

Review article

Outcomes of involuntary hospital admission – a review

Katsakou C, Priebe S. Outcomes of involuntary hospital admission – a review.

Introduction: This paper reviews studies on outcomes of involuntary hospital admissions in general adult psychiatry, and predictors of outcomes.

Method: Studies assessing observer-rated clinical change and self-rated outcomes were identified. Relevant databases were searched and authors were contacted. Studies were classified according to quality criteria.

Results: Eighteen studies fulfilled the inclusion criteria. Most involuntarily admitted patients show substantial clinical improvement over time. Retrospectively, between 33% and 81% of patients regard the admission as justified and/or the treatment as beneficial. Data on predictors of outcomes is limited and inconsistent. Patients with more marked clinical improvement tend to have more positive retrospective judgements.

Conclusion: A substantial number of involuntary patients do retrospectively not feel that their admission was justified and beneficial. At least for this group, new approaches might have to be considered. Larger studies are required to identify predictors on which patients are likely to fall into this group.

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Summations

- On average, involuntarily admitted patients show clinical improvement and, at follow-ups, view their admission and treatment rather positively.
- However, a substantial percentage of patients do retrospectively not feel that the admission was justified and beneficial.
- It appears important to identify predictors of outcomes, so that new approaches may be considered for patients who are likely to have a less favourable outcome and remain dissatisfied with admission and treatment.

Considerations

- The quality of the reviewed studies varies, and the sample sizes are rather small.
- It is not possible to determine to what extent differences between the results of the reviewed studies reflect true differences in outcome or are due to different methodologies used.
- There is little systematic research on predictors of outcome.

Introduction

Involuntary hospital admissions have been part of modern psychiatry since its beginnings more than 200 years ago. They are now practised more or less throughout the entire world, although the corresponding legislation and the frequency of involuntary admissions significantly vary between countries (1). There has been much debate on the ethical justification, appropriate legislation and best practice of compulsory treatment in mental health care (2–11). Empirical evidence on the outcomes of involuntary admissions and subsequent in-patient treatments might inform these debates.

Aims of the study

This review therefore explores the evidence on involuntary admissions in general adult psychiatry and addresses the following questions:

- i) What are the outcomes of involuntary hospital admission and subsequent in-patient treatment in terms of observer-rated clinical change and patient-rated outcomes?
- ii) What socio-demographic and clinical characteristics of patients predict more or less favourable outcomes? This question is of particular relevance to practice, because – if outcome varies – the challenge is to identify those patients with a poor outcome so that new policies and clinical approaches can be developed for that group.

Material and methods

A literature search was performed in June 2004 in several electronic databases – i.e. Psychinfo, Medline, Premedline, Embase – using the following keywords: coercion, commitment, detention, restraint, involuntary/compulsory/formal/forced admission/treatment, outcome and treatment. These keywords were exploded and combined, if possible, in the databases. References within each article were searched to locate more papers. Personal correspondence with authors and other experts in the field until August 2005 helped identify more relevant papers and/or clarify issues in the included papers.

The following inclusion and exclusion criteria were used: studies were only included if they i) had assessed outcomes of involuntary hospital admission and subsequent treatment, ii) had recruited patients from acute general psychiatric wards, iii) used a quantitative methodology, and iv) were published in English.

Studies were excluded if they i) were conducted in units for eating disorders, forensic or drug addiction units, ii) investigated treatment outcomes in mixed samples of involuntary and voluntary patients, with no separate analysis for the involuntary group (12–17), and iii) explored the process of involuntary admission and feelings of perceived coercion during admission without reporting outcomes of the subsequent treatment (18–23).

A number of criteria were defined *a priori* to assess the methodological quality of each study: the design of the study (i.e. prospective vs. retrospective); the clarity of inclusion criteria; the sample size (<50 vs. ≥50); the response and attrition rates (each <50% vs. ≥50%); the analysis and reporting of differences between eligible patients who did and did not respond (response bias), and between patients who were interviewed and dropped out at follow-up (attrition bias); and the status of the interviewers (independent vs. involved in patients' care). The presence of all quality criteria was rated and used to form a total score between 0 and 8 for each study. Studies were allocated to three groups with low quality (0–2), medium quality (3–5) and high quality (6–8).

