



ECT AND MINORS: SOCIAL SCIENCES SOLUTIONS WILL REFORM THE PSYCHIATRIC ABUSE OF INFANTS, CHILDREN AND ADOLESCENTS

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ECT/EST (electroconvulsive therapy/electroshock therapy) is a controversial treatment which has provoked considerable debate, both within mental health services and wider society, since its original development in a slaughterhouse in 1938. The intensity of the debate rightly increased, however, when in 1947 ECT was given to a new client population: children and adolescents. Although some psychiatrists have recently claimed that ECT with children and adolescents is a 'non-issue', the data do not support this claim. Rather, analysis of the data shows that ECT is often used with minors as a 'first-line' treatment.

Mental health professionals who continue to deliver electric shocks to children or adolescents with still-developing neurological systems risk serious consequences. With an unknown mechanism of action, and unpredictable main and side-effects, this practice should be examined in the light of social science perspectives. An interdisciplinary framework is required, both to understand the problem and to generate solutions. This questionable treatment will be discussed with respect to sociological perspectives, psychology, social policy, philosophy and health economics.

Current behaviours and attitudes of educators, researchers and managers are also highlighted. The attitudes and behaviours of these senior staff arguably should influence the next generation of personnel who will address the problem: health care students. Such students are ideally positioned to challenge the mental health orthodoxy, to prevent delivery of ECT to minors, and ultimately to provide a climate of service and treatment provision designed specifically for children and adolescents.

Introduction

The administration of electroconvulsive therapy (ECT) to minors remains a major challenge to health care reformers in the 1990s. True prevalence rates are

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unknown, due to differences in collecting and reporting mental health statistics; however, ECT is given to children and adolescents worldwide. In the USA, it has been estimated that between 500 and 3500 children and adolescents are given ECT each year (Thompson and Blaine, 1987). In the UK, an audit survey by the Royal College of Psychiatrists found 60 cases during the 1980s where ECT had been given to minors. This report was deeply flawed by reporting biases (e.g., a survey focus on child psychiatry services only); it did not provide an accurate barometer of true UK prevalence rates. Although flawed, this report still provided some valuable data; it remains as yet unpublished, however. In Australia and New Zealand, epidemiological data about prevalence rates with minors are currently unavailable, although at least 2500 people are known to be given ECT each year in Australia (Ragg, 1995).

ECT/EST (electroshock therapy) involves the delivery of electric shocks to the forebrain. Even in adults, the mechanism of action is unknown (King and Liston, 1990). Psychiatrists, however, have claimed positive results with adult populations in the treatment of mood disorders (Pippard and Ellam, 1981). Historically, ECT also has been used with adults for the treatment of thought disorder (i.e., 'schizophrenia') and eating disorders. More recently, ECT has been widely used with elderly people (Oxlad and Baldwin, 1996), pregnant women, people from ethnic minorities, people with Parkinson's disease and people with AIDS/HIV.

Many children and adolescents experience developmental problems as a result of 'conflict with authority'. This conflict, however, can be viewed as a natural (and even desirable) aspect of maturation during the transition to adulthood. Inspection of the clinical presentations of minors given ECT revealed 436 different behavioural categories for which the treatment was subsequently given (Baldwin and Oxlad, 1996). Analysis of these data has confirmed that psychiatrists have used ECT unsystematically with children, in a wide range of clinical situations.

There is no objective correspondence between the presenting clinical condition of the young person and the subsequent decision by psychiatrists to give ECT (Baldwin and Oxlad, 1996). Moreover, it is impossible to predict when psychiatrists will recommend (or not recommend) ECT; few medical staff proscribe its use. In the UK, only two psychiatrists have opposed the use of ECT with minors (El-Shariff, 1993; Baker, 1994). In the USA, moreover, two of the most outspoken critics of ECT administration with adults have yet to declare their view on the administration of ECT with minors (Breggin, 1991; Szasz, 1990). An explicit moral stance is required to examine the practice of ECT administration to minors.

