

CROWDING AND ITS EFFECTS

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INTRODUCTION

There is general agreement that crowding produces negative effects. It has been described as part of the conventional wisdom in juvenile corrections (Roush, 1989). Most assumptions about the effects of crowding come from personal experience. People generally do not like crowds and crowded conditions (Baum & Paulus, 1987). For these reasons, most individuals tend to agree that the effects of crowding are negative. This predisposition makes the inferences between animal research and human behavior more credible. For example, a common proof that crowded conditions produce agitation and aggression is the rat studies (Calhoun, 1962). However, beyond animal research and personal dislike of crowded conditions, what evidence links crowding to negative or harmful effects in juvenile confinement facilities?

The evidence takes two general forms, qualitative and quantitative. The qualitative evidence consists primarily of anecdotal information and reports. Although most come from observations and experiences by staff in institutional settings, some are quite thorough, systematic, and detailed. Others are reports and complaints to various authorities by those who live or work in crowded conditions. The quantitative evidence is the findings from experimental and quasi-experimental research that tests various hypotheses about the effects of crowding. The quantitative evidence contains many significant results.

QUALITATIVE RESEARCH

Practitioners at all levels of juvenile justice can identify changes associated with crowded conditions in juvenile facilities. Direct experience and observation supply sufficient proof that institutional operations are different

during periods of crowding and that these differences are negative. Four sources of qualitative evidence are noteworthy:

- Juvenile court judges normally receive information about the juvenile detention and corrections facilities located in their jurisdictions. Judges also have a good understanding of the effects of crowding based on feedback from juveniles, parents or guardians, institutional staff, and staff from other child serving agencies. The Judges Council of the National Council on Crime and Delinquency (NCCD) issued a report opposing crowding in juvenile confinement facilities and noting that "crowding deteriorates conditions of confinement" ("Judges seek reforms," 1989). The judges, simultaneously cited as sources and solutions to crowding (Schwartz & Willis, 1994), were one of the first juvenile justice system participants to chronicle the link between crowding and negative outcomes.
- The American Correction Association (ACA) developed and refined standards for juvenile detention and corrections facilities (American Correctional Association, 1991). Although described as minimums, the goal of standards was the improvement of juvenile detention and corrections practice. When a standard opposed a certain practice, it followed that the practice was not beneficial, even counterproductive, to effective facility operations or to the health, safety and well being of the detainees and staff. ACA specifically opposed crowding through its standard that the number of

juveniles does not exceed the facility's rated bed capacity" (3-JDF-2B-07).

- The National Juvenile Detention Association (NJDA), through its members and Board of Directors, adopted a position statement in 1997 that strongly opposed the crowding of juvenile detention facilities. The statement cited the dangers of harm to residents and staff in the forms of increased assaults, injuries, and suicidal behaviors. The second area for concern was the deterioration of conditions of confinement and disruption of programs. Crowding turns juvenile detention into warehouses for juvenile offenders (Toch, 1985), which destroys the mission of detention outlined in the NJDA Definition Statement (Stokes & Smith, 1989).
- Much of the qualitative evidence is unpublished. Reports of investigations by licensing agencies, child protective services, departments of social services, consultants, and expert witnesses contain detailed descriptions of horrible conditions of confinement brought about by severe crowding. Because these reports are rarely published, the nature and extent of the most egregious conditions of confinement attributable to crowding frequently get little attention and scrutiny. Without this information, it is easier to minimize and understate the negative impact of crowding. For that reason, special reference is made in this monograph to the article by Sue Burrell of the Youth Law Center (YLC). She describes many of these unpublished conditions in an attempt to put a face on the harm resulting from crowding.

QUANTITATIVE RESEARCH

The quantitative evidence is substantial and specific. Like other aspects of corrections, most is from research with adult populations. Therefore, inferences must be made about how these findings apply to juveniles. There are,

however, several juvenile-specific studies, and these are especially informative. The research literature also introduces a new term that is essential to the understanding of crowding. The concept is density. It has two components, social density and spatial density, which will be explained later. Both are present in every juvenile institution.

The research reveals good news and not-so-good news. The good news is that the negative effects of crowding are predictable and uniform. Unfortunately, these negative effects occur more intensely with children and juveniles. The not-so-good news is that the onset of these negative effects is less predictable. Research and experience suggest that a threshold exists, after which increases in resident population or decreases in the ratio of staff to residents will trigger the negative effects of crowding. There does not appear to be one single criterion or factor that uniformly predicts the onset of negative effects.

