CHAPTER 8
TRANSITION SECURED? A FOLLOW-UP STUDY OF ADOLESCENTS WHO HAVE LEFT SECURE RESIDENTIAL CARE

"We staan aan het begin van een traject en je weet niet wat erna gebeurt"
["We are at the beginning of a trajectory and you do not know what happens after"]
(A group care worker about secure residential youth care and the period after)

Abstract

Outcomes of secure residential care, which are often viewed in terms of recidivism, show that many adolescents have delinquent behavior problems after their departure. Little is known about other outcomes such as the youths' quality of life or their family situation, and about services that might decrease the problems after care. Aim of the present study is to assess these outcomes for adolescents one year after leaving secure residential care. Results from admission to one year after departure indicate an overall decrease in the adolescents' problem behavior and delinquent friends. One year after departure, the adolescents report to be less satisfied about their financial situation, leisure time and social participation, and living arrangements than before admission. Most of the adolescents report to receive support after leaving secure care. However, the receipt of services directly after departure does not predict positive outcomes in terms of recidivism. Younger adolescents who do not show delinquent behavior are significantly less likely to show recidivism than older adolescents showing delinquent behavior prior to admission. The results suggest that moderately positive outcomes can be achieved for some adolescents, but that delinquent behavior is an important opposing factor.

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8.1 Introduction

Young people in residential care often show a high degree of psychopathology and problem behavior, more so than young people who are placed in other types of care (Handwerk et al., 1998; Harder et al., 2006; McDermott et al., 2002). Especially adolescents in secure residential care show serious and complex problems (Boendermaker, 1999; Bullock et al., 1998). Secure residential care can be seen as the most intensive or restrictive type of residential care, and refers to a type of service in which care and treatment are offered in a secured environment. In the Netherlands, the most recent numbers show that almost 7,000 young people stay in judicial and correctional residential settings, which makes up 3% of the total group of young people using specialized services and almost a third (30%) of the group in residential care (Stevens et al., 2009).

Since young people in secure residential care often exhibit antisocial or delinquent behavior, outcomes of this intensive type of residential care are frequently viewed in terms of recidivism (Grietens & Hellinckx, 2004; Lipsey & Cullen, 2007). Outcome studies that have looked at delinquent behavior of young people following secure residential care show that this delinquent behavior is quite stable over time. A considerable part of the youth shows a relapse into delinquent behavior after staying in secure treatment. One year after departure, studies show percentages of recidivism between 30% and 64% (Bullis & Yovanoff, 2002; Gottfredson & Barton, 1993; Greenwood & Turner, 1993; Van Dam, 2005; Van der Heiden-Attema & Wartna, 2000).

The small amount of research that has focused on other long-term outcomes shows that for many of these adolescents the situation after leaving secure residential care is characterized by various problems (Boendermaker, 1998) and that their situation after departure is often instable, for example in terms of accommodation (Boendermaker, 1998; Bullock et al., 1990; Bullock et al., 1998). Regarding accommodation, Boendermaker (1998) and Bullock and colleagues (1990) looked at the living conditions of adolescents respectively one and two year after staying in secure residential care. Both studies found three subgroups of adolescents approximately equally divided over the population. The first group consists of adolescents staying with their parents or family, the second group of youth living independently and/ or with friends, and a third group staying in residential care facilities.

After they have left the secure care facility, young people are regularly out of school or unemployed (Bullis & Yovanoff, 2006; Bullock et al., 1998) and have problems in spending their leisure time (Van der Ploeg & Scholte, 2003). When adolescents return home after secure residential care, they are likely to be back in situations that contributed to their delinquent behavior, such as contact with delinquent and/or drug-using peers, dysfunctional parents or households, and

extensive opportunities for illegal activities (e.g., drug selling and auto theft) instead of legal employment (Greenwood, Deschenes, & Adams, 1993; Greenwood & Turner, 1993). Bullock et al. (1998) found in their study that 65% of the 204 young people's families continued to have problems during the two years after the youth departed from specialist treatment interventions. Family members of probably at least a quarter of the young people carried on their lives much as they had in the past (Bullock et al., 1998).

The findings of these outcome studies show that the transition of adolescents from secure residential care to adulthood is problematic and that there is often a need for treatment after young people have left secure residential care. The long term outcomes of secure residential care might be improved by the application of aftercare services (e.g., Curry, 1991). However, the small amount of studies focusing on aftercare services following secure residential care show inconclusive outcomes (Harder, Kalverboer, & Knorth, 2011). The preparation for leaving care and the provision of aftercare support seems to be lacking in practice (Court of Audit, 2007; Baltodano et al., 2005; Boendermaker, 1998; Harder et al., 2011; Knorth, Knot-Dickscheit, & Strijker, 2008). Bullock and colleagues describe this in the following quotation: "these young people enjoy maximum support while in the centers but it evaporates swiftly in the outside world" (Bullock et al., 1998, p. 65).

The preparation of young people for leaving care and the provision of aftercare services can be problematic due to the fact that it is quite common for young people to have an unplanned discharge (Court of Audit, 2007; Harder et al., 2006). In the Netherlands, about a quarter drops out of care by running away or staying away after parole in secure residential care (Boendermaker, 1998; Hendriks & Bijleveld, 2004). Especially for youth with the most serious and complex problems, which often include youth who prematurely drop out of residential care, sustained support seems to be needed after discharge (Harder et al., 2011).

