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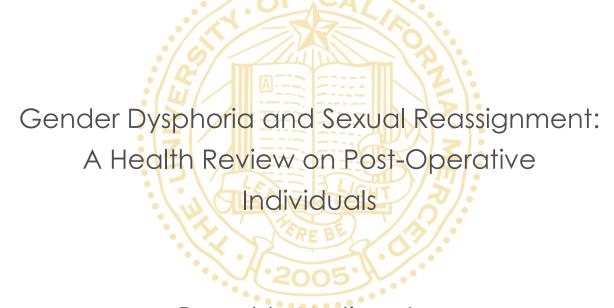
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Abstract

In this review the well-being of post-sexual reassignment individuals will be discussed. Gender dysphoria (GD) and sexual reassignment surgery (SRS) continues to be a research process for the scientific community on evaluating the health statuses of transitioned individuals. Though researchers consider this subject in its primitive stage of investigation, the literature available gives ideas in assessing whether these sexual reassignment procedures work for gender dysphoric individuals. There is a diverse amount of information on GD and SRS that detail both similar and differing results depending on the type of methodologies used by researchers. Reviewing the style of research, methods, and results within studies can bring more knowledge and new ideas to form better conclusions on the health statuses of individuals diagnosed with gender dysphoria and after sexual reassignment surgery.

Keywords: gender dysphoria, gender identity disorder, transgender, sexual reassignment surgery, psychology, health



Gender Dysphoria and Sexual Reassignment: A Health Review on Post-Operative Individuals

Gender Dysphoria (GD), otherwise known as Gender Identity Disorder (GID), as expressed in the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-V) by the American Psychological Association (2013), is defined as an individual's cognitive incongruence and discontent with their assigned gender to that of their biological sex (p. 451). The topic of gender dysphoria has been through a few changes throughout the years. It was once heavily emphasized as a serious mental illness with detrimental effects. Recently, many researchers have argued that gender dysphoria is not as severe as many once thought it to be. With modern medical advancements in the health field and changing global societies, this has been a cause as to why the shift in characterizing gender dysphoria as a severe diagnosis has declined (Levine & Solomon, 2008). As time moves forward, much of these advancements have paved way for people with gender dysphoria to fully embark on their preferred identification. Many have gone through the process of sexual reassignment surgery (SRS) cosmetically aiding the individual with their psychological gender mismatch to that of their biological sex. The process of reassignment surgery has sprung new questions within the discipline of psychology and health. Such as, how effective are these surgeries? Is it best to transition as young as possible



or later as a fully developed adult? What can be said on the overall well-being of transgender individuals who have gone through the process of gender reassignment? Reviewing the available literature amongst the psychology and health discipline will help in answering these questions and provide insight on how well transitioned individuals do after surgery.

Gender dysphoria (GD), gender identity disorder (GID), and transsexualism/ transgenderism all share a same meaning; that being, when an individual is
dissatisfied with their assigned gender on behalf of their biological sex, and
desire to live as the opposite sex and gender. The terms transgender and transsexual originated from the terms transsexualism and transgenderism. The
terms transgender and transsexual (Trans for short) are vastly used in the
literature to describe a person who identifies as the opposite sex and gender.
Likewise, these words will be utilized within this paper to describe research
material about gender dysphoric individuals. These individuals are those who
have begun the process of gender reassignment, and primarily those who
have already gone through the entire process of sexual reassignment surgery.

In order to comprehend the material that will be reviewed in this paper, it is important to understand these terms. Acknowledging the details before and in between the transition process of these individuals will also be discussed. The purpose of this research specifically deals with the surgical reassignment



processes. The words sexual and gender seem to be used interchangeably in scholarly articles within the topic of discussing reassignment procedures. To elaborate, some researchers prefer using the term sexual reassignment surgery (SRS) while others prefer gender reassignment surgery (GRS); both meaning the undergone surgical procedure of genitalia modification upon the wishes of the gender dysphoric individual. These procedures may also involve the alteration of other bodily physical features and the inclusion of hormonal treatments as well.

