefully in solving problems, and their high standards may spur them on to greater achievement.

However, maximization can come at a significant cost to well-being. In several samples of adults, the researchers found that maximization was negatively related to happiness, life satisfaction, optimism, and self-esteem. It seems that the tendency to want to maximize outcomes is highly correlated with potential regret over choices that have been made. Maximizers seem especially susceptible to social comparison and adaptation that can drain joy from life. Maximizers also tend to keep their options open, which lowers life satisfaction.

To some degree, we all compare our life’s outcomes with those of others. The gap between what we have and what our friends and neighbors possess can foster feelings of relative deprivation. An important reason that money fails to boost life satisfaction is our strong tendency to compare ourselves with those who have more. Especially as we climb the ladder of success, we are more likely to compare ourselves with those one rung higher than with those a rung lower, and so we often become dissatisfied.

Maximizers, in their eagerness to decide whether they have attained the “best” life outcomes, need some standard for making that judgment. Because an objective criterion often is not available, they compare themselves with others. Research confirms that, relative to satisficers, maximizers do engage in more social comparison and experience greater feelings of relative deprivation.

Our remarkable capacity to adapt also shortcircuits happiness. Good experiences—a promotion, a new car, gaining entrance to a prestigious school—boost our spirits only briefly. Similarly, bad experiences—a car accident, a rejected job application, a low score on an entrance exam—deflate us, but only temporarily.

Although we may understand the adaptation principle, we underestimate its power. We adapt more quickly than we think. And because maximizers have higher standards of acceptability than do satisficers, they tend to find adaptation more distressing. Given the huge investment they have made in weighing alternatives before making a choice, maximizers feel that they deserve a higher rate of return. Expecting more from every situation, maximizers more often experience disappointment.

Finally, maximizers strive to keep their options open. For this they may pay an unanticipated price. Dan Gilbert and Jane Ebert conducted an intriguing series of studies in which participants made a reversible or irreversible choice. Participants strongly preferred keeping their options open to having their choice made final. Surprisingly, however, the researchers found that participants were less satisfied with the outcomes of reversible decisions than with those that were irreversible. Why? Perhaps when we make a final decision, we work to convince ourselves that we made the right choice. In keeping their options open, as maximizers tend to do, they remain ambivalent.


**PsychSim 5: Helplessly Hoping**

In this activity, students learn the importance of a sense of personal control over the events in their lives. Students participate in a simulated experiment on learned helplessness in dogs and then consider how the results might apply to the behavior of people trapped in unpleasant situations.

**Classroom Exercise: The Life Orientation Scale and Optimism**

The Personality unit in these resources includes Michael Scheier and Charles Carver’s Life Orientation Test, which assesses a person’s optimism, or more specifically, a person’s expectations regarding the favorability of future outcomes. The exercise also describes research relating optimism to physical and psychological health.

**Classroom Exercise: Defensive Pessimism**

Does pessimism ever work? Nancy Cantor and her students coined the term defensive pessimism to refer to a cognitive strategy in which people set low expectations for a future performance despite having done well in similar situations in the past.

Obviously, setting low expectations helps “cushion” the blow of possible failure. More important, people may use the strategy to reflect on what might happen, and thus give special attention to problems they might encounter. They then work hard to prepare for the upcoming situation or performance. Often, defensive pessimists feel anxious and out of control. Their
strategy helps them harness their anxiety as motivation, with the result being a better performance.

Handout 15, designed by Nancy Cantor, is the Defensive Pessimism Questionnaire. The items reflect two important characteristics of defensive pessimists. In addition to having negative expectations, they reflect extensively about possible positive and negative outcomes. Items 1, 2, 6, and 15 assess the “pessimism” factor, and items 4, 7, 8, 10, 12, 14, 16, and 17 assess the “reflectivity” factor. To score, students should reverse the numbers (1 = 7, 2 = 6, 3 = 5, 4 = 4, 5 = 3, 6 = 2, 7 = 1) placed before items 2 and 16 and then add the numbers in front of these 12 items. Scores can range from 12 to 84, with higher scores reflecting greater defensive pessimism. Items 5 and 9 are filler items and items 11 and 13 are experimental items. Item 3 tests for “realistic” pessimism—that is, if respondents have done poorly before in a similar situation, they are simply being realistic when they think their future performance may be poor. Cantor indicates that in college student samples, fewer than 20 percent rate themselves below 5 on this item.

Theoretically, defensive pessimism has its basis in the need to manage anxiety. Thus, it is not surprising that it is positively correlated with trait anxiety, neuroticism, the fear of negative evaluation, and self-handicapping. It correlates negatively with self-esteem and with self-clarity.

Most of the research on defensive pessimism has contrasted it with strategic optimism (they obtain low scores on Handout 15). Whereas defensive pessimists manage anxiety through extensive reflection about possible outcomes, strategic optimists distract themselves to avoid anxiety and thereby maintain their positive outlook. Both perform well in tasks in which they are allowed to pursue these respective strategies. On the other hand, defensive pessimists perform more poorly if they are instructed to focus only on positive outcomes and strategic optimists perform more poorly if they are encouraged to reflect about the upcoming task.

In her review of the research, Cantor suggests that defensive pessimism seems to be an excellent strategy for those who are tense because it addresses their psychological reality, namely, the need to control anxiety, which does not simply go away by wishful thinking. At the same time, there may be long-term costs. Preliminary data indicate that after three years in college, defensive pessimists report slightly lower grade-point averages and more physical and psychological symptoms. Because people often react negatively to others’ anxiety, defensive pessimists may also create negative impressions, annoying the people around them. Defensive pessimists do not necessarily become less anxious or generally more positive over time. In fact, the strategy, because it works, may be self-perpetuating.


Classroom Exercise: Unrealistic Optimism About Life Events

One obstacle to our implementing strategies that prevent illness may be that we are unrealistically optimistic about our health. You can readily demonstrate this with Handout 16, which is based on Neil Weinstein’s research. After students have completed the brief questionnaire, have them calculate their average response. Then ask for a show of hands from those who have a score below 0. Virtually every hand will go up. You might note this as another example of the self-serving bias, the tendency to see ourselves favorably.

Weinstein has found that people are especially optimistic about controllable health problems. Interestingly, only 5 percent of all smokers predict that they will be smoking 5 years from now, according to statistics from the Centers for Disease Control. Perhaps uncontrollable health problems are less related to one’s self-image, and so people exhibit less self-serving bias regarding them. Explain this to the class, then invite students to identify which health problems are most controllable (answer: the even-numbered items). Instruct them to average their responses to the odd items, and to average their responses to the even items. Then ask: “How many of you were, on average, more optimistic about the even-numbered items?” Virtually all hands should rise. (On the even-numbered items Weinstein found that Rutgers students averaged –1.46; on the odd numbers they averaged –0.16.)

This demonstration could serve as a springboard for an interesting discussion about optimism. Are people really being unrealistically optimistic about their own futures, or are they instead unduly pessimistic about others’? What are the benefits of optimistic thinking? Those with a generally hopeful attitude cope with stress more successfully and exercise more control over their environment. What are its perils? Because of the optimism of the American military, the United States was unprepared for the Japanese attack on Pearl Harbor. More currently, those who shun negative thinking about future energy supplies and the possibility of nuclear war are not likely to be much concerned with conservation or nuclear disarmament. Likewise, those who are unrealistically optimistic about their future health are least interested in taking steps to reduce risks to their health.


Weinstein, N. D. (1987). Unrealistic optimism about sus-
Classroom Exercise: The Hardiness Scale

Optimism is one factor that influences our response to stress. Suzanne Kobasa has suggested that “hardiness” is also important in how we handle stress. Presumably, the hardy personality does not become anxious and aroused in the first place, and thus never begins the spiral that may lead to illness. Handout 17 presents 12 items similar to those in Kobasa’s hardiness questionnaire. While evaluating someone’s hardiness requires more than this quick test, it should give students some idea of how hardy they are. Scoring instructions are included on the handout itself.