An extraction sheet adapted from other systematic reviews (24) was used to extract and document all relevant information of each paper. The systematically obtained aspects included sample characteristics, time(s) of assessment, outcomes examined, instruments and results and the above quality criteria.

The findings are presented descriptively. As the designs used and outcome criteria assessed in the studies varied significantly, it appeared not appropriate to conduct a meta-analysis on the results. Findings from all included studies are presented, and quality scores are taken into account for both the presentation and the interpretation of findings.

Results

A total of 521 abstracts were considered, but only 23 papers met the inclusion criteria (25–47). These papers reported results of 18 studies, nine of which are prospective and nine retrospective.

Samples

The sample sizes range from 16 to 138 participants. In most of the studies, the samples are recruited from acute state psychiatric wards and have comparable characteristics. However, some studies applied different inclusion criteria and assessed more specific subgroups. A more detailed

presentation of the sample characteristics, sizes, as well as response and attrition rates is given in Table 1.

Times of assessment

In prospective studies, the first interview is usually conducted within a few days after admission and another one before discharge. Only three studies followed up patients beyond discharge (25, 31, 39). In retrospective studies, the time points of assessment show more variation. In four studies, patients were assessed within the first 25 days after admission (30, 32, 34, 36) and in two studies close to discharge (26, 41). In the remaining three studies, patients were interviewed after longer periods of time, i.e. between 4 months and 3 years after discharge (27, 28, 37) (details see Table 1).

Quality of the studies

There were nine low quality studies (26, 27, 31, 32, 34–37, 41) six medium quality studies (25, 28–30, 33, 47) and three high quality studies (39, 42, 46). Three studies scored 0, and no study had a score over 6. Only seven out of the 18 studies described their samples in a clear and unambiguous manner (33, 35, 36, 39, 42, 46, 47). Eleven studies had a sample size equal to or over 50 (between 50 and 138) (25, 28, 29, 30–33, 37, 39, 42, 46), and nine had a response rate equal to or over 50% (25, 28, 29, 30, 36, 39, 42, 46, 47). Comparisons between participants and non-participants were made in only two studies (28, 30), and no study compared the characteristics of participants who dropped out with those who remained in the study. Lastly, interviewers who were not involved in patients' care were used in only six studies (29, 39, 42, 46, 47, 34).

Observer-rated clinical outcomes

Observers were either clinicians involved in the patients' care or independent researchers. They mostly rated patients' global clinical progress in terms of functioning and symptoms after involuntary hospital treatment. Overall, patients showed improvements in symptoms and/or functioning at discharge and within the next 4 months. This has been found in studies of different quality including two high quality studies (39, 42, 35).

Self-reported outcomes

Patients were mostly asked to rate a number of different but related outcomes. More specifically, their attitudes on the following five aspects of their

admission and/or treatment were investigated, using different questions.

A construct that was assessed in the majority of studies are participants' views on their need for hospital admission and treatment in general, i.e. not necessarily related to the involuntary nature of the admission. Findings indicate that 33–68% of patients rate their admission as correct or necessary (31, 39, 46, 47, 34, 41, 29). When the percentage of patients explicitly expressing negative views is reported, 28–48% of interviewees believe that they did not need hospital admission (34, 41, 47). All but one of these investigations assessed participants at (or close to) discharge. In high quality studies, 47–66% of the participants believe at discharge that it was right that they were admitted (39, 46). Apart from one low quality study (41), all studies specifying both positive and negative views indicate that the number of participants viewing their admission positively is higher than those with negative views.

Patients were also asked to assess, more specifically, their involuntary admission and whether such a compulsory intervention was justified in their case. A total of 39–75% of participants in different studies report retrospectively that it was right that they had been involuntarily admitted and treated, whilst 10–47% of the interviewees explicitly state that their involuntary admission was unjustified (27, 28–30, 32, 36, 37). Although no high quality studies address this issue, results from all investigations but one medium quality study (30) illustrate that the number of patients reporting positive views is higher than those holding negative attitudes. Furthermore, results suggest an association between patients' views and the length of time that has elapsed since the admission: patients' views tend to become more positive over time (31). Within the first 25 days after admission, 39–58% believe that their admission was correct (30, 32, 36). In interviews between 4 months and 3 years after admission, between 66% and 75% report positive views on their admission (27, 28, 37).

