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The Curious Case of Shanthi: The Issue of Transgender in Indian Sports

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Background of the study

Shanthi Soundarajan an Indian runner was born in 1981 in the village of Kathakkurichi in Pudukkottai District of Tamil Nadu, India. Soundarajan, a dalit¹ by birth belongs to poorest of poor category. She grew up in a small hut devoid of toilet, water or electricity. Her mother and father had to go to another town to work in a brickyard, where they earned the equivalent of \$4 a week. While they were gone, Shanthi, the oldest, was in charge of taking care of her four siblings. Sometimes, Soundarajan's grandfather, an accomplished runner, helped while her parents were away. When she was 13, he taught her to run on an open stretch of dirt outside the hut and bought her a pair of shoes. At her first competition, in eighth grade, Soundarajan won a tin cup; she collected 13 more at interschool competitions. The sports coach at a nearby high school took note of her performances and spotted her. The school paid her tuition and provided her with uniform and lunch. Athletics gave a new dimension to her life engulfed with struggles.

She had very impressive track record to her credit. At a national meet in Bangalore in July 2005 she won the 800m, 1,500m and 3000m. In 2005 she attended the Asian Athletics Championships in South Korea, where she won a silver medal. In 2006, she was chosen to represent India at the Asian Games held in Doha, Qatar. In the 800 meters, Soundarajan took the silver in 2 minutes, 3.16 seconds, beating Viktoriya Yalovtseva of Kazakhstan by 0.03. This win and a subsequent failed gender test lead to Soundarajan becoming embroiled in an ongoing, unresolved debate over the issue of transgender and sports (BBC News ,2006). She was told results indicated that she "does not possess the sexual characteristics of a woman" (BBC News, 2006). Soon after the results of the sex test came out, she was stripped of her silver medal.

In this backdrop, my descriptive, diagnostic study, based secondary data, would like to trace the plights of transgender sports personnel in India and abroad.

Conceptualizing Transgender:

A person's sex is rooted in biology. Sex is "either of the two major forms of individuals that occur in many species...distinguished respectively as female or male especially on the

¹ An untouchable in Indian caste hierarchy

basis of their reproductive organs and structures” (Merriam-Webster Online Dictionary). On the other hand, gender is a socio-cultural construction. It is the behavioral, cultural, or psychological traits typically associated with one sex. Transgender is an umbrella term that describes “individuals whose gender identity doesn’t match the gender identity commonly experienced by those of the individuals’ natal sex” (Buzuvis, 2011).

Transgender is a general term applied to a variety of individual, behaviors and group involving tendencies that diverge from the normative gender role (woman or man) commonly, but not always, assigned at birth, as well as the role traditionally held by society. Transgender is the state of one’s “gender identity” (Self-identification as male, female, both or neither) not matching one’s assigned gender” (identification by others as male or female based on physical/genetic sex) Transgender does not imply any specific form of sexual orientation, they may identify as heterosexual, homosexual, bisexual, pansexual or asexual. The precise definition for transgender remains in flux, but include, of relating to or designating a person whose identity does not conform unambiguously to conventional notions of male or female gender, but combines or moves between these.

A transgender individual may have characteristics that are normally associated with a particular gender, identify elsewhere on the traditional gender continuum, or exist outside of it as “other”, “a-gender”, “inter-gender” or third gender.

According to S.Kessler & W.Mekenna (1978) in theory, transgender is a challenge to the Social Construction of gender. In practice, it is usually transgender people in one way or another not place them outside the conventional male/female dichotomy, yet live in social world that recognizes only females and males. In the light of three possible meanings of trans, they considered to deconstruct gender.

The prefix “**trans**” has 3 different meanings. Trans means change, as in the word “transform”. In this **first** sense transgender people change their bodies to fit the gender they feel they always were. Transgender in this sense is synonymous with what is typically meant by the term (Kessler & Mekenna, 1978).

In the **second** sense “Trans” means across as in the word “transcontinental”. In this sense a transgendered person is one who moves across genders. This meaning does not imply being essentially or permanently committed to one or the other gender and therefore has a more social-constructionist connotation. The transgender person in this meaning does not leave the realm of two genders. The emphasis is on the “crossing” and not on any surgical transformation accompanying it such a person might say “I want people to attribute the gender “female” to me, but I’m not going to get my genitals changed. I don’t mind having my penis”. It is more like a previously unthinkable combination of male and female (Martin and Nguyen, 2004).