Kobasa states that three personality traits are important ingredients in hardiness. These include commitment to self, work, family, and other important values; a sense of personal control over one’s life; and the ability to see change in one’s life as a challenge to master. Kobasa’s research has confirmed that hardiness protects one from stress. In one study, she interviewed 200 AT&T executives who after scoring high on the Social Readjustment Rating Scale either had stayed healthy or become sick. In addition to asking them about their jobs, age, education, and income, she asked questions similar to those on the handout. Healthy executives were not younger, wealthier, or better educated than their “more sickly” colleagues. However, they were more committed, felt more in control, and had a larger appetite for challenge.

You may also want to review an analysis of the hardiness scale’s validity and utility by Steven Funk and Kent Houston. For example, their factor analysis did not identify the same factors as Kobasa’s hypothesized dimensions of commitment, control, or challenge. Results also indicated that hardiness may be more strongly related to depression than to physical illness. They further show that there is a significant negative correlation between measures of hardiness and maladjustment. This relationship, however, does not mean that a lack of hardiness is synonymous with maladjustment.


Classroom Exercise: Social Support Scale

Research indicates that social support promotes both happiness and health. The Social Support Scale provided by Paul Insel and Walton Roth (Handout 18) measures the extent to which a person receives or obtains social and psychological support from community activities, friends, and relatives. A score is obtained by adding all the numbers below the lines with check marks (item 1) and all the circled numbers (items 2 through 7). Insel and Walton suggest the following interpretations: 70 or more indicates high support, that is, a well-developed social support structure to counter the negative effects of stress; 40 to 69 indicates moderate support, that is, sufficient areas of social support to counter the negative effects of stress; less than 40 indicates low support, that is, lack of a minimum support structure to counter the negative effects of stress.

Ask your students to explain the support-health link. Possibly, people with strong social ties eat better, exercise more, smoke and drink less. Perhaps social relationships help us to evaluate and overcome stressful events such as rejection. Close relationships may also provide the opportunity to confide painful feelings. Research by Miller McPherson and his colleagues indicates that the average American has only two close friends and that almost one in four has absolutely no one to confide in. The findings suggest that the number of friendless Americans has doubled over the last 20 years.

Ask students if their college or university setting provides adequate social support. What difference, if any, does living on or off campus make?


Classroom Exercise: Self-Concealment Scale

Close relationships can provide the opportunity to confide painful feelings, and talking about our troubles can promote both physical and psychological health. The Therapy unit in these resources includes the Self-Concealment Scale, which measures the extent to which people typically conceal or disclose personal information that is traumatic.

Lecture/Discussion Topic: Social Relationships and Health

Sheldon Cohen identifies three important social factors or variables that affect our social health: social support, social integration, and negative interactions. Each influences health through a different mechanism.

Social support refers to a social network’s provision of psychological and material resources. It includes instrumental support, which is the provision of material aid; informational support, which is the giving of advice and guidance in dealing with life’s problems; and emotional support, which is the offering of empathy, caring, and reassurance. Social support affects...
health by buffering the effects of stress. That is, social support eliminates or reduces the effects of stressful experiences by providing less threatening interpretations of adverse events and effective coping strategies.

The most important factor in social support operating as a stress buffer, argues Cohen, is the perception that others will provide appropriate aid. Having someone lend you money may be helpful in the face of unexpected unemployment but useless in the death of a friend. Support may reduce the effect of stress by providing a solution to the problem, by reducing the perceived importance of the problem, or by providing a distraction from the problem. Cohen notes that social support sometimes fosters healthful behaviors such as exercise, personal hygiene, proper nutrition, and rest.

Social integration is defined as participation in a broad range of social relationships. As a multidimensional construct, it is thought to include a behavioral component—active engagement in a wide range of social activities or relationships—and a cognitive component—a sense of purpose, belonging, and identification with one’s social roles. Social connectedness is beneficial to physical health whether or not one is under stress. For example, social networks may influence whether people exercise, are on low-fat diets, smoke, or take illicit drugs.

Social interaction aids in emotional regulation by increasing positive affect and helping to limit the intensity and duration of negative affective states. These positive cognitions and emotions are thought to be beneficial because they reduce psychological despair and even result in greater motivation to care for oneself. Furthermore, having a wide range of social networks provides multiple sources of information that could result in more effective use of health-relevant behaviors and help one to avoid stressful or high-risk situations.

Evidence suggests that social integration influences health regardless of whether people are facing adversity. Many studies have found that healthy adults who are more socially integrated (e.g., are married, have close family and friends, belong to social and religious groups) live longer. Studies also indicate that greater integration predicts survival from heart attacks, less risk for cancer recurrence, less depression and anxiety, and less severe cognitive decline with aging.

Finally, social relationships can facilitate the spread of disease and the opportunity for conflict, exploitation, stress transmission, misguided attempts to help, and, ultimately, feelings of loss and loneliness. Negative interactions can be an important source of stress and illness. For example, Cohen and his colleagues found that people involved in serious, enduring (one month or longer) conflicts were more susceptible to illness. When research participants were exposed to a virus that causes the common cold, those with enduring conflicts were more than twice as likely to develop a cold as were persons without any chronic stressors in their lives. The conflicts that contributed to this increased susceptibility included problems with spouses, close family members, and friends. More generally, Cohen’s research indicates that social environments and one’s response to them can have a powerful detrimental effect. He suggests that the adverse effect is mediated through one’s appraisal of social conditions as stressful, which is then followed by changes in health behaviors and endocrine, immune, and cardiovascular responses.


**Lecture/Discussion Topic/Student Project: Writing About Life Goals**

In one experiment, James Pennebaker found that those who wrote about personal trauma in a diary had fewer health problems during the ensuing four to six months.

In a variation on Pennebaker’s approach, Laura King asked undergraduates to write about one of four topics for 20 minutes each day for four consecutive days. Participants wrote about their most traumatic life event, their best possible future self, both of these topics, or a nonemotional topic. Mood was measured before and after writing and health center data for illness was obtained with participant consent.

Measures of subjective well-being taken three weeks later indicated that writing about life goals was significantly less upsetting than writing about trauma and was linked with a significant increase in subjective well-being. Follow-ups five months after the writing, however, indicate that writing about trauma, one’s best possible self, or both, were associated with better health compared with the controls.

King concludes that writing about life goals provides another way to enjoy the health benefits of releasing one’s anxieties without the emotional costs. Such writing was linked with feeling less upset and happier and with getting sick less often. King also suggests that individuals who actively focus on and write about their best possible futures may be able to more effectively pursue their goals. Future research may determine whether this kind of writing actually leads to a clearer sense of one’s goals, greater focus, and less conflict.

Writing about emotional events may help integrate life experiences into a larger, more meaningful framework. Words may limit experience, indicates King, and transform the world into a more comprehensible whole. The exercise thus gives the writer a feeling of control over his or her emotional life or valued outcomes.

King’s instructions for writing about trauma and life goals follow:

For the next few minutes we would like you to write about some traumatic event or traumatic loss that you have experienced in your life. Write about the experience...
in as much detail as you can. Really get into it and freely express any and all emotions or thoughts that you have about the experience. As you write, do not worry about punctuation or grammar, just really let go and write as much as you can about the experience.

Think about your life in the future. Imagine that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all your life goals. Think of this as the realization of all your life dreams. Now, write about what you imagined.

In yet another variation on the writing paradigm, Chad Burton and King randomly assigned a sample of 90 undergraduates to write about either an intensely positive experience or a control topic for 20 minutes each day for 3 consecutive days. Mood measures were taken before and after the writing. Three months later, they obtained information on the number of health center visits made by participants. Results indicated that writing about intensely positive experiences was associated not only with enhanced positive mood but also with significantly fewer health center visits, compared with visits by control participants.

