Module B-1: Principles of Adaptation to Stress

1. Statement of Purpose

How well a nurse can determine the correct intervention for a nursing care problem depends largely on her communication skills, her ability to listen to the overt as well as the covert information. It is fair to say then, that in order for the nursing process to be successfully used in planning client care the nurse must have good communication skills. A sensitivity to the cues clients give, both verbally and nonverbally, often provide the key to underlying physiological and/or emotional problems related to stress. This module emphasizes adaptation responses to stress and the implications for nursing intervention.

2. Terminology

Adaptation  Hypothalamus  GAS - general adaptation syndrome
Acetylcholine  Hypophysis  Alarm reaction  ACTH  Stressor
Stage of resistance Distress Stress Stage of exhaustion
Human needs Hans Selye Homeostasis

3. Classroom Content

3.1. Classroom Objectives

a. Define homeostasis in terms of physiological response to stress.
b. Discuss human needs, using Maslow's hierarchy of needs to identify ways that stress can interfere with the individual's psychosocial behaviors for clients of all ages.
c. Contrast stress with distress.
d. Discuss physiological responses to stress relative to the endocrine and autonomic nervous system.
e. Discuss emotional responses to stress that exhibit as anxiety/fear and anger/hostility.
f. Discuss possible outcomes of unresolved stress in terms of age, sex, cultural & social experiences.
g. Describe the nurse’s role in the resolution of stress for individuals; for herself/himself.
h. Discuss development of a nursing care plan for a client under stress.
i. Discuss the factors that influence stressors including nutrition.
j. Discuss the impact of culture and religion as it impacts a client’s adaptation to stress and anxiety.
3.2 Learning Activities

a. Know terminology.
b. Read assigned chapters in Kozier, Fundamentals of Nursing.
c. In class, discuss Handouts #1 & #2.
d. Complete Handout #3. Discuss your feelings about this Handout with your classmates or in class as time permits.
e. Read assigned chapters in Taylor, Selected Readings from Mereness= Essentials of Psychiatric Nursing, 14th ed.

3.3 References

a. Kozier, Fundamentals of Nursing
b. Handouts #1, #2, #3, #4.
c. Taylor, Selected Readings from Mereness= Essentials of Psychiatric Nursing, 14th ed.

4. Clinical Objectives

a. Transfer a client from bed to chair or chair to bed using proper body mechanics.
b. Use appropriate communication skills considering age and socio-cultural heritage of client.
c. Do a basic physical assessment on the assigned client and record the findings in the client=s medical record. Develop a plan of care based on these findings.
d. Administer medications (not IV=s) to assigned client.
e. Complete mini care plan on an assigned client.
   Apply principles of Standard Precautions on the assigned client.
   Turn and reposition the client.
   Collect any specimens ordered according the hospital/facility protocols.
   Take and accurately record vital signs on the assigned client.
   Monitor and record intake and output on the assigned client.

5. Skills Laboratory Requirements

5.1 Required Skills: Wound Management

a. Preparing a sterile field
b. Open sterile gloving
c. Changing a dry sterile dressing
d. Irrigation of wounds
e. Changing complicated dressing
f. Changing dressings around a drain
g. Care of a patient with a Hemovac/closed suction wound drainage
h. Decubitus care
   1) Transparent Dressings
   2) Hydrocolloid Dressings
3) Amorphous Gels
4) Calcium Alginites
5) Enzymatic Debriders
6) Topical Antibiotics

i. Obtaining wound cultures
   1) aerobic
   2) anaerobic

j. Apply sterile warm moist compresses
k. Suture & staple removal
l. Advancement & removal of drains

5.2 Self-Review Skills

   a. Medical Asepsis/Handwashing
   b. Surgical Asepsis

5.3 Skills Laboratory Terminology

   a. Lynn, Taylor’s Clinical Nursing Skills
   b. Kozier, Fundamentals of Nursing

5.4 Skills Laboratory Objectives

   Lynn, Taylor’s Clinical Nursing Skills

5.5 References

   a. Lynn, Taylor’s Clinical Nursing Skills
   b. Kozier, Fundamentals of Nursing
   c. Videotapes and computer software as assigned
   d. Handout #5
Anxiety