Third meaning of “trans” is beyond or through”. In this a trans gendered person is one who has gotten through gender, beyond gender. No clear gender attribution can be made, or is allowed to make. Gender ceases to exist, both for this person and those with

whom they interact (Martin and Nguyen, 2004). This third meaning is the most radical, which talks for elimination of gender.

The term transgender was popularized in the 1970's describing people who wanted to live cross-gender without sex reassignment surgery. In the 1980's the term was expanded to an umbrella term and became popular as a means of uniting all those whose gender identity did not mesh with their gender assigned at birth. In the 1990's the term took on a political dimension as an alliance covering all those who have at some point not conformed to gender norms, and the term became used to question the validity of those norms or pursue equal rights and antidiscrimination legislation, leading to its widespread usage in the media, academic world and law. The term continues to evolve; Transgender identity includes many overlapping categories including transsexual, cross-dressers, and transvestite and so on. Among these the term "transsexual" requires little elaboration, as it is closer to the term transgender.

Transsexual is a subcategory under the transgender umbrella. Three criteria are used to classify a transgender individual as transsexual: "(1) persistent discomfort about one's Birth-Sex, (2) at least two years of persistent preoccupation with acquiring the sex characteristics of the other sex, and (3) having reached puberty (the age at which the reproductive organs mature)" (Pilgrim, 2003: 495-501). Transsexual people have deep conviction that the gender to which they were assigned at birth on the basis of their physical anatomy or birth gender is incorrect. That conviction often compels them to undergo hormonal or surgical treatment to bring their physical identity into line with their preferred acquired gender identity.

Transsexualism is not the same as cross-dressing for sexual thrill, psychological comfort or compulsion. It is not the same as being sexually attracted towards people of the same sex. Many transsexual people wish to keep their condition private, and this must be respected and they should be treated as members of their acquired gender.

Emergence of the Issue of Transgender in the History of International Sports:

The earliest recorded case was that of Stanisława Walasiewicz, a Polish athlete who won a gold medal in the women's 100 m at the 1932 Summer Olympics in Los Angeles. After her death in 1980, she was found to have male genitalia. Another Polish athlete Ewa Klobukowska, who won the gold medal in women's 4x100 m relay and the bronze medal in women's 100 m sprint at the 1964 Summer Olympics in Tokyo, was the first athlete to fail a gender test. In 1967, she was found to have a rare condition, which gave her no advantage over other athletes. Eight athletes failed the tests at the 1996 Atlanta Olympics but were all cleared by subsequent physical examinations.

It was against the backdrop of the height of the Cold War that the rears of female athletes, masquerading as males dominated the international sporting arena. Fuelled by rumor and suspicion (two Soviet sisters who won gold medals at the 1960 and 1964 Olympics, and who abruptly retired when gender verification testing began), sex testing

was introduced in competitive sports in the mid 1960s. The first tests, at the European Championships in 1966 and the pan-American Games in 1967, required female competitors to undress before a panel of doctors. Other methods used during this period included manual examination or close-up scrutiny of the athlete's genital region.

When athletes complained that these tests were degrading, the IOC at the Mexico City Olympics in 1968 introduced genetic testing in the form of a sex chromatin (Barr body) analysis of cells from a buccal smear. The procedure was further modified at the Barcelona games, using the polymerase chain reaction from to amplify the DNA extracted a specimen to allow detection of a Y chromosome gene, SRY those codes for male determination.

When this procedure was far less humiliating for competitors, geneticists and other experts argued that the test is pointless at best and has the potential for causing great psychological harm to women who, sometimes unknowingly, have certain disorders of sexual differentiation. Published data suggest that test results for about 1 in 500-600 athletes are abnormal and could result in their disqualification, says Dr. James C. Puffer, of the University of California, Los Angeles, School of Medicine, who served as the chief medical officer for the 1968 US Olympic team.

