

10 PENELITIAN KORELASIONAL

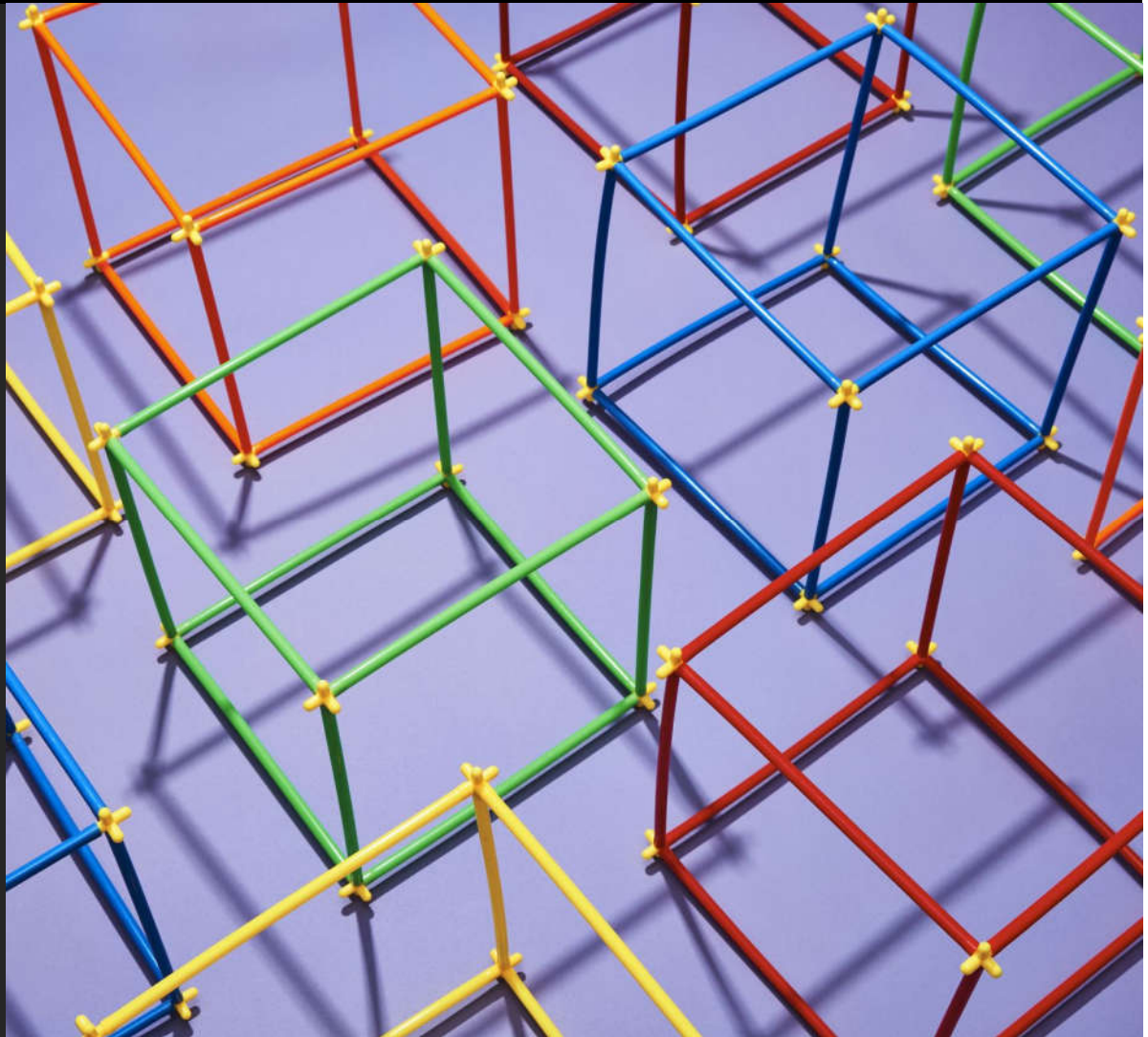
KULIAH 10

METODOLOGI PENELITIAN &
STATISTIK DESKRIPTIF

(ARIES YULIANTO, S.PSI., M.SI)