Though there is plenty of literature about the well-being of transindividuals post-sexual reassignment, the research is still scant and the
distinguished divide within this topic reveals that. While there is information
showcasing the positives about SRS, there is the contrary side that concludes the
negatives. With that said, many of the studies fall into their respective categories
in terms of differing methodology styles that result in different conclusive outcomes. Analyzing these studies according to their relationship between one another and examining the different outcomes between them can help shed light
on where the health statuses lie of the transgender population. To begin examining this literature, we're going to look at common research found within the
field of psychology and health. This research includes shorter ended follow-up
studies with trans-individuals and their experiences after gender reassignment.



In a follow-up longitudinal study about patients having gone through GRS by Grift, Elaut, Cerwenka, Cohen-Kettenis, and Kreukels (2017), the group analyzed after a period of four to six years post-GRS, the quality of life of these individuals. This group consisted of 136 participants. After consulting with the participants and having filled out subjective and standardized questionnaires and scales for the purpose of evaluating their well-being, the analysis resulted in almost all positive outcomes for quality of life. Only eight of the 136 participants resulted with a negative quality of life. Similar to those positive findings, in a study from Singapore, Tsoi (1993) found 93% of the study's 81 participants were also deemed improved from gender identity disorder after a one to eight year follow-up period post-operation.

Another study by Vries, McGuire, Steensma, Wagenaar, Doreleijers, and Cohen-Kettenis (2014), they evaluated a total of 55 transgender teenagers with the minimum of at least one-year post-gender reassignment surgery. This longitudinal study examined the participants by using what the researchers emphasized as a subjective questionnaire, standardized happiness and quality of life scales, and one objective measure of whether they were currently employed during the time of the study. Researcher's results here showed a positive outcome for the transgender teenagers; detailing how SRS and the inclusion of cross-hormone treatment worked successfully to alleviate prior



symptoms of gender dysphoria. Adding in one more study, by Yildizhan, Yuksel, Avayu, Noyan, and Yildizhan (2017), in their longitudinal study of 20 individuals having gone through SRS with at least one-year of record post-operation, they found overall positive results using the same questionnaire and interview type of methods.

Analyzing these few studies, there is consistent trends and patterns on the format and structure about them. To pick these trends apart, one of them is the seemingly positive results that they all have in common. These consistent findings are good on behalf of increasing validity towards these kinds of studies. This can help increase proper evaluation as to whether or not SRS works to alleviate those suffering from GD. However, the shared patterns in these studies need to be evaluated, because they reflect what the results are.

To further explain, the researchers utilized primarily subjective means for gathering results. Naturally, they are set this way by using methods such as having participant's answer different types of self-reported questionnaires and scales vulnerable to subjectivity. Researchers take the participant's word as a form of truth to formulate results. Alongside the studies so far, yet another long-term study from Germany by Ruppin and Pfäfflin (2015), aligns with these same trends and patterns just discussed. They followed up on 71 adults with GID and having gone through SRS after an average of about 13 years. Ruppin and



Pfäfflin (2015), operated using some of the same methods to conduct their research as those detailed above. They acquired their results by using what they deemed as subjective questionnaires and interviews. As a result, they too concluded outcomes similar to those of Grift et al. (2017), Vries et al. (2014), Tsoi (1993), and Yildizhan et al. (2017), that of which SRS was effective in reducing gender dysphoria amongst the participants and their quality of life was categorized as positive.

With the usage of subjective means in the studies, the results can be inspected due to this kind of methodology. The results thus far are gathered by way of subjective questionnaires, scales, and interviews. It is important to know that these methods can present issues when determining the well-being of those who have gone through the SRS process and how they thrive thereon after. As briefly mentioned earlier, there is a lack of objective means for gathering results with these types of methods. Though researchers conclude positive results, they are primarily based on the main tool of having participants fill out self-reported scales, questionnaires, and answering to interviews constructed by the researchers.

