
The Contribution of Individual Style to Stress in the Thoracic & Cardiovascular Surgery Team

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Abstract

Interpersonal orientations of thoracic surgeons, operating room nurses, and perfusionists were assessed and found to differ substantially. It is proposed that these differences may contribute to increased stress-related symptoms within as well as outside of the operating room.

Recent surveys^{1,2,3} have reported increased prevalence for stress-related symptoms such as alcohol abuse, drug addiction, marital discord, and even suicide among individuals functioning as part of thoracic surgery teams. Several factors, including the close proximity to death during and immediately following surgery, overcoming increased public prominence, and prolonged work hours with decreasing rewards have been projected as potential explanatory mechanisms for this phenomenon⁴. While these factors certainly account for a portion of the stress experienced in the operating room, investigations on personality differences and interpersonal orientations have been largely neglected in uncovering answers to this increasingly serious problem.

Each individual on the thoracic surgery team, from surgeon to nurse to perfusionist, possesses a unique interpersonal style that may help or hinder functioning as a member of a team. In addition, one's perception of interpersonal styles of the other members of the surgery team also has an effect on the level of stress in the operating room. These perceptions may affect whether individuals will function congruently or in conflict with one another. It can be proposed then, that the differing perceptions of inter-personal functioning in the operating

room may be a major foundation for the rising levels of distress in the O.R.

In one of the most prominent theories of interpersonal behavior, Dr. Karen Horney⁵ described three general interpersonal styles: The individual's tendency to move toward other people (pleasantness); the tendency to move against other people (bluster); and the tendency to withdraw or move away from other people (self-isolate). According to Horney, the well-balanced individual should possess equivalent elements of all three styles. The tendency to neglect one mode and/or over use another may indicate the presence of considerable interpersonal strain and possible neurotic tendencies that could lead to stress-related symptoms. The purpose of this investigation is to assess interpersonal styles or traits, as defined by Horney, of individuals composing the thoracic surgery team.

It was hypothesized that significant variances in the three orientations ("toward," "against," or "away from") or significant differences in perceptions of these orientations could be a foundation for the high stress levels in the lives of cardiovascular surgery team members.

Method

Subjects: 195 individuals attending the senior author's seminar entitled, "Stress and Burn Out in a Cardiac Surgery Team" at the 1984 Pathophysiology and Techniques of Cardiopulmonary By-Pass Symposium in San Diego, CA on March 10, 1984, served as the subject sample. This sample was composed of 11 Thoracic Surgeons (Mean ((M)) age = 40.3; *M* years experience = 11.3), 56 Registered Nurses who worked as a part of a thoracic surgery team (*M* age = 34.3, *M* years experience = 11.1), and 128 Perfusionists (*M* age = 35.9, *M* years experience = 10.6). While there is no

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difference in years of experience among the three groups (p equals 0.151; n.s.), there was a noticeable difference in the average age = 3.501; (p = .03) with surgeons being significantly older than the other two groups (p < .05).

Procedure: During the senior author's presentation, all participants were administered the TRI-Orientation Check List (TOC). The TOC is a self-report scale designed to assess an individual's orientation (toward, against, away from) with respect to interpersonal relationships. The test consists of 75 adjectives, 25 terms describing each of the above three categories. Individuals were instructed to select 25 terms which were most descriptive of themselves. Frequency of items from each category was tabulated resulting in a single score for each orientation. According to Horney's theoretical position, the balanced individual will score between 7 and 10 on all 3 subscales.

Of the symposium participants, 79 were requested to select the 25 adjectives that best described, in their opinion, themselves. The remaining 116 participants were requested to describe another member of their surgery team, i.e. thoracic surgeons, CRNAs, R.N.s, or perfusionists. The purpose of this study was delineated prior to the distribution of the TOC and consent of participants was obtained.

Results

The data were analyzed using a one-way analysis of variance corrected for unequal cell sizes. All post hoc analyses were conducted using the Scheffé procedure. The results of the comparison of interpersonal orientations of individuals in the operating room (see Figure 1) indicated highly significant differences in orientations "toward" others (p < .001), orientations "against" others; (p < .001), and orientations "away from" others (p < .001). Post hoc analyses revealed that thoracic surgeons are perceived as being significantly more oriented "against" individuals (p < .01) and less "towards" individuals (p < .01) than any other member of the surgical team. In addition, thoracic surgeons were more oriented "away from" others than were O.R. nurses (p < .01). The O.R. nurses, on the other hand, were perceived as being more oriented "toward" individuals (p < .05), less "against" individuals (p < .05), and less "away from" individuals than anyone else in the operating room.

