Introduction:

Throughout history, members of the LGBT community have been subjected to efforts to convert or change their identities, either forcefully or by personal choice. Despite recent progress in expanding LGBT recognition, protections, and equality, conversion therapy remains a mar on headway that’s been made and hinders future advancement. Countless professional associations such as the American Psychological Association, World Health Organization, and the American Medical Association have publicly announced opposition to the practice; some countries and jurisdictions have even gone one-step further, completely banning procedures for minors. As of January 2018, it is estimated that almost 700,000 LGBT adults in the US have experienced conversion therapy, and 77,000 youth (ages 13-17) would receive some form of conversion therapy before the age of 18 (Mallory, Brown, and Conron 2018).

Conversion therapy, albeit poor nomenclature, given that this practice has been shown to have negative long-term health impacts (Haldemann 1994, 2000; American Psychology Association 1997), also falls under a number of other names: sexual reorientation therapy, aversion therapy, sexual orientation change efforts, ex-gay therapy, among others. Practitioners who employ these approaches can range from professionally trained counselors and psychologists, to religiously affiliated organizations or groups started by individuals who have undergone “successful” conversion therapy themselves. For some LGBTQ persons, experiences with this practice could be limited to individual or group settings, or at facilities that have been coined as “conversion” or “reprogramming” camps, where some participants recounted being subjected to punitive measures like electrocution and physical abuse (Human Rights Watch, 2017; Baegan & Hattie 2015).

Conversion therapy remains a stain on the global progress that has been made towards LGBT equality and grievously undermines efforts on that front. Numerous studies have found associations between conversion therapy and depression (Drescher et al 2016), loss of sexual feeling (Beckstead 2009), and suicidality (Ryan et al 2018).

Previous Reviews:

While there is published literature on health outcomes related to this procedure, there remains a gap in organizing the spectrum of practices that could be considered conversion therapy into more-like groups. This dearth in information has major implications for collecting data on these practices, as it potentially misses many LGBTQ persons who may not have experienced conversion therapy in the conventional sense. To date, there has been no review conducted that focused on both better identifying and
categorizing variations on this practice and developing appropriate measures by which to gather data on them.

Current Review:

Given the ongoing use of this practice in many areas both in the U.S. and worldwide, our objective was threefold. First, to review the scientific literature to determine what work had already been done in the area of distinguishing and standardizing different methods of conversion therapy into larger groups. Our hypothesis was that despite the major progress that has been made in the areas of LGBT rights, there has been little to no research carried out to better understand and standardize this practice. Especially given that this practice remains a viable option for those considering methods to convert oneself or a loved one; particularly in areas where respect and rights for LGBT persons remain in peril. The second objective was to develop a systematic review process to examine practices of conversion therapy, whether defunct or still in practice. Improved categorization will allow for better recognition and identification of these practices; which has strong implications for data collection, policy development, and human rights. Lastly, to present a novel method by which to review exposure to conversion therapy and standardize the measurement.

Methods:

The purpose for this current systematic review was in order to create a more complete picture of the range of conversion therapy interventions that have been and are in practice throughout the world. To do this, we followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to identify resources in the scientific literature (Moher, Liberati, Tetzlaff, Altman, & Group 2009). What distinguishes this review from others is the inclusion of sources and data that had been found from non-scientific sources, such as organizations who practice some variation of conversion therapy, as well as providers who have treated patients who’ve been exposed to them.

Scientific Literature Example:

Published literature and books on conversion therapy included in this review were identified through the following computerized databases: PUDMED, WEB OF SCIENCE, PSYCINFO, CINAHL, and EMBASE. Keywords that were used in the database searches were: conversion therapy, sexual reorientation therapy, reparative therapy, ex-gay therapy, faith, strategies, measure, techniques, methods. Additional articles were identified through the examination of the references cited in the articles and books that selected through the database review.
One main criterion was used for inclusion in the review; the study had to include the description or identification of exposure to a form of conversion therapy. Given that there has been no such previous review that has sought to categorize versions of this practice, there was no time frame that was used as a standard to be included in the review. This was selected so that the review was both thorough and complete to develop and recommend a new set of tools for measuring exposure to variants of this practice.