While research shows that adolescents often show delinquent behavior problems in their situation after care while making the transition from secure residential care to adulthood, little is known about other outcomes, such as the youths' quality of life or their family situation after departure (Harder et al., 2006; Knorth, 2005; Knorth et al., 2008). Furthermore, interventions after secure residential care seem to be needed for the improvement of the long-term outcomes of secure residential care. However, few studies have looked at the outcomes of aftercare services following secure residential care and none of these services focused on the parents or families of the young people.

The aim of this article is to assess outcomes for adolescents one year after leaving secure residential care and the factors that are associated with successful outcomes. We will explicitly focus on the transition from secure residential care to the community, including the preparation for departure and services that these young people receive after residential care.

The central questions of this contribution are:
- What are the outcomes for adolescents one year after they have left secure residential care in terms of their behavior problems, quality of life, living conditions, and the functioning of their social context (i.e., family and friends)?
- Which factors at departure and after departure are associated with positive outcomes for adolescents who have left secure residential care?

Considering the findings in previous studies, we formulated the following hypotheses with regard to the questions above:
- Most of the adolescents show poor outcomes in terms of delinquent behavior, quality of life and living conditions one year after departure;
- About a third of the group lives at home with their parents or family, a third lives independently and/ or with friends, and a third stays in residential care facilities one year after their departure;
- Adolescents are poorly prepared for leaving care and few of them receive aftercare support;
- Adolescents who are not prepared for their departure (i.e., those with a premature termination and those who did not went on parole during their stay) show poorer results that those who are prepared;
- Young people receiving aftercare services show more positive outcomes than young people not receiving aftercare.

8.2 Method

This study was conducted as part of a longitudinal study that is focused on adolescents who stayed in secure residential center *Het Poortje* which is located on two sites in the north of the Netherlands. Young people aged from 12 to 23 years old are placed in the center by either a civil or penal measure. The principal reason for admission is either intolerably disruptive and antisocial behavior or behavior presenting a danger to the young person him or herself or to the general public.

The main components of care and treatment in the center are activities at the residential group and special education in relatively small classes of eight to ten adolescents at the internal school. At the moment of data collection, most of the young people stayed on residential groups with twelve adolescents per group, supported on a daily basis by two group care workers. Young people in a special care program called “Doen Wat Werkt” [Do What Works], however, stayed on smaller groups of eight adolescents. The adolescents in this program received short-term secure care for a maximum of six weeks, followed by either a placement at home with Multi Systemic Therapy (MST, Henggeler, 2009) or Functional Family Therapy (FFT, Sexton &

Alexander, 2002), or semi-secure care followed by a placement at home with MST or FFT. The social competency model is considered to be the primary, underlying methodology of the care and treatment in the secure residential center (Durrant, 1993; Slot & Spanjaard, 1999).

A group of adolescents that entered the center between 1 September 2007 and 1 June 2008 (*N* total = 328) was eligible for inclusion in the study. Youth were included if they:

- were able to understand the Dutch language;
- stayed for a minimum period of eight weeks, except for adolescents in the "Do What Works" program.

Based on these criteria, 226 adolescents (69%) were included in the study. The most common reason for exclusion (84%) was a too short stay in the center (less than eight weeks). Other reasons for exclusion were not speaking or understanding the Dutch language properly (10%) and placement within the scope of a correction (6%).

The total research project consisted of interviews and questionnaires which were administered at admission (T_1), eight weeks after admission (T_2), at departure (T_3) and one year after departure (T_4). The adolescents were informed about the research project by the project leader shortly after admission during a private conversation and by an information flyer. To promote their participation in the project, it was emphasized that participation in the project was confidential and that it was a common part of their stay in the center. Young people and their parents were involved by interviews and questionnaires in all four measurements, and staff was involved in the first three measurements by questionnaires.

Several months after starting the project, the group of admitted adolescents was two times higher than what was expected in advance. There were not enough interviewers to administer the interviews. Therefore, young people that were admitted were randomly selected in turns for participation during a period from January to May 2008. This resulted in a group of 32 young people (14%) that was excluded from participation in the first three measurements.

8.2.1 Procedure

For the present study, we used information from the interviews administered with the young people at admission (T_1) and one year after departure (T_4) to view changes from T_1 to T_4. These (semi-)structured interviews were conducted by students of the University of Groningen. To guarantee a correct administration, these students received training before conducting the interviews.

At admission the young people participated in interviews, in the course of which the situation before admission was the main focus. These interviews were administered with 164 of the 194 young people that were eligible for the T_1

measurement (85%). Once the young people had left the center for one year, the project leader informed the interviewers so that they could contact the youth for the 12-month follow-up (T_4) interviews. The interviews at admission were administered again, complemented with an interview focusing on the receipt of support after departure.

At follow-up, 69 adolescents (31%) of the total included group (*N*=226) were excluded, because six adolescents were still in the center and 63 adolescents were not contacted before the end of the data collection period. In contacting the eligible 157 adolescents at follow-up, the contact information at the moment of departure from the center was used. Almost half (44%) of the 157 adolescents could not be reached and six adolescents (4%) could not be contacted, as their parents did not want to cooperate, which resulted in a group of 75 adolescents (48%) that could not be contacted. A second group of 46 adolescents (29%) did not participate, because they refused or could not participate due to situational problems. A group of 36 adolescents (23%) did participate at follow-up. Since one adolescent only filled in questionnaires at the moment of follow-up and another adolescents was interviewed almost two years after his departure, these persons were excluded from further analysis. The remaining 34 adolescents were interviewed between 12,3 and 19,2 months after departure. Most of these adolescents (*n*=26) were also interviewed at admission (T_1).

