The Therapeutic Use of Games with Mentally Retarded Adults

(Adult play, research)

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This article provides conceptualizations of play as a learning and survival behavior and presents findings of a study of the use of games with mentally retarded adults. In this study the aim was to describe both how therapists can use games as therapeutic media and how changes can be observed in the subjects. The study identifies a number of therapeutic strategies that did enhance the play of the subjects. Along with increases in play, improvement in motor behavior, cognitive abilities, affect, attention, self-confidence, and social interaction was observed.

Games considered essential in early occupational therapy practice are not currently in widespread use. However, games are consistent with the "art and science" of occupational therapy (1) and should be included as legitimate media for practice. It has always been the central concept of occupational therapy that humans' use of themselves in everyday activities, in self-care, in work, and in play has the power to maintain, restore, and increase health. This art and science of the field suggests the use of multiple media as therapy, including games. A theoretical rationale for and findings from a study of the use of games as a form of occupational therapy for mentally retarded adults will be presented.

Theoretical and Empirical Support for Play as a Survival Behavior. Play, a central human characteristic, is responsible for both individual learning and the very fabric of social and cultural life (2). Evidence suggests that play is a prerequisite to behavioral flexibility necessary for higher species to survive (3). Among living species, those who play most exhibit the greatest ability to adapt their behavior for survival in a wide variety of ecologies, rather than exhibiting specialized behaviors for narrow ecologies. Man is the best example of this relationship between play and flexibility for adaptation in multiple ecologies. Experiments convincingly point to social play deprivation as the key feature of social isolation; the absence of play assures that the adult will be an inflexible and poor survivor (3). It is not only what one learns in play, but also how one learns to adapt behavior to emerging and changing circumstances that is important. The player, besides learning what is necessary to adapt in a particular circumstance—a game, for example—also learns how to adapt to external conditions. If such learning were to take place in a more serious arena where the consequences could threaten survival, it would be rather inefficient and inefficient.

Play also allows the player to process latent learning by increasing the general stock of knowledge that the person can draw upon in later circumstances (4). For instance, studies show that children who play with objects have more information later about possible ways to use those objects and are more successful...
“Play is a form of learning by doing.”

ful in solving problems involving the manipulation of such objects than their peers who had the same information demonstrated to them by an adult (5). Such research suggests that play is a form of learning by doing.

Play is a behavioral mechanism that processes learning of rules (6). Rules are symbols that inform the person about the world and how to act in that world. These rules or symbols inform the person of constraints on action (7). As such, rules tell the person what to do and how to do it. Thus, in play, the player generates his or her own rules for doing, which are in concordance with the constraints of the physical and social world. Without normal play, it is theorized that the organism is a poor learner and a poor doer, lacking information and competence for survival (6, 7).

The play and games of childhood and adolescence form a context in which an individual develops an operational concept of self within an organized social group (8). Prior to game behavior, children practice taking on social roles in dramatic play, symbolically becoming doctors, firemen, parents, and teachers. Within the game, the player takes on a role with organized consequences. In the game, the player exercises a group of responses and organizes them into a pattern of behavior.

The player is also able to perceive himself or herself performing under some acquired identity while playing a role (8). The player learns self-organization by enacting various characters or roles in the game. In this manner, the player begins the process of gathering a generalized notion on self-identity in relation to others, and the player learns how to enact role identities in a social context (9).

The organized game provides a special set of social conditions. The player who plays a game must take on the attitude of everyone who is involved in the game. For example, to behave as a pitcher in a game of baseball, a player must know the purpose, plan, and intentions of the batter, catcher, and the team. A player projects himself or herself into a social scene and becomes a member of a meaningful social context. He or she must understand how roles of various players (e.g., in a baseball or football game) have a definite interrelationship to each other. The player must know what everyone else in the game is going to do in order to play competently. The responses of others are organized so that the attitude and actions of one calls out the appropriate attitudes and actions in the others (8). Such organization is a manifestation of the rules of the game.