The research also identifies two sets of factors that serve to intensify or moderate the negative effects of crowding. In legal terms, these factors aggravate or mitigate the nature of a crime. The research literature spends more time on those variables that mitigate the effects of crowding but, instead, refers to them as "mediating" factors. To avoid confusion, mediating factors means those variables that moderate or mitigate the effects of crowding, and aggravating factors are those circumstances that make the effects worse. To the extent that some or all of these factors coexist in juvenile confinement facilities, the onset of negative effects could be initiated before reaching capacity or postponed when the institution is over capacity. Based on the collective wisdom of architects, environmental designers, sociological psychologists, and juvenile justice practitioners, the best predictor of the onset of negative effects is the institution's designed capacity. This concept of a threshold will be discussed later in conjunction with accepted levels of staffing.

Density

The real issue is density. Two types of density affect juvenile institutions. Social density is a comparison of different numbers of people in the same size space. Spatial density is a comparison of the same number of people in different size spaces. Crowding is a measure of social density because the institution is a finite space and the population of the facility changes over time. Spatial density issues occur almost continuously in most juvenile confinement facilities as groups, teams, or units of juveniles move from one different size area to another during the day.

Density can be viewed as a continuum, much like temperature. There are high levels and low levels of density depending on changes in the numbers of persons and the sizes of the spaces they occupy. Capacity could be defined as a point on the density scale where the ability to maintain normal, healthy or optimum functioning is at its peak. Theoretically, once density moves beyond capacity, crowding occurs; and the ability to maintain normal, healthy, and optimal functioning begins to deteriorate.

The good news is that density elicits predictable reactions from individuals. The not-so-good news is that although these reactions are predictable, it is not as easy to predict when they will occur.

Parallels can be drawn to another reaction individuals have to external change. Take, for example, change in temperature. When exposed to a drop in temperature over an extended period, individuals "get cold." Predictably, the extremities (hands, fingers, feet, toes, noses, and ears) become cold. Hands go into pockets for warmth; sniffles occur; the muscles shiver; and movement increases either to secure an external source of warmth or to raise body temperature. Everyone has experienced this phenomenon. Yet, when looking at a thermometer, everyone does not "get cold" at the same temperatures or the same time.

Just like getting cold, the negative responses do not occur at a specific level of intensity or duration for every incarcerated juvenile. Much like getting cold, there is a narrow range of tolerance for homogenous groups (see Wener & Keys, 1988). Some juveniles can tolerate crowding for longer periods than others can. The list of mediating factors helps to explain how juveniles cope with crowding. This explains why some studies do not confirm a relationship between density and certain types of negative behaviors, i.e., increased assaults and injuries.

Findings from Adult Corrections

Many significant positive correlations have been found between density (the number of people per unit space) and the rates and frequencies of dangerous, harmful, and problematic behaviors in adult correctional facilities (see reviews in Paulus, 1988; Wright & Goodstein, 1989). Table 1 summarizes the research findings and describes the negative effects.

Table 1. Summary of Findings from Adult-Specific Research

Effects	Source
When crowding or density increases, studies have also found...	
Increases in perceived crowding, altered behaviors, and rates of sick call, even with changes in population density as small as 11-25%.	Wener & Keys, 1988
Increases in the rate of illness complaints.	McCain, Cox & Paulus, 1976
Gender differences; males need more space.	Moos, 1976
Increases in the rate and frequency of disruptive behaviors.	Megargee, 1977
As prison size increases, so does the rate of homicides.	Sylvester et al., 1977
Increases in the rate of psychiatric commitments.	Paulus, McCain & Cox, 1978
Increases in the rates of antisocial behaviors and pro-social behaviors.	Jan, 1980
Increases in the rate of reconviction rates.	Farrington & Nuttall, 1980
Increases in the rate of sick calls.	Werner & Olsen, 1980
Increases in the rate of heart failures.	Carr, 1981
Increases in the rate of violence indirectly; differentially causing confusion and tension depending on cognitive-evaluative state.	Ellis, 1984
Reductions in interpersonal distance leading to increases in the rate of violence.	Walkey & Gilmour, 1984
Increases in physiological measures of stress, i.e., pulse, blood pressure, and sweat.	D'Atri, 1975' D'Atri et al., 1981
Increases in the rate of number of assaults.	Jan, 1980; Gaes & McGuire, 1985; Megargee, 1977
Decreases the ability to classify and treat; incarceration becomes warehousing.	Toch, 1985
Effects apply to not only residents but also staff.	Toch, 1985
Increases in the frequency and rate of disruptive behaviors; effects are aggravated with juvenile and young adult offenders.	Nacci, Teitelbaum & Prather, 1977; Carr, 1981