Besides the information of interviews, we also used treatment documents, information of the center about the course of departure, and official records regarding information on delinquent behavior at follow-up, since that information was available for all the adolescents that had left the secure care center. A group of 21 adolescents was excluded from further data-analysis, because they departed within less than one year at the moment of data gathering on recidivism. This resulted in an *N*=199 for data on recidivism at T_4.

8.2.2 Participants

The characteristics of the group of 199 adolescents who had left the center for at least one year were gathered by using the information that was available in treatment documents. The characteristics of the adolescents, including a separate column for the subgroup of 26 adolescents that was interviewed at admission (T_1) and one year after departure (T_4), are shown in Table 8.1.

Table 8.1
Sample characteristics of total follow-up (N = 199) and the interviewed (N = 26) group

Characteristics	Adolescents departed ≥ one year (*N* = 199)			Adolescents interviewed at T_1 and T_4 (*N* = 26)		
	M	*SD*	*range*	*M*	*SD*	*range*
Age at admission	16.2	1.4	12.1-20.0	16.5	1.5	13.4-20.0
	N	*%*		*N*	*%*	
Sex (male)	135	67.8		18	69.2	
Ethnicity (Dutch origin)	125	62.8		19	73.1	
Measure of placement (civil)	147	73.9		17	65.4	
Place of origin (regional; nearby the center)	90	45.2		15	57.7	
Living arrangement prior to admission[a]						
At home with (one of the) parents	109	54.8		16	61.5	
Residential setting (including secure care)	62	31.2		5	19.2	
With (foster)family or independent	22	11.1		5	19.2	
Care history before admission	181	91.0		22	84.6	
Behavior problems						
Externalizing	174	87.4		19	73.1	
Internalizing	75	37.7		7	26.9	
Delinquent behavior	139	69.8		17	65.4	

Note. The 26 adolescents that are interviewed at admission and follow-up are included in the total follow-up group of 199 adolescents.
[a]*n* = 193 for the total follow-up group.

Given the low response rate with regard to the measurement at follow-up, several analyses were conducted to examine possible attrition bias. We looked at differences between the three response groups – 75 non-contacted youth, 46 refusers and 36 participants – in both background (see Table 8.1) and relevant follow-up characteristics (e.g., recidivism, receipt of aftercare and prematurely departing from care). First, we looked for differences in age at admission and departure, and length of stay by means of a Kruskal-Wallis test, which showed no significant differences. After that, we compared the three groups on all the other characteristics by using chi-square tests. These analyses showed that the groups were significantly different in terms of externalizing problems (Fisher: p = .008). Further analyses showed that the 75 non-contacted youth were significantly more likely than the refusers (Fisher: p = .010) and participants (Fisher: p = .014) to show externalizing problems before admission. There was a trend in the data showing that the 75 non-contacted adolescents were more likely to have stayed in residential care before admission, to leave the center prematurely and to show recidivism after admission compared to the two other groups. The 46 refusers were more likely to have shown internalizing problems prior to admission than the other youth. Furthermore, the 36 participants were more likely to be of Dutch origin, to have lived close by the center and to go home after their departure compared to the two other groups.

8.2.3 Instruments

SRDC interview

Information on problem behavior, contact with parents and peers, and living arrangements at follow-up were collected by the Scientific Research and Documentation Center (SRDC) interview (Van der Laan & Blom, 2006b) conducted with the adolescents at admission and follow-up. Aim of the SRDC interview is to gain insight into the self-reported delinquent behavior of young people, including risk and protective factors surrounding this behavior (Van der Laan & Blom, 2006a). The SRDC interview was administered mainly as an interview, except for the delinquent behavior scale (36 items) which was applied as a questionnaire.

Problem behavior was measured in terms of delinquency and substance use. The frequency and seriousness of self-reported delinquency over the last twelve months were combined into one delinquency score. The frequencies were categorized in five categories: 0 times, 1 time, 2-4 times, 5-10 times and 11 times or more often. The offences were categorized as minor (weight=1) and serious (weight=3) as is applied by Van der Laan and Blom (2006a, p. 280). This delinquency scale showed good reliability (α = .87) for the present sample. Substance use was measured using items concerning the frequency of alcohol, soft drugs and hard drugs use during the last twelve months.

The functioning of the family was measured in terms of the supervision behavior of parents regarding the leisure time activities of the adolescents. Sum scores of four subscales ranging from 1 (never) to 5 ([almost] always) were used: 1) openness of the young people to their parents (5 items), 2) parental control (5 items), 3) inquiring behavior of parents (5 items) and 4) passive monitoring (5 items). These parenting scales have Cronbach's alpha's ranging from 0.61 to 0.80.

Since contacts with peers often become more important in adolescence (Aseltine, 1995; Van der Laan & Blom, 2006b), we also looked at the time spend with friends and the amount of delinquent friends reported by the adolescents. We used items of the SRDC interview about the amount of time spend with friends (4 items) and a subscale concerning the delinquent behavior of friends which contains 6 items ranging from 0 (none delinquent) to 3 (all delinquent). The scores on the subscale (α = .88) were calculated into one delinquent friends score ranging from 0 to a maximum score of 18.

Quality of life interview

An assessment of the adolescents' general well-being was provided by the Lancashire Quality of Life Profile (Van Nieuwenhuizen et al., 1998; LQoLP, Van Nieuwenhuizen, Schene, Boevink, & Wolf, 1998), which was conducted with the adolescents at admission and follow-up. Aim of this structured interview is to describe the quality of life of people with mental illness. It consists of objective and subjective items

assessing ten life domains: living situation, leisure and social participation, finances, legal status and safety, family relations, health, positive and negative self-esteem, framework and fulfillment (Van Nieuwenhuizen, Schene, Koeter, & Huxley, 2001).

