Theoretical and Research Evaluation

The MASH Model

The Coping & Stress Profile® is based on a theoretical model called the Multisystem Assessment of Stress and Health (MASH) Model. The MASH Model builds upon previous stress research to form a comprehensive biopsychosocial model of stress and health (Aldwin, 1984; Boss, 1989; Doherty & Campbell, 1988). Earlier work in the field of stress concentrated on stress and coping at only one conceptual level, most often at the personal level or in a work setting (Aldwin, 1994).

The MASH Model contains three primary components: stress, coping resources, and satisfaction, which are assessed at four levels of a person’s life: personal, work, couple, and family. (See Figure 1.)

Stress is assessed at the personal, work, couple and family level. Coping resources are organized into a skill dimension and a relationship dimension. The skill dimension includes Problem Solving and Communication. The two relationship dimensions focus on the concepts of Closeness (cohesion) and Flexibility. Each of these four resources are assessed at all four levels, thereby developing sixteen coping resources.

The basic hypothesis of the Coping & Stress Profile is as follows: the greater the number of coping resources one has developed, the better he or she is able to manage life stress and, thereby, increase life satisfaction.

Figure 1: Multisystem Assessment of Stress and Health (MASH) Model
Integration of Earlier Theories

The MASH Model draws on earlier models of family stress, including the ABCX Model of Family Stress by Reuben Hill (1958), the Family Adjustment and Adaptation Response (FAAR) Model by McCubbin and Paterson (1994), and the Cognitive Appraisal Model of Stress and Coping by Lazarus and Folkman (1985).

All these models of stress and coping are similar in that they look at three components: level of stress, coping resources, and adaptation (satisfaction). The newer theoretical models have mainly identified more coping resources.

The Coping & Stress Profile® is unique because it focuses on these three components across four areas of life. It is, therefore, more comprehensive and also integrates ideas and resources from previous theory and research.

Coping & Stress Profile® Scales

Instrument Scaling

Twenty-four scales were developed for the Coping and Stress Profile: four stress scales (one for each area of life); sixteen scales for assessing coping resources (four for each area of life); and four satisfaction scales (one for each area of life).

Reliability of Scales

All twenty-four scales used in the Coping and Stress Profile have very high internal consistency reliability (alpha) averaging .83 with a range of .71 - .96. An overview of the source of the scale, number of items and the reliability of the scale is provided. (See Table 1.)

Stress Focus on Daily Hassles and Life Strains

In assessing stress, the focus is on persistent problems and the hassles of everyday life, rather than on life events. Even though major life events have been the standard for earlier stress research, recent findings show that minor life strains or “daily hassles” are better predictors of subsequent physical and psychological symptoms (DeLongis, 1985). Strains are defined as ongoing issues that cause an underlying tension in a person.
Reviewing major life events (i.e. moving, weddings, promotions, births, divorces) was the primary way stress was determined until the last few years. The Holmes and Rahne Stress Scale is a popular example of measuring stress by focusing on life events. The problem with life events is that some people interpret them as positive, while others might see the events as negative. It is only the negative interpretation of a life event that is a problematic stressor.

Research by DeLongis (1985) clearly demonstrated that physical symptoms (i.e. headaches, ulcers, high blood pressure) and/or psychological symptoms (depression or anxiety) could be better predicted using “daily hassles” than by life events. The daily hassles, or stressors, have a more direct effect on a person. Therefore, if a person has a high level of stressors over time, he or she could develop either psychological or physical symptoms.
Research focusing on the family, by Lavee, McCubbin and Olson (1986), also found that life events were less significant predictors of stress and coping than were life strains. Just knowing the number of life events that a person or family has experienced did not predict their level of satisfaction. The study also found that strains changed more predictably over the family life cycle, and were more variable across family system types, than were life events. More specifically, the most stressful stage for families was when there were adolescents in the home, followed by when there were young children. The least stressful times were the early years of marriage, before the inclusion of children, and the later years, after the adolescents left home.

**Stress**

**Personal, Couple, and Family Stress**

Three new scales were developed by Olson and Stewart (1988) to provide an inclusive array of strains rather than life events.

A comprehensive scale focusing on strains was developed to measure Personal Stress because all past measures of couple and family stress focused on life events. Consequently, it was necessary to develop new items that focused on strains, or daily hassles, in couple and family relationships.