Mediating Factors

Researchers from the cognitive or transactional school maintain that human behavior is a product of the interaction between the environment and the individual's interpretation of that environment (Toch, 1977; Wright, 1986). Because all individuals are different, there is less predictability about how an individual will adapt or respond to certain environmental stimuli, such as crowding. Furthermore, many individuals respond to crowding without resorting to aggression or violence. Several studies argued that there are other factors associated with crowding in locked institutions that disrupt the assumed relations with negative effects (Houston, Gibbons & Jones, 1988; Sechrest, 1991). If practitioners are correct, the maintenance of daily programs and constructive activities, particularly those that emphasize the understanding of personal problems and conflict resolution, could explain moderation of negative effects associated with crowding (Jan, 1980; Previte, 1997).

Time. Megargee (1977) found future time perspective to be a mediating factor. In situations where release from incarceration was in the near future (as in most juvenile detention), fewer negative behaviors were reported regardless of the density factor. Residents did not want problems that would postpone their release. Megargee noted no differences based on age of offender.

Short lengths of stay are, however, indicators of transient populations. In institutions with high turnover rates of both residents and staff (c.f. Parent, et al., 1994), transiency or social instability may be the dominant cause of violence (Ellis, 1984).

Institutional Type. Scott's (1981) maintained that environmental dimensions must be viewed as a whole. Jan (1980) suggested that the relationship between density and misconduct varies according with the institutional type. In institutions where the classification system effectively segregated

violent and non-violent offenders, Sechrest (1991) found that classification was more predictive of violence than density. Gaes and McGuire (1985) noted that the percent of inmates involved in programs was inversely related to violence, and the effect was greater with younger inmates.

Disproportionate Minority Confinement. Racial mixture is associated with more assaults against inmates, whereas assaults against staff increase as the inmate population's racial homogeneity increases (Gaes and McGuire, 1985). Leger (1988) found a greater sensitivity to negative effects by whites when they were the minority race in the living unit.

Aggravating Factors

Age. Nacci, Prather and Teitelbaum (1977) noted that the effects of density were aggravated with juvenile and young adult offenders. In other words, the frequency and intensity of negative effects increased as the age of the offender population got younger.

Contrast Effect. Once inmates adjust to a given level of density, increases in population can substantially increase perceptions of crowding (Wener & Keys, 1988). This "contrast" between the adjustment level of density and the increased level of density can occur even when both levels are below the point where the negative effects of crowding should occur. Furthermore, small increases in population (as little as 11%) can initiate the contrast effect. The contrast effect explains why some institutions experience the effects of crowding before reaching or exceeding capacity.

Offenses to other senses create irritable and aggressive behaviors:

Noise. Moos (1975) cited noise as an event that leads to annoyance, anxiety, and sleep disturbances in individuals. Russell and Ward (1982) reported that noise leads to fewer helping behaviors and decreases attentiveness to behaviors. These findings support the design and construction of new, secure facilities that

place a premium on noise abatement from safety and public protection perspectives.

Odors. Russell and Ward also noted that excessive odors reduce frustration tolerance, and unpleasant odors lead to aggression and increased dislike toward others. This finding relates to the specific examples cited in the Burrell article where crowded institutions had obnoxious odors.

Housing. Paulus, McCain and Cox (Cox, McCain & Paulus, 1984; McCain, Paulus, McCain & Cox, 1978) examined illness reports in a county and federal correctional facility and found illness reports to be significantly higher among dormitories than in one or two-man cells. In a second study, the authors conducted a broad survey of several prisons over a 16-year period and identified that mortality rates and psychiatric commitments were higher during periods of high population.

Comparing single-occupancy rooms, cubicles, and dormitory living arrangements, those assigned to dormitories were highest in measures of perceptions of crowding, perceived loss of control, and rates of health complaints (Schaeffer, Baum, Paulus & Gaes, 1988). On all measures, single-occupancy housing was associated with the greatest moderation of the negative effects of crowding. Wener and Keys (1988) found that crowding effects did not come from double occupancy housing (a room designed for two people), but rather from being on a living unit above designed capacity.