Criticisms of ECT use with infants, children and adolescents

Side-effects associated with ECT administration

In children and adolescents, the delivery of electric currents produces unpredictable changes in the brain. In the context of a still-developing neurological system in pre-pubertal children, the deliberate inducement of seizures via electric currents produces unpredictable structural and functional consequences. Many people have reported both short-term and long-term memory deficits after ECT administration. A multiple case sample of 217 minors produced a catalogue overview of the specific adverse side-effects and negative consequences associated with ECT administration (Baldwin and Oxlad, 1996).

According to one proponent of ECT, 'a patient recovering consciousness from ECT exhibits multiform abnormalities of all aspects of thinking, feeling and behaving, including disturbed memory, impaired comprehension, automatic movements, a dazed facial expression and motor restlessness' (Abrams, 1988). Other frequently reported side-effects have included confusion, dizziness, nausea, vomiting and headaches (Gomez, 1975; Freeman and Kendall, 1980; Hughes *et al.*, 1981; Kerr *et al.*, 1982; Galletly *et al.*, 1991). Even the staunchest advocate of ECT has acknowledged that 'the principal complications of EST are death, brain damage, memory impairment and spontaneous seizures' (Fink, 1978). Paradoxically in the 1990s he has continued to advocate its use for all populations including children and adolescents (Fink, 1993).

Where ECT has been given to minors, both structural and functional impairments have been recorded (Baldwin and Jones, 1990a, 1991; Jones and Baldwin, 1992). The most common side-effect reported after ECT administration is memory loss. Much clinical data has been gathered to document irrefutable evidence for both short-term and long-term memory loss after ECT administration. Severity of memory loss may be dependent upon the mode of ECT administration, although current evidence is inconclusive. In one study by Squire and Chace (1975), 67% of adult clients reported memory loss after receiving bilateral ECT, while 27% of clients who had been given unilateral ECT reported memory loss.

Other rare but serious side-effects which have been documented include increased depression, elevated arousal, urinary problems, and pimples on the scalp (Hughes *et al.*, 1981). Sometimes epilepsy and spontaneous seizures have also been reported following ECT administration. Devinsky and Duchowny (1983) have argued that spontaneous seizures are usually under-reported in the literature. Furthermore, some authors have indicated that ECT produces disinhibition and increased sexual activity in children with consequent physical abuse towards their siblings (Bertagnoli and Borchardt, 1990). Most disturbingly, fearing further treatments, some minors have even attempted suicide after being given ECT (Clardy and Rumpf, 1954).

Benefits and negative effects of ECT

With adults, apparent benefits of ECT administration have included the resolution of chronic mood/affect disorders; many clinicians have cited intractable

'cases' only restored to normal functioning after the grand delivery of ECT. Many nurses and physicians evidently believe in the potency of ECT to lift chronic depressive disorders in adult clients. The mythology of ECT effectiveness is no doubt fuelled by such reports, based on anecdotal but powerful tales from individual mental health workers.

Such mythology has made a strong contribution to the literature about ECT use with adult clients. Nonetheless, evidence for benefits from ECT administration with minors has never been produced by clinicians working with children or adolescents. Rather, apparent benefits of ECT use with minors has been established via word-of-mouth and anecdotal reports from outcomes of individual cases. Economically, ECT may look like a cheap 'quick fix' but can be expensive when secondary consequences are factored into the financial equation (e.g., costs of subsequent lawsuits or claims). Hence, apparent benefits of ECT administration to minors may be explained by artefact, and confounding variables.

Negative effects of ECT administration to minors include the incontrovertible side-effects of memory impairment, confusion, loss of trust in adult relationships and sensitization to other mental health interventions. Thus, minors who have been given ECT (often against their expressed wishes) may be reluctant to accept other treatments in the future, after sensitization from an event which they perceive as aversive and invasive. Other negative effects include a hostile and negative psychological 'set' towards subsequent therapeutic efforts.