**Work Stress**

The items used to assess the level of stress in the workplace are from an instrument developed by David Fournier (1981) called PROFILE (Personal Reflections On Family Life and Employment).

The PROFILE instrument has four basic domains:

1. problems associated with work;
2. problems associated with the family;
3. impacts or effects associated with work; and
4. impacts associated with the family.

To avoid redundancy with the Couple Stress and Family Stress assessments, only the items from the first and third areas of the PROFILE, dealing with the work environment, are used in the *Coping & Stress Profile*.

For the category of Work Problems, the following PROFILE sub-categories are used in developing the *Coping & Stress Profile*: work schedule, salary and benefits, work supervisors, work relationships, and job characteristics. In the category of Work Impacts, the sub-category of work productivity is used.
Coping Resources

There are four generic coping resources assessed at all four areas of life. Two of the coping resources are the skill dimensions of Problem Solving and Communication. Problem Solving is defined as the positive and active process of dealing directly with problems and making positive changes to resolve them. Communication is defined as a process of effective exchange of information.

The other two coping resources are the relationship dimensions of Closeness and Flexibility. Closeness is defined as the amount of emotional bonding in the system (self, work, couple, or family), while Flexibility is the degree the system changes its roles and rules, over time.

The four coping resources of communication, problem solving, closeness, and flexibility are linear dimensions. In this case, linear means the greater the level of the resource, the better it is for helping a person manage stress, increase productivity, and increase satisfaction. A high score is, therefore, more desirable (balanced) than a low score (unbalanced). It has been found in research with couples and families that those with balanced scores are better equipped to deal with stress and are happier (Olson, McCubbin, et al., 1989). (See Figure 2)

Figure 2: Relationship Map as Applied to Work Systems, Couple/Family Systems.

<table>
<thead>
<tr>
<th>Problem Solving</th>
<th>Communication</th>
<th>Closeness</th>
<th>Flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Effective</td>
<td>Very Effective</td>
<td>Very Cohesive</td>
<td>Very Flexible</td>
</tr>
<tr>
<td>Generally Effective</td>
<td>Good</td>
<td>Cohesive</td>
<td>Flexible</td>
</tr>
<tr>
<td>Fair</td>
<td>Fair</td>
<td>Somewhat Cohesive</td>
<td>Somewhat Flexible</td>
</tr>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>Disengaged</td>
<td>Rigid</td>
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</table>

Skill Dimensions

Problem Solving and Communication are the skill dimensions integrated into the four areas of life. Research with individuals, groups, couples, and families has shown these dimensions to be consistently important for managing stress.
Problem Solving

A variety of studies by Perlin (1989) and Lazarus and Folkman (1984) have identified the first skill dimension, Problem Solving, as a very useful resource to manage stress. People who are high in problem solving tend to deal with stress in a more effective manner. A new scale was developed, based on current research findings, that focuses on taking direct, positive steps to set goals, to arrive at new or different solutions, and to remain empathic with others.

The relationship coping resource of Problem Solving is integrated into all four life areas represented in the Coping & Stress Profile®. The questions are based on positive problem solving, which involves taking direct, positive steps to set goals and to arrive at new or different solutions to problems.

Personal Problem Solving

The ten questions on personal problem solving focus on how well the person is able to create new ideas and solutions. It emphasizes the person’s creative ability and skills at working directly with issues.

Work Problem Solving

The work problem solving scale contains ten items that focus on the following: assertiveness, sense of humor, positive reforming and collaborating with others. These components are very important and are used in most conceptual models dealing with effective problem solving.

Couple Problem Solving

Couple problem solving contains ten items. Couples with high scores on this scale are cooperative in making decisions, can easily find new ways of resolving difficulties, and have respect for the privacy of the other party. They are organized without being controlling of each other or excessively rigid. They are able to cooperate and remain connected, yet are interdependent.

Family Problem Solving

Family problem solving contains ten items and assesses the family’s coping behavior in overcoming problems. Similar to the couple scale, the family scale of problem solving assesses decision making, cooperation, connectedness, flexibility, and respect.
**Communication**

Communication is the second skill resource. As with the other coping resources, communication is assessed in all four areas. This dimension focuses on how a person communicates with others. The link between expressed and unexpressed emotions and adverse health outcomes has been well-documented in literature on psychosomatic medicine (Doherty & Campbell, 1988). Therefore, including an assessment of emotional communication was deemed an important component for the profile.