For competent behavior, the individual must take into account phases and aspects of a common social activity or set of social understandings about the process in which all are engaged. The organized functioning of any person requires incorporating both a general sense of social rules and the special meanings of any social event. The game is a critical step toward social competence since it allows the player to experience and participate in a complex phenomenon of organized social life. In the game one learns to be social and to do social behavior.

From this theoretical perspective, it was judged appropriate to use the game situation as a modality to help retarded adults adapt to the social life of the community. Besides being valued for all the above reasons, play can be valued for its own sake, as an essential component of human life, not just a means to an end. Any improvement in the context of play is a sufficient gain for quality of life.

Play and the Retarded Person. Mentally retarded children and adults may have delayed and suppressed patterns of play (10). Several etiological factors are implicated. The severity of retardation is correlated with a decreased response to stimuli that ordinarily arouses the person and evokes play (11). Retarded persons also may suffer from environmental deprivation, thus receiving insufficient stimuli to evoke playful responses (12). In addition, the lack of adults to encourage and participate in play is implicated in the inability for normal play of institutionalized retarded persons. The lack of normal play among mentally retarded persons may well lead to further disability since it represents suppression or distortion of a crucial learning mechanism in an individual whose capacity to learn is already limited. Further, since play is part and parcel of human experience, its absence signals a lesser quality of life (6).

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Theoretical and empirical literature support the concept that play is an environmental behavior. Conditions in the environment (especially human conditions) can greatly influence the amount, duration, and nature of play (13, 14). Ways a therapist defines the activity, role-models the behavior and attitude of
The Study

This exploratory study examined whether and how the occupational therapist can influence the play of clients who may demonstrate delayed, disturbed, or suppressed patterns of play. The major form of data collection included taking field notes, supplemented by audiotape and videotape. The data included what was done while carrying out the program and the visible impact of the program on clients. The report describes findings using a program of games implemented with seven males (three Mexican-American and four Caucasian), in an activity center for developmentally disabled persons. The subjects, aged 21 to 50, had a mean age of 30. All had retardation from moderate to severe; three had Down’s Syndrome. None of the men had major physical disabilities.

Findings

The findings focus on the strategies and procedures therapists had to employ to maintain the games effectively and on areas of improvement in the men’s behavior.

Strategies for Maximizing Game Behavior. While engaging the retarded men in various games, therapists (participant observers) discovered that they were using “natural strategies” for maximizing game behavior. These strategies were initially unreflexive since the games proceeded as ongoing situated encounters rather than as preplanned episodes. By examining field notes and videotapes, the therapists discovered themselves engaging in instances of what were only later identified as categories of strategies. Eventually the therapists more consciously enacted these procedures. Still, the application of these strategies was always situated and could not totally be pre-planned.

The strategies are organized into categories here to enhance their utility in other clinical applications and in order to lead to more systematic delineation and testing in the future. Each discussion of a strategy includes a description of why the strategy was needed, why it worked, and what was involved in carrying it out.

1. Grading complexity. Observations revealed early in the project that it was not possible to engage these men immediately into complex games. Rather, the complexity of a game needed to be graded both over a series of sessions and within a single session. During the program, the progression was from simple games of catch, to keep away and tag, to more complex and organized games such as baseball, basketball, and football. Within a single session it was fruitful to begin with simple routines and then work toward more complex forms of interaction and play. The following field note describes a typical course of progress during a session:

   On the basketball court it was clear in the beginning that the men expected us to tell them exactly what to do. I suggested we pass the ball around just to get used to it and to limber up. Things went slowly at first with everyone obediently passing the ball as they understood my directive. Then I asked Dan to suggest how we might pass the ball around and he suggested that we toss it in a circle. Shawn modeled for the men how to do a fancy pass, whereupon I suggested that the men try their own variations of passing the ball. Following this we threw baskets. Things really got going. Michael could do a very unconventional but successful layup, while Ralph did mostly free-throws. Dan initially had difficulty tossing the ball toward the basket. He would lift it far over and behind his head and heave it toward the basket while looking down. I suggested that he reverse the process, throwing from his knees while...
Grading the sessions from simple to complex allowed the men to organize their behavior in a meaningful hierarchy. Each step or skill along the way could be integrated into a higher level of organization or new set of rules. Over time the men learned not only a sense of what rules were about, but had acquired facility in following and using rules. In this way they were able to engage in more and more complex games. In addition, grading the complexity was a means of maintaining arousal and interest. Often the men’s attention wandered during repetitive exercises in other settings. By slowly allowing the game session to become increasingly complex, the men remained engaged and interested.

