

Family-Based Treatment of Adolescents with Anorexia Nervosa

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Introduction

Anorexia nervosa (AN) is a serious and potentially fatal mental illness; it has intense influence on the lives of many individuals and their families (Anorexia Nervosa and Associated Disorder [ANAD], 2013). Anorexia nervosa continues to affect people, particularly women from all around the world. The spread of western standards of beauty have made this a common disease in other parts of the world as well, where previously anorexia was not prevalent. The concept of anorexia nervosa describes itself. It is identified as loss of appetite due to nervous reasons (Grange & Eisler, 2009). However, AN burdens individuals with an unyielding obsession with weight loss and food restriction, eventually leading to extreme emaciation and even death. This obsession can lead to very perfectionism outlook towards body and body image, with the result that the patient may start to starve him or herself in orders to stay slim (Goldenberg, 2008).

According to the American Psychiatric Association (APA, 2012), AN is an eating disorder characterized by achieving a low body weight and distorted body image intentionally. Knows about anorexic patients that they control their weight by starving themselves, exercise excessively, or other means of weight control, such as diet pills, diuretic drugs, and ingestion paper tissues (Gardner & Wilkinson, 2011).

Further, Anorexia nervosa is a disorder arising most commonly in adolescence, AN which primarily affects adolescent girls and young women between 15 and 22 years (Grange & Eisler, 2009).

Few studies were conducted in Jordan about anorexia nervosa and family treatment, where there is less reporting about such eating disorder from patients and their families, in Jordan, there are no specialized centers to deal with such eating disorder. At the National Center for Mental Health there is no clear policy or integrated treatment plan to deal with this group of patients where the parents are ignored in the treatment plan where they have the greatest role in the treatment plan and deviate pressures and negative aspects that contribute to the worsening of the disease.

So, the aim of this paper is to provide a general understanding of full picture about the role of family treatment in anorexia nervosa and to examine these adolescent studies more closely and put family-based treatment forward as a promising approach for this patient population, and this paper will remark the significance and strengths of family therapy for the treatment of adolescents with anorexia, In order to achieve that, this paper will define family treatment strategies, Family based treatment, and corroborative evidences and contrary evidences. Finally, the paper will provide proposed recommendations for Jordanian psychiatric nurses based on the available scientific evidences about the effectiveness family treatment to manage and deal with anorexia nervosa.

AN is a serious disorder affecting both psychological and physical health (Lock et al., 2010). Anorexic patients habitually have low self-confidence, extreme dislike their body and frustrated (Smink, Hoeken, & Hoek, 2012). Anorexics often set unrealistic goals and feel enormous guilt when they fail to accomplish those goals (Cooper, 2005).

Anorexia leads to impair the brain and nerves (ANAD, 2013). Anorexics are embarrassments or suffer from poor judgment; they are often sad, irritable, depressed, and moody (APA, 2012). Anorexia nervosa may become one of the chronic diseases that lead to death in world widely among adolescents girls in developed countries (ANAD, 2013).

Anorexia nervosa has bad consequences physically; for illustration, hypotension, bradycardia, heart failure, weakness in the muscles, anemic, and severe dehydration and electrolyte imbalance (ANAD, 2013; Nathalie et al., 2012).

Furthermore, women may irregular menstruating or amenorrhea and sexual dysfunction. Anorexics risky for seizures, immunity diseases, depression, obsessive-compulsive behaviors, anxiety, and substance abuse (ANAD, 2013; APA, 2012; Nathalie et al., 2012).

Sociocultural factors play vital role in development of AN in psychologically vulnerable adolescent females (Imran & Ashraf, 2008). The cultural variations have led to a wide spread adoption of western styles, habits, and attitudes. These variations include a shift in the lifestyle from active to sedentary and in the eating patterns which are changed to fast food (Imran & Ashraf, 2008; Wozniak, Rekleiti, & Roupá, 2012).

Treatment of adolescents with anorexia nervosa is most effectively in the formula of family therapy (Fitzpatrick & Lock, 2007). The psychotherapists report the significant of collaboration among all family members in order to attain success in the scope of problem solving and recovery (Le Grange, Lock, Loeb, & Nicholls, 2010). Family based treatment (FBT) exists as one of the most commonly recommended types of treatment, along with individual psychodynamic psychotherapy and cognitive-behavioral therapy (Cooper, 2005;

Lindsay, Bodell, & Pamela, 2010).