For example, during interview processes, researchers are limited to however and whatever the participant chooses to reply with. What this does is give the researchers pure results according to the responses each participant gave



during the questionnaires, scales, and/or interviews. Therefore, these results are susceptible to unreliability. Knowing this, it presents a limiting variable towards the health evaluation of post-SRS individuals and hinders the ability to state these results as concrete.

These kinds of limitations are normally discussed within each corresponding study. Ruppin and Pfäfflin (2015), state in their study the possibility of participants not remembering incidents correctly when asked to recall them; and, therefore they can present an inaccurate response. In Vries et al. (2014), they explain that their study involved a small sample size and a too short of a follow-up period in comparison to others. Regarding follow-up periods, the length of time it took researchers to acquire information about post-SRS individuals, is another key point to be aware of. "Follow-up" studies entail the phrasing of "longitudinal" or "long-term" within this subject's research. These terms can become another faulty characteristic about these types of studies because they don't always represent the same thing. For instance, three of the four studies above were long-term follow-ups of only about a one-year period after SRS. In contrast to those, the long-term study by Ruppin and Pfäfflin and Tsoi present a huge discrepancy in follow-up time after SRS. Ruppin and Pfäfflin's study embodied a time period of an average 13 years post-SRS follow-up. Tsoi's study had a time span of anywhere between one to eight years of participant



follow-up. These same specifics can be said about Grift et al. (2017), whose study was after a period of four to six years post-SRS.

The differences in meaning of "long-term" or "longitudinal" present a blurred outlook towards the proper health evaluation of post-operative individuals. Connecting this to the main point on transgender well-being, time discrepancies in follow-up periods should be seen as a factor that can hinder proper evaluation of health status. This can also become a bigger issue when taking into account the differences in participants when it comes to specifics such as age, biological sex, race, etc. That leads to the following point related to participant attainment.

Equal representation and non-bias selections of people within a population sample is another major criterion that should be evaluated when examining results in a study. It is vital that this criterion is met, because that itself can frame certain research outcomes not fully representative of a general population. In the research by Grift et al. (2017), they found selection bias as the main limitation in their study. It occurred because they only ended up acquiring 37% of participants from their total selection pool of people invited to partake in the study, most of which came from high levels of education. In a study by Hess, Rossi, Panic, Rübben, and Senf (2014), on male to female transition and life satisfaction, they saw a dropout rate of more than 50%, leading to skeptical



acceptance of the overall positive results in their study. With this, Yildizhan et al. (2017), also states that the researchers who were part of the study were also the health professionals who were involved with the participants' gender reassignment procedures. Because of this selection bias, it is likely that the participants may have responded in a way to show less psychopathology (i.e. mental or behavioral disorder) in front of their own mental health providers and avoid any negative feedback after the study.

In contrast to the literature discussed above regarding shorter ended follow-up studies that use subjective measures, there are other studies that utilize more objective measures and are far more longitudinal in scope. For instance, in a longitudinal cohort study from Sweden by Dhejne, Lichtenstein, Boman, Johansson, Långström, and Landén (2011), studied national registrars that tracked information about individuals ranging from psychiatric episodes, individual's gender and sex status, (e.g. whether they are male or female and/ or when a change of sex took place), and cause of death. With this available information, the researchers gathered material from a group of 324 sex-reassigned individuals from the start of a 30 year period. They evaluated the morbidity, mortality, and criminal rates of these post-operative individuals throughout this period. Researchers found that all three categories were higher than that of people with their biological sex.