The principle of grading complexity also had two implications for the arrangements of groups and the entering of individuals into types of games. Because the men had heterogeneous abilities, there was a problem of keeping the game at an optimum level of complexity for everyone. If a man entered a game he did not understand, or if he were overwhelmed with the amount of excitement, he would not become playful or exhibit a sense of pleasure. Similarly, more competent persons were bored by engaging in sports and games clearly below their ability.

These problems could be overcome by having two different groups with games of different complexity and by carefully observing an individual’s level of skills. For example:

Chuck had shown some indication last week that he was picking up the nature of the tag game so that he was allowed to join us this week. The tag game required that the individual understand that by being hit with a soft ball that he was “it.” He had to realize that “being it” means he would be expected to chase another person and tag him with a ball by throwing it at the person. Also, the person had to have the physical skill to run and to throw the ball accurately while either running or standing still. Further, he had to use deceptive tactics in chasing someone, use evasive tactics in avoiding the person who was “it,” and so forth.

When someone needed to learn skills before entering into a game, he would be worked with first in a very small group or on a one-to-one basis. As the note indicates, therapists had to pay careful attention to the requirements of the game in assessing and preparing a person for readiness to enter the game. If someone entered the game with too few or no prerequisite skills, he would have difficulty acquiring a total sense, or ultimate purpose, of the game. Further, he would not have fun and thus not be playing.

2. Leveling relationships: Whenever possible, therapists joined the men in the game. This allowed the men an opportunity to take charge and more importantly to experience a sense of personal status and worth as they became “equals” with therapists in an activity. This leveling occurred more readily within the context of sports since the men had difficulty performing many symbolic functions, but were more likely to excel in physical skill. For example:

In the past Charles was quite good at throwing the Frisbee. Larry surprised me with his abilities, but it was Michael who surprised both Shawn and myself. Michael ordinarily appears fragile and docile, often assuming postures that look like he is ducking from danger. However, he was truly excellent with the Frisbee, making long and unbelievably accurate tosses and nearly spectacular catches. Shawn and I were impressed with everyone’s abilities and had a good time with the three men. They all, especially Michael, seemed to enjoy themselves. Shawn and I both complimented Michael on his prowess afterwards. Throughout the Frisbee game we were all “leveled or averaged.” The ordinary differences that existed between us were erased. Shawn and I were no longer obviously superior to the rest. In fact, Michael emerged as the best Frisbee player.

This leveling phenomenon allowed the men to experience competence and excellence, which they rarely experienced elsewhere. They could also autonomously determine outcomes and processes. Gradually, within the games, the men demonstrated more confidence and independence in making choices and controlling events. Their patterns of looking to a teacher or therapist for direction or help started to be replaced with responsibility for their immediate affairs. This included simple behaviors such as crossing the street or keeping track of one’s own jacket.

3. Coaching and modeling: Throughout the program it was critical to provide these men with information concerning the actions and strategies they could profitably
employ in the games. When coaching, therapists verbalized and displayed feedback to the men concerning the results of their performance. This often meant demonstrating what the man was doing and what the effect was together with an explanation or demonstration of why it did not work or was not the best strategy.

Modeling appropriate behaviors was extremely beneficial. Therapists provided models of affect, attitude, and behavior that the men could originally imitate and later integrate into their own participation in the game. This required that the therapists remain genuinely involved in the games so that they were always available to the men as models of what was appropriate or effective within the context of the game.