CHAPTER 12

THE CORRELATIONAL RESEARCH
STRATEGY



AN INTRODUCTION TO CORRELATIONAL RESEARCH

- p.296
- **correlational research strategy (Strategi Penelitian Korelasional)**
 - **Mengukur 2** atau lebih variabel utk mendapatkan 1 set skor bagi setiap “individu”.
Melihat pola hubungan yg terjadi dari 2 variabel.
 - not trying to explain the relationship (tidak mencari hubungan sebab-akibat).
 - ‘INDIVIDU’ pada penelitian korelasi, dapat berupa:
 - **Perorangan**
Misal: mahasiswa, pegawai, ibu rumah tangga, dsb
 - **Pasangan**
Contoh: hubungan pola asuh orangtua & prestasi akademik mahasiswa UPJ.
 - **Kelompok**
Contoh: hubungan kohesivitas kelompok & prestasi pada UKM di UPJ.
 - **Waktu**
Contoh: hubungan curah hujan & jumlah kecelakaan di Jakarta selama November 2020.

AN INTRODUCTION TO CORRELATIONAL RESEARCH

Siswa	Motivasi	IQ
A	23	105
B	15	90
C	20	110
D	25	120
E	30	135

Hubungan motivasi belajar & inteligensi pada Siswa SMA

Hubungan pola asuh orang tua & prestasi belajar pada mahasiswa UPJ

Siswa	Pola Asuh Ortu Otoriter	Prestasi belajar
A	43	75
B	48	90
C	70	60
D	75	78
E	40	65

UKM	Kohesivitas	Prestasi tim
A	120	1
B	70	3
C	100	5
D	60	2
E	50	4

Hubungan kohesivitas kelompok & prestasi pada UKM di UPJ

Hubungan curah hujan & jumlah kecelakaan di Jakarta selama November 2020.

Tgl	Curah hujan (mm)	kecelakaan
1	45	8
2	20	3
3	30	5
4	40	7
5	25	4

AN INTRODUCTION TO CORRELATIONAL RESEARCH

2 variabel dikatakan berhubungan, apabila:

Perubahan skor di variabel X memiliki pola tertentu dgn perubahan skor di variabel Y.

Misal: hubungan prestasi belajar & inteligensi

Maka setiap siswa diukur IPK (prestasi) & IQ (inteligensi).

Kapan dikatakan bila keduanya berhubungan?

Ada pola dari data:

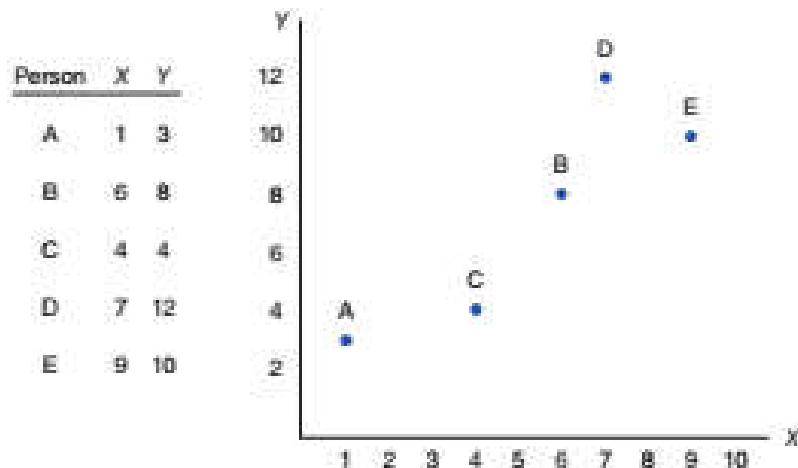
- Ketika IPK semakin tinggi, IQ semakin tinggi; atau
- Ketika IPK semakin tinggi, IQ semakin rendah.

Kapan dikatakan bila keduanya TDK berhubungan?

THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES

p. 299: evaluating relationships for numerical scores (interval or ratio scales) & ranks (ordinal scale)

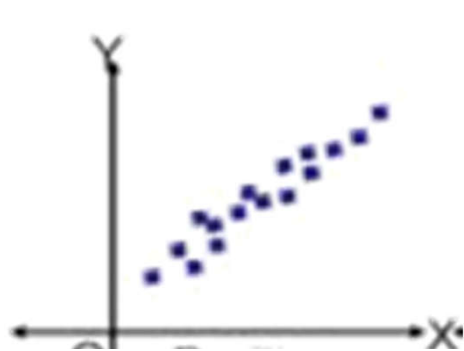
- Pasangan data disimbolkan dgn **X** & **Y**.
- Pasangan data dpt ditampilkan dalam grafik : **scatter plot**.
 - each individual is represented by a single point with a horizontal coordinate determined by the individual's *X* score & the vertical coordinate corresponding to the *Y* value. (Figure 12.1)



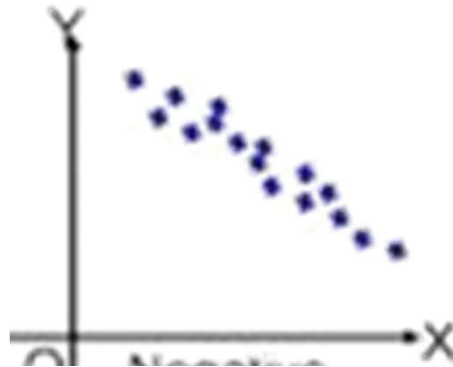
THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES

- 3 hal yg dpt diketahui dari *scatter-plot* utk melihat hubungan variabel:
 1. **Arah hubungan** (*direction of the relationship*) (p.299)
 - Positif: pola dari kiri bawah ke kanan atas.
 - Negatif: pola dari kiri atas ke kanan bawah.
 2. **Kekuatan hubungan**
 - Kuat: titik-titik cenderung mengumpul & membentuk pola ttt.
 - Lemah: titik-titik cenderung menyebar /membentuk lingkaran.
 3. **Bentuk hubungan** (*strength of the relationship*) (p.300)
 - Linear: pola perubahan nilai variabel X & Y sama utk semua kondisi.

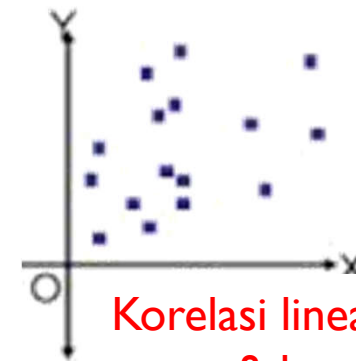
THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES: SCATTER-PLOT