Here are the specific instructions for writing about the positive experience (they could be the basis for an out-of-class student project):

Think of the most wonderful experience or experiences in your life, happiest moments, ecstatic moments, moments of rapture, perhaps from being in love, or from listening to music, or suddenly “being hit” by a book or painting or from some great creative moment. Choose one such experience or moment. Try to imagine yourself at that moment, including all the feelings and emotions associated with the experience. Now write about the experience in as much detail as possible, trying to include the feelings, thoughts, and emotions that were present at the time. Please try your best to re-experience the emotions involved (Burton & King, p. 155).


Reducing Stress

Classroom Exercise/Critical Thinking Break: Health Benefits of Time Spent in Natural Settings

Researchers in Japan have been studying the health benefits of spending time in natural settings. Dubbed the Therapeutic Effects of Forests project, since 2004 Japanese researchers have been studying the physiological and psychological responses of individuals placed in the presence of varying natural stimuli, a popular Japanese practice known as Shinrin-yoku, or “forest bathing.” They have been collecting data on measures of stress in the central nervous system, autonomic nervous system, and other “biomarkers” in study participants who are actually located in forests, or who are located in laboratories (but) exposed to certain elements of a forested environment (such as the odor of wood, the sound of running stream water, or the visual scenery of the forest).

Collected evidence from this line of inquiry suggests that spending time in nature parks, forests, and other green spaces is associated with lower cortisol levels, reduced cardiovascular strain (i.e., pulse rate and blood pressure), and increased immune functioning. Study investigators have attributed these benefits both to stress reduction behaviors (e.g., exercise, relaxation, meditation), as well as to the action of phytoncides, chemicals released into the air by trees and plants to protect themselves from decay and parasitic insects.

You may want to review some of the publications describing the Therapeutic Effects of Forests project before you cover stress in your course. In class, describe the methodologies for some of the studies included in this long-term project and give a brief summary of their findings. For example, be sure to explain that the results were based on a comparison of the experimental group (those who stayed in the forest) and a control group (those who spent time in the city). Then, with your class, generate a list of important variables that may be causally linked to the findings reported so far. Generate a list of possible confounding variables that should be controlled or eliminated as possible alternative explanations for the results.


Student Project/Classroom Exercise: Biodots and Biofeedback in the Classroom

Biodots are small, temperature-sensitive plastic pieces that will adhere to the “webbing” between the thumb and forefinger. They can be obtained inexpensively from Whole Person Associates at 1-800-247-6789 (they also have a helpful relaxation CD) or from Lamaze International at 1-877-952-6293. Biodots change color with changes in skin temperatures and thus can be used to illustrate the underlying principles of biofeedback. Margaret Martin suggests that students wearing the Biodots maintain a journal, noting the color of the Biodot and the accompanying thoughts at random times.
Martin suggests caution in reading journals in class because some may include personal, sensitive information. Alternatively, caution students beforehand about including inappropriate or very personal data. General class discussion may follow small-group discussion in which students address the following questions: Did the Biodots show any relationship between color and activity? Between color and thoughts? What color did the Biodot turn prior to a test, speech, or some other anxiety-producing activity? In what situations did the Biodot show the “relaxed state”?

The last question or issue, of course, concerns students’ successful or unsuccessful efforts to control the Biodot’s color. By itself this can be the basis of a classroom activity. Ask, “What happens when we try to relax?” Students will report varying degrees of success.

To assess the physiological effects of trying to relax, James Motiff suggests the use of a thermistor or any temperature-recording device that measures to tenths of a degree. Have a volunteer who thinks he or she can produce an increase in finger temperature attach the thermistor to the second pad of a noncalloused finger. Measure the baseline temperature, then instruct the volunteer to begin raising his or her skin temperature. Tell the student to try as hard as possible to warm the finger, suggesting that a greater increase reflects greater skill. Under this stress the finger temperature will actually fall.

Motiff suggests that you can make several points with this exercise.

1. Autonomic nervous system (ANS) activity (sympathetic arousal) causes peripheral vasoconstriction, which can be measured as finger temperature.
2. Vasoconstriction with a skin temperature decrease indicates stress, whereas vasodilation with a skin temperature increase indicates relaxation (a shutting down of the stress effect on the sympathetic ANS).
3. Actively trying to do something results in a temperature decrease even when one makes a deliberate attempt to increase finger temperature.

The exercise will naturally lead to the question, “How do people come to control their physical state if active efforts are counterproductive?” Take the opportunity to instruct the class in passive relaxation, in letting go, in perhaps shifting the mental focus to thoughts of relaxing in the warm sunshine of their favorite beach.


Classroom Exercise: The Relaxation Response

Herbert Benson suggests that four basic components are necessary to elicit the relaxation response.

1. A quiet, calm environment with as few distractions as possible. A quiet room is suitable, also a place of worship.
2. A mental device to prevent “mind wandering.” A sound, a word, or a phrase repeated silently or aloud. Attending to the normal rhythm of breathing is also useful.
3. A passive, “let-it-happen” attitude. Don’t worry about distracting thoughts or about how well you are doing. When distractions occur, simply return to repetition of the sound, word, or phrase.
4. A comfortable position to prevent muscular tension. A sitting position is probably best. If you lie down, you may fall asleep.

With this introduction, dim the classroom lights and give your students the following instructions.

1. Sit quietly in a comfortable position.
2. Close your eyes.
3. Begin to relax all your muscles, beginning at your feet…your legs…your stomach and chest…your neck…your face…even the top of your head.
4. Breathe through your nose. Focus on your breathing. As you breathe out, say the word “One” silently to yourself…Breathe in…“one,” Breathe in…“one.” Breathe easily and naturally. In…“one,” etc.
5. Permit relaxation to occur at its own pace. Focus on your breathing. If distractions occur, ignore them, and return to repeating “one.”

After several minutes, have your students open their eyes, stretch their arms and legs, and describe their experience, if any are willing. Feelings will vary. Most are likely to feel a sense of calm and well-being. A small number may report ecstatic feelings. Still others may note relatively little change on a subjective level. Regardless of the subjective feelings, Benson reports the occurrence of definite physiological changes, such as decreased oxygen consumption, accompanying the relaxation response. You might have students check their pulse rate before and after the exercise.

Classroom Exercise/Student Project: Meditation

Meditation, suggests Linda Leal, can easily be demonstrated in the classroom. Although you could devote the beginning of several class periods to her exercise, it may be more efficient to have interested students practice out of class in an attempt to achieve meditation’s full benefits. If you have the necessary equipment (e.g., a sphygmomanometer), students can measure changes in heart rate, blood pressure, and so on as a result of meditating. However, as Leal cautions, the full physiological effects often are not evident until individuals are well practiced.

Ask students to sit quietly and breathe in and out as usual for approximately 30 seconds. Then ask them to concentrate on each breath by lowering their eyes and focusing their attention on breathing in and out. Instruct them to concentrate on the rise and fall of the abdominal area and simultaneously say to themselves “in” and “out.” They are to think of nothing except the rise and fall of the abdomen and the accompanying thoughts of “in” and “out.” Have them practice for several minutes. Since many students are likely at first to have difficulty concentrating on their breathing, reassure them that this problem will diminish with practice. On the second day, instruct your students to close their eyes as they concentrate on their breathing. Again encourage them to focus all their attention on breathing in and out from the abdominal area and simultaneously say to themselves “in” and “out.”

Leal suggests the following questions to guide class discussion.

1. Why should meditation promote feelings of well-being and relaxation? Research indicates that meditation’s physiological effects are related to lowered activity of the sympathetic nervous system. Hypometabolism, the most common bodily change, is marked by decreases in oxygen consumption, heart and respiration rates, and carbon dioxide production. Meditation may also promote feelings of well-being by simply distracting people from stressful thoughts.