4. Keeping the game context and continuity: There was always the need to keep the game going, particularly in the beginning of the program. Later, the men more and more shared in keeping up the pace, emotion, and organization of the game. At first the therapists had to orchestrate the game through substantial effort in order to maintain it as the men learned to become a part of it. Otherwise, there would have been no game for the men to enter. The following field note describes this orchestration:

My work is twofold. First I must work to be a competent player in the game. I often get chased and must avoid being hit and also play the role of being "it" when I am hit. In addition, I must "orchestrate" the game and constantly watch it for problems that threaten its ongoing organization. I also do a fair amount of work to keep the excitement and pace of the game going.

Part of the game or play context was the attitude of playfulness. When an atmosphere of playfulness or fun replaced a more serious mood, it elicited participation, thus resolving many of the motivation problems acknowledged by others who were working with these men. The following field note illustrates this process:

In the park an activity-center aide wanted to get the men to exercise. The aide took Larry and Bart by the hand and dragged them with her as she ran. She was expending much effort to get the men to run and they both had solemn looks on their faces. They did not enjoy it. I thought about our tag game and how naturally these men ran and the expressions of intense involvement and excitement that were displayed on their faces. I decided to experiment by trying it the aide's way. I took Dan and said, "Let's run, Dan." He started to walk fast never breaking into a run and his face was completely blank. I said, "Come on, Dan, run." I urged him to no avail. He just looked at me and said, "I want to play with the sporting goods; they're fun." I felt sorry for making him run like I did, but this confirmed the value of the fun element. I looked over and spotted Charles; he saw me and gestured to me to chase him (as we did in tag). I did and he ran. His run was of a much different quality. He looked excited and put more power behind his steps. This was in stark contrast to Dan's forced run.

After a couple months, a playful mood emerged spontaneously, which was contagious and elicited others' participation. For example:

All of a sudden Dan gets a smile on his face and grabs the ball and hits the volunteer. He in turn hits Larry. Larry then starts to laugh and chases down the volunteer and hits him. I chase Dan who is running and laughing and smiling. I give up pursuit and hit Chuck. I notice Dan hiding behind the volunteer and laughing. Larry ran just about the whole time chasing and avoiding people. In such a short time we achieved a very normal-looking game of tag, with minimal effort. George even got into the game. When the ball came near him, he would grab it, run two or three steps, and throw it at someone. Larry started to employ a strategy of acting like he was going to throw the ball at someone just to get them going.

When the game context (i.e., some rule-bound procedures and an attitude of fun or playfulness) was not maintained, the men would engage in random and unrelated actions, rather than mutually interacting.

Effects of the Games on the Retarded Men. This section discusses changes in the retarded men during the course of the game program. Each section describes early findings on the men together with changes observed within the games:

1. Motor behavior: One of the most notable characteristics of these men was their limited motor behavior. Many were overweight, moved only with difficulty, and in an uncoordinated fashion. They walked remarkably slowly and often were fatigued during brief and relatively non-taxing physical exertion. Few were able to run. Most managed a fast walk but demonstrated stiffness and pain at such physical exertion. In the activity center, frustrated staff often resorted to manipulating the men physically through exercise routines.

The American Journal of Occupational Therapy 379

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While the men initially demonstrated the same limitations and inabilities in the sports or games, the allure soon conquered the men's reluctance to physical exertion and diverted the men's attention from minor aches and pains. For instance, one man, who reportedly was unable to run and demonstrated his inability in early sessions, eventually became so engrossed in a game that he spontaneously burst into a run. Several weeks later a participant observer notes:

I noticed Dan was pursuing the ball carrier this time much longer and more vigorously. In fact, half way through the game he became so exhausted from running that he fell down on his elbows and knees gasping for air. Despite fatigue, he got up and started running again. A few months ago, getting Dan to run was almost impossible, since a fast walk would tire him out.

Throughout the program all the men showed progress in their motor behavior, most notably, increased coordination and stamina.

2. Cognitive abilities: These retarded men demonstrated poor cognitive abilities for practical problem solving and for using appropriate strategies within social situations. Our observations suggested that many of their cognitive limitations were caused by a lack of experience in situations using learning, problem-solving, and strategy-generating skills.

