

TABLE 2.2 Common Types of Variables Classified by Level of Measurement and by Role of Variable

| Variable Type | Key Characteristic | Example |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level of Measurement | | |
| Categorical variable | A variable that is made up of different types or categories of a phenomenon | The variable <i>gender</i> is made up of the categories of male and female. |
| Quantitative variable | A variable that varies in degree or amount of a phenomenon | The variable <i>annual income</i> varies from zero income to a very high income level. |
| Role Taken by the Variable | | |
| Independent variable (symbolized as IV) | A variable that is presumed to cause changes to occur in another variable, a causal variable | Amount of studying (IV) affects test grades (DV). |
| Dependent variable (symbolized as DV) | A variable that changes because of another variable, the effect or outcome variable | Amount of studying (IV) affects test grades (DV). |
| Mediating variable (It is also called an intervening variable) | A variable that comes in between other variables, helps to delineate the process through which variables affect one another | Amount of studying (IV) leads to input and organization of knowledge in long-term memory (mediating variable), which affects test grades (DV). |
| Moderator variable | A variable that delineates how a relationship of interest changes under different conditions or circumstances | Perhaps the relationship between studying (IV) and test grades (DV) changes according to the different levels of use of a drug such as Ritalin (moderator). |