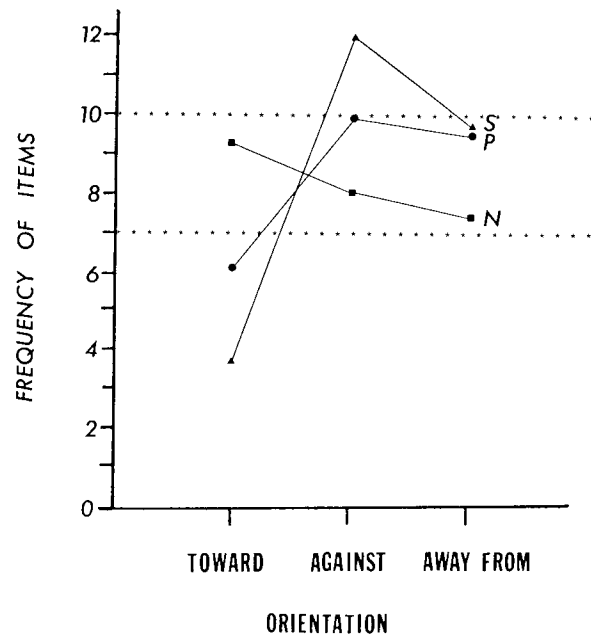
Perfusionists, in comparison with surgeons, had significantly higher scores on the "towards" orientation

(p < .05), significantly lower scores on the "against" orientation (p < .01), and had no significant differences on "away from" orientation (p < .05). In comparison with O.R. nurses, perfusionists were more oriented "against" and "away from" others (p < .05) and less oriented "toward" others (p < .05).

Further analyses to test the accuracy of self-perceptions revealed that surgeons, as well as nurses, perceive themselves as others perceive them. However, perfusionist's self-perception differs from how others view them in the O.R. More specifically, perfusionists view themselves as being oriented more "toward" others (p < .001), and less "against" others (p = .018) than how others perceive them.

Discussion

The individual profiles of thoracic surgeons, operating room nurses, and perfusionists clearly differ from one another. Thoracic surgeons according to Dr. Horney's schema, appear oriented far less "towards" people and much more "against" people than anyone else in the operating room. There is no significant difference in how other members of the thoracic surgery team (other thoracic surgeons, nurse anesthetists and other



LEGEND: S = surgeons, T = perfusionists, N = operating room nurses

Figure 1: The interpersonal orientations of thoracic surgery team members.

O.R. nurses, and perfusionists) perceive thoracic surgeons. Apparently the difficulty which thoracic surgeons have in moving "toward" other people is observed by all others in the operating room as is their tendency to move "against" others.

O.R. nurses appear to be the most psychologically balanced in respect to orientations "towards," "against," and "away from" other individuals. Other members of the thoracic surgery team perceive operating room nurses similarly.

Perfusionists, as other members of the thoracic surgery team see them, appear to be significantly less oriented "towards" others and more "against" others and "away from" others than the operating room nurses. However, perfusionists perceive themselves as being much more in balance with respect to the orientations than how other members of the thoracic surgery team perceive them.

According to Horney, these findings suggest that O.R. nurses possess the most psychologically- healthy personal profiles, followed by perfusionists and finally by surgeons. Therefore, it could be argued that increased stress-related symptoms in thoracic surgeons are related to their characteristic interpersonal style, i.e. insensitive to others needs, but technically precise and isolated in their work. Perfusionists also tend to behave in this manner even though they don't perceive this as taking place. This behavior would therefore place them with similar risks for stress-related symptoms. The stress vulnerability of perfusionists, however, is different than that of the surgeons. Surgeons are aware, as are the other members of the thoracic surgery team, that they display little "towards" behavior and a greater than normal amount of "against" behavior. This awareness has not changed their behavior nor reduced their vulnerability in stress-displays, i.e. a higher than aver-

age degree of alcohol abuse, drug addiction, marital discord and even suicide prevalence. Perfusionists, on the other hand, apparently incorporate a higher level of self-deception or denial than do the surgeons. Apparently perfusionists need to believe that they have a higher level of "towards" behavior than is perceived by other members of the thoracic surgery team. This denial process on the part of perfusionists may create a stress-jeopardy that could be more serious than that of the thoracic surgeons. At least the surgeons are aware of their problems.

While these findings are of interest in themselves, they must be interpreted with caution due to the small sample size of surgeons, (regardless of the statistically impressive findings). Additionally, the failure to control extraneous factors (i.e. salaried versus self-employed professionals, large versus small hospitals), the non-random nature of the sample, and the theoretical definition of "well-balanced" by Horney may be called into question. Nevertheless, these findings are important in that they suggest differences do exist in interpersonal style among the members of the thoracic surgery team and that these differences are present in perception as well as in reality.

References

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