One remarkable change in the men was their increased ability to generate and effectively use strategies of interaction and to problem solve around a game. For example:

When we got more into playing tag, I was struck with how some of the people were already demonstrating remarkably improved skills. Dan was much more alert, ran more (both to avoid and chase people), and was throwing the ball much more accurately. I also noticed him picking out targets excitedly, whereas before he just threw at whoever was around. Michael was the most strikingly different player. He was no longer standing on the fringes of the game field but entered in actively, daring persons to chase him. When he was "it," he often chased Shawn who is difficult to hit because he runs fast and dodges shots. Michael laughed and smiled as he ran after his target, and demonstrated amazing accuracy as he threw the ball.

As the men became familiar with the game, its rules, and purposes, they attempted more elaborate and strategic ways of playing. Games served as meaningful and safe contexts in which to try out new ways of acting. By the end of the study, men who could barely play the simplest games gained sufficient understanding of complex games such as basketball and softball to strategically play with rules and keep other players in mind. These cognitive skills were not demonstrated by the men at the beginning of the study.

The men also improved in their organization of space and time. Early observations revealed that they had no sense of boundaries in games or knowledge of the temporal sequence of events that made up games. They also confined any activity to a small space as if afraid to venture any distance when a ball accidentally rolled away. During the program, the men became increasingly comfortable with large spaces and became able to organize themselves in a space of a football field and a baseball diamond. The games afforded opportunities for them to gain concepts of temporal organization as they had to take turns. At the end of the project, most of the men demonstrated a greatly increased ability to follow the sequence of events in a game and to understand their own relationship in time.

3. Affect and attention: In the beginning of the study, the men usually appeared bored, lethargic, and disinterested in immediate events. Many expressed fear of engaging in behaviors outside a familiar and safe routine. This fear included physical activities and sports, usually manifested as a concern about getting hurt. For example:

Michael mentioned, very seriously, on the way to the park that we must be very careful and not hit his head. I remarked that we would not "bounce the ball off his head," but he did not find it funny as I intended. In fact, he began to tell me about a world full of dangers and evils in which almost everything was to be avoided.

In addition to this frequent fear of unknown activity, many of the men became easily angered. Mild teasing from a peer might escalate quickly into a fist fight. This consequence appeared linked to a lack of social skill in expressing and negotiating feelings and in recognizing the affect expressed in the reactions of others to one's actions.

Games provided a context for the men to observe, express, experience, and integrate emotions into the rules of the ongoing situation. They learned acceptable expressions of anger and how to identify when someone was upset or angry. Those who had been lethargic became excited and invested in the games. For example:

The intensity with which Dan plays the game is evident in his facial expressions. His face appears to be more alive on the playing field and he physically demonstrates more life. He also appears more alert. This is in stark contrast to the somewhat tired and slow-moving Dan I know in the center...
"... as confidence increased, the men spontaneously sought out opportunities for playing a variety of roles in the games."

understands the game and when he is hit, his face lights up and wears an expression, and he immediately and excitedly breaks into a run. This is so uncharacteristic of him in the center where he just slouches around all day. He gets so much into the emotion of the game that he actually yelled out to another player.

That the men were attending to their environment and to the events around them was remarkable. This increased attention often carried over after the game ended:

Today, I was surprised to see Chuck more aware of our presence. He remembered the game and wanted to go again to the park. He was holding the football with the appearance of being ready to go. He seemed more alert (something Nancy noted as we came back from the park and later mentioned to me) and more aware of things around him. He was looking about more and appeared purposeful in his demeanor.

The fact that the men were more alert meant that they had acquired more information about surrounding events and were less prone to act incompetently because they lacked such information.

4. Self-confidence: Observations revealed that these men were often hesitant, not self-assured, and always looking to persons in charge for direction. Many appeared incapable of engaging in spontaneous behavior. They were passive and followed requests and orders without fail. Their mode of self-presentation indicated a lack of personal confidence. In settings such as the classroom or restaurants where they had to count or read, they became flustered and often performed below their abilities.