2. Why is it difficult to keep distracting thoughts from entering consciousness while meditating? Some have suggested that repeated presentations of any one stimulus often results in habituation and thus distraction. Others have maintained that because the mind is undisciplined, it is only through repeated practice that people can train themselves in the art of deep concentration.


Lecture/Discussion Topic: Fringe Medicine

This lecture/discussion topic is suggested in relation to alternative therapies in the Therapy unit but would also be appropriate here.

Lecture/Discussion Topic: Religion’s Costs and Benefits

Kenneth Pargament argues that “religion is a richer, more complex process than psychologists imagine, one that has the potential both to help and to harm.” Thus, the study of religion’s effect on physical and psychological well-being must reflect an awareness of the diversity of religious expression as well as sensitivity to different criteria for defining well-being. Pargament identifies five factors as especially important in understanding the “efficacy” of religion.

First, well-being has been positively linked to religion that is internalized, intrinsically motivated, and based on a secure relationship with God and negatively associated with religion that is imposed, unexamined, and reflective of a tenuous relationship with God and the world.

Second, the efficacy of religion will vary with the criteria used to define health and well-being. Even controversial forms of religion such as fundamentalism have costs and benefits. Although religious fundamentalism has often been associated with greater intolerance of outgroups, it has also provided individuals with clear rules for living, a distinctive identity, a closeness with like-minded believers, and the faith that their lives are sanctioned and supported by God.

Third, not everyone experiences the same benefits from religion. Religion is more helpful to some people than to others. Historically, religion has served as an important source of strength and hope to those who have been disenfranchised and disempowered, for example, to women, African-Americans, the elderly, and the poor.

Fourth, religion is more beneficial in some situations than in others. Religion appears to be especially helpful in stressful situations that push people to the limits of their personal and social resources (e.g., the death of a loved one or their own impending death), exposing their basic vulnerability to the world. That is, in response to situations that highlight personal insufficiency, religion offers social support, the awareness of larger, benevolent forces at work in the universe, and sustained purpose in life.

Fifth, the benefits of religion depend on the degree to which religion is well-integrated into people’s lives. For example, those who benefit most are likely to be part of a social environment that supports their faith. In contrast to high school students who had grown
up in religious-consonant neighborhoods (75 percent or more of residents shared the same religion), those who were raised in religious-dissonant neighborhoods reported lower self-esteem, more psychophysiological symptoms, and greater depression. In addition, people benefit when their religious appraisals and solutions fit the problem at hand. Prayer may help to strengthen resolve in difficult circumstances but it should not replace available medical care. Researchers identified 172 cases of children who died between 1975 and 1995 after their parents withheld medical care for religious reasons. From the Crusades and Spanish Inquisition to the mass suicides of religious cult members, history has often been marked by acts of religious fanaticism that undermine physical and psychological well-being.

Finally, Pargament advises that in studying the factors that may mediate the connection between religion and well-being (e.g., social support, healthy behaviors, coping resources), researchers should be cautious of attempts to reduce religion to something exclusively psychological, social, or physical. For example, in a study of a nationally representative sample of African-Americans, investigators found that the relationship between church attendance and lower levels of emotional distress was mediated by religious support from church members rather than by secular social support. Researchers, argues Pargament, should also consider religion as a dependent as well as an independent variable. Studies must try to identify personal, familial, and community predictors of more effective and less effective forms of religion. Robert Emmons has proposed a “spiritual intelligence” that expresses itself in the abilities to experience transcendent states of consciousness, to hold overarching spiritual strivings that organize and integrate life pursuits, to apply a comprehensive set of religious resources flexibly and appropriately to a full range of life problems, and to engage in virtuous behavior.


**Lecture/Discussion Topic: Spirituality and Health**

Although Freud viewed religion to be a form of pathology—an obsessional neurosis that developed out of feelings of infantile helplessness—many other psychologists disagree. Carl Jung, Freud’s student, stated that spirituality was an important element in psychological health and argued that he could heal only those middle-age people who embraced a spiritual or religious perspective toward life. William James, Gordon Allport, Erich Fromm, Viktor Frankl, Abraham Maslow, and Rollo May also have made spirituality a major focus of their work.

Today’s clinical psychologists vary widely in their views of the role of religion in their patients’ mental health. When Edward Shafranske and H. Newton Maloney surveyed 409 members of the American Psychological Association about their approach toward religion and psychology, nearly all the respondents said they have assessed clients’ religious backgrounds. In addition, 57 percent have used religious language or concepts with clients, 36 percent have recommended participation in religion, 32 percent have recommended religious or spiritual books, 24 percent have prayed privately for a patient, and 7 percent have prayed with a client.

Family physicians seem to be in greater agreement on the benefits of religion in physical health. A 1997 survey of family physicians found that 99 percent believed that prayer, meditation, or other spiritual or religious practices can be helpful in medical treatment. And more than half said they incorporated relaxation or meditation techniques into their treatment of patients.

Lynda Powell, Leila Shahabi, and Carl Thoresen have reviewed evidence for nine specific hypotheses regarding the link between religion or spirituality and health. You might present their findings in class.

**Hypothesis 1**: Church/service attendance protects against disease. There is strong, consistent evidence supporting this hypothesis, with a 30 percent reduction in mortality risk after adjustment for demographic, socioeconomic, and health-related confounders and approximately a 25 percent reduction in risk after adjustment for established risk factors.

**Hypothesis 2**: Religion or spirituality protects against cardiovascular disease. Findings suggest that some aspect of religion, most likely weekly attendance at church services, protects against cardiovascular disease and that this benefit may be largely mediated by the effect of religion or spirituality on a healthy lifestyle.

**Hypothesis 3**: Religion or spirituality protects against cancer mortality. At this time, evidence supporting this claim is inadequate.

**Hypothesis 4**: Deeply religious people are protected against death. Investigations, claim the reviewers, have consistently failed to support this hypothesis.

**Hypothesis 5**: Religion or spirituality protects against disability. Currently, there is inadequate support for this claim. The reviewers suggest that more consistency might be observed if the focus shifts to the elderly, who have some preexisting disability.

**Hypothesis 6**: Religion or spirituality slows the progression of cancer. Research has consistently failed to support this claim.

**Hypothesis 7**: People who use religion to cope with difficulties live longer. The evidence is inadequate.
Hypothesis 8: Religion or spirituality improves recovery from acute illness. The literature consistently fails to support this hypothesis. If anything, the evidence suggests that religion may actually impede recovery from acute illness.

Hypothesis 9: Being prayed for improves physical recovery from acute illness. There is some evidence to support this claim. The absence of a clearly plausible biological mechanism by which prayer could influence medical outcomes leads to skepticism of results.

HANDOUT 1

Stressed Out?

Indicate your degree of agreement with each statement by placing a number in the blank before it. Use the following scale.

- 4 = very often
- 3 = fairly often
- 2 = sometimes
- 1 = almost never
- 0 = never

1. How often have you been upset because of something that happened unexpectedly?
2. How often have you felt that you were unable to control the important things in your life?
3. How often have you felt nervous and “stressed”?
4. How often have you felt confident about your ability to handle your personal problems?
5. How often have you felt that things were going your way?
6. How often have you been able to control irritations in your life?
7. How often have you found that you could not cope with all the things that you had to do?
8. How often have you felt that you were on top of things?
9. How often have you been angered because of things that were outside your control?
10. How often have you felt difficulties were piling up so high that you could not overcome them?

In obtaining your total score, use the following scale to reverse the number you placed before items 4, 5, 6, and 8: 4 = 0, 3 = 1, 2 = 2, 1 = 3, and 0 = 4. Then, add the numbers in front of all 10 items.