Threats

Cause

Causes

To Self

Esteem

To

Biological Integrity

Produce

Change

Psychological

Degrees

Mild

Moderate

Severe

Panic

Physiological

Decreasing

1. Alertness
2. Ability to Perceive
3. Ability to Learn
4. Ability to Receive Sensory Stimuli
5. Ability to Perform
6. Ability to Mobilize Defenses
7. Ability to Communicate
8. Ability to Function Sexually

Increasing

1. Cardiac Output
2. Respiratory Rate
3. Adrenaline Flow
4. Muscular Tension
5. Urinary Output
6. Inertia
7. Pain & Agitation
8. Possible Integumentary Breakdown
Anxiety

Difference between anxiety & fear

-- perceived threat vs real threat

-- anxiety is needed to learn

Phases of anxiety

Mild  = +1

  alertness  ±

Moderate  = +2

  alertness  ±

Severe  = +3

  alertness  ± isolated elements

Panic  = +4

  alertness  ±one is blown up out of proportion

No learning can take place at 4th phase
Varying degrees of learning on up
**STRESS**

Cerebral Cortex — higher center area of the brain, thought, intelligence.

Limbic System — (Rhinencephalon) so called old brain, concerned with basic survival of self & species, center for taste, pleasure, pain, smell, rage, & sex.

Hypothalamus — a transducer which links the fast acting ANS with the slower more sustained endocrine system for nervous and chemical regulation of the body.

SNS — epinephrine & norepinephrine

Releasing Factor

Pituitary — so called master gland regulates other endocrine glands via stimulating hormones and feedback mechanism.

TSH

Thyroid

Controls the rate of O₂ consumption, the BMR simulated by epinephrine

Adrenal Medulla

epinephrine and norepinephrine

Adrenal Cortex

1. Blood sugar—improve CHO metabolism
2. Blood supply to heart, lungs
3. Blood pressure and pulse to improve circulation for O₂ CO₂ exchange
4. Dilates bronchiolus for more efficient respiration
5. Blood coagulability
6. Parasympathetic NS tone—which vegetative functions, e.g. digestion, elimination,
7. slow heart rate muscle tone
8. Polycythemia—red blood cells from contraction

1. Glucocorticoids
   1. alter normal cho, fat, & protein metabolism to blood sugar levels, available amino acids, shift to fat utilization.
   2. Sensitize blood vessel to vasopressor substances such as norepinephrine
   3. Lymphocytopenia, involves lymphatics
   4. Eosinopenia & Antibody formation
2. Mineralocorticoids
   1. conserve Na
of the spleen which favors prolonged muscle action by O₂ transportation

2. conserve H₂O
3. excrete K
4. ECF Volume

Imperial Valley College
Division of Nursing Education and Health Technologies
VN 112
B-1/ Handout #4

**How's Your Stress Score?**

Some stress is necessary for life but too much is harmful. The following is a scale for measuring stress and strain in terms of 43 "life events". To find your score, check the events applying to you during the past 12 months, then add up the total values.