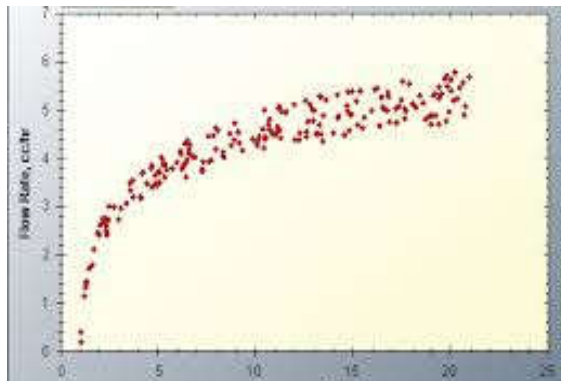
Korelasi linear Positif & kuat



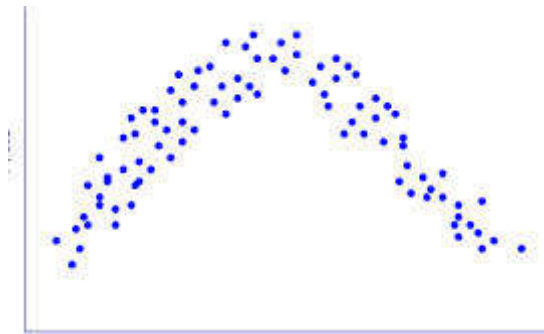
Korelasi linear Negatif & kuat



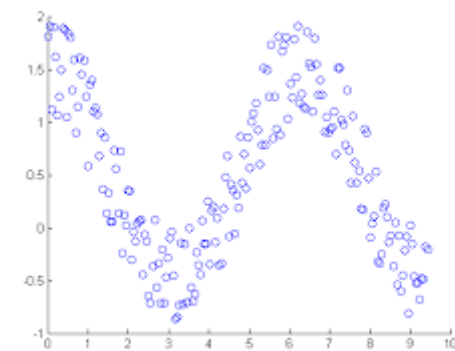
Korelasi linear positif & lemah



Korelasi non-linear



Korelasi non-linear



Korelasi non-linear

THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES: SCATTER-PLOT

Buat ScatterPlot & Perkirakan hubungan dari data di bawah ini

Kelas A			Kelas B			Kelas C			Kelas D			Kelas E	
X	Y		X	Y		X	Y		X	Y		X	Y
10	5		10	2		10	4		10	2		10	7
10	5		12	4		12	5		12	5		11	6
10	5		14	5		14	3		14	6		14	5
10	5		16	6		16	7		16	6		16	4
10	5		18	7		20	6		18	7		18	2

THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES: **CORRELATION COEFFICIENT**

- **correlation coefficient** = a numerical value to measure & describe the relationship between 2 variables.
- A correlation describes 3 characteristics of a relationship.
 1. *The direction of the relationship.* (p.299)
 - a. **positive relationship**
 - b. **negative relationship**
 2. *The form of the relationship.* (p.300)
 - a. **linear relationship.**
 - b. **monotonic relationship.**
 3. *The consistency or strength of the relationship.* (p.300)

Perhitungan correlation coefficient, lihat appendix B hlm 455.

INTERPRETING AND STATISTICALLY EVALUATING A CORRELATION

- The value of a correlation, which ranges from 0.00 to 1.00, describes the consistency of the relationship with 1.00 (or –1.00)
 - indicating a perfectly consistent relationship and 0.00 indicating a complete lack of consistency. (p.303)