How You Measure Up
Stress levels vary among individuals—compare your total score to the averages below:

<table>
<thead>
<tr>
<th>AGE</th>
<th>GENDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–29</td>
<td>14.2</td>
</tr>
<tr>
<td>30–44</td>
<td>13.0</td>
</tr>
<tr>
<td>45–54</td>
<td>12.6</td>
</tr>
<tr>
<td>55–64</td>
<td>11.9</td>
</tr>
<tr>
<td>65–over</td>
<td>12.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARITAL STATUS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Widowed</td>
<td>12.6</td>
</tr>
<tr>
<td>Married or living with</td>
<td>12.4</td>
</tr>
<tr>
<td>Single or never wed</td>
<td>14.1</td>
</tr>
<tr>
<td>Divorced</td>
<td>14.7</td>
</tr>
<tr>
<td>Separated</td>
<td>16.6</td>
</tr>
</tbody>
</table>

Susceptibility to Stress (SUS)

How susceptible you are to stress depends upon a mix of your health behaviors, lifestyle, and resources for coping with stress. This test will help you determine your level of susceptibility and the factors that contribute to it. Fill in 1 (ALMOST ALWAYS) to 5 (NEVER) according to how much of the time an item is true of you.

1. I eat at least one hot, balanced meal a day.
2. I get 7–8 hours sleep at least 4 nights a week.
3. I give and receive affection regularly.
4. I have at least one relative within 50 miles on whom I can rely.
5. I exercise to the point of perspiration at least twice a week.
6. I avoid tobacco use (cigarettes, pipe, cigars, snuff, chewing tobacco).
7. I consume fewer than 5 alcoholic drinks per week.
8. I am the appropriate weight for my height.
9. I have an income adequate to meet basic expenses.
10. I get strength from my religious beliefs.
11. I regularly attend club or social activities.
12. I have a network of friends and acquaintances.
13. I have one or more friends to confide in about personal matters.
14. I am in good health (including eyesight, hearing, teeth).
15. I am able to speak openly about my feelings when angry or worried.
16. I have regular conversations with the people I live with about domestic problems (e.g., chores, money, and daily living issues).
17. I do something for fun at least once a week.
18. I am able to organize my time effectively.
19. I drink fewer than 3 cups of coffee (or tea or cola drinks) per day.
20. I take quiet time for myself during the day.
21. I have an optimistic outlook on life.

Source: Susceptibility to Stress scale from Stress audit, version 5.0-OS developed by Lyle H. Miller and Alma Dell Smith. Copyright © 1987, 1994 Biobehavioral Institute of Boston, Brookline, MA 02146. Reprinted with permission.
HANDOUT 3

Responses to Stress

Indicate how often each of the following happens to you, either when you are experiencing stress or following exposure to a significant stressor. Use the following scale.

<table>
<thead>
<tr>
<th></th>
<th>0 = never</th>
<th>1 = once or twice a year</th>
<th>2 = every few months</th>
<th>3 = every few weeks</th>
<th>4 = once or more each week</th>
<th>5 = daily</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heart pounding</td>
<td>Heart racing or beating erratically</td>
<td>Cold, sweaty hands</td>
<td>Headaches (throbbing pain)</td>
<td><strong>Cardiovascular symptoms</strong></td>
<td><strong>Skin symptoms</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td>Acne</td>
<td>Acne</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dandruff</td>
<td>Dandruff</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Perspiration</td>
<td>Perspiration</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Excessive dryness of skin or hair</td>
<td>Excessive dryness of skin or hair</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td><strong>Subtotal</strong></td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td>Rapid, erratic, or shallow breathing</td>
<td>Shortness of breath</td>
<td>Asthma attack</td>
<td>Difficulty in speaking because of poor breathing control</td>
<td><strong>Respiratory symptoms</strong></td>
<td><strong>Immunity symptoms</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td>Allergy flare-up</td>
<td>Allergy flare-up</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Catching colds</td>
<td>Catching colds</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Catching the flu</td>
<td>Catching the flu</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Skin rash</td>
<td>Skin rash</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
<td><strong>Subtotal</strong></td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td>Upset stomach, nausea, or vomiting</td>
<td>Constipation</td>
<td>Diarrhea</td>
<td>Sharp abdominal pains</td>
<td><strong>Gastrointestinal symptoms</strong></td>
<td><strong>Metabolic symptoms</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td>Increased appetite</td>
<td>Increased appetite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Increased craving for tobacco or sweets</td>
<td>Increased craving for tobacco or sweets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Thoughts racing or difficulty sleeping</td>
<td>Thoughts racing or difficulty sleeping</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Feelings of crawling anxiety or nervousness</td>
<td>Feelings of crawling anxiety or nervousness</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td><strong>Subtotal</strong></td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td>Headaches (steady pain)</td>
<td>Back or shoulder pains</td>
<td>Muscle tremors or hands shaking</td>
<td>Arthritis</td>
<td><strong>Muscular symptoms</strong></td>
<td><strong>Overall symptomatic total (add all seven subtotals)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td></td>
<td>Overall symptomatic total</td>
</tr>
</tbody>
</table>

The Stress Appraisal Measure (SAM)

This questionnaire is concerned with your thoughts about various aspects of the potentially stressful situation previously identified by you or your instructor. There are no right or wrong answers. Please respond according to how you view this situation RIGHT NOW. Please answer ALL questions. Answer each question by CIRCLING the appropriate number corresponding to the following scale.

1 = not at all
2 = slightly
3 = moderately
4 = considerably
5 = extremely

1. Is this a totally hopeless situation? 1 2 3 4 5
2. Does this situation create tension in me? 1 2 3 4 5
3. Is the outcome of this situation uncontrollable by anyone? 1 2 3 4 5
4. Is there someone or some agency I can turn to for help if I need it? 1 2 3 4 5
5. Does this situation make me feel anxious? 1 2 3 4 5
6. Does this situation have important consequences for me? 1 2 3 4 5
7. Is this going to have a positive impact on me? 1 2 3 4 5
8. How eager am I to tackle this problem? 1 2 3 4 5
9. How much will I be affected by the outcome of this situation? 1 2 3 4 5
10. To what extent can I become a stronger person because of this problem? 1 2 3 4 5
11. Will the outcome of this situation be negative? 1 2 3 4 5
12. Do I have the ability to do well in this situation? 1 2 3 4 5
13. Does this situation have serious implications for me? 1 2 3 4 5
14. Do I have what it takes to do well in this situation? 1 2 3 4 5
15. Is there help available to me for dealing with this problem? 1 2 3 4 5
16. Does this situation tax or exceed my coping resources? 1 2 3 4 5
17. Are there sufficient resources available to help me in dealing with this situation? 1 2 3 4 5
18. Is it beyond anyone’s power to do anything about this situation? 1 2 3 4 5
19. To what extent am I excited thinking about the outcome of this situation? 1 2 3 4 5
20. How threatening is this situation? 1 2 3 4 5
21. Is the problem unresolvable by anyone? 1 2 3 4 5
22. Will I be able to overcome the problem? 1 2 3 4 5
23. Is there anyone who can help me to manage this problem? 1 2 3 4 5
24. To what extent do I perceive this situation as stressful? 1 2 3 4 5
25. Do I have the skills necessary to achieve a successful outcome to this situation? 1 2 3 4 5
26. To what extent does this event require coping efforts on my part? 1 2 3 4 5
27. Does this situation have long-term consequences for me? 1 2 3 4 5
28. Is this going to have a negative impact on me? 1 2 3 4 5

**College Undergraduate Stress Scale**

Copy the “stress rating” number into the last column for any item that has happened to you in the last year, then add these.