Space. Responses to the physical environment vary according to individual and developmental needs. For example, Moos (1975) noted that males need more space than females. Sylvester, Reed and Nelson (1977) used the concept of prison size as a measure of space. As the physical size of a prison increases, the number of homicides also increases. Wener and Olson (1980) observed that decreases in space through crowding lead to an increased rate of sick calls. Farrington and Nuttall (1980) noted higher reconviction rates for inmates

released from more densely populated facilities.

Gaes and McGuire (1985) described an additive effect for both large physical environment and dormitory living arrangements. A large system configured with large percentages of its population housed in dormitories is more susceptible to higher assault rates.

Table 2 contains a summary of mediating and aggravating factors.

Juvenile-Specific Findings

Do the same negative effects identified in the adult correction research occur with juveniles in juvenile confinement facilities? The juvenile-specific research supports this inference and suggests two noteworthy exceptions. First, the negative effects of crowding occur with greater predictability in juvenile institutions. Second, juveniles appear to be more sensitive to the negative effects, and their reactions are more intense.

Table 3 contains a review of the juvenile-specific research. Four juvenile-specific studies require additional explanation.

1) Ray (Ray, Huntington, Ellisor & Prytulla, 1978; Ray & Wandersman, 1981; Ray, Wandersman, Ellisor & Huntington, 1982) examined changes in density on the social climate, interpersonal relations, and the psychological responses of 115 institutionalized juvenile offenders at a youth correctional center. His findings revealed significant effects on social climate. Ray also documented the following relationships: 1) Increased crowding was tied to increased negative feelings about peers, staff, and counselors. 2) Increased crowding preceded reductions in classroom cooperation, reductions in involvement with peers, and poor grades in the school programs.

Table 2. Summary of Mediating and Aggravating Factors

Effects	Source
Ability to cope with new environmental stresses varies with cognitive functioning.	Leschied, Jaffe & Stone (1985)
Noise in the environment led to a tuning-out strategy in children resulting in an ignoring of speech sounds and a reduction of auditory discrimination, ultimately leading to reading problems.	Cohen, Glass & Singer, 1973
Privacy is a priority for juveniles especially for sleeping.	Srivastava, 1978
Hard, stark, and drab design leads to discouragement in children.	Foster et al., 1981
Environment affects a youth's interest levels, ability for self-sustained activity, independence, and feelings of security and self-confidence.	Dimidjian, 1983
Comparing single versus multiple occupancy rooms, those in single rooms reported lower effects of crowding.	Schaeffer et al., 1988
Racial antagonism aggravates perceptions of crowding, especially for whites; racial antagonism linked to violence more than crowding	Leger, 1988
Good classification (program and housing assignments), adequate staffing, and good supervision have a greater effect on assaults than crowding	Sechrest, 1991
As the percentage of population in dorms increases, rates of juvenile-on-juvenile injuries also increase.	Parent et al., 1994
Use of program and dayroom areas slightly more influential on perceptions of crowding than type of sleeping room.	Schaeffer et al., 1988; Wener & Keys, 1988
Physical environment affects normal child development.	Smith & Jaworski, 1984; Lewis, 1984

Ray systematically studied the effects of social density (a comparison of different-size groups in same-size spaces) and spatial density (a comparison of same-size groups in different-size spaces). During the study, dorm populations moved from a low-density to a high-density and then again to a low-density condition. While the number of boys varied, the physical size of the living area remained constant. In the low-density conditions, the boys generally reported more involvement, staff support, autonomy, practical and personal problem orientation, order, and organization.

Increased social density made very little difference in the larger dorm (about 4,000 square feet). However, the same was not true for the smaller dorm (about 2,000 square feet). As social density increased, involvement, support, order, organization, and staff control declined, but expressiveness increased. That is, juveniles behaved in a manner more characteristic of disturbed behavior or a mental health program. The number of juveniles per square feet of living space appeared to be an important variable in setting the threshold for the onset of negative effects. In general, social disorganization increased with crowding in the smaller dorms.