For the present study, living arrangements, main daily activities, having work, having a helping friend, having debts and the frequency of family contact were used as objective indicators of quality of life. On the basis of 22 items from the Life Satisfaction Scale (LSS), which is used throughout the interview for the rating of satisfaction on ranging from one (cannot be worse) to seven (cannot be better), subjective indicator scores on six life domains and a total mean score were calculated. Besides the LLS, an item concerning satisfaction about life at the moment of the interview and the Cantril's ladder were used. Cantril's ladder is a 100 mm scale on which a subject can indicate how he perceives his life on a continuum ranging from life at its worst to life at its best. The reliability of the LQoLP scales seemed adequate (α = .71 - .80) for the present sample.

Aftercare interview

The aftercare interview was developed for the research project and was administered with the adolescents at follow-up. Central aim of this interview is to gain insight into the preparation for departure and the receipt of aftercare services. The interview was constructed by using a follow-up interview that was used in the Dutch study of Boendermaker (1998) as an important example. The aftercare interview contains 22 items and consists mainly of questions with different multiple choice answering options. It was administered in two parts, namely at departure (the preparation for departure) and at follow-up (the receipt of aftercare services). In the present study, we will only report findings on the follow-up part.

Treatment documents

Information on key background measures of the adolescents (i.e., demographic and problem characteristics), the preparedness for departure and the application of aftercare services was collected by using information from the center's administration department and treatment documents.

The preparedness for departure was defined by having been on parole during the stay in the center and information about the course of departure. Adolescents who were unexpectedly suspended or released immediately by court, those who ran away or did not return from parole and adolescents that were removed due to problematic behavior were classified as premature care leavers. Adolescents were also classified as unprepared for departure if the treatment documents indicated that the moment of departure was unknown shortly before leaving the center.

Aftercare services were defined as the services and professional support (e.g., outpatient mental health care, step-down services, community support) that adolescents received after leaving the secure center. These services could be related to the residential care program (such as the MST/ FFT therapy for adolescents in de ''Do What Works" project) or be provided by an independent care agency. Adolescents who received MST or FFT or other types of non-residential care (e.g., foster care and care projects abroad) after their departure were classified are receiving aftercare.

Judicial Documentation System (JDS)

Follow-up information on arrests and convictions was obtained by coding information from the Judicial Documentation System (JDS) of the Dutch Ministry of Justice. The digital database JD-online was used, which contains information of individuals who have come into contact with the law. Information about the criminal offences in the year following departure was collected for all youth and combined into one dichotomous variable indicating whether the adolescent showed recidivism or not.

8.2.4 Data analysis

In describing the outcomes at the moment of the follow-up, this information (T_4) will be compared to the data of the adolescents before their admission to the center (T_1) by using paired t-tests and, if applicable, the Wilcoxon signed-rank test. For the dichotomous variables the McNemar test was used, which is a method used on nominal data of two related groups to compare the proportion of subjects who changed their response in one direction to those who changed in the opposite direction (Field, 2009). The threshold for significance in these analyses was set at $\alpha \leq .05$.

To determine which factors at departure and after departure were associated with outcomes, we first conducted univariate analyses on relationships between client factors (i.e., background characteristics), care factors (e.g., premature departure and aftercare services) and recidivism. We applied a threshold for significance at $\alpha \leq .10$. After that, the factors that were expected to be important in relation to recidivism (i.e., the receipt of aftercare, preparedness for departure, and living arrangements at departure) and background factors that were associated with recidivism were applied in a multiple logistic regression analysis. We applied a "forced entry method" to explain which predictors account for recidivism one year after departure.

8.3 Results

8.3.1 Problem behavior and quality of life

Self-reported delinquent behavior and substance abuse in the year before admission and the year following departure from the secure care center are shown in Table 8.2.

Table 8.2
Problem behavior at admission and follow-up (n=24)

Problem behavior in last 12 months	Admission (T_1)		Follow-up (T_4)	
	M	*SD*	*M*	*SD*
Delinquency score (seriousness x frequency)	16.3	25.7	6.5	8.7
Type of delinquent behavior	*N*	*%*	*N*	*%*
Offences against property	16	66.7	9	37.5
Aggressive/ violent offences	15	62.5	14	58.3
Vandalism/ public order offences	15	62.5	11	45.8
Possession of a weapon	5	20.8	2	8.3
Drug offences	8	33.3	4	16.7
Minor offences	16	66.7	13	54.2
Alcohol use ≥ four days a week	6	25.0	4	16.7
Soft drugs use ≥ four days a week	10	41.7	8	33.3
Hard drugs use > two days a week	4	16.7	2	8.3

Note. The delinquency scores ranges from 0 to 88 at T_1 and from 0 to 29 at T_4. Differences in delinquency score have been calculated by using the Wilcoxon signed-rank test.

The adolescents do not show a significant difference in their delinquency score from admission to follow-up (T = 64, p = .074, r = 0.37). The results point to a decline in offences against property from the period before admission to one year after departure, although this is not significant (McNemar: p = .065). Despite the fact that there is no significant difference in problematic substance use, there is a trend in substance use problems to decline from the period before admission to the follow-up period.

