

Nursing Research

課前預讀

Data analysis in Quantitative Studies

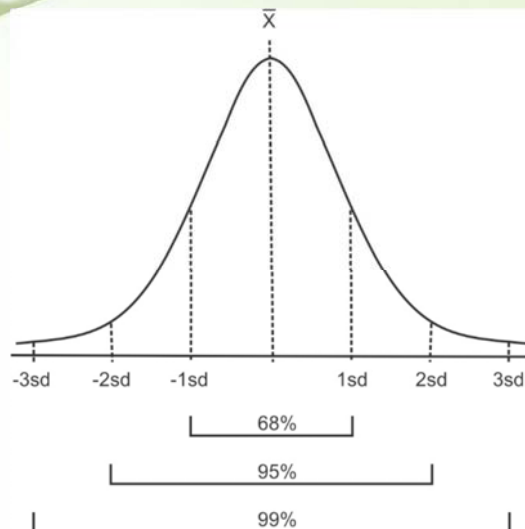
Parametric / Non-parametric statistics

護理系關可欣老師

Learning Outcomes

- Define parametric/non-parametric statistics.
- Define test of Normality.
- Practice on SPSS.

Theoretical normal distribution



Parametric vs Non-parametric statistics

Parametric statistics

- Normal Distribution
- 連續變數

Non parametric statistics

- Distribution-free
- 樣本數很小 (e.g. $N < 30$)

Testing for Normality using SPSS Statistics

畫圖法P-P plots :

- 對稱
- 偏態
- 峰值

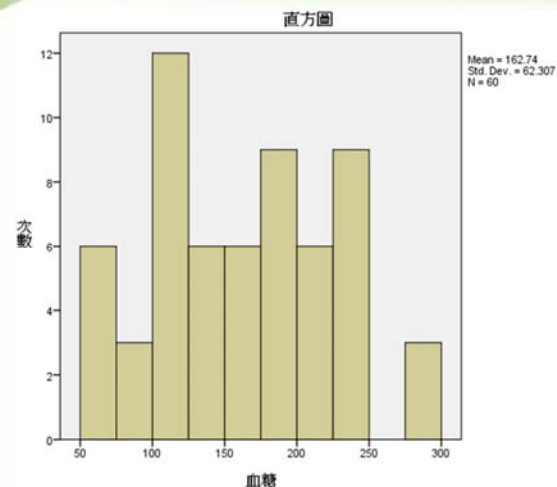
常態機率圖 :

- Q-Q probability plots

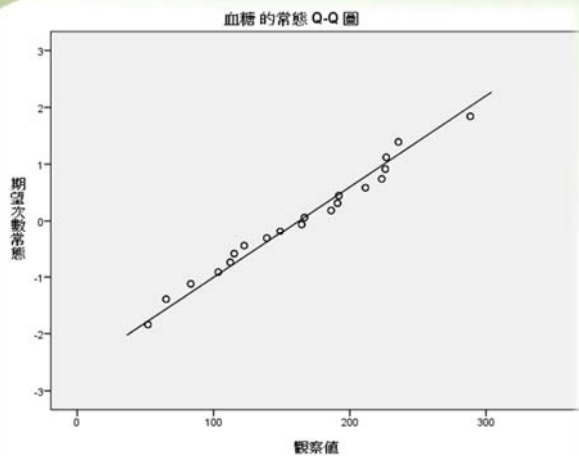
Test of Normality :

- Kolmogorov-Smirnov (K-S test)
- Shapiro-Wilk (S-W test)

Cumulative frequency (P-P) plots:



Q-Q probability plots:



Test of Normality: Kolmogorov-Smirnov (K-S test) vs Shapiro-Wilk(S-W test)

常態檢定

	Kolmogorov-Smirnov 檢定 ^a			Shapiro-Wilk 常態性檢定		
	統計量	自由度	顯著性	統計量	自由度	顯著性
血糖	.097	60	.200*	.964	60	.072

a. Lilliefors
*. 此為真羅

- large sample sizes

- small sample sizes
- more sensitive



Q & A