<table>
<thead>
<tr>
<th>Event</th>
<th>Stress Ratings</th>
<th>Your Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being raped</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Finding out that you are HIV-positive</td>
<td>100</td>
<td></td>
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<tr>
<td>Being accused of rape</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>Death of a close friend</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Death of a close family member</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>Contracting a sexually transmitted disease (other than AIDS)</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Concerns about being pregnant</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>Finals week</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Concerns about your partner being pregnant</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Oversleeping for an exam</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Flunking a class</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Having a boyfriend or girlfriend cheat on you</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Ending a steady dating relationship</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Serious illness in a close friend or family member</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Financial difficulties</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Writing a major term paper</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Being caught cheating on a test</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Drunk driving</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Sense of overload in school or work</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Two exams in one day</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Cheating on your boyfriend or girlfriend</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Getting married</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Negative consequences of drinking or drug use</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Depression or crisis in your best friend</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Difficulties with parents</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Talking in front of a class</td>
<td>72</td>
<td></td>
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<tr>
<td>Lack of sleep</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Change in housing situation (hassles, moves)</td>
<td>69</td>
<td></td>
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<tr>
<td>Competing or performing in public</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Getting in a physical fight</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Difficulties with a roommate</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Job changes (applying, new job, work hassles)</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Declaring a major or concerns about future plans</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>A class you hate</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Drinking or use of drugs</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Confrontations with professors</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Starting a new semester</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Going on a first date</td>
<td>57</td>
<td></td>
</tr>
</tbody>
</table>
**HANDOUT 5 (continued)**

<table>
<thead>
<tr>
<th>Event</th>
<th>Stress Ratings</th>
<th>Your Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Maintaining a steady dating relationship</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Commuting to campus or work, or both</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Peer pressures</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Being away from home for the first time</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Getting sick</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Concerns about your appearance</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Getting straight A’s</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>A difficult class that you love</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Making new friends; getting along with friends</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Fraternity or Sorority rush</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Falling asleep in class</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Attending an athletic event (e.g., football game)</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Total

Handout 6

Are You a Type A or a Type B?

You can get a general idea of which personality type you more closely resemble by responding to the following statements. Read each statement and circle one of the numbers that follow it, depending on whether the statement is definitely true for you, mostly true, mostly false, or definitely false. Scoring is explained below.

1 = definitely true  2 = mostly true  3 = mostly false  4 = definitely false

1. I am more restless and fidgety than most people.  
2. In comparison with most people I know, I’m not very involved in my work.  
3. I ordinarily work quickly and energetically.  
4. I rarely have trouble finishing my work.  
5. I hate giving up before I’m absolutely sure I’m licked.  
6. I am rather deliberate in telephone conversations.  
7. I am often in a hurry.  
8. I am somewhat relaxed and at ease about my work.  
9. My achievements are considered to be significantly higher than those of most people I know.  
10. Tailgating bothers me more than a car in front slowing me up.  
11. In conversation, I often gesture with hands and head.  
12. I rarely drive a car too fast.  
13. I prefer work in which I can move around.  
14. People consider me to be rather quiet.  
15. Sometimes I think I shouldn’t work so hard, but something drives me on.  
16. I usually speak more softly than most people.  
17. My handwriting is rather fast.  
18. I often work slowly and deliberately.  
19. I thrive on challenging situations. The more challenges I have the better.  
20. I prefer to linger over a meal and enjoy it.  
21. I like to drive a car rather fast when there is no speed limit.  
22. I like work that is not too challenging.  
23. In general, I approach my work more seriously than most people I know.  
24. I talk more slowly than most people.  
25. I’ve often been asked to be an officer of some group or groups.  
26. I often let a problem work itself out by waiting.  
27. I often try to persuade others to my point of view.  
28. I generally walk more slowly than most people.  
29. I eat rapidly even when there is plenty of time.  
30. I usually work fast.  
31. I get very impatient when I’m behind a slow driver and can’t pass.  
32. It makes me mad when I see people not living up to their potential.  
33. I enjoy being around children.  
34. I prefer walking to jogging.  
35. When I’m in the express line at the supermarket, I count the number of items the person ahead of me has and comment if it’s over the limit.
HANDBOUT 6 (continued)

36. I enjoy reading for pleasure. 1 2 3 4
37. I have high standards for myself and others. 1 2 3 4
38. I like hanging around talking to my friends. 1 2 3 4
39. I often feel that others are taking advantage of me or being inconsiderate. 1 2 3 4
40. If someone is in a hurry, I don’t mind letting him or her go ahead of me. 1 2 3 4

Scoring:
For each statement, two numbers represent Type A answers and two numbers represent Type B answers. Use the scoring sheet to determine how many Type A and Type B answers you gave. For example, if you circled 1, definitely true, for the first statement, you chose a Type A answer. Add up all your Type A answers and give yourself plus 1 point for each of them. Add up all your Type B answers and give yourself minus 1 point for them.

1. 1,2 = A; 3,4 = B 11. 1,2 = A; 3,4 = B 21. 1,2 = A; 3,4 = B 31. 1,2 = A; 3,4 = B
2. 1,2 = B; 3,4 = A 12. 1,2 = B; 3,4 = A 22. 1,2 = B; 3,4 = A 32. 1,2 = A; 3,4 = B
3. 1,2 = A; 3,4 = B 13. 1,2 = A; 3,4 = B 23. 1,2 = A; 3,4 = B 33. 1,2 = B; 3,4 = A
4. 1,2 = B; 3,4 = A 14. 1,2 = B; 3,4 = A 24. 1,2 = B; 3,4 = A 34. 1,2 = B; 3,4 = A
5. 1,2 = A; 3,4 = B 15. 1,2 = A; 3,4 = B 25. 1,2 = A; 3,4 = B 35. 1,2 = A; 3,4 = B
6. 1,2 = B; 3,4 = A 16. 1,2 = B; 3,4 = A 26. 1,2 = B; 3,4 = A 36. 1,2 = B; 3,4 = A
7. 1,2 = A; 3,4 = B 17. 1,2 = A; 3,4 = B 27. 1,2 = A; 3,4 = B 37. 1,2 = A; 3,4 = B
8. 1,2 = B; 3,4 = A 18. 1,2 = B; 3,4 = A 28. 1,2 = B; 3,4 = A 38. 1,2 = B; 3,4 = A
9. 1,2 = A; 3,4 = B 19. 1,2 = A; 3,4 = B 29. 1,2 = A; 3,4 = B 39. 1,2 = A; 3,4 = B
10. 1,2 = B; 3,4 = A 20. 1,2 = B; 3,4 = A 30. 1,2 = A; 3,4 = B 40. 1,2 = B; 3,4 = A

Total number of Type A answers: ______ × 1 point each = ______
Total number of Type B answers: ______ × 1 point each = ______
Total score (add lines above) ______

Determine your personality type based on your total score:
+20 to +40 = Definite A
+1 to +19 = Moderate A
0 to −19 = Moderate B
−20 to −40 = Definite B

Are You a Type D?

Read each statement and circle the appropriate number to indicate your answer. There are no right or wrong answers: your own impression is the only thing that matters.

<table>
<thead>
<tr>
<th></th>
<th>I make contact easily when I meet people.</th>
<th>Less</th>
<th>False</th>
<th>Neutral</th>
<th>Less</th>
<th>True</th>
<th>True</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
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<tr>
<td></td>
<td>I often make a fuss about unimportant things.</td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>I often talk to strangers.</td>
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<td>4</td>
<td>3</td>
<td>2</td>
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<td></td>
<td>I often feel unhappy.</td>
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<td></td>
<td>I am often irritated.</td>
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<tr>
<td></td>
<td>I often feel inhibited in social interactions.</td>
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<td></td>
<td>I take a gloomy view of things.</td>
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<td></td>
<td>I find it hard to start a conversation.</td>
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<td></td>
<td>I am often in a bad mood.</td>
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<tr>
<td></td>
<td>I am a closed kind of person.</td>
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<tr>
<td></td>
<td>I would rather keep people at a distance.</td>
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<tr>
<td></td>
<td>I often find myself worrying about something.</td>
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<tr>
<td></td>
<td>I am often down in the dumps.</td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When socializing, I don’t find the right things to talk about.</td>
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<tr>
<td></td>
<td></td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from “DS14: Standard assessment of negative affectivity, social inhibition, and Type D personality” by Johan Denollet, Ph.D. *Psychosomatic Medicine, 67*, 89–97.
Coping with Health Injuries and Problems Scale

The following are ways of reacting to health problems, such as illness, sicknesses, or injuries. We are interested in your last illness, sickness, or injury. Please number from 1 (not at all) to 5 (very much) for each of the following items. Indicate how much you engaged in these types of activities when you encountered this health problem.