The subjective Quality of Life domain scores at admission and follow-up are shown in Table 8.3. One year after departure, the adolescents are significantly less satisfied about their leisure time and social participation, $t(25)$ = -2.55, p = .017, 95% CI [-0.83, -0.09], r = .45, their financial situation, $t(25)$ = -3.00, p = .006, 95% CI [-2.13, -0.40], r = .51, and their living situation, $t(25)$ = -2.81, p = .009, 95% CI [-1.53, -0.24], r = .49, than before their admission. The adolescents are significantly more satisfied about their life at the moment of the follow-up interview than at the interview moment shortly after their admission, $t(25)$ = 3.22, p = .004, 95% CI [0.50, 2.27], r = .54. Furthermore, the adolescents report a significantly higher quality of life one year after departure compared to their situation shortly after admission, $t(24)$ = 3.12, p = .005, 95% CI [6.42, 31.66], r = .51.

Table 8.3
Subjective quality of life at T_1 and T_4 (n=26)

	T_1		T_4	
Quality of life domain	*M*	*SD*	*M*	*SD*
Leisure time and social participation*	5.84	0.65	5.38	0.84
Family	5.58	1.14	5.42[a]	0.84
Finances**	4.87	1.43	3.60	1.77
Living arrangements**	5.61	0.81	4.73	1.45
Safety	6.00	0.94	6.00	0.66
Health	5.91	0.83	5.83[a]	0.67
*Total subjective quality of life score (LSS)****	*5.61*	*0.66*	*4.99[b]*	*0.74*
Satisfaction about life [at moment interview]**	3.62	1.75	5.00	1.65
Cantril's ladder**	48.5	28.0	65.4[a]	20.5

Note. All scores, except Cantril's ladder, are based on a 1-7 scale with 1 indicating low and 7 indicating high quality of life. Cantril's ladder is based on a 100 mm scale.
[a]n = 25.[b]n = 24.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Information on the objective quality of life indicators is shown in Table 8.4.

Table 8.4
Objective quality of life indicators at T_1 and T_4 (n=26)

	T_1		T_4	
Quality of life indicator	N_{yes}	$\%_{yes}$	N_{yes}	$\%_{yes}$
Living arrangements				
With (one of the) parents	13	50.0	12	46.4
Residential care center (including secure care)	4	15.4	9	34.6
With (foster) family	3	11.5	1	3.8
Independent (alone, with others or under supervision)	5	19.1	3	11.5
Unstable/ homeless	1	3.8	0	0
Main daily activities[a]				
Education	8	30.8	11	42.3
Work	3	11.5	4	15.4
Activities center / work project/ sheltered workshop	0	0	3	11.4
Unstructured (e.g., going out with friends, dealing drugs)	7	26.9	6	23.1
Hobbies (e.g., sport)	7	26.9	2	7.7
Having a paid job	7	26.9	6	23.1
Having financial depts	6	23.1	8	30.8
Daily or weekly family contact	22	84.6	20	76.9
Having a helping friend	26	100	25	96.2

Note. Differences in living arrangements are analyzed by comparing the situation living with parents versus not living with parents. The main daily activities are studied by comparing structured activities (e.g., education, work and activities at a center or project) with unstructured activities (e.g., unstructured activities and hobbies).
[a]n = 25 for T_1 group.

Since adolescents in residential care may have less chance in showing unstructured daily activities at follow-up, we checked for an association between having structured activities and being in residential care. The Fisher's Exact test showed no significant

association between these activities and being in residential care, Fisher: p (one-tailed) = .37, but the results do indicate that adolescents in residential care are less likely to show unstructured activities than those not in residential care, *OR*= 0.48, 95% CI [0.07, 3.09]. The results of the McNemar test show no significant differences in objective quality of life indicators for the 26 adolescents from admission to follow-up. There was, however, a trend for the daily activities to be more structured at the follow-up than before admission (McNemar: p = .065).

Besides the information on living arrangements for the 26 adolescents at T_1 and T_4, there was information about the follow-up situation of 78 other adolescents. The living arrangements of these 78 and 26 adolescents together, representing 47% of the total group of 220 young people, are shown in Table 8.5. The table also includes information on living arrangements of almost all the 220 adolescents at admission and follow-up (for respectively six (3%) and nine adolescents (4%) this was unknown), because it gives more insight into the adolescents' situation from admission to follow-up.

Table 8.5
Living arrangements at admission (n=215), departure (n=211) and follow-up (n=104)

	Admission (n = 215)		Departure (n = 211)		Follow-up (n = 104)	
Living arrangements	*N*	*%*	*N*	*%*	*N*	*%*
With (one of the) parents	110	51.2	95	45.0	45	43.3
Residential care center (including secure care)	73	34.0	82	38.9	32	30.8
Independent**	7	3.3	18	19.0	17	16.3
Unstable/ homeless	3	1.4	0	0	4	3.8
With (foster) family*	22	10.2	12	5.7	3	2.9
Adult detention facility	0	0	0	0	3	2.9
Other type of care (e.g., foreign care projects)	0	0	4	1.9	0	0

Note. Differences from admission to follow-up have been calculated for n = 98 by using the Cochran's Q test for living with parents, in residential care, independent or with foster family.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

As can be seen in Table 8.5, many youth live at home with their parents at follow-up and this proportion seems to be quite consistent from admission to follow-up. Around a third (still) stays in residential care facilities from admission to follow-up. Less than a fifth lives independently (alone, with others or under supervision) at follow-up. The Cochran's Q test shows a significant difference in independent living, $\chi^2(2) = 19.1$, p = .00, and in living with foster family, $\chi^2(2) = 6.8$, p = .04. Post hoc analyses by McNemar tests show that adolescents are significantly more likely to live independently at follow-up than at admission (McNemar: p = .00). The post hoc analyses on living with foster family did not show significant differences. However, Table 8.5 shows a trend of decline for living with (foster) family from admission to follow-up.