Articles were uploaded, organized, and reviewed using Google Drive and the reference manager software RefWorks. One reviewer screened citations and if the information was deemed relevant, the abstract was obtained. The same reviewer examined the abstract for relevant information and if it was indicated that it was relevant, the full article was obtained and reviewed. Any discrepancies were discussed with a senior reviewer and consensus was established to determine whether or not to include an article. Data was abstracted with standardized protocol, which included: author, year, title, country, study design, study population, sample size, intervention strategy, and results.

**Results:**

The search criteria identified 1523 potentially relevant articles and reports. After removing 1350 duplicates, 233 peer-reviewed articles were included in the title review phase (Figure 1). A total of 234 were included in the full-text article review, and 35 met the inclusion criteria and thus included for further analysis. Of note, is that the majority of the articles identified described the health outcomes related to conversion therapy, with little to no information regarding the formal practice that was used in these cases. A review of the literature revealed abundant scientific studies, case reports, and personal accounts that have were used to develop 4 categories by which to group variations on conversion therapy: psychotherapy, medical, religious, and punitive.

**Figure 1:**

One of the categories that quickly became clear was psychotherapy (n= 169). The logic behind this practice is centered in the belief that one’s sexuality is a product of an abnormal upbringing or experience that causes an individual to seek the affection of the same-sex. This therapeutic approach seeks to work through past experiences like absent paternal or officious maternal figures, in order to rectify fundamental differences and develop a healthy desire for members of the opposite sex. This category incorporated the majority of the literature found in this review, with countless variations
of psychotherapy, but further classified as either: psychodynamic, behavioral, cognitive, or others.

Psychotherapy outlined in the literature fell largely into two areas, individual or group therapy. These approaches centered around cognitive behavioral therapy (CBT), or “talk” therapy, which seeks to understand unwanted thoughts and behavior and develop strategies to modify them. As evidenced by the shift in the regularity of this approach seen in the literature, this has become a common frontline practice where it is still allowed. The second and largest sub-category in psychotherapy, were behavioral methods of conversion therapy. This method relied on aversive methods to conditions clients away from their homosexual desires, often with physical or painful stimuli like electric shock (James 1977; Freeman 1975; McConaghy 1973) or nausea-inducing chemicals (McConaghy 1969, 1970, 1975; Freund 1960; James 1962). Others sought to pair problematic thoughts or desires with imagined (covert) (Alford 1983; Canton 1974; Herman 1974) or real (overt) (Herman 1974; Freund 1973; Levin 1970; Fookes 1960) imagery like putrid corpses or other noxious scenes. Other behavioral methods mentioned in the literature included orgasmic reconditioning (Barlow 1979; Brownell 1977; Conrad 1976) and anticipatory avoidance (James 1978; McConaghy 1978, 1973, 1972; Tanner 1972). Cognitive therapy was the third sub-category in psychotherapy and included hypnosis (James 1978; Kraft 1971, Allen 1958, Bramwell 1906, Quackenbos 1899), fading (Barlow 1974; McGrady 1974), and dream therapy (Gerschman 1971; Brill 1913). The final sub-category, other, included any techniques described that did not fit in other sub-categories but fell under the umbrella of psychotherapy, they included: tape capsule (Hatterer 1970), exercise (Kronmeyer 1980; Hammond 1883), relaxation (Latimer 1977; Blitch 1972; Barlow 1969; Schmidt 1965), bladder washing (Brill 1913), baths (Moreau 1884; Hammond 1883), and several others.