The Prevalence

AN can occur in both gender and in the different age groups, the prevalence of AN among young females is around 0.4% in ratio 10:1 female-to-male, but anorexia nervosa is far less common in males than in females (Smink, Hoeken, & Hoek, 2012). Adolescent females are epidemics with AN with estimates of prevalence in 0.2% to 1% of adolescent girls (Mirsa et al, 2011; Smink, Hoeken, & Hoek, 2012).

Review of Literature

Introduction

The purpose of this literature reviews to insight more information about the role of family based treatment in anorexia nervosa among adolescents. One type of psychotherapy frequently used to take care of patients with AN is family therapy. In family-based treatment, parents are viewed as a resource rather than burden (Fisher, Hetrick, & Rushford, 2010). Likewise, family therapy is considered as one of the most commonly recommended types of treatment (Eisler, Simic, Russell, & Dare, 2007).

Although there are several forms of family therapy, this paper will illustrate that the therapy most often tested is family based therapy. Generally, there were numerous evidences to confirm that family treatment may be efficacious compared to treatment as common (Bodell & Keel, 2010). However, there is an sufficient amount of evidences to emphasize whether family therapy is efficient compared to other psychotherapies for rates of relapse, symptoms, and weight measures (Findlay, Pinzon, Taddeo, & Katzman, 2010; Ma & Lai, 2009).

Family-Based Treatment initially established in the late 1970s and early 1980s by a team of clinical researchers led by Christopher Dare and Ivan Eisler (Family therapist). This team was constructed at the Institute of Psychiatry and the Maudsley Hospital in London, England (Loeb & Grange, 2009). Maudsley Family based treatment has promptly become the treatment of choice for adolescents and children with anorexia nervosa (Touyz & Hay, 2013).

Related Studies and Main Findings

Many studies have highlighted the role of family therapy in the handling and management of anorexics in adolescents. Family processes involve in restoration a family role and in the safeguarding of disordered patterns of behaviors, indeed the family becomes empowered to create a modification (Loeb & Grange, 2009).

Anorexic patients persistently assume they are fatter or obese. Anorexia is a psychological more than physical problem. Anorexics patients often use their obsession with food and weight to ease emotional distress (Katharine, Loeb, Daniel, & Grange, 2009).

Apparent factors that contribute to escalation anorexia nervosa include family, however if parents continually criticize their children about their weight and their bodies, the children will be prone for anorexia in the future (Lindsay, Bodell, & Pamela, 2010).

The Maudsley approach widely used for teenagers, The Maudsley approach includes three clear phases and it's usually conducted within 15-20 sessions over 12 months. In the first phase which is called as the weight restoration phase, in this phase the therapist focuses on bad consequences of severe malnutrition, assessing the family's typical interaction pattern, and assisting parents in re-feeding their sons (Fitzpatrick & Lock, 2007).

The second phase of treatment focuses on encouraging the parents to help their child to take more control over eating once again. The therapist instructs the parents to accept that the main task here is the return of their child to physical health, and that this now occurs in a method that is in protection with their child's age and their parenting style (Eisler & Le Grange, 2008).

The third Phase starts when the adolescent is able to keep weight above 95% of ideal weight and self-starvation has declined (Grange & Eisler, 2009).

Rhodes, Baillie, Brown, and Madden (2008) conducted study to twenty families were randomized in two group, one of them receiving standard treatment and ten parent-to-parent consultation session between weeks three and five, participants Girls aged 12-16 with a DSM IV-TR diagnosis of anorexia nervosa (AN). The authors concluded that parental efficacy was measured using the Parent versus Anorexia Scale (PVA). Similarly, Weight was measured by percentage ideal body weight according to the metropolitan life tables.

The multidisiplinary team should support the patient's family and let them be engaged in the treatment plan and take an assertive stand against anorexia nervosa behaviors such as excessive weight loss and excessive exercising (Grange, 2012).

A key component of the family-based treatment model is that the parents are given the responsibility to return their child to physical health and ensure full weight restoration (Findlay, Pinzon, Taddeo & Katzman, 2010).