1 = not at all  
2 = a little  
3 = occasionally  
4 = fairly often  
5 = very much

1. Think about better times.   17. Plan for the future.
3. Find out more information.   19. Comply with advice.
5. Be with others.   21. Listen to music.
7. Seek treatment quickly.   23. Follow doctor’s advice.
8. Feel angry.   24. Wish it hadn’t happened.
11. Focus on getting better.   27. Take medications on time.
12. Become frustrated.   28. Think about being vulnerable.
13. Enjoy attention from people.   29. Have nice things around.
15. Learn more.   31. Find out about treatments.
16. Think about things I can’t do.   32. Worry about my health.

**Coping With Stress**

Take a few minutes to identify the most important problem you have faced during the last year. Then, using the scale below, indicate how often you used each of the following strategies to deal with it.

<table>
<thead>
<tr>
<th></th>
<th>0 = Not at all</th>
<th>1 = A little</th>
<th>2 = Occasionally</th>
<th>3 = Fairly often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Took things a day at a time.</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Got away from things for a while.</td>
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<tr>
<td>3</td>
<td>Tried to find out more about the situation.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>Tried to reduce tension by drinking more.</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>Talked with a professional person (e.g., doctor, lawyer, clergy).</td>
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<tr>
<td>6</td>
<td>Made a promise to myself that things would be different next time.</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Prepared for the worst.</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Let my feelings out somehow.</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>Took it out on other people when I felt angry or depressed.</td>
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<td></td>
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<tr>
<td>10</td>
<td>Prayed for guidance and/or strength.</td>
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<tr>
<td>11</td>
<td>Accepted it; nothing could be done.</td>
<td></td>
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<tr>
<td>12</td>
<td>Talked with spouse or another relative about the problem.</td>
<td></td>
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<tr>
<td>13</td>
<td>Talked with a friend about the problem.</td>
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<tr>
<td>14</td>
<td>Tried to reduce tension by taking more tranquilizing drugs.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>15</td>
<td>Told myself things that helped me feel better.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>Kept my feelings to myself.</td>
<td></td>
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<tr>
<td>17</td>
<td>Bargained or compromised to get something positive from the situation.</td>
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<tr>
<td>18</td>
<td>Tried to reduce tension by exercising more.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Tried to reduce tension by smoking more.</td>
<td></td>
<td></td>
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<tr>
<td>20</td>
<td>Tried to see the positive side of the situation.</td>
<td></td>
<td></td>
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<tr>
<td>21</td>
<td>Considered several alternatives for handling the problem.</td>
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<tr>
<td>22</td>
<td>Made a plan of action and followed it.</td>
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<tr>
<td>23</td>
<td>Went over the situation in my mind to try to understand it.</td>
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<tr>
<td>24</td>
<td>Tried to reduce tension by eating more.</td>
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<tr>
<td>25</td>
<td>Got busy with other things to keep my mind off the problem.</td>
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<tr>
<td>26</td>
<td>Drew on my past experiences.</td>
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<tr>
<td>27</td>
<td>Avoided being with people in general.</td>
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<tr>
<td>28</td>
<td>I knew what had to be done and tried harder to make things work.</td>
<td></td>
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<tr>
<td>29</td>
<td>Tried to step back from the situation and be more objective.</td>
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<td></td>
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<tr>
<td>30</td>
<td>Refused to believe that it happened.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Sought help from persons or groups with similar experiences.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Tried not to act too hastily or follow my first hunch.</td>
<td></td>
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</tbody>
</table>

HANDOUT 10

Multidimensional Health Locus of Control Scales

Indicate your degree of agreement with each statement by placing a number in the blank before it. Use the following scale.

6 = strongly agree
5 = moderately agree
4 = slightly agree
3 = slightly disagree
2 = moderately disagree
1 = strongly disagree

1. If I get sick, it is my own behavior that determines how soon I get well.
   ____

2. I am in control of my health.
   ____

3. When I get sick, I am to blame.
   ____

4. The main thing that affects my health is what I myself do.
   ____

5. If I take care of myself, I can avoid illness.
   ____

6. If I take the right actions, I can stay healthy.
   ____

   TOTAL

7. Having regular contact with my physician is the best way for me to avoid illness.
   ____

8. Whenever I don’t feel well, I should consult a medically trained professional.
   ____

9. My family has a lot to do with my becoming sick or staying healthy.
   ____

10. Health professionals control my health.
    ____

11. When I recover from an illness, it’s usually because other people (e.g., doctors, nurses, family, and friends) have been taking good care of me.
    ____

12. Regarding my health, I can only do what my doctor tells me to do.
    ____

    TOTAL

13. No matter what I do, if I am going to get sick, I will get sick.
    ____

14. Most things that affect my health happen to me by accident.
    ____

15. Luck plays a big part in determining how soon I will recover from an illness.
    ____

16. My good health is largely a matter of good fortune.
    ____

17. No matter what I do, I’m likely to get sick.
    ____

18. If it’s meant to be, I will stay healthy.
    ____

   TOTAL

Locus of Control

Indicate the extent to which each of the following statements applies to you. Use the following scale:

1 = disagree strongly
2 = disagree
3 = disagree slightly
4 = neither agree nor disagree
5 = agree slightly
6 = agree
7 = agree strongly

1. When I get what I want, it’s usually because I worked hard for it.
2. When I make plans, I am almost certain to make them work.
3. I prefer games involving some luck over games requiring pure skill.
4. I can learn almost anything if I set my mind to it.
5. My major accomplishments are entirely due to my hard work and ability.
6. I usually don’t set goals because I have a hard time following through on them.
7. Competition discourages excellence.
8. Often people get ahead just by being lucky.
9. On any sort of exam or competition, I like to know how well I do relative to everyone else.
10. It’s pointless to keep working on something that’s too difficult for me.

Using a scale from 1 = strongly agree to 7 = strongly disagree, indicate how true each of the following statements is for you.

____ 1. Get pleasure from looking forward.
____ 2. Don’t like to look forward too much.
____ 3. Can feel the joy of anticipation.
____ 4. Anticipating is a waste of time.
____ 5. Can enjoy events before they occur.
____ 6. Hard to get excited beforehand.
____ 7. Can feel good by imagining outcome.
____ 8. Feel uncomfortable when anticipate.
____ 9. Know how to make the most of a good time.
____ 10. Find it hard to hang on to a good feeling.
____ 11. Can prolong enjoyment by own effort.
____ 13. Feel fully able to appreciate good things.
____ 14. Can’t seem to capture joy of happy moments.
____ 15. Find it easy to enjoy self when want to.
____ 16. Don’t enjoy things as much as should.
____ 17. Enjoy looking back on happy times.
____ 18. Don’t like to look back afterwards.
____ 19. Can feel good by remembering past.
____ 20. Feel disappointed when reminiscing.
____ 21. Like to store memories for later recall.
____ 22. Reminiscing is a waste of time.
____ 23. Easy to rekindle joy from happy memories.
____ 24. Best not to recall past fun times.

Indicate how much each of the following statements reflects how you typically are. Use a scale from 1 = not at all to 5 = very much.