Another commonly assessed outcome criterion is patients' perceived benefits from their treatment. Findings indicate that 39–81% of patients perceive their hospitalisation as helpful, whereas between 6% and 33% perceive no benefits or even feel harmed by their treatment (33, 25–28, 30, 32, 34, 36). Yet, there are no high quality studies exploring this issue. One medium quality study found that only 46% of patients who are assessed close to admission state that their involuntary admission was helpful (30). In two other medium quality studies, however, 73–75% of patients report benefits from their treatment, when interviewed

Table 1. Description of studies

Author/year/citation/origin/ design/quality score	Sample	Response rate (RR) Attrition rate (AR)	Times of assessment	Main outcomes examined	Instruments	Results
Gove and Fain, 1977. (25) USA/prospective/medium quality	86 involuntary patients admitted to a pilot programme (to a psychiatric intensive care unit and then to a readjustment unit)	RR: 100% AR: 2%	- T1: admission - T2: within one year following admission	- Perceived benefits from treatment	Single items	- 75% stated that they had been helped by the hospitalisation, whereas 6% thought that they had been harmed in some way
Spensley et al., 1979. (26) USA/retrospective/low quality	28 consecutively admitted involuntary patients	RR: not reported	A month after discharge	- Perceived satisfaction with treatment - Perceived benefits from treatment	Single items	- 50% were highly satisfied with their treatment, whereas 21% were moderately to severely dissatisfied. - When asked if the services were helpful, the mean was 1.8 on a scale from 1 to 4
Srinivassan, 1980. (27) UK/ retrospective/low quality	20 involuntarily admitted patients	RR: 37%	4–16 months after admission	- Perceived justification of involuntary admission - Perceived benefits from treatment	Single items	- 75% thought that the compulsory admission had been appropriate while the rest 25% thought that it was inappropriate. - 80% thought that the hospital stay had been helpful
Towes et al., 1981. (28) Canada/retrospective/ medium quality	61 randomly selected involuntary patients	RR: 61%	On average 348 days following their admission	- Perceived justification of involuntary admission - Perceived benefits from treatment	Single items administered in a semi-structured interview	- Reactions to committal were scored on a scale from 1 (being strongly opposed) to 5 (being strongly in favour). The mean score was 2.9. - 73% felt that they had been helped by the commitment whereas 27% reported feeling hurt after having been committed
Kane et al., 1983. (29) USA/prospective/ medium quality	75 consecutive involuntary patients from a private centre in a middle- class community	RR: 71% AR: 23%*	- T1: admission - T2*: discharge or when the psychiatrist rated them as at least 80% improved	- Perceived justification of involuntary admission - Perceived need for treatment	Single items	- 57% reported that they should definitely (or perhaps) have been committed whereas 43% thought that they should not have. - 68% thought that it was fortunate (or perhaps fortunate) that they were hospitalised whereas 23% thought that it was not fortunate