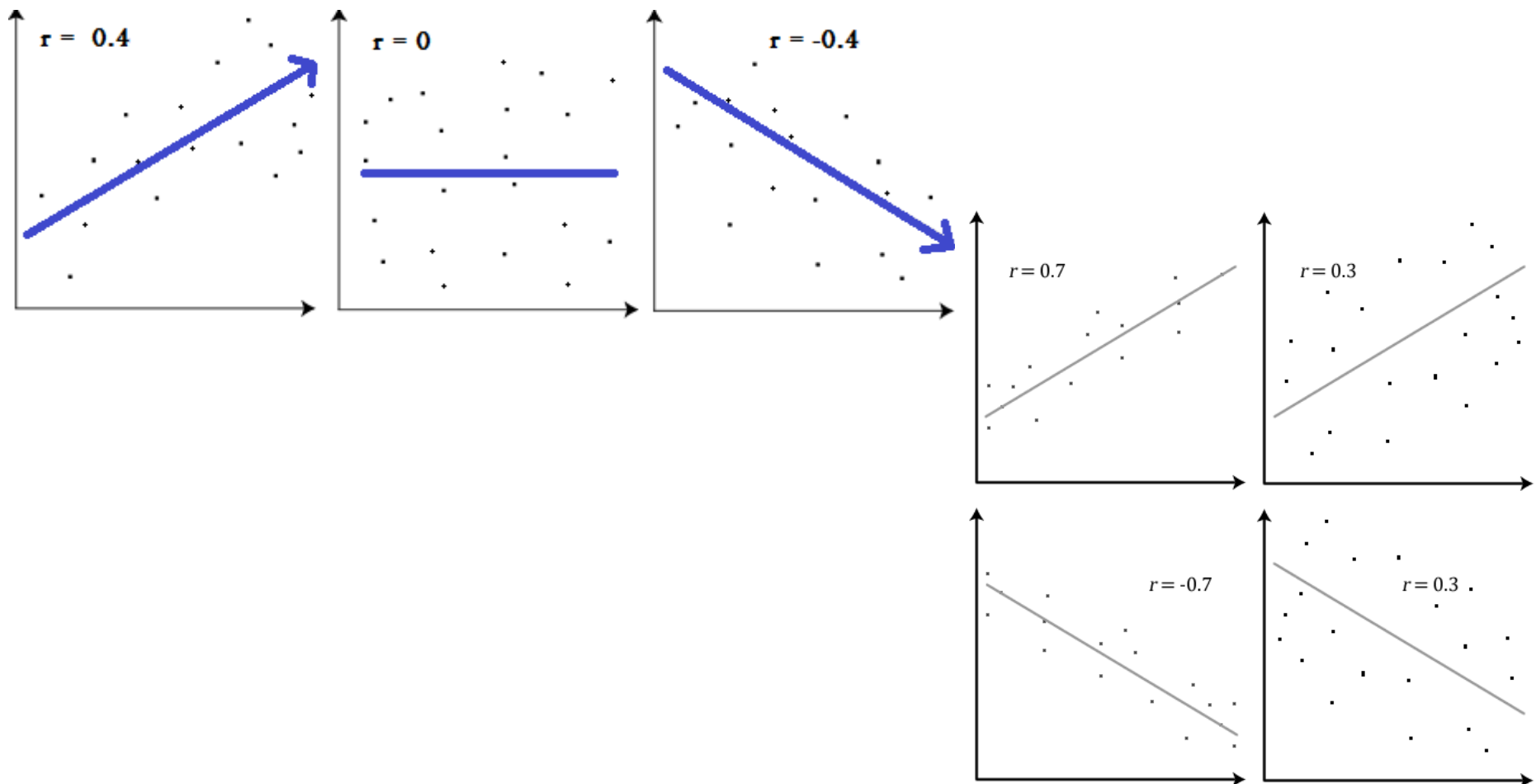
a. The Strength of a Relationship

TABLE 12.1

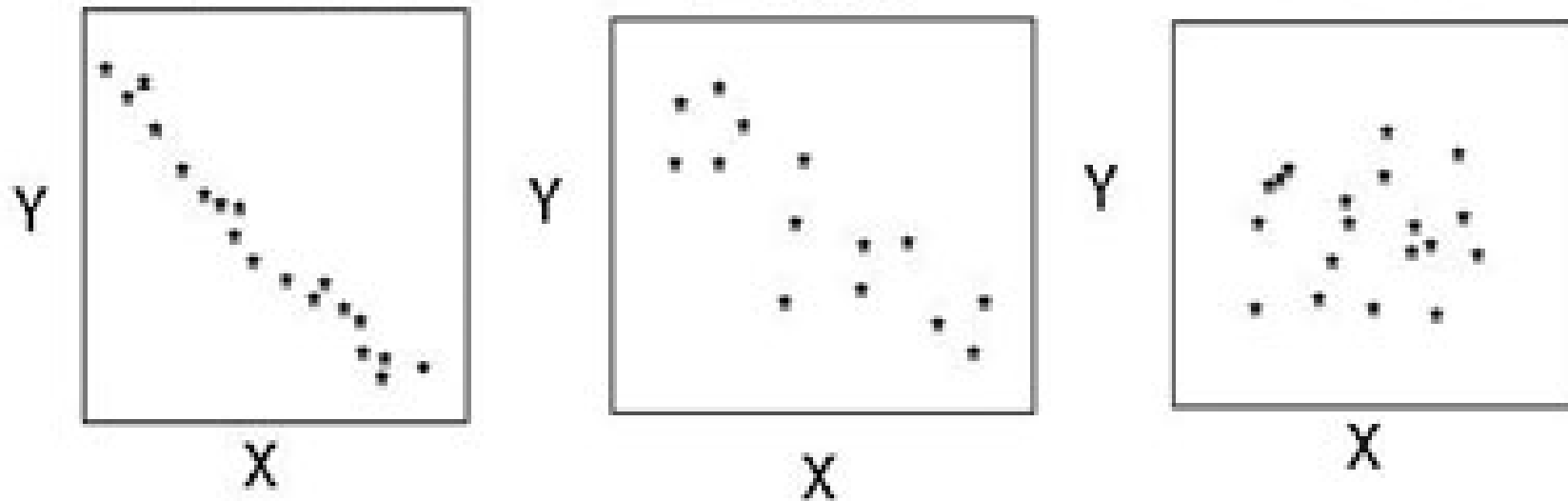
Guidelines for Interpreting the Strength of a Correlation

Degree of Relationship	Value of the Correlation Coefficient, or Coefficient of Determination
Small	$r = 0.10$ or $r^2 = 0.01$ (1%)
Medium	$r = 0.30$ or $r^2 = 0.09$ (9%)
Large	$r = 0.50$ or $r^2 = 0.25$ (25%)