Because in the games the men experienced the leveling phenomenon described earlier and because they experienced success and personal competence, their confidence increased remarkably. The following note exemplifies this:

The Frisbee activity was interesting for all of us because we had to spread ourselves over great distances and it included a lot of running. Michael's finesse with the Frisbee became apparent. I was impressed most of all by his command over the activity. Here he was a competent self-assured sportsman. This picture is very different from that in the center. It is my impression that he plays the constant role of "court jester" in the activity center, acting very foolish.

As self-confidence accrued, the men assumed more and more demanding roles in games, becoming team captains or quarterbacks. In these roles, they had to make consequential decisions. As confidence increased, the men spontaneously sought out opportunities for playing a variety of roles in the games, requesting to be the pitcher or the catcher. Previously, they stayed within familiar and comfortable roles.

5. Social interaction: Earliest observations of these mentally retarded men revealed that they lacked skills of social interaction. Most were unable to notice and use social cues to guide their behavior. They seemed to have little or no sense of how others perceived and reacted to their own social behavior. Finally, they were unaware of many socially normative means of entering conversation, such as greeting and leaving, accomplishing these social events in awkward and socially inappropriate ways. For instance, greetings often consisted of prolonged hugs instead of the conventional handshake. Further, these men routinely interacted with each other and with therapists in a teasing and aggressive fashion. The field note describes a typical series of interactions involving Bart, who was famous for his teasing and aggression:

There were a number of interesting reactions to Bart's maneuvers. Michael became flustered, but wouldn't talk directly to Bart. He would say things about Bart with his head turned away such as, "Shouldn't do that" or, "have to be a good boy." Bart just responded by stuffing the glasses down Michael's shirt. Robert, in response to being called a "punk" by Bart and referred to by him as "nuts," threatened to slug Bart in the face. . . .

During games, the men were faced with the consequences of their behavior for others and had to gauge and direct their own behavior according to the actions and attitudes of others. They eventually demonstrated increased ability to interact in ways that were more socially acceptable. For example, Bart, who formerly only got attention through teasing, learned to evoke normal social responses by playing the game competently. This was dramatically illustrated in a final baseball game when his teammates cheered as he hit a double.

Conclusions
This article reports findings from an exploratory study that examined the use of games as therapeutic media with mentally retarded adults. The rationale for the games was the
potential game behavior could have as an important learning mechanism and the importance of normal play for quality of life. Occupational therapists collected data as participant observers during a year while they implemented a program of games with the men. The focus of data collection was on therapists’ strategies to make effective use of the games and on changes in the subjects. Data, consisting of field notes and videotapes, were reported here under categories generated from analysis of the data.

The strategies employed by occupational therapists to enhance the game behavior of the men included grading complexity, leveling relationships, coaching and modeling, and keeping up the game context and continuity. Grading complexity helped assure that each person was optimally challenged in the game and was able to perform according to his abilities. Leveling relationships allowed the therapist to assume a parallel role with the retarded person when the latter showed the ability to act competently and autonomously. Remaining in the role of therapist or instructor was often counterproductive since it kept retarded persons in a reciprocal dependent role.

Coaching and modeling provided information to the retarded person to formulate his own behavior. Coaching provided feedback and modeling provided instances of behavior and affect for imitation. Maintaining the game context and continuity was an extremely important strategy. Keeping up a rule-ordered sequence of playful behavior was necessary to provide a game or playful context in which the men could effectively participate.

Change in the men included motor behavior, cognitive abilities, affect and attention, self-confidence, and social interaction. Improvement was observed in the areas of coordination and stamina. The men showed an increase in their cognitive ability to employ purposeful strategies of behavior and to understand and competently use time and space. Lethargic and disoriented demeanor was replaced with increased joy, excitement, investment, and attention. The game provided a context in which the men gained self-confidence through success in areas within which they could excel and in which they learned strategies of interaction with social others.

The findings from this exploratory study support the assertion that therapists can influence the game behavior (play) of retarded men. The strategies of therapists described in the findings should serve as suggestions for further refinement of techniques of using games as therapy. Further study using control groups and standardized measures of dependent variables would also be desirable. Also, the form of investigation used here is an appropriate research model for developing programs and achieving a preliminary assessment of how they can be made effective.

REFERENCES


382 June 1981, Volume 35, No. 6