**Personal Communication**

A ten item self-report scale, developed by Olson and Stewart (1988) assesses how often one expresses frustration or disappointment, how clearly the person explains himself or herself, how well the person remains in control of his or her feelings, and if the person is appropriately assertive with others.

**Work Communication**

This ten item assessment of work communication measures the effectiveness and clarity of interpersonal communication at work among co-workers, supervisors, and other levels of management.

**Couple Communication**

Couple communication is measured by using a ten item self-report scale from the ENRICH Marital Inventory (Olson, Fournier, Druckman, 1986). Items address the level of comfort felt by partners in their ability to share emotions, beliefs, and perceptions with each other. It also assesses feelings about the quality of the communication between the two parties.

**Family Communication**

Family communication is a ten item scale by Barnes and Olson (1986) that focuses on willingness and ability to share feelings with other family members. It measures the extent to which family members communicate well as a group.

**Relationship Dimensions**

The relationship dimensions of the Relationship Map (Figure 2), closeness and flexibility are integrated into all four system levels: personal, work, couple and family.

**Closeness and Flexibility**

Closeness is one of the most important factors in helping people effectively manage stress. The focus is on emotional closeness with others who can offer support and help when it is needed.
Flexibility is the ability to change when change is necessary. The focus is on looking for alternative ways of operating, and knowing how and when to shift from current ways of doing things.

**Personal Closeness and Flexibility**

Personal closeness and flexibility focuses on the preferences and ability of the person to relate to others in ways that would facilitate these dimensions.

**Work Closeness and Flexibility**

To assess the level of closeness and flexibility in the work system, two scales were developed by Olson and Stewart (1988) based on observation of work groups.

Consultants in a position to make observations of both families and work groups discovered that many of the same factors contributing to problems within the family are also true for work groups. That is, unbalanced systems are often low in closeness (disengaged) and low in flexibility (rigid). Unbalanced groups can have negative consequences, not only for the effectiveness of the group, but also for employee morale and health.

These factors translate to issues of work group productivity. Very productive work groups are high in coping resources and are identified as balanced systems. Unproductive work groups on the other hand, have poor coping resources, and are unbalanced systems. (See Table 2.) Refer back to Figure 2: Relationship Map Applied to Work Systems, Couple/Family Systems for additional information.

**Table 2: Productivity and Relationship Resources**

<table>
<thead>
<tr>
<th>Productivity of Work Groups</th>
<th>Problem Solving</th>
<th>Communication</th>
<th>Closeness</th>
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<tbody>
<tr>
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<td>Flexible</td>
</tr>
<tr>
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<td>Fair</td>
<td>Fair</td>
<td>Somewhat Cohesive</td>
<td>Structured</td>
</tr>
<tr>
<td>Unproductive</td>
<td>Poor</td>
<td>Poor</td>
<td>Disengaged</td>
<td>Rigid</td>
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</tbody>
</table>

**Couple and Family Closeness and Flexibility**

To measure these areas, a revised version of FACES III (the family version) and MACES III (the couple version) was developed by Olson, Portner and Lavee (1986). FACES is an acronym for Family Adaptability and Cohesion Evaluation Scales, while MACES is the acronym for Marital Adaptability and Cohesion Evaluation Scale. These are both twenty item self-report instruments that assess the levels of closeness and flexibility within the family or couple system.
Olson and Colleagues (1989) used FACES III in a national survey of 1,000 “normal” families. This study, among others, has found that closeness and flexibility are critical characteristics of families that cope well with stress. It has been revised to be used with a variety of family structures including nuclear, blended, and single-parent families.

Satisfaction

Satisfaction is an important outcome assessment that focuses on how well a person is adapting to all aspects of life. In addition to personal satisfaction, three additional measures are used for evaluating levels of satisfaction at work and in couple and family relationships. These scales are included in order to provide outcome measures at the four system levels, rather than having only one general outcome measure. The four separate scales provide a more accurate and valid assessment of satisfaction.

Personal Satisfaction

A ten item Life Satisfaction scale was developed by Viet and Ware (1983) that measures global life satisfaction and a meaningful life. Considerable research has demonstrated the empirical and clinical value of this domain. People higher in satisfaction are not only happier about their life, but tend to have higher levels of self-esteem, fewer physical symptoms, and fewer emotional problems.