Clearly, prevailing methods of gender testing cause mental harassment to the athlete. They also discriminate against women with sexual disorders. Further, the inaccurate nature of these tests and the process itself is extremely demeaning to the reputation and the character of the athlete in question, perhaps even adversely affecting careers. The Spanish hurdler Maria Patino, who failed a gender test in 1985, was reinstated after it was found that she was resistant to the strength-promoting qualities of testosterone. Any method to confirm the gender of an athlete will also have to grapple with the questions posed by legal protections against invasive medical procedures (Martin and Nguyen, 2004)

The International Olympic Committee (IOC) and the International Amateur Athletics Federation (IAAF) decided to require that all female athletes be tested to ensure their "femininity" and to disqualify those with a presumed unfair "male advantage". The first tests were "naked parades", where women were required to walk nude before a panel of judges and to undergo gynecological examinations. The physical exams were soon augmented by sex chromatin testing, a short-lived test that looked for a Barr body, the inactivated second X chromosome found in female cells. The Barr body test was replaced by karyotyping, which in turn was succeeded by SRY analysis direct test for the presence of the single-most important gene in male development. Unfortunately, IOC officials did not appreciate the complexity of human sex determination. After three decades of intense debate between scientist and physicians, and just before the 2000 Olympics in Sydney, the IOC abolished routine gender testing.

Thus gender testing not only compromises the psychological well-being, privacy and integrity of the athlete but also is potentially harmful to the career of the athlete due to its inaccurate nature. Further, with the spandex uniforms worn by the athletes at present and routine dope tests conducted, which require them to urinate under the watchful eye of an official, it is practically impossible for a male athlete to pass off as a female and vice-versa and thus unnecessary to have such tests conducted, particularly when the guiding spirit of the Olympic movement dictates that “...the health and the welfare of athletes must prevail over the sole interest of competition and other economic, legal or political consideration” (Martin and Nguyen, 2004)

Authenticity and Validity of “Gender-testing” from the Medical Point of view

The process of creating human life begins when a sperm cell joins an egg cell. Under normal circumstances, when a sperm cell and an egg cell meet there are two possibilities: if both carry X chromosomes, the resulting baby will be born bearing ovaries, uterus and vulva; if the egg cell carries a Y chromosome, the resulting baby will be born equipped with penis and testes. During the development of the fetus from two cells to human baby, hormones (produced by the fetus itself, produced by its mother or introduced into the fetal environment from external sources) influence the developing structures of parts of the brain, central nervous system and reproductive organs. Sex hormones are grouped into three categories: estrogens, progesterin and androgens, Female secrete all three types, but more of estrogen and progesterin than androgens. Males also secrete all three kinds of sex hormones but they secrete more androgen than other two. Throughout the life cycle, hormonal messages are accompanied by social and environmental experiences.

While under normal circumstances, humans have either XX or XY Sex chromosomes, a look at the cases of people who do not fit this pattern shows that, although chromosomes appear to be responsible of a wide variety of sex and gender characteristics, neither sex nor gender follow slavishly from chromosomal instructions.

Turner’s syndrome: When a fetus develops with only one sex chromosome present in all or most of its cells, it is known as Turner’s syndrome. This configuration is referred to as 45XO or simply as XO. All Turner’s syndrome individuals are born with a female body and are often thought to be unremarkable females at birth, but they lack female internal sexual organs. The administration estrogens at puberty enable XO females to live feminine lives from birth through adulthood.

Androgen Insensitivity Syndrome: In this situation an XY individual is unable to use androgens and thus, although producing normally sufficient quantities of androgens, does not develop under their influence. This condition is called AIS or Testicular Feminization. In such cases an XY baby is born with normal looking female and they are reared as women as well. When they reach puberty and experience difficulties, they experience them as adolescent boys/girls who are suddenly turning into girls/boys, external genitalia, male internal reproductive organ, and a short vagina that does not lead

to a cervix or uterus. Such children appear as normal female infants at birth and rose as such. They normally get no menses. Through their testes do secrete testosterone in normal quantities for a normal male but bodies of AIS individuals are unable to use it and thus are not affected by it.

Klinefelters Syndrome: In normal individuals Sex chromosomes are present in all cells of the body and they are the same in all cells. But these abnormalities include individuals with more than two Sex chromosomes in different cells of the body. In Klinefelters syndrome an individual has two or more X chromosomes combined with a single Y-chromosomes. Such individuals are born with normal looking male genitals and are raised as boys. These boys are often fertile and capable of normal male sexual activity despite their small testes ad characteristically female breasts. Individuals with more than tow chromosomes are highly susceptible to mental retardation.

In all these above mentioned hormonal and chromosomal abnormalities the “Sex and Gender identities of these people follow from their sex assignment at birth. However the counter argument is that physiological advantage does not necessarily exist. The transgender process involves the taking of massive doses of estrogen, which decreases the individual strength and prevents the further development of testosterone. It is argued that transgender women incline towards behavior that fully accentuates their femininity, avoiding anything to tip their physical appearance over to the masculine side and therefore tending to shy away from sport or significant training (www.feminist.org).

