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Extracts

- ## 3D Venn diagram in PRA: a methodological innovation

Venn diagrams are one of the commonly used methods in PRA to study institutional relationships. Popularly known as 'chapati diagrams' ('chapati' means round bread in the Hindi language), this method uses circles of various sizes to represent institutions or individuals. The bigger the circle, the more important is the institution or individual. The distance between circles represents, for example, the degree of influence or contact between institutions or individuals Overlapping circles indicate interactions, and the extent of overlap can indicate the level of interaction.

Material used

Paper circles are the most frequently used material in Venn diagrams. Drawings on the paper and ground are also used, although this does not allow the size or location of circles to be changed. Sometimes, after the circles are drawn, participants discuss the diagrams and want to change the size or location. They hesitate to do so where the Venn diagram is drawn, but if the circles are cut from paper, they are encouraged to make corrections.

Usage of Venn diagrams

The Venn diagram method in PRA is very useful to study and understand local people's perceptions about institutions, individuals and programmes. The method provides valuable insights into power structures and decision making processes. The extent to which community institutions need to be strengthened can be ascertained. The relative importance of services and programmes can also be studied.

Disease perception

I conducted a training programme in 'Tigeri' slum of New Delhi for the voluntary organisation MAMTA in September, 1996. A Venn diagram was used to study locals' perception of diseases and their prevalence. The steps, as in any other Venn diagram process, included :

- listing of diseases by the locals;
- writing the names of diseases/or symbols for different diseases on small cards;
- putting the cards in descending order of perceived danger of diseases;
- asking people to allot different sizes of cut paper circles to the diseases, such that the greater the perceived danger, the bigger the circle; and,
- drawing a circle representing Tigeri and asking people to place the circles, such that the closer the circle to Tigeri, the more prevalent is the disease.

2D to 3D Venn diagramming

How can we study the cost of treatment in this diagram? This raises the question as to how more than two variables can be studied using a Venn diagram. Normally in a Venn diagram one dimension, the size of the circle, represents the importance of the institution, influence, perceived danger of disease etc. The second dimension, distance from the village or individual, represents proximity, psychological distance, prevalence of disease, etc.

The use of 3D Venn diagram provides an opportunity to add one more dimension to our study. Using the example of disease perception in Tigeri, the perceived danger of the disease has been represented by the circle size and the prevalence of the disease represented by the distance from the village circle. Now suppose that we are interested in studying the locals'

perception of the cost of treatment of the disease. This is where a 3D Venn diagram can be help us. Any flat object can be stacked up to represent the cost: the higher the pile of objects, the higher the cost of treatment (see Table 1). The material used for the third dimension may vary. For example, in a tribal village, Ashabani of Dumka in Bihar, the villagers used broken flat tiles. In another tribal village, D. Mallavaram of East Godavari, the villagers preferred using currency notes and coins to depict the cost of treatment (see Figure 1).

Thus, the 3D-Venn diagramming provides a valuable tool for local people to express themselves in three dimensions and for the outsider to understand complex relationships.

Figure 1. 3D Venn Diagram for disease percpetion in D. Mallavaram of East Godavari

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Table 1. 3D Venn diagram: disease perception in Tigeri dam

Venn diagram	Dimension	Represented by	Studied variable
1D	Width	Size of the circle	*Perceived danger* - the bigger the circle, the more dangerous the disease
2D	Length	Distance from the village	*Prevalence* - the closer the circle to the village, the more prevalent the disease
3D	Height	Coins/flat tiles	*Cost of treatment* - the higher the pile of coins/tiles, the more expensive is the treatment

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