Field theory cannot be expressed in terms of the traditional framework of quantum field theory, as it deals with the interactions of particles that are not directly observable. The framework of field theory is based on the idea that physical phenomena can be described by the behavior of fields, which are mathematical objects that are defined over space and time.

In the context of quantum field theory, a field is a function that assigns a value to each point in space and time. The value of the field at a particular point represents the classical field value, and the variation of the field over space and time describes the evolution of the field. The field equations are differential equations that describe the behavior of the field, and they are obtained by applying the principle of least action, which states that the path taken by a particle between two points is the one that minimizes the action.

The two most important types of fields are scalar fields and vector fields. Scalar fields are functions that assign a single number to each point in space and time, while vector fields are functions that assign a vector to each point in space and time. Scalar fields can be used to describe phenomena such as temperature, pressure, and density, while vector fields can be used to describe phenomena such as velocity, force, and magnetic field.

In the context of quantum field theory, the fields are promoted to quantum fields, which are described by quantum states that are superpositions of all possible states. The quantum states are obtained by solving the field equations with boundary conditions that are consistent with the principles of quantum mechanics, such as the principle of superposition and the uncertainty principle.

The quantum field theory is a powerful tool for describing a wide range of phenomena, such as the behavior of subatomic particles, the properties of matter and the electromagnetic field, and the behavior of fields in curved spacetime. The quantum field theory is also used to predict the behavior of fields in new experiments, such as the detection of gravitational waves, and to test the validity of the principles of quantum mechanics.