Another two studies that mirror Dhejne et al. (2011) come from Denmark. Both studies were conducted by the same researchers Simonsen, Hald, Kristensen, and Giraldi (2016), focusing on evaluating the well-being of trans individuals post-SRS. One study focused on morbidity and cause of death of trans individuals, while their second supplementary study focused on psychiatric morbidity and mortality. For both Simonsen et al. (2016) studies, they utilized data from the Danish National Health Registrar and Cause of Death Registrar from a period of 32 years. The researchers were able to gather information about the population in Denmark. Similar information that was gathered for the Sweden study such as, number of psychiatric episodes, self-reported questionnaires, hospital visits, disease diagnosis, age, time of death, and more.

The registrar information in both studies was used to compare morbidity, mortality, and overall deaths from the transgender population to that of the general population. Noting that, it was found that higher morbidity, such as higher suicide rates, was prevalent amongst transgender individuals. The mortality rate was also concluded to be higher, because of the patterns seen in earlier deaths among the transgender population in comparison to those of the general population in Denmark. These types of measures are crucial to the evaluation of post-operative individuals alongside the study of gender



dysphoria.

The conclusions made in these studies are reliable and valid. This is apparent by examining longer follow-up periods, but more significantly the results based on objective measures. As discussed, this was possible with the utilization of national services and attaining the permission to use the mass archived information. The downside of this type of research is that it strictly adheres to systematic data. It completely removes the one-on-one basis of researchers interacting with the actual participants; unlike the subjective type of studies where researchers focus on the participants at hand and their responses. In these objective studies there are no questionnaires being answered, or any interviews being conducted at a personal level. Therefore, these methodologies present this kind of limitation.

Moreover, one can begin to decipher the distinguished divide that exists amongst the health evaluation research of transitioned individuals. Researchers and evaluators can examine the differences between the subjective shorter ended studies from those of much longer time periods that utilize objective parameters. The results presented by the subjective and shorter studies, showcase positive results with the help of control groups taking some of the same questionnaires or standardized evaluation scales; this becomes a strong suit in regard to the validity of the positive results. Meanwhile, the objective, focused,



and longer-term studies determine negative results in a likewise manner by drawing comparisons to control groups such as general populations.

In connection to the central topic, the difference between objective and subjective results play a key role in finding the level of agreement towards evaluating the health statuses of post-operative individuals. On one hand you take the participants word about their own well-being, and on the other you look at what the actual data shows. As seen in the research, the studies utilizing subjective measures show positive results for post-SRS individuals. The other studies where objective methods are used, develop into negative results. Noting this, if one side of the research studies stay consistent and the other side doesn't, then perhaps concentrating on this detail can help future analysis of information.

Doing this can lead the way towards finding stronger analysis and evaluation in the more consistent studies and perhaps should be given the upper hand as necessary for the proper treatment of those suffering with gender dysphoria.

Despite these clear differences between the styles of studies, we evaluate another inconsistency related to the more available research. To examine this variance amongst the many shorter studies, we take a look at a few that have actually concluded negative quality of life outcomes for transgender people. In a study by Yuksel, Ertekin, Ozturk, Bikmaz, and Oglagu (2017) from Turkey, they evaluated 141 individuals who had gone through psychotherapy for at least



one year after SRS. Utilizing the interview methodology, they measured the degree of suicidality at the time of their adolescence to the then present time of the study. Results showed a significantly higher rate of suicidality before the age of 21 for these transgender individuals, with their diagnoses of GD being a highly associated factor. A possible reason tied with this high suicidality rate as mentioned by Yuksel et al. (2017) could be due to the conservative environment the country holds.

A cross-sectional pilot study from India, by Poguri and Sarkar (2016), showed that trans people in south India have a higher morbidity rate and poorer quality of life than that of the general population in that region. It details that the cause behind these higher rates is due to the social disadvantages of the south Indian culture. The evidence that presents this originates from clinical scales and questionnaires. The pilot study was done with 15 trans participants in a two month period. This population sample shared some commonalities, such as all having at least one suicide attempt in their life, all had been sexually abused as a child, and the median age of this group was 30 years old. The reported answers from scales and questionnaires were calculated by health professionals and evaluated with the collaboration of the researchers to determine the outcome of the participants' mental health and quality of life. It was determined that transgender individuals in south India have a poorer



quality of life and experience distress in their everyday lives.