8.3.2 Functioning of the social context

The scores on the supervision scales of parents from the SRDC interview are shown in Table 8.6.

Table 8.6
Supervision behavior of parents at T_1 and T_4 (n=25)

Supervision behavior of parents		T_1[a]		T_4[b]	
		M	*SD*	*M*	*SD*
Openness to parents	mother	15.5	3.87	16.7	4.73
	father	15.4	4.15	14.5	3.74
Parental control	mother***	13.9	5.53	10.9	5.86
	father	12.8	5.36	10.7	5.42
Inquiring behavior of parents	mother	13.3	3.97	14.1	4.11
	father*	13.7	3.87	10.3	4.87
Passive monitoring	mother	10.8	2.71	11.7[c]	2.21
	father	10.1	2.86	9.53	3.28

Note. Openness, control and inquiring behavior scores range from 5 (low rate of supervision) to 25 (high rate of supervision). Passive monitoring score range from 5 (low) to 15 (high).
[a]*n* = 23 scores mother, *n* = 17 scores father. [b]*n* = 22 scores mother, *n* = 17 scores father. [c]*n* = 23.
*$p \leq .05$. ***$p \leq .001$.

According to the adolescents, there are few changes in the supervision behavior of parents from admission to follow-up. Only the inquiring behavior of fathers shows a significant decline, $t(14) = -2.36$, $p = .034$, CI [-5.99, -0.28], $r = .53$, and this is also true for the parental control of mothers ($T = 5$, $p = .022$, $r = .34$). Furthermore, the adolescents report to be more open to their mothers and mothers tend to be more inquiring and passively monitoring the adolescents' leisure time activities.

The change in intensity of contacts with friends and in the contact with delinquent friends from admission to follow-up is shown in Table 8.7.

Table 8.7
Change in contacts with friends (n=24)

Contact with friends	T_1		T_4	
	N_{yes}	$\%_{yes}$	N_{yes}	$\%_{yes}$
On weekdays (Mo. – Thurs.)				
Most days or every day	20	83.3	17	70.8
(almost) all afternoon and evening	16	66.7	15[a]	62.5
In weekend (Fri. – Sun.)				
Mostly all days	22	91.7	17	70.8
(almost) all afternoon and evening	21[a]	87.5	18	75.0
	M	*SD*	*M*	*SD*
Delinquent behavior friends*	4.38	3.52	2.71	3.03

Note. *n* = 24, because one adolescent indicated that he had no friends at follow-up. Delinquent friends' scores range from 0 (no delinquent friends) to 18 (only delinquent friends).
[a]*n* = 23.
*$p \leq .05$.

The McNemar tests show no significant differences in the intensity of contact with friends before admission and one year after departure. The adolescents do report significant less delinquent behavior by friends from admission to follow-up, $t(23) = 2.50$, $p = .02$, 95% CI [.29, 3.05], $r = .46$.

8.3.3 Preparation for departure and aftercare services

Almost half (47%) of the 34 adolescents that were interviewed with the aftercare interview report that the moment of departure was known shortly – i.e., zero to seven days – before their departure. For eight adolescents (24%) this moment was known one to two weeks before they actually left the secure care center. For the other adolescents, the moment of departure was known for two weeks or earlier before leaving the center. Nine adolescents (27%) think that they have left the center in time; six adolescents (18%) considered it to be too early and somewhat more than half (53%) thinks that they had left the center too late. Most of the adolescent (65%) are satisfied about the process of their departure from the secure care facility.

While five adolescents (15%) did not receive support in the year following their departure from the center, the other 29 adolescents (85%) reported that they did receive support. At the moment of the interview, most of the adolescents (71%) indicated that they (still) received support by someone: 63% of these 24 adolescents received this support since they departed. According to almost half of the 24 adolescents who received support at follow-up (46%), this support was often provided by the youth's family guardian of the Youth Care Agency. Three of the 24 adolescents (13%) indicated that they received non-professional support from one or more family members.

The frequency of the social support at follow-up ranges from 0 to 5 times per month with a mean of 2,4 contacts every month. Half of the 24 adolescents who receive support at follow-up think that the frequency of the support is sufficient; four adolescents (17%) indicate that it is not frequent enough and three adolescents (13%) think that the contact is too frequent. In 13 of the 24 cases (54%) the support is aimed at both the adolescents and their parents, although in three cases there seems to be relatively little support for parents. In nine of the 24 cases (38%) the support is only aimed at the adolescents and in one case (4%) the support is aimed at the parents. The types of support that the adolescents receive are shown in Table 8.8.

Table 8.8
Social support at follow-up (n=24)

Type of social support at follow-up	*N*	*%*
Material/ practical (e.g., accommodation, financial)	14	58.3
In contact with parents and family	13	54.2
School/ education	13	54.2
Control/ supervision on youth's behavior	10	41.7
Stimulating leisure time activities	7	29.2
During transition from care	7	20.6
Work/ employment	6	25.0
Building social contacts	5	20.8

The support often consists of having conversations, which is indicated by 20 adolescents (83%). Eight adolescents (33%) indicate that the care worker is mediating in contacts with other people, followed by doing activities with the care worker (21%). Three adolescents (13%) report that they do exercises or make assignments.