While the second category of conversion therapy is archaic in nature, there are countries around the world whose draconian laws may allow for these antiquated and destructive medical practices. Historically this form of conversion therapy was one of the first utilized as a method to cure homosexuality, though there have even been recent accounts in the media and literature (n= 45). Medical conversion therapy functions on the postulation that sexual orientation or gender identity is byproduct of an inherent biological dysfunction, be it your genitalia or biological chemistry, which could be treated exogenously. Historically, one of the once front-line methods to cure homosexuality were lobotomies (Zlotlow 1959), complete removal of one’s sexual organs (Kopp 1938; Hackfield 1935) or organotherapy (Glass & Johnson 1944; Barahal 1940; Wright 1940). More recently, more pharmaceutical approaches have been utilized, be it medication (Tennent 1974; Bartholomew 1986; James 1962; Freund 1960) hormone or steroid therapy (Dorner 1980).
For many individuals, dissatisfaction with one’s sexuality or gender identity are a product of the institutions in which they are socialized, often in religious contexts (Gibbs 2015), which encompass our third category. A majority of the world’s major religions view homosexuality as “sinful” and “against God’s will”, which places many LGBT people’s identity and existence in direct conflict with the ideals that shape their worldview. Because of this, some individuals may solicit therapy from their religious leaders in order to be cured of their “sin” and thus the fourth category of conversion therapy. Innumerable narratives in the literature recount hours of regular prayer (van den Aardweg 2011; Byrd, Nicolosi, Satinover, 1996), being sent to “conversion camps” (Parks 1997; Allen 1958), or exorcised in order to rid oneself of homosexual demons (Brown 2000; Barlow 977).

Punitive measures comprise the final categorization that we determined from reviewing the literature. Perhaps not surprisingly, this is certainly less documented in the primary literature than the rest of the variations of conversion therapy, personal accounts indicate that individuals continue to be victims of abuse and humiliation as a means of conversion (citation). In one article, participants depicted grueling forced labor and being chained to his bed and “beaten with planks, sticks and plastic pipes” and “forced to eat his own feces” (Plant 1988). The majority of accounts we found describing punitive measures of conversion therapy had been documented by investigative journalists, media reports, self-described accounts, or other non-peer reviewed materials.

**Figure 2:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-Category</th>
<th>General Information</th>
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<tbody>
<tr>
<td>Psychodynamic:</td>
<td>Behavioral:</td>
<td>Cognitive:</td>
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<tr>
<td></td>
<td>Overt (real) sensitization (Fookes 1960; Levin 1970; Freund 1973; Herman 1974)</td>
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<tr>
<td>Positive Conditioning (McConaghy 1975; Larson 1969; Mcguire 1964)</td>
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<tr>
<td>Reciprocal Inhibition (Schmidt 1965)</td>
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<tr>
<td>Operant Conditioning (Barlow 1975; Sandford 1975; Brown 1964)</td>
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<td>Backward Conditioning (McConaghy 1973)</td>
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<td>Differential Conditioning (Solyom 1965)</td>
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<p>| Anti-complaining therapy (van den Aardweg 1986) |
| Sexual Orientation Method (Feldman, MacCulloch, Mellor 1966) |
| Severe Study of Abstract Subjects (Hammond 1883) |
| Baths (Kiernan 1884; Moreau 1884; Hammond 1883) |
| Douches (Moreau 1884) |
| Abstinence/celibacy (Harvey 1897; Harms 1953; Moore 1945; Ellis 1897; Raffalovich brill1895) |</p>
<table>
<thead>
<tr>
<th><strong>Surgical:</strong></th>
<th><strong>Pharmacotherapy:</strong></th>
<th><strong>Organotherapy:</strong></th>
<th><strong>Other:</strong></th>
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<tbody>
<tr>
<td>Clitorodectomies (Hackfield 1935)</td>
<td>Radiation (Potter 1933)</td>
<td></td>
<td>Acupuncture (Warren 1980)</td>
</tr>
<tr>
<td><em>Orchiodectomy</em> (Bremer 1959; Golla 1949; Barr 1920, Hughes 1914; Ellis 1896; Daniels 1896, 1893)</td>
<td>Hormones (Perloff 1949; Freed 1943; Rosenzweig 1941; Potter 1933; Dorner)</td>
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<td>Electroshock (Thompson 1949; Liebman 1945)</td>
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<tr>
<td>Ovariectomy (Kopp 1938)</td>
<td><em>Insulin</em> (Allen 1958; Lorand 1957)</td>
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<tr>
<td>Lobotomy (Zlotlow 1959; Bowman 1953; Friendlander 1948; Banay 1942)</td>
<td>(Bancroft 1974;</td>
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<tr>
<td>Transplant (Trask 2018; Steinach &amp; Lichtenstern 1917), Stereotaxic treatment (Hitchcock 1972; Aebert 1971)</td>
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<td>Leucotomy (Tow 1955), Hypothalotomy (Dieckmann 1988; Schmidt 1981; Rieber 1979)</td>
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<td>Vasectomies (Kopp 1938; Sharp 1909)</td>
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<tr>
<td><em>Pudic nerve section</em> (1904)</td>
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**Medical**