Family collaborations and dynamics may generate an environment that corroborates the maintenance of AN, Eisler and Le Grange (2008) argued that the family itself is a resource for helping the sons cope with and

recovery from her eating.

One of the few Jordanian research studies on this approach was undertaken in (2011), Mousa, Al-Domi, Mashal, and Jibril (2010) conducted a cross-sectional study in Jordan at 432 adolescent girls aged 10–16 years were recruited from public and private schools in Amman, the authors concluded that pubertal, familial and social variables were connected with eating disorders occurrence.

Latzer, Azaiza, and Tzischinsky (2009) conducted study to compare the eating attitudes and behaviors, comprising weight concerns and dieting behavior, among three religious groups (Moslems, Druze, and Christians) and consisted of 1141 Israeli-Arab adolescent females. The authors presented arguments to emphasize that 75% of the students had adversely Eating Attitude Test-26 (EAT-26) score (>20) and that 25% of the students had a positive EAT-26 score (<20) and a high prevalence of disturbed eating attitudes and behaviors among Israeli-Arab adolescent schoolgirls.

In another study which contained of 1,131 Arab schoolgirls in Israel, comprising 922 Moslem, 125 Christian, and 84 Druze adolescents, in the 7–12th grades, for same authors, Latzer, Tzischinsky, and Azaiza (2007) noted that the Christian subgroup had a considerably lower total eating disorder inventory-2 (EDI-2) score than the Druze and Moslem subgroups, which had similar total EDI-2 scores. As well significant variances were observed between the three religious subgroups in all subscales.

Paulson-Karlsson, Engström, and Nevonen (2008) conducted study to assess the outcome of family-based treatment for female adolescents with anorexia nervosa. Adolescents and parents were assessed pre-treatment, 75% of the patients were in full remission with decline in eating disorder symptoms and adopting problems and they experienced a less distant and disordered atmosphere in their families. The authors pointed out that family-based treatment appears to be effective in adolescent anorexia nervosa patients regarding areas examined in this study.

Ma and Lai (2009) in their study hold the position that family therapy combined with conventional psychiatric treatment was effective in restoring body weight, increasing the body mass index, and recovering menstruation.

Wade et al. (2008) suggested that a positive correlation between anorexia nervosa in daughters and a predisposed family situation of perfectionism and high personal standards. Also, Wade et al. (2008) specify that parental and self-criticism of unmet goals do not predispose adolescents to the development of anorexia.

Loth and Neumark-Sztainer (2009) proposed that parents who make negative comments about their body or weight expose children to detrimental perceptions about their own bodies. Becoming critical of their own bodies is an occurrence that manifests when parents are openly critical themselves.

One of the prominent models of family therapy is the Maudsley model of family therapy, in which the family enthusiastically contributes in helping their sons in attaining a more healthy weight, is considered the most novel model of family therapy for treating anorexia in adolescents (Loth & Neumark-Sztainer, 2009).

FBT holds considerable guarantee for adolescents with anorexia nervosa. Lock et al. (2010) conducted randomized controlled trial study which included one hundred twenty-one participants, aged 12 through 18 years, who meet DSM-IV criteria for AN and excluding the amenorrhea requirement, the full remission from anorexia nervosa defined as normal weight and mean global Eating index percentile and eating-related psychopathology. The authors concluded that FBT was significantly superior for partial remission at end of treatment but not at follow up.

In addition, body mass index percentile at end of treatment was significantly superior for FBT, but this effect was not found at follow-up.

A meta-analysis conducted by Couturier, Kimber, and Szatmari (2012) indicated that behaviorally based FBT (Maudsley Family Therapy) for adolescents with anorexia nervosa is better-quality to individual therapy. The authors reported that family therapy emphasis on intervention with disordered eating behaviors should be suggested and recommended as the first line of handling and managing the anorexic adolescents.

Adolescents with AN respond well to family therapy, in many instances without the necessity for inpatient treatment. Between 50% and 75% of adolescents are weight restored by the end of the treatment (Eisler & Le Grange, 2008).