Moral acceptability

Administration of ECT to minors is a highly political activity. Such activity predicated political solutions. Previously, ECT critics have advocated a complete ban on ECT administration to all client groups (Frank, 1990). Although a discussion of the appropriateness of ECT administration to adult clients is beyond the scope of this article, there are nonetheless powerful arguments against the use of ECT with anyone. Arguably, the use of electric currents of uncertain values to produce seizures equivalent to an epileptic fit, in the absence of any rationale, is an unacceptable and destructive invasion of privacy. Other critics have argued against the use of ECT as a contravention of human rights; use of enforced ECT, when valid consent has been withheld (or not obtained) is a *prima facie* case of psychiatric abuse (Baldwin and Jones, 1991).

Psychiatrists have perpetuated the myth that ECT is used with minors as a 'life-saving' device. Results from a recent qualitative evaluation of ECT effectiveness, however, have produced clear evidence *against* this proposition (Baldwin and Oxlad, 1996); only 5% of 217 cases even mentioned suicide as a variable in this clinical arena. Hence the treatment orthodoxy has been manipulated by medical staff to support a 'treatment of last resort' scenario, unsupported by the facts. In reality, ECT generally is used with minors, after psychopharmacology, but in the absence of psychosocial interventions (Baldwin and Oxlad, 1996). Hospital admission, and the presence of clinical predictors such as thought disorder, aggressive behaviour or withdrawn behaviour, are more likely to explain the decision by psychiatrists to use ECT with minors. Failure by staff to control difficult or challenging behaviours also has set the clinical conditions for ECT administration.

Evaluation of alternatives

The challenge for clinical psychologists remains the provision of credible therapeutic alternatives, offered in lieu of ECT. Some clinicians have made a conservative estimate of 230 different therapy techniques and interventions (Kazdin, 1988). These interventions include, but are not limited to: behaviour modification, behaviour therapy, family therapy, counselling, contingency contracting, individual psychotherapy, and social skills training (Kazdin, 1994). Many of these rival interventions have a tried-and-tested pedigree, based on the scientific evaluation of known outcomes (Bednar and Kaul, 1994; Hollon and Beck, 1994).

Outcomes of previous research have suggested that both group and individual psychotherapies are effective treatment options for children and adolescents (Kazdin, 1994). Psychotherapy is a valuable treatment option because it is less restrictive and should be less expensive than hospitalization or residential care. Moreover, children are often able to remain in their home environment, and treatment techniques can be used in many different settings such as schools, day treatment centres and residential hospitals (Kazdin, 1994). Researchers have concluded from meta-analyses of child and adolescent interventions that psychotherapy is more effective than no treatment; different techniques yield similar results, and greater improvement was observed with behavioural than nonbehavioural treatments (Smith and Glass, 1977; Smith *et al.*, 1980; Casey and Berman, 1985).

Cognitive-behaviour therapy is also an alternative treatment to ECT which has produced positive outcomes for children and adolescents. This form of intervention has been used for a wide range of clinical presentations in minors (Durlak *et al.*, 1991; Kazdin, 1994). Children have been taught to use step-by-step approaches to solving their problems via role-playing, modelling and direct reinforcement (Kazdin, 1994). Although a valuable treatment option, changes in cognitive processes do not always result in therapeutic benefits (Kazdin, 1994).

Another alternative treatment option frequently overlooked is 'no treatment'. 'Treatment' can be a worse form of tyranny or punishment than physical measures. There should be clear limits on the power of the state to intervene in people's lives (Foucault, 1979). The 'rule of thirds' has maintained that approximately one-third of clients will recover due to spontaneous remission, one-third will stay the same, and one-third will deteriorate. Furthermore, if a minor does not receive treatment, the chances of inadvertent rights abuse (via not obtaining valid and informed consent, or providing a treatment against the minor's wishes) are reduced.