**Pharmacotherapy:**
- Radiation (Potter 1933)
- Hormones (Perloff 1949; Freed 1943; Rosenzweig 1941; Potter 1933; Dorner)
- *Insulin* (Allen 1958; Lorand 1957)
- (Bancroft 1974;)

**Organotherapy:**
- Organotherapy (Barahal 1940; Wright 1940; Glass & Johnson 1944)
- (Bancroft 1974;)

**Other:**
- Nutrition (Kronmeyer 1980; Potter 1933), Exercise (Kronmeyer 1980)
- Acupuncture (Warren 1980)
- Electroshock (Thompson 1949; Liebman 1945)

**Plant 1988; Diamant 1987; Allen 1958; Potter 1933**
<table>
<thead>
<tr>
<th>Religious</th>
<th>Prayer &amp; Repentance:</th>
<th>Exorcism:</th>
<th>Programs:</th>
<th>Other:</th>
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</table>

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<tr>
<th>Punitive</th>
<th>Abuse:</th>
<th>Starvation:</th>
<th>Public/Sexual Humiliation:</th>
<th>Other:</th>
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<tr>
<td></td>
<td>Forced Labor</td>
<td></td>
<td>Forced Sexual Encounters (Ovesey 1969; Frank 1961)</td>
<td>Corrective Rape</td>
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</table>

**Discussion:**

Despite the traumatic and often ineffective practice of conversion therapy that LGBT people are subjected to worldwide, there is a breadth of research related to the implications of conversion therapy, but there remains a gap in knowledge regarding how to properly standardize measurement of exposure. This review sought to better identify and categorize variants of the pseudoscientific practice published in the scientific literature; ultimately 93 articles and 14 books were included in this systematic review.
Not only is there a gap between information regarding health outcomes related to conversion therapy and exposure measurement, there’s also a divide between the amount of available information for each of the categories outlined as a result of this review. For example, when evaluating religious or punitive variants on conversion therapy compared to psychoanalysis, published literature is scarce. We hypothesize this can be attributed to the sensitivity of the topic, the extreme measures that are taken, and/or the privateness of which these methods are orchestrated. We found parallel results in regards to medical therapies, which we expect is due to the overwhelming renunciation of these practices by international agencies and medical organization on account of the staggering evidence that indicates these are neither efficacious nor humane. Furthermore, this scarcity extends to the great deal of disconnect between academic work and that of the communities who propagate and promote this practice, but also those that work on behalf of those who to seek to ameliorate the ruination it has caused.

We believe that developing this system of categorization and classification will help to better capture and measure the complete epidemiology and impact of these practices around the world and the communities that are affected. As it stands, individuals may not identify or connect with the mixed definition of conversion therapy that currently exists, potentially overlooking large numbers of people who have suffered from any variation on conversion therapy. Although we recognize that this due to the nature of the exposure of interest, there are several limitations with this review.

The major limitation of this review is regarding studies or accounts of these practices that may have been conducted outside of the US, that were recorded or were on in private and thus cannot be accounted for. Because of this, the categorization framework suggested here may not accurately encapsulate the full range of methods used in conversion therapy. Moreover, given recent campaigns to outlaw this practice, websites or organizations (NARTH, Exodus International, etc.) that had once existed or promoted such practices may have been shut down or removed reference to additional resources. Given this, this systematic review and analysis may not completely reflect the ongoing, shifting response to extend the availability and accessibility for these resources into the future.

**Conclusion:**

This review further made clear the necessity of developing better tools for measuring subjugation to these practices worldwide. Long after undergoing conversion therapy, members of the LGBT community struggle with the trauma and pain inflicted on them by
these practices, which has lifelong implications for health and well-being. The standardization schema set forth here seeks to provide a new framework by which to more accurately measure exposure to conversion therapy in hopes of improving data collection and closing the existing gaps in knowledge. Further progress in the area of LGBT recognition, protection, and equality demands the elimination of these antiquated practices to convert one's inherent biological nature throughout the entire world - this begins here with more accurate and precise quantitative classification and measurement.

