mysticism and cause a bit of discomfort, the empirical evidence is scanty (Honigfeld, 1964b). Patients do not react uniformly to different treatment procedures (Wolf 1959). Morison et al. (1961) and Traut and Passarelli (1957) found placebo injections to have greater efficacy then oral drugs, but another study found no difference (Goldman, Witton, & Scherier, 1965). Reactions to size, color, and shape of tablets or capsules vary (*JAMA*, 1955; Leslie, 1954; Schapira, McClelland, Griffiths, & Newells, 1970).

The efficacy of various placebo treatments may ultimately depend on the treatment modality that serves as the appropriate stimulus for each patient. One group of individuals may react best to a drug stimulus, another to psychotherapy or psychoanalysis, and another to biofeedback, behavior modification, or acupuncture, for example. Four studies by the authors (Shapiro et al., in preparation) revealed a consistent relationship between the desire for psychochemotherapy and positive response to medication placebo.

Miscellaneous Factors

Factors external to the administered therapy may cause changes that are misattributed to the influence of the therapy. Some of these external factors are; preexisting symptoms (Bushfield, Sneller, & Capra 1962; Schulterbrandt, Raskin, & Reatig, 1974; Green, 1964), spontaneous remissions (Lesse, 1964, 1966), the influence of group pressures and reactions of other patients (Knowles & Lucas, 1960; Letemendia & Harris, 1959; Morrison & Walters, 1972; Schachter & Singer, 1962) significant life events (Lipman, Hammer, Bernades, Park, & Cole, 1965; Davidson, 1960) and the process of filling out questionnaires (Glaser & Whittow, 1954).

Placebo reactivity is related to type of referral (Hankoff, Engelhardt, Freedman, Mann, & Margolis, 1960). Untreated patients may be favorably influenced by treated patients (Craig & Coren, 1974; Meszaros & Gallagher, 1958). The taste of a pill can influence placebo reaction (Baker & Thorpe, 1957). The type of bodily or behavioral reaction, and whether it is expected or unexpected, can affect the degree of placebo response (Morris & O'Neal, 1975).

There are many other factors, not fully explored, that probably influence placebo effects. Some situational variables that may influence placebo response include the cost of treatment, type and size of practice, reputation of the therapist, atmosphere of the office (informal or intimate, busy or unhurried, supporting or rejecting, etc.), use of therapeutic adjuncts such as nurses or aids to administer treatments, reinforcing directions with written information sheets or audiovisual aids, and so on.

PHYSICIAN VARIABLES

Although the relationship between physician and patient has been recognized throughout history as an important determinant of response to medical treatment, the responsibility of the patient has always been emphasized. However, therapeutic evaluations indicate that physician characteristics constiute a crucial variable in therapy. The great bulk of evidence supporting the role of the physician in therapy is derived from studies completed in the 1950 and 1960s. Although reaffirmed in more modern evaluations (Luborsky, Singer, & Singer, 1975), this potentially fruitful area has not become a major research topic for prospective research.

The study of the physician's contribution to placebo and therapeutic effects is referred to as iatroplacebogenics—physician-caused placebo effects. Iatroplacebogenics can be direct or indirect. The former refers to placebo effects produced by the physician's attitude to the patient, to the treatment procedure, and to the treatment results. Indirect iatroplacebogenics, a much more subtle mechanism, occurs when the patient misinterprets the physician's intent, and experiences the physician's interest in a therapy or procedure as a personal interest.

Direct Iatroplacebogenics

Attitude to Patient

Attitude to patient refers to the therapist's interest, warmth, friendliness, liking, sympathy, empathy, neutrality, lack of interest, rejection, and hostility. Its general importance is indicated by a survey that cited the physician's personal interest—not his or her competence—as the main determinant of