ECT from interdisciplinary viewpoints

Social science perspectives will reform the psychiatric abuse of infants, children and adolescents. Health professionals from many disciplines will contribute to this change in service provision. Each discipline has had a different level of involvement in the administration of ECT to minors, and each can make a valuable contribution to the elimination of this form of 'treatment'. Hence each social science perspective and health care discipline is reviewed.

Sociological perspectives

Choices about mental health treatments necessarily reflect underlying values about how people are viewed in culture and society. Many national and cross-national differences exist about ways to intervene with mental health problems. Some agreement exists amongst professionals, however, about how such services should (and should not) be delivered.

Hence some 'treatment universals' have been established, which both prescribe and proscribe how such interventions are given. In medicine, for example, the dictum *primum non nocere* (first, not to harm) is at the heart of much health care provision worldwide. Also, rights have been established for medical practitioners to prescribe any intervention which might benefit the person receiving treatment. Historically, this has permitted some unusual interventions (e.g., use of leeches to relieve tension, aggressive psychopharmacologic regimens).

Mental health interventions are predicated on implicit social and cultural assumptions. First, although the techniques and methods may be unproven, there is nonetheless an assumption of 'beneficence' (i.e., that the person will benefit from the intervention). Secondly, although some health procedures induce further distress or pain, the net outcome is assumed to be positive. 'Exposure' techniques, for example, during which the person is required to tolerate repeated contact with aversive stimuli, are based on a fundamental therapeutic premise that 'more negatives will help resolve the problem'. Thirdly, there is an assumption of a match between the identified need(s) of the individual and the selected intervention(s).

In any given society, the range of mental health interventions reflects core values about how people are perceived. In some African cultures, self-expression via chanting, 'speaking in tongues' and fugue states often has been viewed as a 'meaningful personal experience'. In European and North American cultures, however, the same behaviours often have been viewed as signs of psychotic disturbance (Sue *et al.*, 1994). The 'sociology of diagnosis' has been hotly contested in the mental health arena. Some sociologists have challenged the dominance of the *Diagnostic and statistical manual* (DSM) in psychiatric diagnosis, instead proposing a more comprehensive approach (Brown, 1990). Overextensions of the biopsychiatric model have been criticized as inappropriate and flawed (Brown, 1987, 1989).

Sociological narratives about ECT with minors should include a discussion about whether or not specific psychiatric procedures are *ever* appropriate for children and adolescents (Szasz, 1972); some are clearly 'context-inappropriate'. Others are either culture-inappropriate or age-inappropriate (or both). With interventions for 'deviant' behaviours, such as delinquency and truancy, it is questionable whether children or adolescents should ever receive 'treatments' such as 'boot camps' or 'tough love' (Baldwin and Barker, 1995).

Previously, vigorous ethical objections have been raised about the delivery of some contentious procedures (e.g., 'pindown' (Baldwin and Barker, 1995)) with minors (Kazdin, 1994). Some treatments may always be inappropriate with minors, given the wider sociological implications (e.g., incarceration of adolescents in adult jails, psychosurgery, psychosexual therapies).

The involvement of social workers in the delivery of mental health interventions has been the subject of considerable debate (Farber, 1990). Specifically, ques-

tions have been raised about the role of the social worker as 'agent of the state' or as 'advocate' for the minor. In the field of child mental health, it is questionable whether social workers can ever fully represent the real needs of children. Such minors are at risk from potentially harmful interventions, albeit from well-meaning mental health professionals.

Social work with minors often begins at the point where family interests intersect with the perceived problems of the child or adolescent. In clinical contexts, where different views frequently coexist, it may be difficult for social workers to prioritize the needs of at-risk child clients. Mental health nurses have recorded their dissent regarding ECT administrations with minors; no published examples exist, however, where social workers have publicly objected to this treatment.