8.3.4 Delinquent behavior at follow-up

According to the official numbers, 74 of the 199 young people (37%) who had left the secure residential center for at least a year showed recidivism in the year following their departure. For the subgroup of 34 adolescents that was interviewed at follow-up, twelve adolescents (35%) had been in contact with the law within one year after their departure. According to the self-report delinquency information that was available for 31 of these 34 adolescents, 81% committed offences in the year after departure.

In exploring the univariate relationships of client and care factors with recidivism, several significant relationships emerge (see Table 8.9). Regarding the adolescents' background characteristics, boys are significantly more likely to show recidivism than girls, and in line with this, adolescents with a penal measure (mostly boys) are also more likely to show recidivism than adolescents placed by a civil measure. Adolescents living close by the secure care center at admission (i.e., regional placements) are more likely to show recidivism than adolescents living further away. Also, being older at the moment of admission and the presence of delinquent behavior prior to admission are significantly positively associated with recidivism one year after departure.

Table 8.9
Univariate analyses results between covariates and recidivism (n=199)

Variable	*z / t*	*r*	*95% CI*
Age at admission	-2.64**	.19	[-1.96, 1.96]
Length of stay in the center (months)	1.07	.08	[-.034, .115]
	χ^2	*OR*	
Sex (male vs female)	18.8***	4.87	[2.29, 10.35]
Ethnicity (Dutch vs non-Dutch)	0.20	0.87	[0.48, 1.58]
Measure of placement (penal vs civil)	4.95*	2.06	[1.08, 3.93]
Place of origin (regional vs non-regional)	7.37**	2.27	[1.25, 4.13]
Care history (yes vs no)	0.14	1.23	[0.40, 3.76]
Living with (foster)parents before admission (yes vs no)	0.03	0.95	[0.54, 1.70]
Externalizing behavior problems (yes vs no)	0.49	1.40	[0.55, 3.57]
Internalizing behavior problems (yes vs no)	0.00	1.02	[0.56, 1.85]
Delinquent behavior (yes vs no)	17.5***	5.58	[2.35, 13.28]
Premature departure (yes vs no)	0.98	0.73	[0.39, 1.36]
Parole during secure care (yes vs no)	0.87	0.75	[0.40, 1.38]
Receipt of aftercare services (yes vs no)	0.07	1.09	[0.58, 2.05]

Note. CI = Confidence Interval. Significant associations between recidivism and age at admission have been calculated by using the Mann-Whitney test and associations between recidivism and duration of stay by an unpaired t-test.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

On the basis of these univariate analyses, delinquent behavior, region of placement and age at admission are included as predictors in the regression model, because these background characteristics are the most relevant with regard to recidivism. The three care factors are also included, because those are the variables of interest. The results of the logistic regression-analysis are shown in Table 8.10.

Table 8.10
Logistic regression analysis of predictors for recidivism (n=199)

	Model 1[a]				Model 2[b]			
Predictor	*β*	*SE*	*OR*	*95% CI*	*β*	*SE*	*OR*	*95% CI*
Constant	-0.52***	0.15			-0.42**	0.15		
Receipt of aftercare	0.04	0.36	1.04	[0.51, 2.11]	-0.48	0.43	0.62	[0.26, 1.44]
Premature departure	-0.39	0.35	1.24	[0.34, 1.35]	-0.47	0.41	0.63	[0.28, 1.40]
Parole during care	-0.39	0.33	0.68	[0.35, 1.30]	-0.33	0.40	0.72	[0.33, 1.57]
Delinquent behavior					1.61***	0.47	5.00	[2.01, 12.44]
Place of origin					0.92*	0.37	2.51	[1.21, 5.18]
Age at admission					0.30*	0.31	1.35	[1.05, 1.75]

Note. SE = Standard Error. OR = Odds Ratio. CI = Confidence Interval.
[a]R^2 = .009 (Hosmer & Lemeshow), .01 (Cox & Snell), .02 (Nagelkerke). Model $\chi^2(1) = 2.42$, $p = .49$.
[b]R^2 = .14 (Hosmer & Lemeshow), .17 (Cox & Snell), .23 (Nagelkerke). Model $\chi^2(1) = 33.16$, $p = .000$.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Table 8.10 shows that the adolescents' characteristics (model 2) and none of the three care factors are significant predictors of recidivism. Delinquent behavior prior to admission is the most important predictor for recidivism. Older adolescents showing delinquent behavior and living close by the center prior to admission are significantly more likely to show delinquent behavior during the follow-up than younger adolescents who do not show delinquent behavior and live further away prior to admission.

8.4 Discussion

Overall, the results from the interviews with adolescents one year after leaving secure residential care indicate that the outcomes for this group are moderately positive instead of poor. The results show no significant differences in self-reported delinquent behavior or substance use problems from admission to follow-up, but do indicate an overall decrease in both delinquency and substance abuse. This finding corresponds with results of other studies showing that delinquent behavior of adolescents can be reduced by residential care, but that the achieved reduction (9-12%) is relatively small (Grietens & Hellinckx, 2004; Lipsey & Wilson, 1998). It also corresponds with research on substance abuse treatment with adolescents in a residential care context which indicates that substance abuse can be reduced, but that continued substance use is common (Garner, Godley, Funk, Dennis, & Godley, 2007).

