

UNIT - IV

Crowding

Most of the developing and under-developed countries including India are facing problems pertaining to the phenomenon growth in the population and overcrowding. In India, the population has already crossed one billion, making the country one of the most crowded in the world. This unabated increase in the population is partly responsible for various environmental problems like unhygienic living conditions, noise, and air and water pollution. A number of scholars, journalists and environmental activists have consistently noted that these environmental problems are presumably contributing to various societal, psychological and physical problems which mankind is facing today. For instance, Stokols (1976) has noted that "at the societal level mounting pressures from global problems like over population (Ehrlich & Ehrlich, 1970; Hauser & Dunken, 1959; Thompson, 1953), urban stress (Jacobs, 1961; Milgram, 1970; Simmel, 1950) and environmental deterioration (Carson, 1962; Commoner, 1963) have contributed to an increasing concern among policy makers, planners to layman about man's relationship to the physical environment." During the 1960s, the concern of rising population and environmental deterioration has increased. With the publication of Ehrlich and Ehrlich (1970) most popular book entitled Population, Resource and Environment the idea of eco- catastrophe was born. The Ehrlichs argue that the world is already overpopulated in terms of world's ecological resources. They consider it possible that the capacity of the planet to

support the human life in the planet earth has already been permanently impaired. "Spaceship earth"

is now unable to sustain its over populated population and is slowly going out of control In fact it has been reasoned by several scholars that since human being multiplies an exponential rate while

goods and resources can only expand arithmetically, shortage inflation and imbalance have become cancerous for our economy.

Keeping the abovementioned forecast and looking towards the present population trends, urban

stress, resources

Scarcity, stress and its adverse affects on individual's quality of life, well-being and health, crowding which is a direct resultant of population appears to be an important area of research investigation. In this chapter attempt will be made to present a brief historical background of crowding research followed with the conceptualization of the phenomenon of crowding and how it is

different from density. Furthermore a comprehensive review of crowding studies will be presented in

diverse settings. Finally, the theoretical perspectives and future direction of crowding research will be presented.

Historical Background

Three important traditions have historically dominated crowding research in Euro-American context.

These are:

1. In 1920s the sociological tradition, which centred on urban analysis was popular.
2. In 1950s and 1960s studies on animal crowding was the dominant focus.

3. In the late 1960s and early 1970s the socio-psychological trend was emphasized.

A brief sketch of these three perspectives is given below:

The Sociological Tradition

The early urban sociologists concentrated on correlational methods and tried to study the relationship between Population density and various outcome measures related to Social pathology,

like juvenile delinquency, physical and mental health. Another characteristics of this research

were its emphasis on long-term outcomes such as crime rates, mental and physical illness. Finally,

the effects of crowding were studied primarily as a societal level problem and not as an

individual, family or small group level.

The Animal Ethnological Tradition

Research on animals began in 1960s. The foremost advantage of animal research is that one can

telescope in time the impact of population density because in comparison to humans the life expectancy of animals is shorter and thus social processes and reactions to crowding can be analyzed more comprehensively. In addition, detailed autopsy and variation of population density in various experimentally created conditions is possible which is not possible when human subjects are involved. The major limitation of these studies is that generalization from animal to human subjects is not always

possible.

The Socio-Psychological Tradition

In the early 1970s the research of crowding on humans began. Early research on crowding was conducted primarily in the laboratory settings with an emphasis on control of extraneous variables.

Groups were formed under varied conditions of crowding and its effects were studied on task performance and feelings. However, after couple of years research on crowding has gone into high gears and the effects of crowding has been

examined in different field settings including home, cities and prisons.

Conceptualization of Crowding

To a layman on the street the meaning of confused with crowding is often density. It was believed

that crowding is simply having "too many people at some place at some time" and the result is the

negative feelings and reactions towards others.. But this view does not reveal much and some pertinent Questions remained unanswered. For Instance how many people close together the people are

and how long a time people are exposed to such noxious conditions.

There is no all-inclusive definition of crowding, however,

there is a more comprehensive definition one has to have a rowding. For instance, Froshansky,

Ittelson, and Rivlin (1970) persons in a given space. The experience of "being crowded" close look

on some of the frequently used definitions of proposed that "crowding is not simply a matter of density of depends to some degree on the people crowding him, the activities going on and his previous experience involving

number of people in similar situations." Stokols (1976) had made a distinction between the physical

condition of density involving spatial limitation and the experiential state crowding in which the restrictive aspects of limited space as perceived by the individual exposed. Sometimes "crowding"

is viewed in terms of spatial consideration alone. But this meaning of crowding fails to delineate those social and personal aspects, which may interact with spatial factors in the experience of crowding. According to the proposed definition of Stokols

(1976) "density is viewed as a necessary antecedent, rather than a sufficient condition for the experience of crowding".