Psychology

Inspection of psychological perspectives on ECT administration with children and adolescents has included an integration of personal, social and clinical factors. Consideration of personal and social themes has assisted an understanding of the normal development of young people into adulthood. Thus, a psychological focus on what is 'usual and typical' for the age proband is helpful, with predictions about how behaviour disorders develop and how best to intervene. Resolution of ECT administration with minors ultimately requires a full clinical perspective, based on appropriate data sources.

In the mental health field clinical psychologists traditionally have provided radical critiques of orthodox psychiatry (Bentall, 1990; Boyle, 1981; Brown, 1990; Heather, 1976; McPherson and Sutton, 1979; Pilgrim and Treacher, 1992). Clinical psychologists often have provided alternative explanatory psychosocial frameworks, interventions and evaluations to offset the dominant biophysical ethos of mainstream psychiatry. Despite the recent reversal of this norm, whereby psychiatrists have rightly criticized some psychological practices (see, for example, Breggin, 1994), most critiques of orthodox mental health have been produced by psychologists, nurses and sociologists.

Some psychologists, for example, have opposed the administration of ECT with minors under any circumstances; this unilateral and unequivocal stand has been rare, however (Baldwin and Jones, 1990b, 1991; Jones and Baldwin, 1992). Other psychologists have supported the use of ECT with minors, adopted a position of indifference (e.g., by not responding to the demand characteristics of the situation), or not taken appropriate professional action before, during and/or after its administration (e.g., J. Hollywood, personal communication, 1989).

Social policy

Ultimately, social policy is determined by politicians and implemented by service planners and managers. In the context of child psychiatric service provision, however, many decisions about clinical and mental health treatments are made by powerful individual psychiatrists. Other service delivery systems (social/health services) hence are impacted by a process of 'psychiatric expansionism' (Barker *et al.*, 1989). Social policy thus may be shaped by medical and psychiatric agendas. The progress of individual children and adolescents in

mental health services often therefore is determined by the actions of single professionals; such staff exert considerable control over the future of minors. In social services settings, however, decisions about client futures more frequently are determined by the collective decision-making of the 'care team'. The removal of teenagers from social services facilities to implement psychiatric treatments such as ECT should be challenged by mental health professionals.

In residential social service systems, although 'key workers' or 'case workers' exert control over the individual client, reference usually is made to the wider staff management team for policy decisions about clients. The range of services available for distressed or disturbed children and adolescents reflects wider social policy norms. Sometimes a mismatch occurs between the identified needs of the young person and the response of the service system.

Hence, when 'respite care' has been identified as the primary need, the individual minor should receive a service designed to allow them temporary relief from their immediate distress (e.g., removal from an abusive parent). Mental health services, however, often have failed to meet the true needs of the individual; instead services have been focused on societal needs to remove the person from their immediate environment, to 'protect' other persons. ECT delivery to infants, children and adolescents often has been based on 'problem resolution', not on individual assessment to meet personal needs (Baldwin and Oxlad, 1996).

When social services provision has been inadequate and failed, by default minors often have been placed in either psychiatric or criminal justice service systems. In the UK, for example, there have been documented examples of minors aged 12-16 incarcerated in adult jails, due to inadequate age-appropriate 'special needs' secure provision. Minors have been removed from children's and adolescents' services, so that they could be given ECT in adult psychiatric services (Baldwin and Jones, 1990b, 1992).

Ideally, social policy should provide for the special needs of children and adolescents, with full acknowledgment of their developmental status. Service provision for minors should share some of the features of generic services for adults (e.g., use of general hospitals) but also recognize their intrinsic age-related special needs (e.g., paediatric service provision). The frequent mismatch between identified individual needs and subsequent service provision is a challenge for future effective resource management.

When minors have been transferred from adolescent psychiatric services to be given ECT in adult wards, social policies clearly have failed to meet the fundamental needs of the young person. The psychological safety of minors is a prerequisite for other interventions. Instead, social policy has been used to subvert the true needs of the minor in the interests of 'containment' for members of a wider society.