1. I am good at resisting temptation.
2. I have a hard time breaking bad habits.
3. I am lazy.
4. I say inappropriate things.
5. I do certain things that are bad for me, if they are fun.
6. I refuse things that are bad for me.
7. I wish I had more self-discipline.
8. People would say that I have iron self-discipline.
9. Pleasure and fun sometimes keep me from getting work done.
10. I have trouble concentrating.
11. I am able to work effectively toward long-term goals.
12. Sometimes I can’t stop myself from doing something, even if I know it is wrong.
13. I often act without thinking through all the alternatives.

HANDOUT 14

Respond to each of the statements by using the following scale:

1 = completely disagree  
2 = disagree  
3 = disagree somewhat  
4 = neither disagree nor agree  
5 = agree somewhat  
6 = agree  
7 = completely agree

1. When I watch TV, I channel surf, often scanning through the available options even while attempting to watch one program.

2. When I am in the car listening to the radio, I often check other stations to see if something better is playing, even if I’m relatively satisfied with what I’m listening to.

3. I treat relationships like clothing; I expect to try a lot on before I get the perfect fit.

4. No matter how satisfied I am with my job, it’s only right for me to be on the lookout for better opportunities.

5. I often fantasize about living in ways that are quite different from my actual life.

6. I’m a big fan of lists that attempt to rank things (the best movies, the best singers, the best athletes, the best novels, etc.).

7. I often find it difficult to shop for a gift for a friend.

8. When shopping, I have a hard time finding clothing that I really love.

9. Renting movies is really difficult. I’m always struggling to pick the best one.

10. I find that writing is very difficult, even if it’s just writing an e-mail to a friend, because it’s so hard to word things just right. I often do several drafts of even simple things.

11. No matter what I do, I have the highest standards for myself.

12. I never settle for second best.

13. Whenever I’m faced with a choice, I try to imagine what all the other possibilities are, even ones that aren’t present at the moment.

When you answer the following questions, please think about how you prepare for and think about academic situations. Each of the statements below describes how people sometimes think or feel about these kinds of situations. In the blank space beside each statement, please indicate how true it is of you, in academic situations.

1. I go into these situations expecting the worst, even though I know I will probably do OK.
2. I generally go into these situations with positive expectations about how I will do.
3. I’ve generally done pretty well in these situations in the past.
4. I carefully consider all possible outcomes before I go into these situations.
5. When I do well in these situations, I often feel really happy.
6. I often worry, in these situations, that I won’t be able to carry through my intentions.
7. I often think about how I will feel if I do very poorly in these situations.
8. I often think about how I will feel if I do very well in these situations.
9. When I do well in these situations, it is usually because I didn’t get too worried about it beforehand.
10. I often try to figure out how likely it is that I will do very poorly in these situations.
11. I’m careful not to become overconfident in these situations.
12. I spend a lot of time planning when one of these situations is coming up.
13. When working with others in these situations, I often worry that they will control things or interfere with my plans.
14. I often try to figure out how likely it is that I will do very well in these situations.
15. In these situations, sometimes I worry more about looking like a fool than doing really well.
16. Prior to these situations, I avoid thinking about possible bad outcomes.
17. Considering what can go wrong in academic situations helps me to prepare.

Compared to other students of your sex at your college, what do you think are the chances that the following health problems will trouble you at some point in the future? Respond by choosing a number from the following scale.

Compared to other students of my sex, the chances of my experiencing this problem are:

-3 = much below average
-2 = below average
-1 = slightly below average
 0 = average
+1 = slightly above average
+2 = above average
+3 = much above average

___ 1. Arthritis
___ 2. Suicide
___ 3. Pneumonia
___ 4. Being 40 or more pounds overweight
___ 5. Laryngitis
___ 6. Alcoholism
___ 7. Being killed in an auto accident
___ 8. Lung cancer

HANDOUT 17

How Hardy Are You?

Write down how much you agree or disagree with each statement by placing a number in the blank before it. Use the following scale.

0 = strongly disagree
1 = mildly disagree
2 = mildly agree
3 = strongly agree

A. Trying my best at work makes a difference.
B. Trusting to fate is sometimes all I can do in a relationship.
C. I often wake up eager to start on the day’s projects.
D. Thinking of myself as a free person leads to great frustration and difficulty.
E. I would be willing to sacrifice financial security in my work if something really challenging came along.
F. It bothers me when I have to deviate from the routine or schedule I’ve set for myself.
G. An average citizen can have an impact on politics.
H. Without the right breaks, it is hard to be successful in my field.
I. I know why I am doing what I’m doing at work.
J. Getting close to people puts me at risk of being obligated to them.
K. Encountering new situations is an important priority in my life.
L. I really don’t mind when I have nothing to do.

To Score Yourself:

These questions measure control, commitment, and challenge. For half the questions, a high score (like 3 “strongly agree”) indicates hardiness; for the other half, a low score (like 0 “strongly disagree”) indicates hardiness.

To get your scores on control, commitment, and challenge, first write in the number of your answer—0, 1, 2, or 3—above the letter of each question on the score sheet below. Then add and subtract as shown. (To get your score on “control,” for example, add your answers to questions A and G; add your answers to B and H; and then subtract the second number from the first.)

Add your scores on commitment, control, and challenge together to get a score for total hardiness.

A total score of 10–18 shows a hardy personality. 0–9: moderate hardiness, below 0: low hardiness.

### Social Support Scale

*Instructions:* Answer all parts of questions 1–7 by putting a check mark on the line beside your answer or by circling the appropriate number. Then calculate your score by adding all the numbers below the lines with check marks, as well as those that you circled.

1. Do you belong to any of these kinds of groups? If YES, please indicate how much you take part in group activities. For example, INACTIVE means that you belong, but hardly ever go to meetings; SOMewhat ACTIVE means you attend meetings once in a while; VERY ACTIVE means you attend most meetings.

<table>
<thead>
<tr>
<th></th>
<th>Do You Belong?</th>
<th>Level of Participation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you take part?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. A social or recreational group?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>b. A labor union, commercial group, or professional association?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>c. A political-party group or club?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>d. A group concerned with children (such as P.T.A. or Boy Scouts)?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>e. A group concerned with community betterment, charity, or service?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>ASIDE FROM THE ABOVE GROUPS, DO YOU BELONG TO:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. A church-connected group?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>g. A group concerned with a public issue such as civil liberties, property rights, etc.?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>h. A group concerned with the environment, pollution, etc.?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>i. A group concerned with self-improvement that meets regularly?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
<tr>
<td>j. Any other groups?</td>
<td>NO 1</td>
<td>YES 2 3</td>
</tr>
</tbody>
</table>

Describe them: ____________________________________________________________

*Circle 1, 2, or 3. 1 = Inactive; 2 = Somewhat Active; 3 = Very Active*

2. How many close friends (people you feel at ease with, can talk to about private matters, and can call on for help) do you have?
   - CIRCLE ONE: None 1 2 3 4 5 6 7 8 9 10 or more

3. How many relatives do you have that you feel close to?
   - CIRCLE ONE: None 1 2 3 4 5 6 7 8 9 10 or more
HANDOUT 18 (continued)

4. How many of these friends or relatives do you see at least once a month?
   CIRCLE ONE: None 1 2 3 4 5 6 7 8 9 10 or more

5. About how often do you see any close relatives or friends? (Circle one.)
   5 More than once a week
   4 Once a week
   3 A few times a month
   2 Once a month
   1 Less than once a month

6. How often are you on the telephone with any close relatives or friends? (Circle one.)
   5 More than once a week
   4 Once a week
   3 A few times a month
   2 Once a month
   1 Less than once a month

7. How often do you exchange letters with any close relatives or friends? (Circle one.)
   5 Once a week or more
   4 A few times a month
   3 Once a month
   2 A few times a year
   1 Once a year or less