Table 1. Continued

Author/year/citation/origin/ design/quality score	Sample	Response rate (RR) Attrition rate (AR)	Times of assessment	Main outcomes examined	Instruments	Results
Toews et al., 1984. (30) Canada/retrospective/ medium quality	75 consecutive involuntary patients	RR: 70% AR: 55%†	On average 8.8 days after admission	- Perceived justification of involuntary admission -Perceived benefits from treatment	Single items based on a previous study [Toews et al., 1981. (28)]	- When asked how they felt about being committed at the moment, patients scored an average of 2.8 on a scale from 1 (being strongly opposed) to 5 (being strongly in favour). - 39% believed that commitment was necessary in their case, whereas 47% believed that it was unnecessary. - 46% thought that their commit- ment was helpful, whereas 33% thought that it was harmful - Little significant change in attitudes over time - In the follow-up, they were more likely to report that they accepted the doctor's opinion of their need for treatment - 58% reported that involuntary hospitalisation was appropriate in their case, whereas 39% thought that it was inappropriate. - 81% reported having been helped by the treatment, whereas 14% considered that they had not been helped 39% of those assessed at T1 and T2 reported at T2 that they had benefited from hospitalisation
Towes et al., 1986. (31) Canada/prospective/ low quality	75 involuntary patients	RR: 70% AR: 55%†	- T1: admission - T2: 1 month later - T3: 3 months later - T4: 6 months later	Changes in perceived need for treatment	Single items based on previous studies [Towes et al., 1981; 1984. (28, 30)]	
Bradford et al., 1986. (32) Canada/retrospective/ low quality	57 involuntary patients from three acute units and a Behaviour Modification unit	RR: not reported AR: 0%‡	At least 7 days after admission	- Perceived justification of involuntary admission - Perceived benefits from treatment	A questionnaire based on instruments used in previous studies [Towes et al., 1981; 1984. (28, 30)]	
Beck and Golowka, 1988. (33) USA/prospective/ medium quality	82 consecutive involuntary patients (including both civil and criminal commitments)	RR: not reported AR: 0%‡	- T1: admission - T2: discharge	Perceived benefits from treatment	1 single item	
Spence et al., 1988. (34) Australia/retrospective/ low quality	44 consecutive involuntary patients	Not reported	At least a week after admission (on average 15 days after admission)	- Perceived need for treatment - Perceived benefits from treatment	Single items based on previous studies (Gove and Fain, 1977; Shanon, 1976)	- 55% thought that they needed treatment, whereas 41% still thought that they did not. - 75% thought that hospitalisation had been beneficial, whereas 16% thought it had not. - 23% believed that hospitalisation had been harmful, whereas 73% did not believe so
Mc Evoy et al., 1989. (35) USA/prospective/low quality	24 consecutive involuntary patients suffering from schizophrenia or schizoaffective disorder whose length of stay was at least 14 days	RR: not reported AR: not reported	- T1: within up to 11 days after admission - T2: discharge	- Observed clinical progress - Perceived clinical progress	- Brief Psychiatric Rating Scale (BPRS) – Clinical Global Impressions Global Severity Item (CGI) - Global self-assessment (one single item)	- Significant clinical improvement - No significant changes in initial high global self-assessment scores

Table 1. Continued

Author/year/citation/origin/ design/quality score	Sample	Response rate (RR) Attrition rate (AR)	Times of assessment	Main outcomes examined	Instruments	Results
Conlon et al., 1990. (36) Canada/retrospective/ low quality	16 consecutively admitted patients with no previous hospitalisations for emergency assessment	RR: 57%	1–25 days after admission (mean 7.96 days)	- Perceived justification of involuntary admission - Perceived benefits from treatment	A semi-structured interview based on previous studies [Towes et al., 1986. (31)]	- 44% stated that their commitment had been necessary and 63% stated that it led to treatment. - 50% evaluated the outcome of the commitment as helpful, whereas 18% believed that it was harmful - 66% stated that they were grateful for having been detained, whereas 24% stated that they were 'not bothered' and 10% felt resentful - Overall improvement - At discharge 2/3 (66%) seemed to accept their admission
Rusius, 1992. (37) UK/ retrospective/low quality	50 out-patients who had been detained within the last 3 years	RR: not reported	Within the next 3 years after detention	Perceived justification of involuntary admission	Single items	
Kjellin et al., 1993. (39) Sweden/prospective/ high quality	100 consecutive involuntary patients (excluding those who were discharged within 3 days of admission)	RR: 85% AR: 15% (T2), 25% (T3)	- T1: admission - T2: discharge or after 3 weeks of care (whichever occurred earlier) - T3: 4–8 months later	- Perceived need for treatment - Observed clinical progress	- Global Assessment Scale (GAS) - Single items	
Svensson et al., 1994. (41) Sweden/retrospective/ low quality	21 consecutive patients who reported that they were involuntarily admitted in four acute and three rehabilitation wards with a length of stay of at least 3 weeks	RR: not reported	4 weeks after admission or at discharge if that was during the fourth week	- Perceived need for treatment - Perceived satisfaction with treatment	Items from the SPRI (an instrument measuring satisfaction with treatment)	- 33% thought that their admission was correct and necessary, whereas 48% reported that it was wrong and unnecessary. - Their mean general satisfaction with treatment was 71.4 on a scale from 24 to 120 - 64% were rated as improved. - 76% reported improvement, whereas 24% believed that they had not improved. - 46% reported satisfaction with treatment
Kjellin et al., 1997. (42) Sweden/prospective/ high quality	95 consecutive involuntary patients (excluding those who were discharged within 3 days of admission)	RR: 82% AR: 24%	- T1: within 5 days of admission - T2: discharge or after 3 weeks of care	- Observed clinical progress - Perceived clinical progress - Perceived satisfaction with treatment	- Global Assessment of Functioning (GAF) - Single items	- 47% said that it was right that they were admitted - 73% said they had been treated well during the stay at the ward. - 68% felt better at discharge
Kjellin et al., 2004. (46) Sweden/prospective/ high quality	138 involuntary patients	RR: 55% AR: 15%	- T1: within 5 days after admission - T2: discharge or after 3 weeks of care	- Perceived need for treatment - Perceived clinical progress	Single items used in previous Swedish studies	