Philosophy

At the humanistic level, it has been questioned whether anyone should ever receive ECT treatment (Oxlad and Baldwin, 1995). Arguably, a treatment with an unknown mechanism of action certainly should never be given to minors, given the ethical, moral, humanistic and legal objections. In the pluralistic treatment environment, more than 230 therapies have been identified (Kazdin, 1988); rival

interventions are plentiful, many have known mechanisms, effects and outcomes. The origins of ECT, and its subsequent abuses for purposes of torture and political terrorism have developed a set of stigmas not easily removed via psychiatric marketing and repackaging (Jones and Baldwin, 1992).

Some contemporary critics of psychiatry have advocated the total abolition of ECT with all client groups. These arguments have been predicated partly upon an argument based on objections to the use of a treatment which dehumanizes both clients and staff (Frank, 1990). Such critics have noted the irreversible and destructive side-effects of ECT, the failure to adopt standardized procedures, and the flagrant disregard for mental health legislation by some psychiatric staff.

A philosophical consideration of ECT administration with children should focus on whether or not this destructive and invasive treatment can ever be justified with minors unable to give informed and valid consent. As yet, the American Psychiatric Association has not agreed upon any appropriate consent procedures relative to ECT and minors (Cook and Scott, 1992). Even if a situation occurred where a minor could 'give consent' for ECT, the ethics of administering the treatment should still be questioned.

Minors (particularly those with a mental health problem) often do not have the emotional maturity or psychological capacity to make an informed decision about an invasive and possibly damaging treatment (Oxlad and Baldwin, 1996). An independent advocate should be appointed to communicate with (and represent the best interests of) the at-risk minor.

Some humanistic perspectives preclude the use of ECT on moral and ethical grounds. Within existing UK mental health legislation, for example, there is no provision for the ethical delivery of ECT to minors. In the USA, many minors receive ECT in private service settings, where adherence to agreed procedures is more variable.

Ethical objections to ECT administration have been based on the foundation that many effective rival treatments exist. Also, delivery of ECT to minors often has breached fundamental codes of conduct (e.g., enforced ECT, absence of consent forms, disregard for agreed administration procedures) (Baldwin and Jones, 1991; Oxlad and Baldwin, 1995). Despite the pervasive threat of legal action (when a common law tort has been committed during the delivery of ECT to minors) the practice has continued during the 1990s.

Health economics

Economic indices often have been discounted as a factor to account for choices in the provision of treatments to meet client needs. In the UK until the late 1980s, health services were available 'free at the point of delivery'; recent internal NHS reforms produced a renewed interest in cost-effectiveness and cost utilities. In this climate of economic effectiveness, 'value for money', and 'added value' there has been a focus on comparison of different treatments with apparently similar effects and outcomes. In this comparative climate, it is understandable that ECT has been perceived as a 'quick fix' by busy health care and social services staff.

In the wider economic climate, the work performance of clinicians and practitioners often is measured by their demonstrated resource management skills. In this context, ECT can be perceived (and then promoted) by psychiatrists as a

cheap, effective alternative to drug therapies or high-cost psychosocial interventions (e.g., psychotherapy). No comparative treatment evaluations have ever been completed between ECT and psychotherapy, however. Nor would any such study ever receive ethical approval. Most ECT studies have compared ECT with 'no treatment', often with inconclusive results (Baldwin and Oxlad, 1996). Many studies have failed to produce convincing data to support the use of ECT with adults; none has produced any evidence to support the use of ECT with children and adolescents. No comparative study with children and adolescents has ever been completed; all information generated to date has been derived from uncontrolled anecdotal clinical cases.

An economic analysis of rival psychiatric treatments for child or adolescent mental health services will produce some of the missing data required to make an informed decision. Also, although rival treatments may appear equally effective, calculation of their actual costs will require a full health economic analysis. Such an economic analysis would include examination of *secondary* consequences of ECT administration (e.g., rehospitalization, subsequent staff costs, compensation claims, damages payments, litigation fees). The apparent fiscal attractions of giving ECT to children and adolescents may prove illusory in the final analysis.