Godart et al. (2012) did Randomized Controlled Trial, 60 female AN adolescent, aged 13 to 19 years. The authors found that significant group effect for the Morgan and Russell outcome category in favor of the program with family therapy. Fisher, Hetrick, and Rushford (2010), in 13 trials were included, suggested that family therapy may be more effective than treatment as usual on rates of remission.

Summary of Literature Review

The purpose of literature review was to explore the effectiveness of family therapy among adolescents anorexia nervosa. In general, FBT is implemented as central outpatient treatment model. FBT is disconnecting to traditional family therapy which addresses interpersonal and relationship issues within a family unit. Furthermore, family oriented interventions are a vital and integral part of any treatment model for adolescents

with anorexia nervosa.

The Journal of Family Therapy, Overall they create studies of family-based treatments for anorexia nervosa to be promising. Particularly, Maudsley approach offers advices, interventions, and recommendations for adolescents with anorexia nervosa.

In summation, the previous studies offer significant evidence to support the understanding of how familial influences, these studies consistently show that adolescents with AN respond well to family therapy without the need for inpatient treatment.

Patients with poor family functioning at baseline also improved but only after two years of treatment (Loeb & Grange, 2009).

The Corroborative Evidences (Advantages of Family Based Treatment)

The probable benefits of family treatment approach are plentiful; the adolescents remain in their familiar environment, which permits for ongoing linking with friends, family and activities (Eisler, 2005; Paulson-Karlsson, Engström, & Nevenon, 2008; Rhonda, Merwin, Nancy, Zucker, & Alix, 2013). Overall are important for continuing recovery. Lastly, rare inpatient resources can be focused to adolescent whose anorexic patients cannot be managed as an outpatient with family-based treatment (Touyz & Hay, 2013).

Gardner and Wilkinson (2011) suggested that family therapy advantageous over individual psychotherapy in terms of physical enhancement (weight gain and resumption of menstruation) and reduction of cognitive distortions, particularly in younger patients.

FBT consists of importance roles in the handling and management of anorexics in adolescents (Wade et al., 2008). FBT considers parents and health care providers as the primary resource for recovery and the most suitable support for regaining a healthy weight and avoiding harmful behaviors (Gardner & Wilkinson, 2011).

Families played essential and central role in the genesis of the illness and that a change in the dysfunctional patterns of family interactions would bring forward a change in the patient's symptoms (Carr, 2009).

Godart et al. (2013) conducted randomized controlled trial to compare two multidimensional treatment programs for adolescent anorexia nervosa, treatment as usual versus treatment plus family therapy. The authors remarked that adding family therapy session to the multidimensional programs enhances treatment effectiveness in girls with severe anorexia nervosa. Reading patients with more severe eating related psychopathology have better outcomes in a behaviorally targeted family treatment than an individually focused approach (Grange et al., 2012)

Merwin, Zucker, and Timko (2013) in pilot study about acceptance-based separated family treatment demonstrated that five of the six adolescents restored weight to their ideal body mass index as indicated by age, height and sex which was determined by individual growth charts. Also the authors proposed to test the efficacy of this therapeutic approach by larger trials and compared to current family-based interventions to determine unique effects.

To examine the effectiveness, fidelity, and acceptability of family based treatment another study was conducted in Canada, the authors indicated that this treatment is effective not only for weight restoration, but also in enhancing some psychological symptoms comprising dietary restriction and maturity fears (Couturier, Isserlin, & Lock, 2010).

The Contrary Evidences

There are numerous drawbacks related to family based treatment: Expensive, need more multidisciplinary team and counselor, consumed more than usual time, and most of families don't persist in therapy (Grange & Eisler, 2009).

Despite the persuasive role of the family in eating disorders, Latzer et al. (2010) affirmed that no amount of data sustains the idea that family members are causally related to eating disorders. Specifically, psychologists and researchers alike are insist in their disapproval of any therapeutic model placing family members in the category of blame for the etiology of eating disorders (Latzer et al., 2010).

Discussion

While some patients with extreme emaciation or complications of the anorexia nervosa will require admission to hospital, family therapy will still be useful as an adjunct to ward management. There is rising empirical evidence that family therapy offers a supportive and effective model of outpatient treatment of anorexia nervosa in children and adolescents.