Table 1. Continued

Author/year/citation/origin/design/quality score	Sample	Response rate (RR) Attrition rate (AR)	Times of assessment	Main outcomes examined	Instruments	Results
Wallsten et al., 2004. (47) Sweden/prospective/medium quality	Two studies: - First study: 44 involuntary patients - Second study: 49 involuntary patients	RR: 83% (first study), 67% (second study) AR: 16% (first study), 13% (second study)	- T1: within 5 days after admission - T2: at discharge or after 3 weeks of care	- Perceived need for treatment	Single items used in previous Swedish studies [Kjellin et al., 1993; 1997 (39, 42)]	- In both studies, 61–62% thought that it was right that they were admitted (or that they should have been admitted earlier), whereas 28–32% believed that they should not have been admitted.

*Only those who had negative views towards commitment were assessed at T2.

†Only 45% of the sample with complete data were included in the analyses.

‡Only those who reported at T1 that they did not expect any benefits from hospitalisation were assessed at T2.

approximately a year after their admission (28, 25). Interestingly, the impact of time on patients' views reported above seems to hold for patients' perceptions on whether they benefited from their treatment.

Furthermore, when patients were specifically asked to report whether they thought they had clinically improved after receiving involuntary treatment, 68–76% of them stated in two high quality studies that they felt better (42, 46).

Several studies, including two high quality ones (42, 46), address the issue of patient satisfaction with treatment. Findings suggest that 46–73% of patients report to be satisfied with the treatment they received (42, 46, 26).

Predictors

One high, two medium and one low quality study explore predictors of more positive or negative patient views. Only a limited number of baseline characteristics are considered as predictors, i.e. age, gender, diagnosis, marital status and number of previous hospitalisations. Other characteristics such as ethnicity have not been tested as predictors in any of the studies. In the high quality study, no significant differences were found in terms of age, gender and diagnosis between patients who did and did not report improvement (42). In the medium quality studies, findings are inconclusive, as different variables – such as age and gender – are found to have a significant predictive value in different studies. Two studies (29, 33) suggest that patients with a more marked clinical improvement tend to report more positive views on their hospitalisation. Data on predictors of outcomes are presented in Table 2.

Discussion

The evidence reviewed in this paper suggests that patients show significant clinical improvement after involuntary treatment, although this conclusion is mainly based on single global functioning scores. Furthermore, patients' assessment of their involuntary admission and subsequent treatment seems to be rather positive than negative. The number of participants who retrospectively report positive views on the justification of their involuntary admission, their initial need for hospital treatment and their perceived benefits from treatment in almost all studies is higher than those who explicitly express negative views. Thus, both the observed outcomes as well as patients' personal evaluation of their involuntary hospitalisation are rather positive than