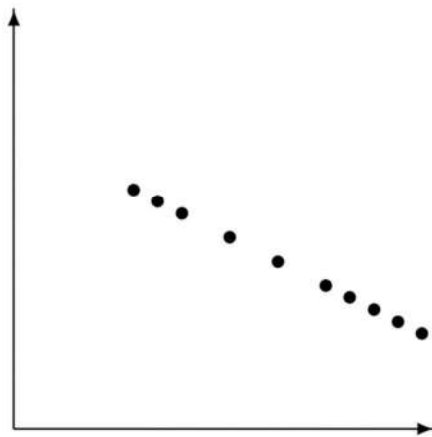
THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES: **CORRELATION COEFFICIENT**



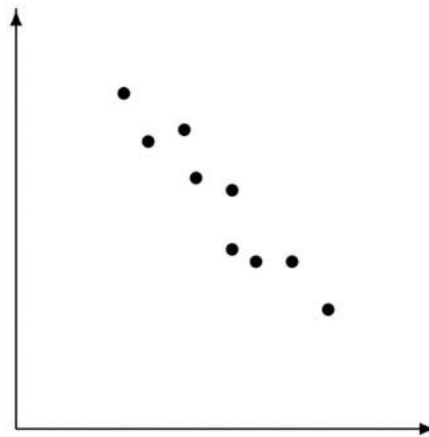
THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES: **CORRELATION COEFFICIENT**



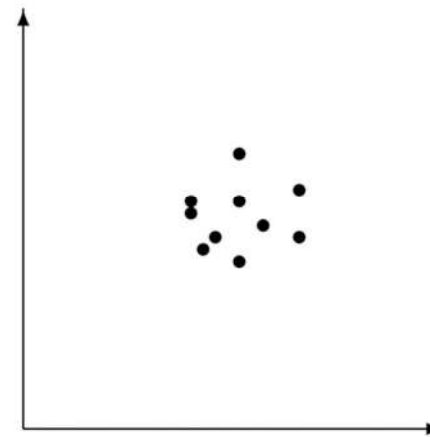
THE DATA AND STATISTICAL ANALYSIS FOR CORRELATIONAL STUDIES: **CORRELATION COEFFICIENT**



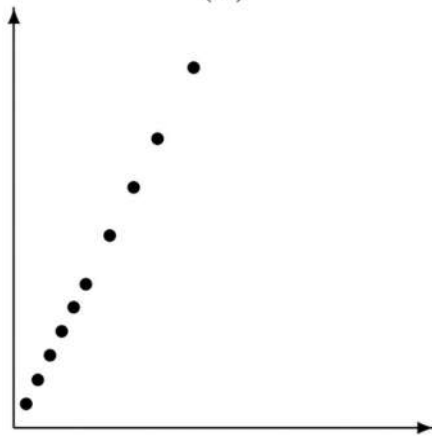
(a)



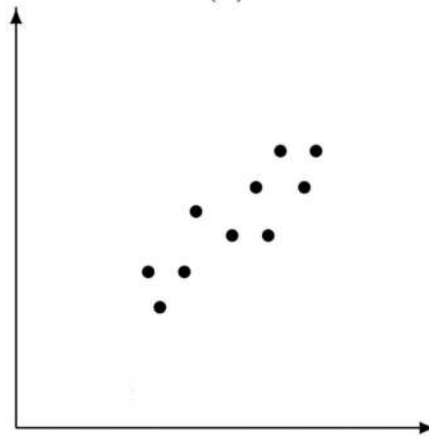
(b)



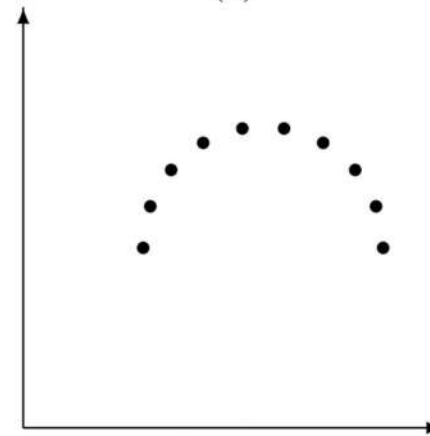
(c)



(d)



(e)



(f)