The adolescents are significantly less satisfied about their financial situation, leisure time, social participation and living arrangements one year after departure than before admission. The results on these quality of life domains correspond to the finding that adolescents who have left secure residential care regularly have problems with school, employment or in spending their leisure time (Bullis & Yovanoff, 2006; Bullock et al., 1998; Van der Ploeg & Scholte, 2003). The adolescents report a significantly lower quality of life at follow-up than at admission on the basis of different life domains, but also report to have a significantly higher overall quality of life at follow-up compared to the moment shortly after admission to the center. This inconsistency can be explained by the fact that the questions regarding their overall quality of life are applicable to their situation shortly after admission rather than their situation before admission, which is the case for the quality of life domains. It is very likely that the adolescents disagreed with their (often involuntary) placement in the center (cf. DiGiuseppe et al., 1996; Englebrecht et al., 2008), and therefore, are less satisfied about their situation shortly after admission than their situation before their admission.

Around a third of the adolescents stay in residential care and this number seems to be quite consistent from admission to follow-up. This result is in line with our expectation that a third would live in residential care facilities one year after

departure. We also expected that about a third of the group would live at home with their parents or family and that a third would live independently. Almost half of the young people in our sample are living with their parents however, which supports the finding that the parents or family are an important social support network for the young people (cf. Courtney & Dworsky, 2006). Furthermore, relatively few adolescents live independently one year after secure residential care, despite the fact that most of the adolescent in the sample are 16 year or older at departure and the finding in other studies that a majority of young people leaving care moves to independence at 16-18 years of age (Stein, 2006b). Our findings do show a slight increase of adolescents living independently from admission to follow-up. Furthermore, the number of adolescents living independently at follow-up can be an underestimation because there was information about the living arrangements for somewhat less than half of our sample.

With regard to the functioning of the social context (i.e., family and friends), we have found indications for small improvements from admission to follow-up. The adolescents report few changes in the supervision behavior of their parents, which corresponds with the finding of Bullock et al. (1998). Even though, we found a trend in the data for fathers to show less and for mothers to show more monitoring behavior regarding the leisure time activities of their child. The adolescents do report that they have significantly less delinquent friends at follow-up than before their admission. These results might partly be explained by the fact that the adolescents who stay in residential care at follow-up have fewer opportunities to have delinquent friends. Another possibility is that the adolescents learned positive social skills during and after their stay in the center (Slot & Spanjaard, 1999), making them more resistant to delinquent friends. However, this is a hypothesis that should be tested in subsequent research.

While we expected that adolescents would be poorly prepared for leaving care, most of the interviewed adolescents indicate that they are satisfied about the process of their departure from the secure care facility. However, for most of the adolescents the moment of departure was known quite shortly – i.e., zero to fourteen days – before their departure. We also expected that few adolescents would receive aftercare support and found, however, that almost all adolescents report to have received professional and unprofessional support in the year following their departure. One year after departure, most young people (still) receive support.

More than a third (37%) of all the adolescents who had left the secure residential center for at least a year showed recidivism in the year following their departure and this number lies within the low range of recidivism rates that are found in other studies (Bullis & Yovanoff, 2002; Gottfredson & Barton, 1993; Greenwood & Turner, 1993; Van Dam, 2005; Van der Heiden-Attema & Wartna, 2000). While the official recidivism rate is almost the same (35%) for the small group of adolescents that is interviewed at follow-up, their self-reported recidivism rate is much higher (81%).

This corresponds with the finding that official numbers of delinquent behavior might be an underestimation of the actual delinquent behavior (cf. Van der Laan & Blom, 2006a).

In contrast to our expectations, prematurely departing from secure care and receiving aftercare services are not associated with outcomes in terms of recidivism one year after departure. Only individual characteristics of the adolescents could predict recidivism at follow-up. Especially delinquent behavior prior to admission is an important predictor of recidivism. This finding is consistent with findings in other studies, in which delinquent behavior prior to admission seems to be one of the most important factors associated with recidivism (Abrams et al., 2008; Cottle et al., 2001).

There are several limitations to consider when interpreting the results reported here. First, an important part of the results is based on a relatively small sample of adolescents, because almost half of the adolescents could not be contacted one year after their departure from secure care, and almost a third refused to participate. Therefore, the results with regard to self-reported behavior problems, quality of life, living conditions, and the functioning of the social context may not generalize to adolescents who did not participate in the follow-up interviews. Indeed, adolescents that did participate seem to function relatively better than adolescents who could not be contacted. So, the moderately positive outcomes might not be applicable to the adolescents that were not contacted at follow-up.

A second limitation is applicable to the instruments that were used. In looking at the association between the preparedness for departure and aftercare with outcomes, we used information from the center. Some of the information about the transition process might have been missing from the treatment files, because the moment of departure is often known quite shortly before the moment of departure. To determine the receipt of aftercare services, we used information from the moment directly after departure. Therefore, we do not know whether the adolescents actually received aftercare services in practice and if so, how these services were applied in practice.

Furthermore, some instruments that have been used might not be relevant for all the adolescents in the study. For example, the scales on monitoring behavior of parents seem to be especially suitable for younger people, who are not living separately from their parents. The information that is gathered with some of the instruments is also quite limited. For example, the information of the SRDC interview about the functioning of the parents only provides information about the supervision behavior of parents. It does not indicate the quality of contact between the adolescents and their parents, while that seems to be an important factor in this context (cf. Courtney & Dworsky, 2006; Geurts, 2010).

Despite these limitations, our findings do give some insight into the youths' quality of life and social situation after departing from secure residential care. To our

knowledge, our study is the first prospective longitudinal study that focuses on the problem behavior, quality of life, social situation and the transition process of adolescents who have left secure residential care. The finding that moderately positive outcomes can be achieved for some young people and the fact that adolescents receive support after leaving secure care is encouraging, although we still know too little about how these outcomes are achieved and whether the quality of support after care is sufficient to handle the often serious problems that are present.