Work Satisfaction

This is a ten item scale developed by Olson and Stewart (1988) that assesses the degree of satisfaction gained from a person’s work, and the degree to which an individual is enriched by his or her work. It includes items that assess many of the same factors measured in the Work Stress scale. These items include: satisfaction regarding work schedules, salary and benefits, job characteristics, and work relationships. It is assumed that since these items assess most of the significant occupational issues conceptualized by Fournier in his Work Stress scale, the satisfaction scale should reflect similar dimensions.

Couple Satisfaction

This is a ten item couple satisfaction scale taken from the 125 item ENRICH Inventory by Olson, Fournier & Druckman (1986). The Marital Satisfaction scale from ENRICH is a global measure of satisfaction in ten areas of a couple’s relationship. High scores on this scale are interpreted to mean compatibility with most aspects of the couple’s relationship.
**Family Satisfaction**

This domain is measured by a ten item scale taken from a fourteen item scale within the ENRICH Inventory, developed earlier by Olson and colleagues (1986). This scale contains items related to satisfaction with various aspects of family life, including family closeness and flexibility. Families that are happier tend to get along better with each other, and individual family members function better in society.

There is a direct relationship among satisfaction scales in the four areas of life. Work and family aspects have the highest correlation (.65), followed by couple and family (.52), and personal and work (.37). This means, for example, that a person satisfied with his or her work life, will generally be happy with family relationship, as well. (See Figure 3.)

**Figure 3: Interconnection of Satisfaction in Four Areas of Life**

There is also a direct relationship between health (physical and psychological) and satisfaction as shown by the Coping & Stress Profile®. Personal satisfaction is negatively correlated to physical symptoms (-.36) and to psychological distress (-.63). As expected, there is a positive correlation (.52) between physical symptoms and psychological distress. (See Figure 4.)

**Figure 4: Interconnection of Health and Satisfaction**
There are six additional personal coping resources people use, in conjunction with the Relationship Coping Resources, to manage their levels of stress. These consist of Self-Esteem, Mastery, Social Support, Spiritual Beliefs, Exercise, and Nutrition. While these personal resources are important for one to have a healthy life style, Dr. Olson’s research and that of others has not found that they predict satisfaction and other outcomes as well as the sixteen Relationship Coping Resources which form the core to the *Coping & Stress Profile*®.

A study completed by Kenneth Stewart (1988), tested the reliability and validity of the *Coping & Stress Profile*. The research demonstrated that the profile is a very reliable and valid assessment instrument.

It clearly identified individuals who coped well with stress, and had no major physical or psychological symptoms, and those who were stressed and had some symptoms. The value of the profile, as a comprehensive assessment, was demonstrated by the fact that those who coped well with stress used resources from all four areas of their lives.

A sample of 440 adults was taken from three populations: two corporate sites (51%), a family medical practice (23%), and a stress management class (26%). The questionnaires from each of these diverse sampling sites were pooled into one group for data analysis, since the purpose was not to make comparisons among groups, but to focus on the variables in question.

This pooled sample of females (62%) and males (38%) was primarily Caucasian and relatively well-educated (28.8% had a post-graduate or professional education). 82% were either married or in a significant relationship and 59% were in families with children.

Validity of the *Coping & Stress Profile* scales and the MASH Model were supported by the research.

- It clearly discriminated between individuals who coped well with stress and those who did not.
- Individuals who coped well with stress used resources from all areas of their life (personal, work, couple, family).
- The findings demonstrated the value of a comprehensive assessment of stress and coping.
The following five coping resources were found to discriminate between individuals who coped well with stress and those who did not. These five resources consistently accounted for a very high percentage (76-80%) of overall satisfaction:

- Couple Cohesion
- Self Esteem
- Family Flexibility
- Work Communication
- Couple Problem Solving

People who were high in these resources coped well with stress; they tended to have no major physical or psychological symptoms and used several coping resources from all four areas of their life. (See Figure 5.)

Figure 5: Key Resources for Successful Coping

<table>
<thead>
<tr>
<th>Relationship Resources</th>
<th>Personal</th>
<th>Work</th>
<th>Couple</th>
<th>Family</th>
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<tbody>
<tr>
<td>Problem Solving</td>
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<td>Communication</td>
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<td>Closeness</td>
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<td>Personal Resources</td>
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<tr>
<td>Self-Esteem</td>
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National Normative Data

Normative data for the *Coping & Stress Profile*® is continually updated and research is ongoing. In 1995, norms were available on about 8,500 people. A majority of couple and family scales have a national normative database of over 20,000 individuals.