CHAPTER 7

Summary and general discussion

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Transsexualism appears to be an old phenomenon and sex reassignment as a treatment for individuals with this diagnosis has gone through major development since it has been identified. Over the past three decades, advancement in medical techniques has enabled professionals to meet transsexuals with the realization of their wish for sex reassignment (SR). Access to treatment, cost of treatment, legal matters, and the social attitudes towards gender variant people have all been evolved. By now, SR has been investigated in many, largely retrospective, follow-up studies, and has been found to be effective in patients with severe gender identity disorder (GID). However, SR is no guarantee to a trouble-free live. To clarify the benefits and limitations of SR with further detail requires follow-up studies with a prospective design. This particular type of research is necessary to distinguish between specific areas of functioning that improve, and which decline or need special care, as a consequence of SR. In addition, differences in outcomes of SR between various subgroups of transsexuals and between male-to-female transsexuals (MFs) and female-to-male transsexuals (FMs) have not yet been substantiated with prospective data in large samples. In view of the irreversibility of SR, more conclusive evidence on how to prevent postoperative regrets is imperative. Particularly, identification of distinctive risk factors of poor postoperative functioning necessitates prospective research. By far the least explored and most controversial domain with respect to SR is early (hormone) treatment with adolescent transsexuals. Clearly, thorough evaluation of early treatment is compelling, not only to arrive at evidence-based practice, but also at evidence-based criteria for contraindications of early treatment. The prospective studies that generated from these matters are described in this dissertation and aimed to contribute to the advancement of scientific knowledge and evidence regarding these issues. Below we summarize and discuss our main findings of the studies.

Sex reassignment in adolescent transsexuals

Chapter two describes the results of our study on evaluation of early treatment with adolescent transsexuals. The clinically relevant but separate decision not to proceed with SR in other adolescents with gender identity problems was also evaluated. As far as the treated adolescents are concerned, similar results were obtained as in a previous, retrospective, study (Cohen-Kettenis and van Goozen, 1997). First and foremost, the current

data indicated that the gender dysphoria had decreased to such an extent that this primary symptom of the gender conflict was absent after treatment. This is the main goal of SR. The fact that three observers independently evaluated the adolescents' appearance to match their new gender role, corresponds with the adolescents' greater satisfaction with their overall appearance and their body characteristics after SR. Furthermore, these findings support the impression of the first study that adolescents could more easily pass in the new gender role. Just as in the first study, postoperatively the adolescents functioned quite well socially, and scored in the normal range with respect to psychological functioning. Above all, no one expressed feelings of regret concerning the decision to undergo SR. Compared with 141 adult Dutch transsexuals the adolescents fared better socially and psychologically (Kuiper and Cohen-Kettenis, 1988). Findings from the present study substantiate a few follow-up studies with adults, concluding that unfavorable postoperative outcomes are more related to a late start rather than an early one (for a review, see Cohen-Kettenis and Gooren, 1999). However, the unequivocal positive outcomes may be partially attributable to the strict criteria for treatment eligibility for adolescent SR applicants, since those patients selected for early treatment belong to the best functioning transsexuals. In addition, most of the transsexuals in our study were FMs. We know from other studies that postoperatively, FMs fare in many respects better than MFs (Kockott and Fahrner, 1988; Kuiper, 1991; Kuiper and Cohen-Kettenis, 1988, 1992; Pfäfflin and Junge, 1998; Verschoor and Poortinga, 1988). Still, it seems reasonable to conclude that careful diagnosis and strict criteria are necessary and sufficient to justify hormone treatment (and thereby a start of SR) in well-functioning adolescents, even if they are between 16 and 18 years.

The second aim of the study was to examine whether the decision not to proceed with the SR procedure for some applicants had been a sensible one. Without SR, the nontreated group showed some improvement too, but they also showed a more dysfunctional psychological profile, at pretest as well as at follow-up. In general, the nontreated subjects functioned worse than the treated subjects at follow-up. More than half of the nontreated group had been given a psychiatric diagnosis at application and/or follow-up. The most likely explanation of the intricate finding that the nontreated group reported less gender dysphoria at follow-up without SR is the probability that the intensity and quality of the gender dysphoria at pretest had been different from the treated group. Indeed, at the time of application the variation in scores on the gender dysphoria scale (as

reflected by the standard deviations) was much larger in the nontreated group. Moreover, some clinical reports suggest that there was far more gender confusion and uncertainty about SR in the nontreated group. Not to allow these patients to start medical treatment seems to have been good decision, in spite of the fact that some of the nontreated patients may actually have had GID.