Shanthi might have been born with an intersexed condition known as Androgen Insensitivity Syndrome (AIS) (The Times of India, 2007). She has a deep voice and a flat chest; she had never menstruated but knew that was not uncommon for female runners. There was no evidence of her, undergoing sex reassignment surgeries. Considering her impoverished background, we can easily rule out such time taking, expensive interventions. “It should always be remembered that gender reassignment is a complex and long-term process based on genuine medical need. It is not something people undertake lightly or in order to gain competitive advantage” (Dept. for Culture, Media and Sport, UK, 2005)

There are two distinctly different points of view in relation to male-to-female transgender participating in competitive sport. There are those that believe that there is a competitive advantage for a male who has undergone sex reassignment surgery because of his

- Previous physical training and muscular development
- Significantly higher levels of testosterone
- Greater muscle to fat ration
- Greater heart and lung capacity and tendency towards greater aptitude in motor skills.

(www.womensportsfoundation.org.)

Believers in the opposite group argue that:

- Anyone exposed to testosterone at puberty will be a good athlete,
- That all males make better athlete than all females; and
- That under patriarchal social structure where masculinity is a virtue males will change gender in order to reap rewards in women's sports, which they are unable to obtain by competing in men's sport.

None of the above mentioned assumptions could be justified. If we prohibit transgender to participate in sports because of a presumed advantage which raises the question of whether people born with other genetic advantages for sport should be similarly be prohibited from playing (Because in Mafrans syndrome which causes women to grow to heights of seven foot and some female basket ballers and volley ballers have this syndrome) .In congenital adrenal hyperplasia which causes an oversupply of testosterone in women and produces extreme muscularity. Thus "Gender verification has long been criticized by geneticists, endocrinologists, and other in the medical community one major problem was unfairly excluding women who had a birth defect involving gonads and external genitalia (i.e., male pseudohermaphroditism).

A second problem is that only women, not men were stigmatized by gender; verification testing, systematic follow-up was rarely available for female athletes "failing" the test, which often was performed under very public circumstances. Follow-up was crucial because the problem was not male impostors; but rather confusion caused by misunderstanding of male pseudohermaphroditism (Simpson, 2000, PP 1568-1569).

Legal status and the position of various International communities on this Issue:

Gender-verification tests at international competitions were instituted as a result of a heightened awareness that athletes were taking performance-enhancing drugs that gave them a "male advantage". Suspicion that a number of Soviet and East German female athletes were not really women added to the climate of distrust.

An area of women's sport, which is creating gender confusion, heated debate and for which gender verification has implications, is transgender (Specifically male to female) in sport. The issue brings attention to the two broad areas:-

- Prevention of harassment
- Access to sports networks, clubs and other facilities.

The International Amateur Athletic Federation (IAAF) has discussed the issue of transgender people in sport. It suggested that individuals undergoing gender reassignment from male to female before puberty should be regarded as female. However they argued that individuals that undertook gender reassignment (male to female) after

the relevant medical body within the sport organization concerned should assess puberty individually.

The most recent and controversial decision on gender by the IOC came on May 27, 2004, when the IOC Executive Committee decided to allow transsexuals to compete in the Olympics and opened the way for transsexual athletes to compete in the 2008 Beijing Olympics. In May 2004 the International Olympic Committee (IOC) announced the conditions under which transsexual athletes may compete in sports competitions. This announcement was carried out by an ad hoc committee convened by the IOC Medical Commission. These conditions were applied as of the Athens Olympic in 2004. The group confirms the previous recommendation that any “individuals undergoing sex reassignment of male to female before puberty should be regarded as girls and women” (female). This also applies to individuals undergoing female to male reassignment. The group recommends that individuals undergoing sex reassignment after puberty is eligible for participation in female or male competitions under following conditions:-

- Surgical anatomical changes have been completed including external genitalia changes & gonadectomy.
- The appropriate official authorities have conferred legal recognition of their assigned sex.
- Hormonal therapy appropriate for the assigned sex has been administered in a verifiable manner and for a sufficient length of time to minimize gender-related advantages in sport competitions.

The group recommends that eligibility should begin no sooner than two years after their gonadectomy. In the event that the gender of a competing athlete is questioned, the medical delegate (or equivalent) of the relevant sporting body shall have the authority to take all appropriate measure to determine the gender of a competitor.