Table 3. Summary of Findings from Juvenile-Specific Research

Effects	Source
When crowding or density increases, studies have also found...	
Decreases the ability to classify and treat; incarceration becomes warehousing.	Toch, 1985
Effects apply to not only residents but also staff.	Toch, 1985
Increases in the frequency and rate of disruptive behaviors; effects are aggravated with juvenile and young adult offenders.	Nacci, Teitelbaum & Prather, 1977; Carr, 1981
Decreases in residents' perceptions of order, organization, and staff support.	Ray, Huntington, Ellisor & Prytulla, 1978; Ray & Wandersman, 1981; Ray, Wandersman, Ellisor & Huntington, 1982
Decreases in involvement with peers; decreases in classroom cooperation, and lower school grades.	Ray, et al.
Decreases in perceptions of safety.	Roush, 1989, 1990
Increases in aggressive behaviors in boys; girls were unaffected.	Loo, 1972
Largeness, large physical space, produces confusion and anxiety in children	Foster, VanderVen, Kroner, Carbonara & Cohen, 1981
Increases in the rates of social withdrawal, of avoidance of eye contact, and of solitary play.	Aiello, Thompson & Baum, 1984
Increases in the rates of juvenile-on-staff injuries.	Parent, Leiter, Kennedy, Livens, Wentworth & Wilcox, 1994
Increases in the rate of suicidal behaviors.	Parent et al., 1994
Increases in the rate of isolation (room confinement) less than 24 hours in duration.	Parent et al., 1994
Increases in the rate of injury.	Parent et al., 1994

Ray tied many findings from the adult correctional research to juvenile corrections. His research supported previous studies and confirmed the belief that crowding generates predictable, negative effects on institutionalized juveniles. More importantly, Ray empirically affirmed the primacy of relationships (c.f., Brendtro & Ness, 1983; Roush & Stelma, 1986; Yang et al., n.d.). As social density increased,

staff-to-juvenile relationships suffered. For example, residents reported a reduction in staff support and, subsequently, a reduction in the order and organization on the unit. Reduced order and organization meant that greater amounts of minor misbehaviors were tolerated and resident expressiveness increased. Staff used more threats and coercion to maintain control. Moreover, as relationships

deteriorated during high social density, residents reported increased negative feelings about other residents, staff, and counselors.

2) Roush (1989, 1990) examined the relationship between residents' perceptions of well being and conditions of confinement as measured by the level of compliance with American Correctional Association standards. The assumption was that residents' perceptions of well being would be higher in juvenile detention centers with "good" conditions of confinement (high standards compliance). However, the findings exposed very weak relationships between high levels of standards compliance and positive perceptions of well being by detained youth. Further investigation revealed that those institutions in the sample with the highest levels of standards compliance were also the ones with the most severe crowding as measured by average daily population in excess of rated capacity.

This unexpected link between standards compliance and crowding raised questions. For example, which occurred first? Was standards compliance a way to maintain stable institutional operations in the face of crowding? Or, were the institutions with the highest levels of standards compliance (even ACA accreditation) more likely to become crowded due to the assumption that they could maintain program integrity even when operating beyond their design capacity? More study is needed in this area. However, the findings prompted greater exploration of the effects of standards compliance as a mediating factor of the negative effects associated with crowding. Based on the data from residents and staff in these facilities, Roush concluded that the effects of crowding were so powerful that they negated the positive aspects of standards compliance.

3) All of these factors were instrumental in the formulation of the OJJDP Conditions of Confinement Research Project (Parent et al., 1994). The OJJDP Study of Conditions of Confinement is the most

extensive juvenile-specific research. It established the strongest ties to the research findings from adult corrections (see Table 2); and it confirmed, on a much larger scale than Roush's preliminary findings, the absence of a relationship between standards compliance and positive evaluations of conditions of confinement. Additionally, the OJJDP Study called attention to several essential operational factors linked to harmful outcomes during periods of crowding. These factors included low levels of staff experience, low amounts of staff training, and high rates of staff turnover.

The Study of Conditions of Confinement collected abundant information but data analysis was restricted due to limited funding. In 1996, Roush secured the data for continued analysis by graduate students in the School of Criminal Justice at Michigan State University. Christopher Porter's (1996) Master's thesis revealed a significant increase in suicidal behaviors in institutions with high levels of violence. He postulated that violence associated with crowding also increases the risk of suicide.