In chapter three we focused on the effects of SR on the level of psychological functioning of adolescent transsexuals, as measured with the Rorschach Comprehensive System. The rationale for this study was prompted by an alternative explanation for the fact that the often-assumed association between psychopathology and transsexualism has hardly ever been found. Some clinicians, such as Lothstein (1984), argued that transsexuals suffer from borderline personality pathology. The otherwise intact reality testing of these patients supposedly becomes impaired only in unstructured situations. Subsequently, psychological deterioration resulting from SR might not become apparent with structured questionnaires. Both in the retrospective and prospective study, psychological functioning of the adolescents was measured by means of well-known reliable and valid self-report personality questionnaires. To check the validity of our previous findings and conclusions regarding the psychological stability, we investigated their level of psychological functioning making use of the Rorschach test. This instrument is thought to be less subject to influences of conscious steering in responding. The results suggested psychological stability over time. Therefore, the fear that the adolescents' psychological functioning would deteriorate as a consequence of an early start of the SR procedure is not substantiated by the Rorschach findings. Rather, aside from our findings being consistent with questionnaire data from earlier studies, the Rorschach data may point to some improvement in reality testing.

Transsexual subtypes

Whether transsexuals can be validly subdivided into subtypes on the basis of sexual orientation and whether this distinction revealed differences in postoperative functioning was explored in chapter four. Adolescent as well as adult transsexuals participated in this study. Differences between the two subtypes of transsexuals were also examined between MFs and FMs, as this latter group has hardly been studied. Our data support some earlier

assessment findings that homosexual transsexuals have a stronger cross-gender identity in childhood, apply for SR at a younger age, report less sexual arousal while cross-dressing, and are or have been less often married. At application, we further found that the appearance of the homosexuals was already considered to be more compatible with the new, desired gender. In addition, they psychologically functioned better than the *non*homosexual transsexuals. Despite their more cross-gendered childhood however, the homosexual transsexuals did not differ in the intensity of their gender dysphoria and body dissatisfaction from the *non*homosexual transsexuals. These findings suggest that the two subtypes arrive at the request for SR along different developmental routes. These pathways apparently do not imply less severe gender dysphoria for the *non*homosexuals, but they do come to this decision much later. On the basis of the characteristics on which the subtypes did differ, the road along which the *non*homosexual subtype evolves the gender identity conflict is most likely to be accompanied with more obstacles. This might explain the presence of more psychological problems compared with the homosexual group at the time they applied for SR, and, the contrasting disappearance of many differences in psychological functioning at follow-up. Nevertheless, the two individuals who expressed regrets during and after SR were *non*homosexual transsexuals.

Our findings led us to conclude that the distinction between subtypes of transsexuals on the basis of sexual orientation is theoretically and clinically meaningful. Considering the fact that both groups indicated an absence of gender dysphoria and functioned well in several areas of life after treatment, a *non*homosexual preference is not necessarily a contraindication for SR. However, taking into account that the *non*homosexuals are psychologically more vulnerable than the homosexuals, especially before treatment, they may require additional guidance during treatment.

The findings further indicated that the distinction between subtypes is not manifested entirely similar in MFs and FMs. For example, the MF *non*homosexual subtype primarily generated two interaction effects that were found in the study: the first by their relatively high age, the other by their unfavorable appearance. No differences were found between *non*homosexual and homosexual FMs on these two characteristics. Whereas differences were found between the MF subtypes in being (or having been) married, and in sexual arousal while cross-dressing, no such differences were revealed between the FM subtypes.

These effects may very well be manifestations of more similar routes to SR between homo- and *non*homosexual FM's than between homo- and *non*homosexual MFs. This intricate finding however, remains to be elucidated in future research.

Predictors of the course and outcomes of sex reassignment

In chapter five we described a study on predictors of the course and outcomes of SR. First, we investigated which factors at assessment determined whether applicants were allowed to start the SR procedure. We found that eligibility for SR was largely based upon the factors gender dysphoria, psychological stability, and physical appearance.