Public perceptions of health care services

Health professionals should be aware that ECT is administered to children and adolescents for a wide range of presenting behaviours. In general, the 'lay public' seems unaware that ECT occurs with adults; ECT administration to children and adolescents can seem inconceivable to uninformed, but interested, citizens. When people are informed about this practice, their frequent responses include: 'What is ECT?'; 'Is that what they did in *One Flew Over the Cuckoo's Nest*?'; 'I didn't realize that they still did that, especially with children'.

There are many medical treatments and interventions about which the public is uninformed. Administration of an invasive and aversive treatment (ECT) to between 500 and 3500 children each year has continued in the USA (Thompson and Blaine, 1987). Yet many health professionals, as well as lay members of the public, believe that use of ECT was abandoned during the 1960s. This mismatch between general public perceptions and actual psychiatric practice merits full scientific investigation.

Public and professional awareness of this topic should be increased. Knowledge about this treatment will be improved for professionals by reading health-related journals which present a balanced and representative view. Often the publication process favours studies and reviews which present positive results, however. Therefore even knowledgeable professionals only read about ECT in its repackaged form: 'safe and effective'. To provide professionals with a better understanding of ECT used with children and adolescents, a more representative literature is required. The current bias towards publication of positive findings is a methodological distortion. Thus, editors should also be prepared to publish studies which report negative outcomes of the treatment, to allow professionals to make informed decisions about their position on ECT administration with minors. At least, all sides of the debate should be presented, to illustrate both

positive and negative views about use of ECT with minors.

In the public domain, knowledge about ECT administration to minors is created by media reports and the published views of mental health professionals and user groups. Clients (and parents/guardians) should discuss their experiences as users of services, especially with mental health professionals. Coalitions between user groups and professionals have flourished in the 1990s (Pilgrim and Treacher, 1992; Pilgrim and Rogers, 1993). Routine data should be collected about controversial treatments, such as psychopharmacology, ECT and psychosurgery. These data should include: type of programme or treatment; use of psychosocial interventions in the context of ECT use; informed/valid consent prior to ECT treatment; positive or negative results after ECT. The general public should be made aware that ECT is still used with the full range of client groups in contemporary mental health services. Due to stigmas associated with having a mental health problem (in particular, ECT treatment), however, few clients will speak out. Minors are highly likely to 'seal over' these aversive experiences, seeking to forget or minimize the impact on an already-disrupted life history.

Public awareness will be increased by outspoken mental health professionals who object to the unethical administration of ECT to minors. Staff should make their objections known to other mental health professionals, service managers, user agencies and organizations, the media and the general public. Like clients who have been given ECT, however, mental health professionals often have been reluctant to speak out against the 'psychiatric orthodoxy'. Despite strong convictions, professionals often fail to speak out (Pilgrim and Rogers, 1993). A pervasive belief often exists that professionals 'do not have the right' to challenge decisions about treatments prescribed by their superiors. Fear of negative reprisals (e.g., job loss) may be appropriately anticipated (Baldwin and Barker, 1995).

Although these reservations are understandable, the individual interests of users and professionals should be set aside, to inform the general public. This selfless action will help confirm to an indifferent or sceptical public that ECT is still used with children and adolescents. Informed decisions are required about whether ECT is ever justifiable as an ethical and effective treatment option for minors.

Researchers

Health care interventions with children and adolescents should be informed by data accumulated from scientific evaluations of treatment effectiveness, as well as individual single-case studies. No scientific data have ever been advanced to support the use of ECT with minors; no evaluations have ever been completed, either with control groups, or from comparative treatment studies (Oxlad and Baldwin, 1995). Hence the contemporary use of ECT with minors is fuelled only by the practice of individual psychiatrists, and not by mental health outcome data. In the UK, for example, prevalence data about ECT administration are available from the Department of Health. Although some demographic data (gender, geographic region) are available, the numbers of ECT administrations to minors are not published as a separate source. Further research is required to determine more accurate prevalence rates and to obtain national surveys which are not biased.