In October 2005, the IOC Executive Board adopted medical code proposed by the Medical Commission. This code ensures basic rules regarding best medical practices in the domain of sport and the safeguarding of the rights and health of the athletes. Olympic Movement Code proposed by the Medical Commission had entered into force on 1st January 2006 is intended to apply to the Olympic Games, the various championships of the International Federations and all competitions to which the International Olympic Committee (IOC) grants its patronage or support. The code guarantees respect for an athletics human dignity, their physical and mental integrity, the protection of their health and safety, their self-determination; and their privacy and confidentiality of the same except when disclosed with the athletics consent or by requirement of law.

The quoted guidelines have brought a revolutionary change with respect to perceiving the issue that carries almost opposite significance per the ‘way of the world’. However, it has opened up new frontiers of deliberation to bring about empirical and

qualitative understanding pertaining to the issue under consideration. The maddening race for success has changed the ethics of sports and new variation/deviation have come in the forefront in recent times (Singh, 2011).

Let's examine the positions of other countries:

Australia:

Six of the eight Australian States and Territories prohibit discrimination on the grounds of sexuality and five namely New South Wales, South Australia, Western Australia, The Australian Capital territory and Northern Territory prohibit discrimination on the grounds of transgender identity.

United Kingdom:

There are several legal provisions relevant to the treatment of transgender people available in U.K. Most prominent among them are:

The gender Recognition Act 2004 makes it possible for transsexual people to gain full legal recognition in their new gender.

The Sex Discrimination Act 1975 (as amended by the Sex Discrimination (gender Reassignment) Regulations 1999 and by the Gender Recognition Act 2004) makes discrimination against transsexual people in the area of employment and vocational training unlawful, except within narrow exceptions.



Indian runner Santhi Soundarajan & South African runner Caster Semenya

Pleading Justice for Santhi:

The genetic tests provide potentially inaccurate results and discriminate against women with disorders of sexual developments. Genetic anomalies can allow a person to have a male genetic makeup but be physiologically female. Spanish hurdler Maria Patino, who failed a gender test in 1985, was reinstated after it was found that she was resistant of the strength prompting qualities of testosterone y biggest grouse in the handling of this case is that it was blown out of proportion by the media especially by the Times of India,

which over the years seems to have reached the zenith of yellow journalism and pornography in the name of news.

Soundarajan returned to her village in humiliation and promptly fell into serious depression. Months later, she tried to kill herself by ingesting a type of poison used by veterinarians. A friend found her vomiting uncontrollably and brought her to a hospital. "Everyone looked down on me," she says. "Everyone was looking at me in this new way: Is she a man? Is she a transvestite? It's very hurtful. It ruined my life and my family's life"(<http://www.telegraphindia.com>).

It's in this context that the whole handling of the Shanthi's case seems so botched up and so insensitive. Her sexuality-one of the most private domains of a person, is being opened for the world to discuss. For Shanthi, knowing that a gender test has brought out anomalies which would destroy her career and would have profound implication on her life especially in a country where transsexuals are treated worse than dogs and inspire disgust would have been scary enough. Moreover, as Reuters has pointed out, the tests usually are not conclusive enough and require a deeper understanding of the person, which is why they were scrapped in the first place in the Olympic Games. It is not known as of now if Shanthi was aware of the condition in the first place. There have been no comments from her. When she is not from a well-to do family and her parents are so poor that they couldn't have afforded a doctor in the first place. Considering that from such a background Shanthi rose to become a star should be laudable and that alone should have afforded her a little more sensitivity. So that she can still live with her dignity intact. When Indian people, sports associations, Government and media ostracized Shanthi, compelled her to attempt suicide and even work in backlines with paltry income; South African stood rock solid behind Caster Semenya .

Mokgadi Caster Semenya (born 7 January 1991) is a South African middle-distance runner and world champion. Semenya won gold in the women's 800 metres at the 2009 World Championships with a time of 1:55.45 in the final. Semenya also won silver medals at the 2011 World Championships and the 2012 Summer Olympics, both in the 800 meters. Following her victory at the 2009 World Championships, it was announced that she had been subjected to gender testing (Slot Owen, 2009). She was withdrawn from international competition until 6 July 2010 when the International Association of Athletics Federations (IAAF) cleared her to return to competition. The IAAF's handling of the case spurred many negative reactions. Prominent South African civic leaders, commentators, politicians, and activists characterized the controversy as racist, as well as an affront to Semenya's privacy and human rights (Sawyer, Patrick; 2009.)