Second, we aimed to identify predictors of potential drop-outs of hormone treatment. Our data showed that transsexuals are more at risk to discontinue hormone treatment when they are biological men, show more psychopathology, more GID symptoms in childhood, yet less symptoms of gender dysphoria at application. As many studies have found FMs to fare better than MFs in most respects (Kockott and Fahrner, 1988; Kuiper, 1991; Kuiper and Cohen-Kettenis, 1988, 1992; Pfäfflin and Junge, 1998; Verschoor and Poortinga, 1988), the greater vulnerability of MFs to drop out of treatment, is comprehensible. At first sight, a somewhat more puzzling finding is the association between having more GID symptoms in childhood and dropping out of treatment. It must be noted though, that it is the combination of factors that increases the probability to drop out of treatment before surgery has taken place. In particular, inconsistencies in reporting more GID symptoms in childhood, but less gender dysphoria at assessment should alert the clinician.

The third area of prediction was directed at clarifying which factors determine the timely or slowly duration of the second phase of the SR procedure. Our findings implied that MF applicants reporting less negativism, are more likely to complete the second phase "on time" than other applicants. The assumption that unexpected problems would possibly be the main reason for a longer duration appeared to be incorrect. So far, an "on time" or "slow" completion of the SR does not necessarily seem to indicate a "favorable" or "unfavorable" quality of the duration of the SR procedure. Research examining the outcomes of SR between these two groups, in terms of their general and psychological functioning, would provide more insight in this matter. This was one of the aims of the final study described in this thesis (see the next section below).

Finally, we investigated which factors could predict postoperative functioning and

treatment satisfaction. The data show that postoperative functioning can be predicted on the basis of sexual orientation, psychological functioning, and body image. Individuals with a *non*homosexual orientation, high psychopathology scores, and strong dissatisfaction with secondary sex characteristics at assessment, are more likely to function poorly and report more dissatisfaction with SR after treatment. It is of interest that psychological functioning turned out to be a predictor of eligibility for SR as well as of postoperative functioning and treatment satisfaction. This signifies that clinicians participating in this study recognized the impact of psychological dysfunction of the applicant for outcomes of SR, when deciding upon referral for hormone treatment. This finding substantiates the results of one study that also identified psychological instability as a risk factor for postoperative functioning (Kuiper and Cohen-Kettenis, 1998).

Apart from psychological instability and dissatisfaction with secondary sex characteristics, *non*homosexual applicants were found to be more at risk for relatively poor postoperative functioning. This finding supports the outcome of a few studies that revealed more regrets after SR in individuals with this sexual preference (Blanchard et al., 1989; Landén et al., 1998; Smith et al., this volume).

Dissatisfaction with secondary sex characteristics at assessment was another factor that predicted an unfavorable outcome. This finding can be explained in various ways. Either the appearance of the sex characteristics negatively affected the mood or psychological stability of the individuals throughout treatment, or it negatively affected the way persons were actually treated by the environment, or both of these explanations applied. At assessment, clinicians rightly took the physical appearance of the applicant into account as a significant factor for postoperative functioning.

In conclusion, some of the potential risk factors from the literature or from retrospective studies indeed appeared to be important for predicting the course and outcomes of SR. Furthermore, factors were found that could assist clinicians identifying individuals who might be at risk for poor outcomes during or after treatment (see the section on clinical implications below).

Sex reassignment in adult transsexuals

The first aim of our study on outcomes of SR in adult transsexuals was to investigate whether they actually improved in several important areas of functioning, as a

consequence of SR. The main symptom for which the patients had requested treatment, gender dysphoria, had improved to such an extent that it had disappeared after treatment, which is the primary goal of SR. Improvement was also found in satisfaction of the patients with their sex characteristics to the degree that they were content with these features. In addition, according to observers, the appearance of the transsexuals had become more compatible with the new gender. Psychological functioning of the group had also improved after SR. Compared with the data on psychological functioning from the retrospective follow-up study of Dutch transsexuals (Kuiper, 1991), this sample of transsexuals treated at the same gender clinic was found to psychologically function better at follow-up. It is interesting to note that, compared with Dutch normative data, the current sample of transsexuals already appeared to psychologically function reasonably well at application. The transsexuals already strongly identified with the new gender psychologically before treatment had begun. Conversely, with respect to feelings of physical masculinity or femininity, a significant improvement was found at follow-up.