References:


References


Barlow, D. H., Leitenberg, H., & Agras, W. S. (1979). In Upper D., Cautela J. R.(Eds.), Chapter 4 -
experimental control of sexual deviation through manipulation of the noxious scene in covert
Sensitization**Reprinted with permission from the journal of abnormal psychology, 1969, 74,
597–601. © the american psychological association 1969.††This study was supported in part
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doi:https://doi.org/10.1016/B978-0-08-023346-8.50008-4

Follow-up and replications. Archives of General Psychiatry, 36(9), 1001-1007.

Follow-up and replications. Archives of General Psychiatry, 36(9), 1001-1007.


relation to sexual orientation and conditioning performance. The British Journal of

BARTHOLOMEW, A. A. (1968). A long-acting phenothiazine as a possible agent to control deviant
sexual behavior. Ajp, 124(7), 917-923. doi:10.1176/ajp.124.7.917

Princeton University Press.


Boswell, J. (2015). *Christianity, social tolerance, and homosexuality: Gay people in western europe from the beginning of the christian era to the fourteenth century*

Bowman, K., & Engle, B. (1953). The problem of homosexuality. *Journal of Social Hygiene, 39*(1), 10-23. Retrieved from http://hearth.library.cornell.edu/cgi/t/text/pageviewer-idx?c=hearth;cc=hearth;idno=4732756_885_001;node=4732756_885_001%3A4.2;frm=frameset;view=image;seq=4;page=root;size=s


Clausen, J. (2017a). *Apples & oranges: My journey through sexual identity*

Clausen, J. (2017b). *Apples & oranges: My journey through sexual identity*

Colson, C. E. (1972). *Olfactory aversion therapy for homosexual behavior* doi:[https://doi.org.proxy1.library.jhu.edu/10.1016/0005-7916(72)90071-7](https://doi.org.proxy1.library.jhu.edu/10.1016/0005-7916(72)90071-7)


*Conversion therapies and access to transition related healthcare in transgender people a narrative systematic review* doi:10.1136/bmjopen-2018-022425


Drescher, Jack, Shidlo, Ariel, Schroeder, Michael,. (2018). *Sexual conversion therapy ethical, clinical and research perspectives*


Feldman, M. P., & MacCulloch, M. J. (1964). *The application of anticipatory avoidance learning to the treatment of homosexuality: 1. theory, technique and preliminary results* doi:[https://doi.org/10.1016/0005-7967(64)90013-0](https://doi.org/10.1016/0005-7967(64)90013-0)


Graeme, H. (1892). The bicycle in the treatment of nervous diseases. *Journal of Nervous and Mental Disease, 17*(1)


Hallam, R. S., & Rachman, S. (1972). *Some effects of aversion therapy on patients with sexual disorders* doi:https://doi-org.proxy1.library.jhu.edu/10.1016/S0005-7967(72)80011-1


Hanson, R. W., & Adesso, V. J. (1972). *A multiple behavioral approach to male homosexual behavior: A case study* doi:https://doi.org/10.1016/0005-7916(72)90058-4


Morgenstern, F. S., Pearce, J. F., & Rees, W. L. (1964). *Predicting the outcome of behaviour therapy by psychological tests* doi://doi-org.proxy1.library.jhu.edu/10.1016/0005-7967(64)90015-4


Owensby, NM. (1940). Homosexuality and lesbianism treated with metrazol. Journal of Nervous and Mental Disease, 92: 65-66


*Surpassing the love of men romantic friendship and love between women from the renaissance to the present.* (2012). Magnus Books.

Tanner, B. A. (1973a). *Shock intensity and fear of shock in the modification of homosexual behavior in males by avoidance learning* doi:https://doi.org/10.1016/S0005-7967(73)80008-7


Tanner, B. A. (1975). *Avoidance training with and without booster sessions to modify homosexual behavior in males* doi:https://doi-org.proxy1.library.jhu.edu/10.1016/S0005-7894(75)80187-0


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Virginia., Council,, McIlwaine, H. R., Virginia., General Court,, Virginia.,Library Board,,. (1924). Minutes of the council and general court of colonial virginia : 1622-1632, 1670-1676, with notes


Wright, C.A. (1941). Results of endocrine treatment in a controlled groups of homosexual men. Medical Record, 154: 60-61

