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The Hawthorne effect in observational studies:Threat or opportunity?

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To the Editor—In the December 2019 issue of *Infection Control and Hospital Epidemiology*, Mills et al[1] described factors that influence hand hygiene compliance in nursing facilities. Direct observation is used for data collection in this study. One of the problems in observational studies is the Hawthorne effect. However, insufficient control for the Hawthorne effect is a major problem in observational studies.

Hand hygiene (HH) is a simple way to prevent healthcare-associated infections (HAIs). Several methods can be used to measure HH, such as direct observation and measuring the amount of solutions used for hand hygiene (soap and alcoholic ingredients), but direct observation is a key standard method recommended by the World Health Organization.[2] In this method, the observer reviews the behavior of individuals in terms of performance. The first problem occurs because people often change their behavior when they know they are being observed. In fact, change in behavior and performance in the presence of an observer, termed reactivity, can influence the HH compliance rate and may not be an accurate representation of that behavior. Therefore, it is necessary to control reactivity in observational studies.[3]

The control of reactivity in research can be achieved using several methods. First, behavior can be measured when people do not know they are being assessed. In other words, observation is unobtrusive (nonreactive).[3] This approach can be applied in various ways, including hiding the observer or using hidden mechanical recording devices. Adaptation of participants to the presence of an observer through habituation or desensitization is another way to inhibit reactivity. In the habituation approach, the observer explains the process of the project to the participant engaged in clinical activities, and the observer is present on different occasions until the participant no longer reacts to being observed. Limiting the reactivity response through desensitization is similar to the desensitization process used in the behavioral treatment of phobias. This approach is often used by ethologists to adapt animal subjects to the presence of an observer.[3]

Reactivity is major problem that can increase error in measurements in observational studies. Attention to this problem from researchers who perform observational studies is an important first step. To control for reactivity in observational studies, it may be necessary to introduce oneself in different clinical settings.

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