

Quantitative & Qualitative Process (Mermaid)

Tools, Methods, and Applications

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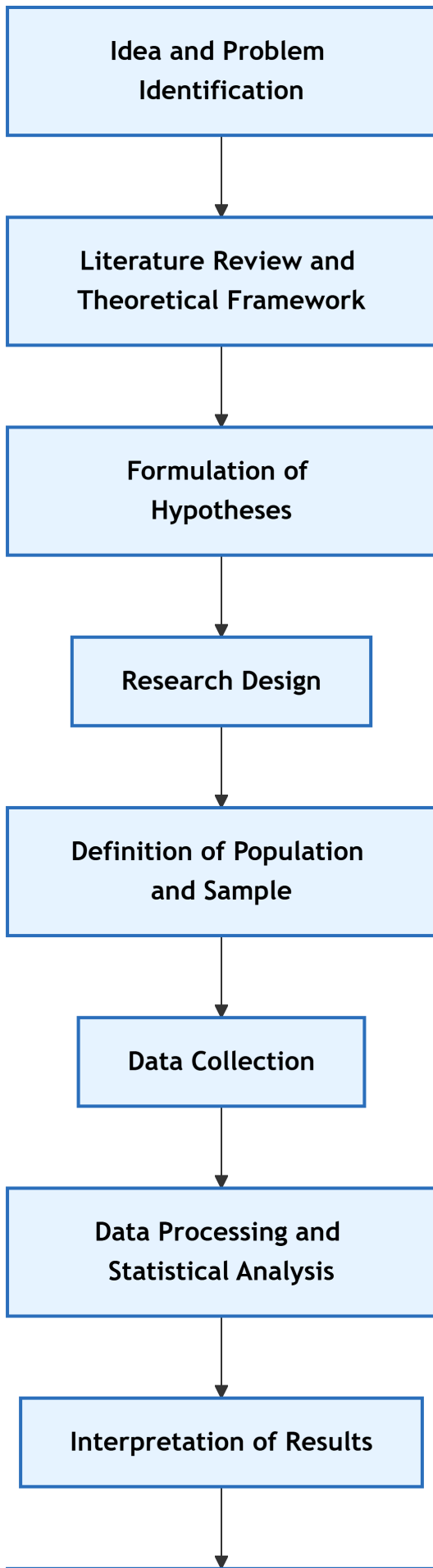
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1 Quantitative Research Process (Linear Flow)

```
graph TD
    A[Idea and Problem Identification] --> B[Literature Review and Theoretical Framework]
    B --> C[Formulation of Hypotheses]
    C --> D[Research Design]
    D --> E[Definition of Population and Sample]
    E --> F[Data Collection]
    F --> G[Data Processing and Statistical Analysis]
    G --> H[Interpretation of Results]
    H --> I[Conclusions, Implications, and Reporting]

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    class A,B,C,D,E,F,G,H,I main;
```



2 Qualitative Research Process (Iterative Cycle)

```
graph LR
```

```
A[Initial Idea or Topic of Interest] --> B[Context and Literature Exploration]
B --> C[Formulation of Research Focus or Questions]
C --> D[Flexible and Emergent Design Development]
D --> E[Selection of Participants or Context]
E --> F[Data Collection]
F --> G[Data Analysis]
G --> H[Categories and Theme Development]
H --> I[Interpretation and Theory Building]
I --> J[Reporting and Reflection]
J --> A[Cycle Repeats as Insights Emerge]
```

```
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class A,B,C,D,E,F,G,H,I,J cycle;
```