In summary then, as a group the transsexuals had improved in all the measured areas of functioning at follow-up. Postoperatively, most of the subjects also functioned quite well, socially, sexually, and in the new gender role. Above all, the vast majority of the group expressed no feelings of regret about their SR. So far, one to four years after surgery, SR appeared to be therapeutic and beneficial. However, SR did not prove to be successful for all of our participants. In particular, one MF transsexual expressed strong regret and another some feelings of regret, during and after treatment. (Both were *non*homosexual MFs, see the section on transsexual subtypes above). It is important to be aware of the fact that even the person who experienced regret to the extent that she had resumed life in the biological gender role as a man, assigned these feelings to the adverse reactions from society.

The second purpose of the study was to determine whether differences could be recognized between MFs and FMs in postoperative functioning. Although we compared these two groups in the study of transsexual subtypes as well, in the current investigation other important areas of functioning were more extensively examined.

Most of the differences we found between the sexes are in agreement with previous studies that concluded FMs to fare better than MFs in most respects. With regard to gender dysphoria, physical appearance, and psychological functioning, the FMs had

improved in these areas even more than MFs had. Postoperatively, FMs further turned out to socially function better, feel more supported and less confronted with adverse reactions from others, and also reported a better ability to pass and function in the new gender role. They even expressed a more fulfilling sexual life than MFs, despite obvious limitations. FMs did seem to feel uneasy about the fact that many of them did not have a penis (yet), as they showed less increase in satisfaction than MFs with their primary sex characteristics. In contrast with these conclusively favorable findings in FMs, is the greater reported satisfaction of the MFs than of the FMs with surgical results. Discontent of FMs with these results was primarily due to scars resulting from breast removal or to functional problems of the penis.

The final focus of the study was to examine whether there are differences in outcomes of SR between transsexuals who had completed the second phase timely or slowly. The results revealed no differences at all between the two groups at follow-up. We therefore concluded that the duration of this phase is no indication of a positive or negative quality of this part of the SR procedure, at least not as measured in this sample.

To summarize, the outcomes of this study substantiate the conclusion from retrospective follow-up studies that SR in adults is indeed effective. Most transsexuals accomplish to realize the gender role transformation successfully. However, clinicians need to be alert for some applicants who are not good candidates for SR. These individuals may require additional therapeutic support to unravel whether surgery will enhance their well-being in the new gender role. For some, professional care in coping with adverse consequences *after* treatment is indispensable.

Clinical implications

The results of our studies regarding the outcomes of SR in adolescent transsexuals, point to the desirability of early rather than late medical interventions. From the data it seems that prevention of false positives when following careful diagnostic procedures is feasible. However, strict diagnostic criteria and conscientious decision-making in adolescence does not preclude that rejected or withdrawing applicants will seek SR later in life. Despite evident therapeutic and beneficial outcomes of SR, referral for hormone treatment in adolescent transsexuals always needs to be accompanied with the awareness that some applicants are not good candidates for SR and probably never will be good candidates. Starting

hormone treatment before adulthood should not be considered when too many adverse factors operate simultaneously, despite the possibility that applicants may actually be transsexual. Even for experienced multidisciplinary teams, disentangling (nongender) problems, that might necessitate different or acute care, from other problems, is more complicated in problematic than in well-functioning adolescents.

From our research on predictors of the course and outcomes of SR, the "sample" of clinicians, who had diagnosed all of the subjects involved in this study, appropriately assessed the impact of some of the risk factors, yet seemed to have underestimated others. They apparently recognized the impact of the psychological functioning and the physical appearance of the applicant at application as significant factors for postoperative functioning. On the other hand, the combination of reporting more GID symptoms in childhood, but less gender dysphoria at assessment, coming from MFs in the presence of psychopathology, should alert the clinician. These inconsistencies may represent either a confusion of the applicant about their development, an (unconscious) exaggeration of the history because current feelings are not clear-cut, or a conscious effort to mislead the clinician. Besides an adjusted diagnostic procedure, these individuals may require special professional care *if* they are allowed to start hormone treatment, as they may be at risk for dropping out prematurely.