4) One of the first analyses of the effects of crowding on institutionalized juveniles came from Moos (1975) and his work at Stanford University on the Correctional Institutions Environment Scales (CIES) (Moos, 1987). To norm the CIES, Moos administered the instrument to hundreds of youth in California detention and training school settings. Moos' interest was the measurement of institutional social climate. He noted variations in social climate inversely related to changes in population density. By studying these changes, he explained many of the dynamics of social climate in juvenile facilities. These dynamics provide insights about how mediating factors operate:

- **Morale, Personality, and Adaptive Behavior.** Moos concluded that as the emphasis on relationships increased in juvenile confinement facilities, residents liked each other and the staff more and

felt that they had more opportunities for personal growth. They also reported more social contact, self-revelation, and independence, and they experienced less social anxiety. The opposite findings held for staff control. As staff became more controlling, residents liked each other and the staff less and felt that they had less to gain from incarceration. Residents who rated the institutional environment as less supportive, unclear, and poorly organized also claimed the staff mistreated them. Perceptions of mistreatment led to increased grievances and allegations of emotional and physical abuse.

- **Disciplinary Infractions.** Overall, high levels of expressiveness on a unit tended to promote aggressive behavior among residents, whereas organization and structure tended to inhibit it (c.f., Previte, 1994). In addition, residents who saw their institution more negatively than the other residents were much more likely to get into trouble. Compared with juveniles who followed the rules, juveniles who broke the rules saw the institutional program more negatively, claiming it lacked expressiveness, practical orientation, and personal problem solving. Juveniles who broke more serious rules and who regularly broke rules viewed the social environment even more negatively. They reported less staff support, less order and organization, and more coercive and threatening staff control.
- **Rates of Absconding.** Rates of running away varied substantially among juvenile corrections programs, in part because of different opportunities, peer group pressures, levels of tolerance for deviancy, and program social climates. Research on 395 youths in nine residential corrections programs compared differences in youth's perspectives of program failures versus

program successes. The program failures rated the social climate less favorably than did the program successes, with the failure group reporting more staff control and less autonomy, practical orientation, and program clarity. These are important signals for detention staff because of its high emphasis on public safety. Thus, an absconding typology can be informative to security. Ironically, the absconding typology defined by Moos is similar to the typology of the growing number of custody-oriented juvenile facilities.

These differences were more pronounced when the absconders among the program failures were examined separately. Overall, the results showed that aggressive youths who rated their programs low on expressiveness and high on personal problem orientation and staff control were more likely to run away. The findings suggested that aggressive youth elected a "flight" or avoidance response to programs that emphasized both structure and the sharing of personal perspectives and feelings. Such findings can also be used to identify high-risk cases when they enter correctional programs and to direct special program efforts toward them.

- **Aftercare Performance.** Particular correctional climates may benefit aftercare performance. Residents evaluated programs with higher community involvement rates (measured by the proportion of youth from the community and the amount of community-based or volunteer programs and services) as somewhat more structured than programs with lower community involvement rates. Residents in these programs also reported an emphasis on interpersonal communications and openness. Wright (1978) also found that facilities that

were higher on organizational commitment and staff support tended to have lower recidivism rates.

In summary, an emphasis on relationships and programs (structure) promoted resident morale and self-esteem, especially in relatively clear and well-organized contexts. Such programs also decreased recidivism rates, a finding that has remained consistent over the past two decades of juvenile justice research (Howell, 1997; Loeber et al., 1998; Previte, 1994). As these findings indicate, correctional climates are directly connected to resident outcomes; however, part of the influence of correctional programs depends on the residents' personal characteristics (c.f., Baum & Paulus, 1987; Howell, 1997).

Mediating Factors

Environment. The quality of the environment affects a child's development (Dimidjian, 1983; Lewis, 1984), and the combination of a good physical environment with a good program and good staff is the best option since a good physical environment will increase the effectiveness of both programs and staff (Provence, Naylor & Patterson, 1978). In the most compelling study, Humphrey (1984) revealed that children's views of their environment predicted their own ratings and their teachers' ratings of self-control. Key environmental variables were order, organization, rule clarity, activity, and involvement.

Staffing and Programming. In the face of severe crowding and its subsequent chaos, Oklahoma County (Oklahoma) Juvenile Bureau chief Ray Bitsche reaffirmed his belief that "the best security is built on programs and more programs, people and more people" (Previte, 1997:77). As part of the technical assistance provided to the Oklahoma County Juvenile Detention Center, the NJDA-YLC Overcrowding Project staff conducted a quality of life assessment following two and a half years of operating over capacity, often at 200 percent capacity. The findings revealed the predicted

crowding profile; but the intensity of the negative effects was far less than expected. Even the depressed subscale scores were still within normal ranges (Burrell, Roush & Sanniti, 1997).