Anorexics patients are obsessive with the thought of being thin and may have a pathological alarm for gaining weight (Fisher, Hetrick, & Rushford, 2010). Culturally, especially women are under persisting pressure to be like thin, and women imitate flawless models found in magazines, television, and movies. This often drives them to more rigorous forms of the disease. Traumatic events, such as rape or assault, and stressful events are

situations that may lead to anorexia (Imran & Ashraf, 2008; Wozniak, Rekleiti, & Roupá, 2012).

Families of anorexic patients continued to be portrayed as dysfunctional maintaining the assumption that parents play a central role in the pathogenesis of anorexia nervosa and should thus be excluded from treatment (Eisler, 2005).

As AN is a rare illness, there are many practical obstacles in assessing the prevalence of AN in non-clinical populations. Despite of FBT is considered standard treatment in child- and adolescent-onset AN, it is vague whether it is the best primary approach for all adolescent patients and their families, or whether we can forecast who is more likely to respond (Findlay, Pinzon, Taddeo, & Katzman, 2010).

Summary and Conclusion

From the previous summary of research findings, all findings confirm and agreed that the family-based treatment is an effective and the best treatment for adolescent patients with anorexia nervosa.

Family based therapy is evidence based and should be recommended as a treatment choice for patients with eating disorder. Anorexia nervosa is a mean and mysterious disorder which plays a lot of tricks and can be difficult to overcome. It makes you think you are fat when actually you are very thin; it makes you feel guilty when you eat, and it supports your view that you are generally a bad and useless person. It can even make you feel like it's your friend. It really can take you over completely. Family therapy aids parents and their child, emotionally and physically.

Anorexia nervosa is life-threatening disease that typically has its onset during the adolescent years (Findlay et al., 2010). Based on empiric evidence findings family-based treatment is an effective in treating adolescents with anorexia nervosa.

Recommendations

Firstly: The treatment of anorexia must emphasis on more than just weight gain and often involves a combination of individual, group, and family psychotherapies in addition to nutritional counseling.

Secondly: Further research is needed to develop intervention programs to control anorexia nervosa occurrence in Jordan

Thirdly: Patient with anorexia nervosa should be treated as an outpatient depending on a clear plan and the medical visits should occur regularly (weekly or monthly) with the patient and family. These visits should comprise an interview with the teenagers and their families, followed by comprehensive evaluation.

Fourthly: Expansion in an education and training programs for staff nurses and improving the multidisciplinary team working in FBT to deal with AN.

References

- Anorexia Nervosa and Associated Disorder. (2013). Retrieved November 28, 2013 from, <http://www.anad.org/get-information/get-informationanorexia-nervosa/>
- American Psychiatric Association. (2012). *Diagnostic and Statistical Manual of Mental Disorders* (5thed). Text Revision. Washington, DC.
- Carr, A. (2009). The effectiveness of family therapy and systemic interventions for child-focused problems. *Journal of Family Therapy*, 1(30), 34-45. doi:10.1111/j.1467-6427.2008.00451.x
- Cooper, M. (2005). Cognitive theory in anorexia nervosa and bulimia nervosa: progress, development and future directions. *Clinical Psychology Review*, 25 (4), 511–532.
- Couturier, J., Isserlin, L., & Lock, J. (2010). Family-based treatment for adolescents with anorexia nervosa: A dissemination study. *Eat Disorder*, 18(3), 199–209.
- Eisler, I., & Le Grange, D. (2008). Family interventions in adolescent anorexia nervosa. *Child Adolescent Psychiatry*, 18, 159-173.
- Eisler, I., Simic, M., Russell, M., & Dare, C. (2007). A randomized controlled trial treatment of two forms of family therapy in adolescent anorexia nervosa: A five year follow-up. *Journal of Child Psychology and Psychiatry*, 48, 552-560.
- Eisler, I. (2005). The empirical and theoretical base of family therapy and multiple family day therapy for adolescent anorexia nervosa. *Journal of Family Therapy*, 27, 104–113.
- Findlay, S., Pinzon, J., Taddeo, D., & Katzman, D. (2010). Family-based treatment of children and adolescents with anorexia nervosa: Guidelines for the community physician. *Canadian pediatric society*, 15(1), 31-35.
- Fisher, C., Hetrick, S., & Rushford, N. (2010). Family therapy for anorexia nervosa. *Cochrane Database of Systematic Reviews*, 4, 1-85. doi:0.1002/14651858.CD004780
- Fitzpatrick, K., & Lock, J. (2007). Evidence-based treatments for children and adolescents with eating disorders: Family therapy and family-facilitated cognitive-behavioral therapy. *Journal of Contemporary Psychotherapy*, 37, 145-155.
- Gardner, J., & Wilkinson, P. (2011). Is family therapy the most effective treatment for anorexia nervosa.

