*Psychopathology*

Placebo reactions are common in patients diagnosed as normal, neurotic, or psychotic. Conflicting results have been reported for an association between placebo effects and a general trait of neuroticism (Gartner, 1961; Luoto, 1964; Knowles & Lucas, 1960). Different methods of measuring placebo reaction make it impossible to directly compare the susceptibility of normals, neurotics, and psychotics to placebo effects. However, the range of measurements suggest that the nature and intensity of placebo reactions are greater for the psychotic. Hysteria, prone to suggestion effects, would seem likely to be related to placebo reactivity. However, several studies have failed to support this relationship (Gartner, 1961; Kornetsky & Humphries, 1957; Muller, 1965; Shapiro et al., 1973).

Shapiro et al. (1968) reported that placebo effects range from 18 to 67 percent for various diagnostic categories. The most frequently cited symptoms associated with placebo reactions are emotionality, depression, and anxiety (Lasagna et al., 1954; Pichot & Perse, 1968; Rickels & Downing, 1967; Shapiro, 1959, 1960a, 1968; Shapiro et al., 1973; Shipman et al., 1974; Sharp, 1965; Thorn, 1962). Manifest, unelaborated anxiety is frequently associated with placebo reaction. Beecher (1960) in anesthiology, Castiglioni (1946) in history and Parsons (1951) in sociology believe that suggestibility increases with increased stress. In proper amounts, anxiety also facilitates learning and focuses attention. Anxiety is considered a favorable prognostic sign in psychotherapy, insulin treatment, and lobotomy. However, careful evaluation of the importance of anxiety in studies of the placebo effect reveal somewhat inconsistent effects and weak correlations (Shapiro et al., in preparation). More carefully conceived and executed studies are required to substantiate this relationship and possibly elucidate the type of anxiety that may be associated with placebo reactions.

## SITUATIONAL VARIABLES

The situation in which therapy is administered is an important determinant of its effectiveness. Judgments about the need for therapy and interpretation of a therapy's effectiveness are both highly reliant on situational factors. For example, Beecher (1956) found that the same type of wound caused vastly different reports of pain depending on whether the patient received the wound from surgery or in a war. Soldiers reported much less pain and need for analgesia, presumedly because the wound was a signal to them that they might be sent home.

Situational factors are especially important when placebo effects are measured by subjective reports, such as mood change (Schachter & Singer, 1962; Lyerly, Ross, Krugman, & Clyde, 1964), pain threshold (Clark 1969; Feather, Chapman, & Fisher, 1972; Davison & Valins, 1969), and the achievement of a marijuana (placebo) "high" (Ademec, 1973; Becker, 1974; Carlin, Bakker, Halperin, & Post, 1972; Carlin, Post, Bakker, & Halperin, 1974; Lennard, Epstein, Bernstein, & Ranson, 1971). Situational factors are conceived as providing an integral component of any emotional response. According to Schachter and Singer's (1962) theory of emotion, individuals interpret their own reactions by means of situational cues. The rendering of therapy provides a potent environmental cue.

In addition to interacting with bodily state changes, situational cues can influence the "milieu" in which therapy is given. Some of the situational variables that affect placebo reactions are staff attitudes, type of population under study, the setting, the treatment procedure, and other miscellaneous factors. Therapist variables, which constiute a major set of situational factors, will be discussed in a separate section.

*Staff*

Staff attitudes, expectations, biases, conflicts, and harmony can influence placebo effects.[3] Negative staff attitudes can reduce the effectiveness of active medication (Sabshin & Ramot, 1956). The effect

[3]Baker & Thorpe, 1957; Eissen, Sabshin, & Heath, 1959; Goldstein, 1962; Hofling, 1955; Linn, 1959; Mezaros & Galagher, 1958, Rathod, 1958; Shapiro, 1960a; Stanton & Schwartz, 1954; Volgyesi, 1954; Von Mehring & King, 1957.