<table>
<thead>
<tr>
<th>RANK</th>
<th>EVENT</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Death of a spouse</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Divorce</td>
<td>73</td>
</tr>
<tr>
<td>3</td>
<td>Marital Separation</td>
<td>65</td>
</tr>
<tr>
<td>4</td>
<td>Jail Term</td>
<td>63</td>
</tr>
<tr>
<td>5</td>
<td>Death of close family member</td>
<td>63</td>
</tr>
<tr>
<td>6</td>
<td>Personal injury or illness</td>
<td>53</td>
</tr>
<tr>
<td>7</td>
<td>Marriage</td>
<td>50</td>
</tr>
<tr>
<td>8</td>
<td>Being fired from work</td>
<td>45</td>
</tr>
<tr>
<td>9</td>
<td>Marital Reconciliation</td>
<td>45</td>
</tr>
<tr>
<td>10</td>
<td>Retirement</td>
<td>45</td>
</tr>
<tr>
<td>11</td>
<td>Change in family member health</td>
<td>44</td>
</tr>
<tr>
<td>12</td>
<td>Pregnancy</td>
<td>40</td>
</tr>
<tr>
<td>13</td>
<td>Sex difficulties</td>
<td>39</td>
</tr>
<tr>
<td>14</td>
<td>Addition to family</td>
<td>39</td>
</tr>
<tr>
<td>15</td>
<td>Business readjustment</td>
<td>39</td>
</tr>
<tr>
<td>16</td>
<td>Change in financial status</td>
<td>38</td>
</tr>
<tr>
<td>17</td>
<td>Death of close friend</td>
<td>37</td>
</tr>
<tr>
<td>18</td>
<td>Change of work type</td>
<td>36</td>
</tr>
</tbody>
</table>
19. Change in number of marital arguments 31
<table>
<thead>
<tr>
<th>RANK</th>
<th>EVENT</th>
<th>VALUE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.</td>
<td>Mortgage or loan over $10,000</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Foreclosure of mortgage or loan</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Change in work responsibilities</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Son or daughter leaving home</td>
<td>29</td>
<td></td>
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<tr>
<td>24.</td>
<td>Trouble with in laws</td>
<td>29</td>
<td></td>
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<tr>
<td>25.</td>
<td>Outstanding personal achievement</td>
<td>28</td>
<td></td>
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<tr>
<td>26.</td>
<td>Spouse begins or stops work</td>
<td>26</td>
<td></td>
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<tr>
<td>27.</td>
<td>Starting or finishing school</td>
<td>26</td>
<td></td>
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<tr>
<td>28.</td>
<td>Change in living conditions</td>
<td>25</td>
<td></td>
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<tr>
<td>29.</td>
<td>Revision of personal habits</td>
<td>24</td>
<td></td>
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<tr>
<td>30.</td>
<td>Trouble with boss</td>
<td>23</td>
<td></td>
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<tr>
<td>31.</td>
<td>Change in work hours/conditions</td>
<td>20</td>
<td></td>
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<tr>
<td>32.</td>
<td>Change in residence</td>
<td>20</td>
<td></td>
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<tr>
<td>33.</td>
<td>Change in schools</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>Change in recreational habits</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>Change in church activities</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>Change in social activities</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td>Mortgage or loan under $10,000.00</td>
<td>17</td>
<td></td>
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<tr>
<td>38.</td>
<td>Change in sleeping habits</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>39.</td>
<td>Change in # of family gatherings</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>Change in eating habits</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>41.</td>
<td>Vacation</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>42.</td>
<td>Christmas Season</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>43.</td>
<td>Minor violation of the law</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
This is your stress score results:

The Washington Medical school has developed this scale for measuring stress in terms of a series of life events. They say a person scoring less than 150 on their scale has only a 37% chance of becoming ill during the next two years. A score of 150-300 raises the odds of illness to 51%, and a 300+ score means you have an 80% chance of becoming seriously ill.

Learning the elements and basic relaxation techniques can be very simple and easy. Suggestion and the positive use of your inherited power to create can and will overcome these life eroding situations.

Stress-relieving Suggestions

1. Try to identify the cause of the stress and strain.
2. Decide how significant or important it is to you.
3. If the problem is caused by an external situation, try and break it up into its component parts and isolate the major irritant.
4. After you have singled out the major irritant, weigh the good and bad. This will determine where you need help.
5. Give serious consideration to changes in your life; for example, a change of attitude.
Removal of Skin, Sutures, Staples and Advancement of Drains

**Assessment**
1. Assess the progress of wound healing, check for any unusual discharge or odor.
2. Assess the anxiety level of patient.
3. Assess overall physical condition.
4. Assess level of suture line integrity prior to removal of staples or sutures.

**Plan**
1. Explain procedure to allay fear and anxiety.
2. Provide for privacy and comfort.

**Equipment**
1. Sterile suture removal kit
   a. Scissors
   b. Forceps
   c. Hemostats
2. Staple remover
3. Skin antiseptic
4. Sterile gloves
5. Dressings (if indicated)
6. Tape
7. Sterile-Strips (if indicated)

**Actions**
1. Check physician's order for removal.
2. Gather equipment
3. Explain procedure and check for adequate wound healing.
4. Remove dressing and cleanse incision with antiseptic, from center to outside edges.
5. Interrupted sutures: Grasp knot with forceps and elevate then cut below knot close to skin and remove with forceps
   Continuous sutures: Grasp knot with forceps and elevate, cut below knot close to skin and remove. Then grasp each suture below, cut and remove in smooth, continuous manner
6. Never pull the visible, contaminated portion of the suture through underlying tissue because infection could result.
7. Check wound integrity for areas of poor healing and call MD if dehiscence noted. (If dehiscence noted, leave remaining sutures or staples in place and call MD)

For staples, follow steps 1-4 above. Using staple remover, place it between staple and skin, apply gentle pressure on remover to lift staple and remove.

8. Cleanse incision with disinfectant in same manner as #4.
9. Apply dressing if indicated.