Examining the results from Yuksel et al. (2017) and Poguri and Sarkar (2016), these studies conclude negative results for transgender individuals and their health status. These studies show an opposing outcome in comparison to the positive results from the shorter ended studies discussed earlier. It must also be mentioned that some of the same limitations are present within these studies as the one's that resulted with the positive outcomes. Some of the limitations include, small sample sizes, short research periods, and centered on specific regions. Similarities between these two studies involve the facet of transgender people living in what the researchers considered as hostile or non-accepting societies. Therefore, this is a contributing factor towards the gender dysphoric individuals' negative well-being. This specific detail about environmental factors is what should be highlighted. Meybodi, Hajebi, and Jolfaei (2014) in their article "Psychiatric Axis I Comorbidities Among Patients with Gender Dysphoria" emphasize that doing more research about gender dysphoria and trans individuals in diverse areas of the world is important to evaluate the differences among these individuals. We can find differences in outcomes from the countless varying nationalities, cultures, and political orientations associated with the environment.



One more positive commonality amongst this research in relation to environmental role is that it generally shows trans individuals with the strongest social supports and accepting environments tend to do best in having a high quality of life, at least subjectively speaking. This portrayal however becomes fragile when looking at the cohort studies such as those from Nordic Scandinavian countries as the Dhejne et al. (2011) study from Sweden. The nation of Sweden holds some of the most acceptable, egalitarian, and social supportive environments in the world. Despite such a supportive environment and close-knit network of people to have as social supports, the data shows that the transgender people are still suffering despite their transition there. Dr. Paul McHugh, professor of Psychiatry at John Hopkins University of Medicine, comments on this study stating why it's important to reflect on these findings given such a positive social network of people and environment. He states:

A 2011 study at the Karolinska Institute in Sweden produced the most illuminating results yet regarding the transgendered, evidence that should give advocates pause...The study revealed that beginning about 10 years after having the surgery, the transgendered began to experience increasing mental difficulties. Most shockingly, their suicide mortality rose almost 20-fold above the comparable non-transgender population (McHugh, 2016).



Conducting more research in diverse areas can lead to better assessment of transgender individuals and their well-being as a whole from country to country. In addition, it can expand the amount of literature on this topic and help answer other research questions subsidiary to the subject matter. For example, this path of research has the potential to determine what causes a person to become gender dysphoric depending on the region they live in.

In addition to seeing that there are differences within the shorter longitudinal studies about gender dysphoria and post-SRS individuals, another argument worth mentioning deals with post-operative individuals and regret. A couple of the studies mentioned, Ruppin and Pfäfflin (2015) and Vries et al. (2014) for example, state that patient regret about SRS is essentially obsolete with no participants in either of those studies saying they regretted their decision to transition. This positive outcome changes in the study by Kuiper and Cohen-Kettenis (1998) from Netherlands where they evaluated 10 transgender individuals by conducting in-depth interviews and looking into their psychiatric history after about 11 years of having lived with their sexual reassignment transition.

In this study, researchers found that most of the participants had a phase where they regretted having gone through the SRS procedure. It's noted that some even regretted their choice additional times after a two-year follow-up



after the study itself. Kuiper and Cohen-Kettenis (1998) describe how some of the participants do not live stable lives partly due to some of them having gone through multiple procedures back and forth in between genders. The only positive result they gathered was about one of the individuals that transitioned from female to male, and they highlight that even this person in the two-year follow-up lives a double life by living at home as a woman and publicly as a man (p. 5).