According to Desor (1972) "Being crowded" is receiving excessive stimulation from social sources.

Desor on the basis of his research suggested that although judgment of crowding varied with space,

the experience of crowding is much more than a matter of space. Though, level of social stimulation

appears to control judgments of crowding when other things are held constant. It seems that those

'other things' are important in deciding when the situation is crowded.

Crowding may be considered as a psychological concept referring to a subjective experience, which

may or may not be adequately reflected by population density measures such as number of people per

person or number of person per unit, or number of people per unit of living space (Baron, Manaël,

Adams, & Griffitt, 1976). Schmidt and Keating (1979) defines CrOwding is experienced when situational density forces

the blocking of goals, interruption of behaviour or cognitive overload to appear. According to

Epstein and Baum (1978) crowding involves an imbalance between people and available space. There

seems to be three events that occur as a result oof this imbalance: Congestion resource scarcity,

an ability to control and limit interaction with others and extremely close proximity to others.

In addition to the above mentioned operational definitions about crowding, some frequently used conceptualization focuses on amount of space available

(Freedman, 1975; Stokols, 1976), close physical proximity (Aiello, Epstein, & Karlin, 1975; Worchel

& Teddlie, 1976), reported crowding (Jain, 1997), unwanted interaction andd overload (Baum &

Valins, 1977; Saegert, 1978), inability to control interaction with others (Zlutnick & Altman, 1972).

Finally, based on the contemporary theoretical models, some attempts have been made to delineate

subjective parameters of crowding. Factor analysis results revealed evidence of four distinct

crowding experience components labelled as: spatial satisfaction, positive or supportive relationship, negative or disruptive relationship and uncontrolled disturbance (Nagar & Paulus, 1997). Thus, it seems that conceptualization of

crowding involves multifaceted experience of individual in response to density related factors.

There are a number of variables that will influence our experience of crowding. These will include

our relationship with the people involved, the duration of the experience, the physical context of the experience, and the meaning of the experience (Cassidy, 1997). We are likely to feel crowded if

the place is occupied with strangers relative to that of friends. We have also experienced positive

emotions when the theatre is occupied to its capacity.

In contrast, if most of the seats of the theater are empty we fail to enjoy low density. The importance of the physical and social context together with the degree of choice seems to be important in ascertaining the crowding experience.

Review of Crowding Literature

A number of researchers have comprehensively reviewed the crowding literature (Baum & Paulus, 1987;

Jain, 1997; Nagar, Crowul8

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199 Pandey & Nagar, 1987). It seems that crowding can be grouped into three broad research
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categories:

1. Animal Studies

2. Correlational studies

3. Experimental studies

Animal Studies

Early research on crowding and high population density was

done almost exclusively on animals (Calhoun, 1962; Christian, 1963; Mardson, 1972; Lawrence,
1974).

A series of studies conducted by Calhoun (1962, 1973) are pertinent to the effects of crowding and

social behaviour of rats. He confined the rats in a quarter of acre enclosure. Group of rats in the laboratory confinement were allowed to breed freely and were supplied with adequate food, water and

nesting material. As the population of rats grew in size the adverse effects of crowding was observed. In fact the behaviour of rats under crowded conditions deteriorated so much that Calhoun

coined the phrase behavioural sink to describe the adverse effects. One very important finding was

that by the end of twenty-seven months the population has become stabilized at a particular level.

In fact the population levelled off at 150 while the space was sufficient to accommodate several thousands. The reason for this was very high level of infant mortality caused by aggressive attacks

from adult males on pregnant females and often cannibalism in eating the newborn. In general there

appeared to be increase in psychopathology. The common symptoms associated with high density, which

served ultimately to reduce the density of the colony included catatonic withdrawal, sexual aberration, disruptive reproductive functions and aggression. In 1973 Calhoun replicated his earlier study conducted in 1962. The results

revealed that despite adequate facilities to accommodate 4000 rats the population never crossed

2200. Disruption of reproductive processes resulted in the complete extinction of the rat colony.