Table 2. Predictors of outcomes

Author/year/citation/origin	Predictors examined	Results
Kane et al., 1983. (29) USA	<ul style="list-style-type: none"> - Diagnosis - Number of previous hospitalisations - Remission of symptoms - Age - Gender 	<ul style="list-style-type: none"> - Men believed more strongly than women that their involuntary admission was wrong. - Patients with more previous hospitalisations felt that they had benefited less from treatment. - Patients achieving remission expressed more positive attitudes
Bradford et al., 1986. (32) Canada	<ul style="list-style-type: none"> - Age - Gender - Marital status 	<ul style="list-style-type: none"> - No significant associations were found between predictors and patients' perceived benefits from hospitalisation
Beck and Golowka, 1988. (33) USA	<ul style="list-style-type: none"> - Diagnosis - Improvement - Gender - Age 	<ul style="list-style-type: none"> - Patients who were diagnosed with either schizophrenia or affective disorders were more likely to report benefits at discharge. - Similar trend (but non-significant) for those who improved. - Younger patients were more likely to report benefits from treatment
Kjellin et al., 1997. (42) Sweden	<ul style="list-style-type: none"> - Age - Gender - Diagnosis 	<ul style="list-style-type: none"> - No significant relationships were found between predictors and reported improvement

negative. However, a significant proportion of interviewees – up to 48% – continue to hold negative views in the various self-reported outcomes.

Some studies suggest that the length of time since admission might be an important factor influencing self-rated outcomes, as patients appear to report more positive views when interviewed after longer periods of time. Yet, the variance in the length of time between admission and interview does not account for all the variation in results.

The variation in outcome underlines the importance of identifying predictors. Yet, there is a considerable lack in research on predictors of outcomes, which would help clarify the reasons why some patients show substantial improvement and/or positive attitudes, whereas others are displeased with the treatment they received or do not improve clinically. It is, therefore, crucial to explore why there are such discrepancies in patients' views, and what individual characteristics, process variables and treatment components are linked to different outcomes. By identifying these factors, patient groups who are more likely to have an unfavourable outcome can be identified and new treatment methods may be considered for those groups. Moreover, admission or treatment characteristics that patients find harder to accept can be reviewed and possibly improved.

Limitations

This review aims to summarise the existing research in the field of outcomes of involuntary hospital admission and their predictors. Various difficulties complicate such an attempt. Most of these problems refer to the methods used in the studies reviewed here.

The sampling procedures applied in the studies are inconsistent. In some studies, only subgroups of the whole population of involuntarily admitted patients were recruited (35–37, 41). Similarly, in some follow-up assessments, only selected subgroups from the initial samples were followed up (29, 33). Also, the times of assessment across the different studies vary substantially, especially in retrospective studies. Hence, comparisons between findings from different studies are sometimes problematic, as they refer to different patient groups assessed at different points in time. It is impossible to distinguish whether different findings reflect true variation in outcomes – e.g. because of differences in context, patient characteristics and treatment, or changes of views over time – or are due to methodological inconsistencies or both.

One might conclude that research on outcomes of involuntary treatment is still in a preliminary phase. Subsequently, there are hardly any validated instruments to assess patients' attitudes on the justification of their (involuntary) admission and treatment or their perceived benefits from it. Therefore, in most of the studies different instruments are used, even when similar constructs are assessed (48). When similar items were used across studies, there have been no systematic attempts to devise structured scales based on these items, which could be established as standards in this field of research.

Apart from the problems arising from the methodological shortcomings of the reviewed studies, there are a number of limitations in the methodology of the review itself. The review only included published studies and is therefore open to publication bias. Only articles published in English and quantitative studies were considered.

Implications for future research

Research on involuntary in-patient treatment has so far investigated a number of different outcomes, using different methodologies and instruments. Therefore, comparisons between studies are difficult to make and only a few unequivocal conclusions can be drawn. Future research should more precisely define the constructs reflecting outcome and assess them in a more consistent way, preferably using the same measures and methods at regular time points to obtain robust and comparable findings.

In addition, more research is needed on predictors of more or less favourable outcomes to inform practice and service development for defined patient groups or interventions. Such research should use sample sizes that provide sufficient statistical power to identify predictors and their potential interaction in influencing outcome, and allow analysing outcomes in large enough subgroups with specific characteristics.

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