Project staff asked detention administrators to describe the measures taken to safeguard resident and staff safety during periods of intense crowding. Programs and more programs, people and more people were the responses. Using staffing and daily programming as the primary defense against the negative effects of crowding is a way to manipulate thresholds. Once the Oklahoma County facility had established an acceptable staffing threshold, maintaining that staffing level became a primary strategy to moderate the negative effects of crowding. The same concept applied to the level of daily programming. In crowded institutions, programs beat lock downs (Previte, 1997:79). Safeguarding both staffing and program levels appeared to lessen the negative effects of crowding.

Aggravating Factors

Space. For children and youth, the largeness of an institutional environment often leads to confusion and anxiety; and a poor arrangement of the facility due to a hard design or due to a stark and drab interior frequently produces discouragement (Foster, VanderVen, Kroner, Carbonara & Cohen, 1981).

Understaffing. Barker (1968) and Wicker (1973) introduced the concept of undermanning, a situation in a behavior setting where there are insufficient participants to achieve the goal or task associated with the setting. Wicker maintained that undermanning has an unsettling effect on normal coping behavior and that these behaviors are carried into other behavior settings. Applied to juvenile institutions, understaffing would be situations where there is insufficient staff to achieve the goals of the facility for that shift, or the inability to provide safety, security, order and programs. Most institutions experiment with different

staffing patterns and ratios until an accepted threshold is found. This accepted staffing threshold is the point where the goals of the institution are achieved in the most cost-efficient manner.

Crowding affects the staffing threshold in several ways. First, crowding alters the normal staffing pattern by increasing the number of residents under one staff member's supervision. Second, some staff react to the negative elements of crowding by taking time off work. This takes the forms of absenteeism, reporting to work late, health problems, worker's comp claims, leaves of absence or quitting. In most instances, these staff members do not provide adequate notice, and the institution has to juggle existing staff to cover the shift while a replacement is sought. Finding a replacement also means overtime, additional inconvenience and stress to the staff member who gives up regularly scheduled time off to cover the shift.

Given these situations, how much deviation from the staffing threshold can occur before problems occur? Carbone and Lynch (1981) studied staffing patterns and staff disciplinary strategies at the Polk County (Iowa) Juvenile Detention Center. They found that once the staffing ratio increased (as the number of residents under one staff member's supervision increased) above the established threshold, problems occurred *immediately* in the form of increased uses of threats and harsher disciplinary actions by staff. Carbone and Lynch observed these behaviors with each deviation from the accepted staffing threshold. Understaffing created an environment where staff became more punitive in their interactions with residents.

HOW IT WORKS

Density affects behavior in many ways. Baum and Paulus (1987) explore various models to explain the effects of density and crowding. As described by Ray, two general explanations are helpful. First, as density increases, social stimulation also increases (Altman, 1975).

Increased social stimulation leads to stress that is displayed interpersonally and psychologically. The results of stress are a greater sense of confusion and a reduced ability to screen out irrelevant stimuli. The net result is that the environment overwhelms the individual.

Second, social density directly effects the number of potential interactions available to individuals (Baum and Valins, 1979). As density and interactions increase, the likelihood of unwanted encounters also increases. Increased social density increases the difficulty in avoiding and terminating unwanted interpersonal contacts. In effect, social density reduces personal control over social interactions. Social density also reduces interpersonal distances, leading to increased personal discomfort and an increased probability that violence will result (Walkey & Gilmour, 1984). Increased spatial density reduces an individual's ability to regulate intimacy. Goal-oriented activities appear to be negatively correlated with spatial density because of a reduction in the number of options available.

Based on the study of different institutions during periods of crowding, some mechanisms are identifiable. They are:

- Crowding aggravates social density, which leads to increased stress among both residents and staff. Stress manifests itself immediately in the forms of frustration and irritability. There is an increase in inappropriate expressiveness by residents (name calling, put-downs, rude comments, and threats). Staff respond in-kind with raised voices, mild threats, and increases in minor disciplinary action, including increased room confinement.
- Too many residents means that staff are overwhelmed with the basic routines of care, custody and supervision. Staff begin to disappear, drawn away from direct supervision due to understaffing and are doing a wide array of duties not included in their job description, i.e., transporting

youth to court or doctor's appointments, dispensing medications, preparing meals, or conducting school classes. Add in the increased amount of time away from supervision required to do routine room checks and the withdrawal of staff from supervision means that residents are left to their own devices to keep themselves occupied. Activity declines; boredom increases; and assaults and injuries increase.