In conclusion, clinicians should take the subtype of transsexualism into account when they decide to proceed with any of the treatment phases, as a *non*homosexual preference is associated with a worse outcome of SR. Since *non*homosexual (late onset) transsexuals are more often ambivalent about SR, they might gain from adapted hormone interventions. They may, for instance, be given only antiandrogens for several months. Other options are a prolongation of the real-life experience or the requirement to live in the opposite role without hormones for some time. Moreover, when *non*homosexual transsexuals report strong dissatisfaction with their secondary sex characteristics in the presence of high psychopathology, they deserve particular attention when treatment eligibility is assessed. In spite of the fact that these factors together could not completely predict the outcomes of SR, their combination must be of primary concern in the diagnostic procedure. After all, analysis of the problems generated by these factors is what needs to be addressed before treatment, in order to assess the probability that they will result in poor postoperative functioning for the individual. These individuals may benefit from additional professional guidance, especially after SR, while adjusting to their new lives and coping with unexpected adversities. Psychotherapy may need to focus on problems resulting from the psychological instability and unfavorable physical appearance of these particular *non*homosexual transsexuals.

Research implications

In spite of the favorable outcomes of SR in our studies with adolescent transsexuals, the total number of young subjects involved remains small. Prospective studies including larger samples may reveal whether our findings are representative for all adolescents undergoing early hormone treatment. Moreover, our minimum follow-up period was one year. It goes without saying that longer periods of follow-up are needed to assess the ultimate outcomes and the stability of the beneficial effects of early SR for adolescent transsexuals.

Although the origins of transsexualism are still largely unclear, the different manifestations of homosexual and *non*homosexual subtypes of transsexualism found in this study support the suggestion that they reflect different etiologies. This clearly is a topic for future research. Studies focusing on how the cross-gender identity evolves in childhood and the development of the gender dysphoria into adulthood might bring us one step closer to the source of potential etiological differences.

The finding that the *non*homosexual transsexuals functioned reasonably well psychologically and reported an absence of gender dysphoria after SR, calls for additional prospective research. Longer periods of follow-up are needed, comparing both subtypes, to confirm the relatively positive outcomes for *non*homosexual transsexuals, since this preference turned out to be a risk factor for poor postoperative functioning. In addition, more detailed accounts of psychotherapies with these patients might elucidate specific mechanisms that contribute to psychological problems at application, on the one hand, and, to their alleviation after psychotherapy at follow-up, on the other.

From our study on transsexual subtypes, differences between homo- and *non*homosexual transsexuals were not entirely similar for MFs and FMs. These effects may be manifestations of more similar routes to SR between homo- and *non*homosexual FMs than between homo- and *non*homosexual MFs. This intricate finding however, remains to be clarified in future research.

In our investigation on predictors of the course and outcomes of SR, we were

primarily interested in factors that could have been known to clinicians before the decision to refer for SR was made. We therefore did not focus on influencing factors that operate during or after treatment, such as loss of work and family, poor surgical results, and lack of social support and professional guidance (Lundström et al., 1984; Pfäfflin, 1992; Ross and Need, 1989; Spengler, 1980). Although these factors can hardly be predicted to occur after treatment, the potential impact they may have on postoperative functioning necessitates research on these issues with more detail.

On the basis of our findings on postoperative functioning of transsexuals who completed SR timely or slowly, we conclude that the duration of the second phase is no indication of a positive or negative quality of this phase. Evidently, more research is needed, preferably a qualitative investigation, of the various motives for postponement, and perhaps for urgency of the surgical transition, to reveal potential impacts of one or the other duration on the outcomes of SR in ways that did not surface in the current study.

Despite the general favorable effects of SR on adult transsexuals, some FMs expressed discontent with surgical results. The number of FMs from whom we had obtained surgical data was small. In light of the findings that poor surgical outcomes largely accounted for postoperative psychopathology in 14 MFs (Ross and Need, 1989), surgical results of larger samples with FMs need to be studied more extensively to assess the ultimate outcome.

To conclude, the prospective research described in this thesis included 345 applicants for SR. More than half of this group (232) was considered eligible for treatment. Still more than half of the initial group had completed SR (196). From 84% of the subjects who were included as completers of treatment (188), follow-up data were gathered. Two transsexuals expressed feelings of regret during and after SR. Both of them attributed these feelings to their suffering from a critical environment, as opposed to the treatment itself. However, the vast majority of the treated transsexuals functioned well and expressed satisfaction about living in the new gender role at follow-up. Considering the large samples and the prospective design of the studies, the findings indicate that SR is medically effective for adult and adolescent transsexuals indeed, provided that careful diagnosis and professional guidance are secure. Future studies are needed to reveal whether the drop-outs of this study will report similar favorable outcomes without completion of SR.

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