Also, an independent third-party agency, responsible to the Ombudsman should be appointed, to obtain reliable data about ECT administration to children.

Managers

Arguably, human services managers have wider professional responsibilities than individual health care staff. Often, management staff are focused on broader themes than the services provided to individual clients. Instead, managers' attention is focused on service indicators (unit costs, effectiveness data, performance measures). Nonetheless, in the contemporary human services climate of legislation and litigation, service managers should attend to the inappropriate use of ECT with minors, to minimize subsequent legal actions.

Educators

Most mental health texts do not include the topic of ECT administration to minors. Educationally, this creates the clinical impression to students and trainees that ECT does not occur with minors (and/or that it requires no discussion). Neither of these perspectives is accurate, nor justifiable, given the prevalence of ECT in the 1990s. Rather, the curricula of teaching and training programmes should be updated to include a full discussion of the topic.

An examination of contemporary psychiatric nursing texts has revealed that written accounts of ECT have focused on positive or neutral aspects of ECT; side-effects are minimized or omitted. Although Cook and Fontaine (1987) acknowledged some contraindications (recent evidence of myocardial infarction; evidence of intracranial pressure; severe underlying hypertension; presence of intracranial masses) there does not seem to be a consensus on contraindications across different teaching texts. The most common side-effects of ECT (memory loss and confusion) are generally acknowledged (Cook and Fontaine, 1987); some texts include greater detail about the treatment than others (see, for example, McFarland and Thomas, 1991).

Thus, despite brief discussions of contraindications and side-effects, administration of ECT to minors often is not acknowledged. In the mainstream mental health literature, there has been a concerted effort to repackage ECT as a 'safe and effective' treatment. Mental health students in training will thus acquire distorted values about ECT. Decisions about whether to object to (or comply with) ECT administration to minors have been based inappropriately on skewed information about ECT with adult populations.

Students of health care

A powerful psychiatric orthodoxy has developed regarding the alleged utility of ECT to minors. Examination of the data, however, has indicated that the perceived benefits of ECT by psychiatrists are artefactual; rather they are based on 'third variable' explanations (Davison and Neale, 1994). Where ECT has been used for the treatment of mood disorders, regression effects probably explain apparent

improvements. In the context of behaviours at extreme levels, even without clinical intervention, 'reversion to the mean' is the most likely consequence.

Students in training are ideally equipped to challenge the dominant treatment orthodoxy in health care environments. Although there are often strong pressures to conform to the status quo, students have a unique perspective, free from the conservative forces within a treatment system. Students of clinical psychology, nursing and social work are especially well placed to provide challenges to orthodox views about the appropriateness of ECT administration to minors. In nursing, clinical guidelines have been proposed for psychiatric nurses who discover a minor who is at risk from ECT administration by psychiatrists (Oxlad and Baldwin, 1995).

Solutions

The 1990s provide a health service provision climate sharply focused on cost-effectiveness and 'value for money'. The interdisciplinary perspectives of sociology, psychology, social policy, philosophy and health economics should be reconciled with public perceptions about ECT use with infants, children and adolescents. The role of health care students, researchers, educators and managers also should be reconciled. Social policies should be devised whereby health care professionals resolve the inappropriateness of ECT treatment for children and adolescents.

From a clear understanding of interdisciplinary themes, students should have the tools to challenge mental health orthodoxies. Students in training, often employed as supernumerary staff, will help prevent ECT administration to children and adolescents. Service provision environments are required where 'client welfare' is placed above economic considerations. Child and adolescent clients should receive age-appropriate interventions within services designed, not for adults, but for minors. ECT is an age- and culture-inappropriate intervention for infants, children and adolescents, and should be discontinued.

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The authors dedicate this article to all health care students in training who, through conviction and persistence, will prevent the administration of inappropriate treatments to at-risk minors.

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