- The sheer numbers of youth forces residents to share private areas, particularly showers and toilets, and this reduces perceptions of privacy. This leads to more problems.
- Staff soon come to the realization that the increased misbehavior is a major problem for them. Because staff are tired and frustrated, more and more of their interventions result in an escalation of misbehavior, resulting in more arguments, threats, room confinements, and risk of physical confrontations. As long as safety and security are not seriously compromised, staff begin to question why they are expending so much energy on minor problems. Once they reach this point, staff start to withdraw emotionally. There is a drop in energy and a rise in apathy. Staff begin to tune out to all but major misbehaviors.
- The withdrawal of staff and the reduction of supervision mean that residents have more freedom to do and say what they please. Because staff will only intervene in serious situations, minor forms of misbehavior are ignored. These include cursing, threats, intimidation, horseplay with the intent to intimidate, bullying, and minor fights (pushing, shoving, slapping, and covert hitting).
- As the withdrawal progresses, residents notice deterioration in the order and organization in the facility. The living unit becomes messy; resident hygiene suffers;

and rules regarding minor misbehaviors go unenforced. Residents interpret this as an indication that these staff members have given up on them and the program. Expressiveness and rule violations increase again. Residents have differing opinions about staff in these situations. Some are very angry with staff for setting a bad example (not doing the right thing), for not maintaining order (failing to enforce the rules equitably), for rejecting and abandoning them, and for being lazy. Unfortunately, these youth take out their anger on other residents. Other residents who are more aggressive see this withdrawal of staff as an opportunity to gain "control" of the unit. Negative leaders emerge based on their effective use of power and intimidation.

- The inability of staff to control minor types of inappropriate behaviors gives way to increases in intimidation, arguments, threats, and fights. Residents and staff perceive the environment as hostile and dangerous. Staff physically withdraw from interaction, and they now supervise from within the confines of the control unit, opening the door or window only long enough to shout a threat, instruction, or warning. The withdrawal is now both emotional and physical, and residents complain bitterly about substantial reductions in staff involvement, support, and safety. Relationships between residents and staff end.
- Crisis management and the breakdown of discipline lead to a rethinking by direct care staff of policies, procedures, and the daily routine. Issues are postponed or ignored. Consequently, the physical plant becomes disorganized and in a state of disrepair. Communications suffer, and knowing what is the proper procedure depends upon who one talks to at any given point during the shift. Order, organization, and program clarity

decrease; and as they do, the institutional and systemic forms of structure that are essential in safeguarding resident and staff security deteriorate.

- By this point, resident subcultures have formed; gangs have reconstituted and are recruiting new members; and negative resident groups control the shift. Staff maintain order through intimidation and toughness. Allegations of staff abuse increase, but the staff refuse to report others. The facility becomes a jail through the forces of prisonization. Its reclamation follows wholesale changes usually brought about by a major crisis or a criminal investigation surrounding: suicides or suicidal behavior resulting in major injury or hospitalization; sexual assaults on residents by staff or other residents; "gladiator games" where staff allow, require or wager on serious fights between individuals or groups of residents to settle resident grievances or to enforce staff's control of the unit; resident drug use in the facility, including marijuana and crack cocaine, supplied by staff; staff reporting to work under the influence of drugs or alcohol or consuming same on the job; just to name a few based on actual problems.

Summary

Crowding contributes to unhealthy and unsafe conditions for the youth and staff in juvenile confinement facilities. Deteriorated conditions of confinement resulting from crowding have the power to undermine the very purpose of juvenile court intervention. Based on the research findings, several findings are plausible.

- Juveniles have a greater sensitivity to density than adults do and, more importantly, more positive responses to mediating factors.
- Juveniles require more space to maintain healthy interactions than adults do.

- Juveniles require more privacy.
- Juveniles are more likely to have developmentally specific disorders that reduce their ability to cope with or to be tolerant of increased density.
- Juveniles are more impulsive and more likely to act out frustration in the form of aggression and violence as change in density occurs.
- Juveniles are more prone to turn frustration and anxiety into depression and to use suicidal behaviors and suicide as a means of responding.
- Capacity figures appear to be the best estimates of when density levels will trigger harmful effects for juveniles.

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