IAAF said it only made the test public after it had already been reported in the media, denying charges of racism and expressing regret about "the allegations being made about the reasons for which these tests are being conducted" (Sawyer, Patrick; 2009). The federation also explained that the motivation for the test was not suspected cheating but a desire to determine whether she had a "rare medical condition" giving her an unfair competitive advantage. The president of the IAAF stated that the case could have been

handled with more sensitivity. Following the furor over her gender, Semenya received great support within South Africa, to the extent of being called a *cause célèbre* (Sawer, Patrick; 2009). Caster Semenya was chosen to carry the country's flag during the opening ceremony of the 2012 Summer Olympics (CBS Sports, 2012) and she later won a silver medal in the women's 800 meters of these games.

Semenya's success brought little senses back in the public mind of India. In July 2012, the Union government stepped in to spread a protective arm around her. She was admitted to the course conducted by Sports Authority of India (SAI) in Bangalore on 2013 with the sports ministry funding her education. Shanthi was one of the 24 coaches in athletics, out of the 108 students who attended the course in eight disciplines. Shanthi Soundararajan's dream of becoming a qualified athletics coach came true on 30 April 2014 when she was awarded the NIS diploma certificate at the Sports Authority of India graduation ceremony in Bangalore. She will realize her shattered dreams through her students.

References:

- Baljinder Singh, Kanwaljeet Singh. (2011). "The Hermeneutics of Participation of Transgender Athletes in Sports – Intensifying Third Force, Physical Culture and Sport.Studies and Research". Vol- LII.
- BBC News. (2009). "Indian athlete fails gender test". 18 December 2006. Retrieved 20 August 2009.
- CBS Sports. 22 July (2012)"Caster Semenya rightly chosen to bear South Africa's flag at opening ceremony".
- Dept of Culture, Media and Sport. (2005). "Transsexual People & Sport; Guidance for Sporting Bodies". Sports Division, UK London.
- Dept. for Culture, Media and Sport, Sports Division, UK. (2005). Transsexual People & Sport; Guidance for Sporting Bodies, London.
- Erin E. Buzuvis. (2011). "Transgender Student-Athletes and Sex-Segregated Sport: Developing Policies of Inclusion for Intercollegiate and Interscholastic Athletics". 21 Seton Hall J. Sports & Ent. L. 1, 10.
- Gooren, J.G. & Bunck, C.M. (2004). "Transsexuals and Competitive Sports: The Netherlands". European Journal of Endocrinology. 151, 425-429.
- J.L. Simpson. (2000). "Gender Verification in the Olympics". JAMA, vol-284, PP 1568-1569.
- Jill Pilgrim, David Martin, Will Binder. (2003). "Far From the Finish Line: Transsexualism and Athletic Competition". Media & ENT. L.J.pp: 495- 501.
- Louis, J.G. (2008). "Hormone Doping: Detection and Deterrence Olympic Sports and Transsexuals". Asian Journal of Andrology. 10, 427-432.
- Martin, J. T. and Nguyen, D. H. (2004). "Anthropometric analysis of homosexuals and heterosexuals: implications for early hormone exposure". Hormones and Behavior 45. 31-39.
- Phoenix, C.H., Goy, R.W., Gerall, A.A. and Young, W.C. (1978). "Organizing action of prenatally administered testosterone propionate on the tissues mediating mating behavior in the female guinea pig". Endocrinology 65, 369-382.
- Slot Owen. (2009). "Caster Semenya faces sex test before she can claim victory". London: *The Times*.19th August 2009.

- Stoller, R.J. (1968). "Sex and Gender: On the Development of Masculinity and femininity". Science House, New York
- Suzanne J. Kessler and Wendy McKenna. (1978). "Gender: An Ethno methodological Approach". Wiley-Interscience, New York.
- T Sawyer, Patrick; Berger, Sebastian. (2009). "Gender row over Caster Semenya makes athlete into a South African cause célèbre". 23rd August, London: *The Daily Telegraph*.
- The Times of India. (2007). "The sad story of Shanthi Soundarajan". 9 January 2007.
- Wallen, K. (2005). "Hormonal influences on sexually differentiated behavior in nonhuman primates". *Frontiers in Neuroendocrinology* 26, 7-26.

Websites:

- <http://www.merriam-webster.com/dictionary/sex> (last visited Mar.25, 2012)
- http://www.telegraphindia.com/1061218/asp/sports/story_7153292.asp
- <http://www.feminist.org>

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