Within the findings of Kuiper and Cohen-Kettenis (1998), they attributed much of the participant's regretful feelings in hand with other diagnoses besides gender dysphoria. In stating that, a study by Meybodi et al. (2014) found that 57 out of the 83 of their participants had comorbid symptoms of other disorders alongside GD; symptoms and disorders associated with high levels of depression, dissociation with social relationships, anxiety and regret. This should sound an alarm amongst researchers in letting them know that SRS as an option for someone suffering from gender identity disorder, as the step towards alleviation, needs to be taken with extreme consideration. This is because GID might not even be the direct cause for identity or self-image issues a person might be having.

In this review, only a small fraction of an entire subject about gender dysphoria and sexual reassignment surgery are being analyzed. Mostly featured in



this review are shorter longitudinal studies, as these are the most common and more widely available. On behalf of the longer-term studies (particularly those of 10 years plus time spans), there is significantly less of them available within the research community; this is partly due to the difficulty in keeping in contact with patients and participants, and the excessive dropout rates when a study of this length moves forward. Despite the shortage of them, the ones available serve great purpose towards examining post-SRS outcomes. Even though they're difficult to complete, it is necessary for more researchers to try their best to conduct them in order to further understand GD. This will add more reliable literature to the topic of GD and SRS and help even out the outweighing effect shorter studies have in present day, especially when they continue to be susceptible to the same consistent limitations.

If there is one mutual conclusion within all the studies reviewed in this paper, it is the shared premise that gender dysphoria is a real self-inflicting problem and leads towards the path of gender reassignment surgery with either negative or positive post operation effects. When comparing short term and long term studies, long term studies which used different methodologies in their research, made it clear that each gender dysphoric and fully transitioned person must be diagnosed and evaluated to the most proper extent. Many of the after effects of post GRS tend to lean towards negative outcomes at least in



the long run of a transgender person's life. Therefore, it is necessary to be highly cautious of those with GD who have gone through sexual reassignment surgery considering the high recorded suicidality rates of more than 40% within the trans population of the United States alone (Haas, Rodgers, & Herman, 2014).

Research on gender dysphoria and sexual reassignment surgery needs to be taken seriously due to modern proponents. Some are stating that children should be allowed to take hormone treatment, puberty blockers, and be allowed accessibility for reassignment surgery because of criteria that they may show in accordance to gender dysphoria (Dragowski, Río, & Sandigorsky, 2011). These new ideas being proposed have prompted controversy in relation to the ethical decision making by either parents/guardian, doctors, through government intervention and/or from the decision coming directly from the child itself. This decision making controversy is in relation to the bigger issue of whether these methods should even be utilized at such young ages; especially when research has shown kids tend to grow out of these small displays of identifying as the opposite sex (Drescher & Pula, 2014).

For reasons like these it becomes vital to continue the research on the well -being of post-operative individuals for the sake of better treatment and diagnosis of everyone most critically before operation and particularly if they are young.



Considering the literature analyzed about gender dysphoria and sexual reassignment surgery and how well individuals thrive in terms of overall health status, it has been presented that there is a mixed amount of research with varying conclusions. Some short-term studies utilize subjective methodology concluding mainly positive quality of life results, while others reveal negative outcomes. The long term studies showcase alternative methodologies with unique ways of gathering objective results for evaluation of the post-operative trans population. As discussed, these primarily show negative outcomes in terms of detailing how the transgender population isn't thriving in comparison to what many of the subjective studies say.

Overall, the research on health statuses of the transgender population is far from perfect and knowing the outcomes for each individual suffering from gender identity disorder are far from being firmly established. Future research needs to find ways to commit to finishing much of the long-term studies of 15 or more years in length. With this, researchers also need to find efficient ways to retain their participants until their study is completed. Improving this can help deter the high dropout rates seen throughout this area of research. Another suggestion regarding GD and SRS research would be to find ways to combine subjective and objective measures towards gathering results in a study with diverse group samples of people. This could vastly improve evaluative results to



better assess the transgender population in a more conclusive manner. Lastly, it must always be kept in mind that it is important to interpret every finding within this area of research with attentiveness and caution for the better diagnosis and total evaluation of post-operative gender dysphoric individuals.



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