Psychiatric Danubina, 23(1), 175-177.

Godart, N., Berthoz, S., Curt, F., Perdereau, F., Rein, Z., Wallier, J. . . & Jeammet, P. (2012). A Randomized Controlled Trial of Adjunctive Family Therapy and Treatment as Usual Following Inpatient Treatment for Anorexia Nervosa Adolescents. *PLoS One*, 7(1), 249-258. doi:10.1371/journal.pone.0028249

Goldenberg, H., & Goldenberg, I. (2008). *Family therapy: An overview* (7th ed). Belmont, CA: Thompson Brooks/Cole.

Grange, L., Daniel, L., Lock, J., Agras, W., Stewart, O., Moye, A., Bryson, W., Booil, J., & Helena, C. (2012). Moderators and mediators of remission in family-based treatment and adolescent focused therapy for anorexia nervosa. *Behavior research therapy*, 50(2), 85–92.

Grange, D., & Eisler, I. (2009). Family Interventions in Adolescent Anorexia Nervosa. *Child and Adolescent Psychiatric Clinics of North America*, 18, 159-173. doi:10.1016/j.chc.2008.07.004

Imran, I., & Ashraf, A. (2008). Anorexia Nervosa in a Pakistani Adolescent Girl A Case Report with Literature Review of Anorexia Nervosa in Asia. *American Academy of Child & Adolescent Psychiatry*, 14(4), 220-231.

Katharine, L., Loeb, M., Daniel, L., Grange, D. (2009). Family-based treatment for adolescent eating disorders: Current status, new Applications and future directions. *Internal Journal Child Adolescent health*, 2(2), 243–254.

Latzer, Y., Azaiza, F., & Tzischinsky, O. (2009). Eating Attitudes and Dieting Behavior Among Religious Subgroups of Israeli-Arab Adolescent Females. *Journal of Religion & Health*, 48(2), 189-199. doi:10.1007/s10943-008-9189-7

Latzer, Y., Tzischinsky, O., & Azaiza, F. (2007). Disordered eating related behaviors among Arab schoolgirls in Israel: An epidemiological study. *International Journal of Eating Disorders*, 40(3), 163-170. doi:10.1002/eat.20348

Le Grange, D., Lock, J., Loeb, K., & Nicholls, D. (2010). The role of the family in eating disorders. *International Journal of Eating Disorders*, 43, 1-5.

Lindsay, P., Bodell, L., & Pamela, K. (2010). Current treatment for anorexia nervosa: Efficacy, safety and adherence. *Psychology Research and Behavior Management*, 3, 91-108.

Loeb, K., & Grange, D. (2009). Family-Based Treatment for Adolescent Eating Disorders: Current Status, New Applications and Future Directions. *national institutional of health*, 2(2), 243–254.

Lock, J., Grange, D., Agras, S., Moye, A., Bryson, S., & Jo, B. (2010). Randomized Clinical Trial Comparing Family-Based Treatment With Adolescent-Focused Individual Therapy for Adolescents With Anorexia Nervosa. *Arch Gen Psychiatry*, 67(10), 1025-1032.

Loth, K., & Neumark-Sztainer, D. (2009). Informing family approaches to eating disorder prevention: Perspectives of those who have been there. *International Journal of Eating Disorders*, 42, 146-152.

Ma, J. L., & Lai, K. (2009). Applicability of Family Therapy for Chinese Children and Adolescents Suffering from Anorexia Nervosa in a Chinese Context: A Preliminary Study. *Social Work in Mental Health*, 7(4), 402-423. doi:10.1080/15332980802237750

Mousa, T. Y., Al-Domi, H. A., Mashal, R. H., & Jibril, M. A. (2010). Eating disturbances among adolescent schoolgirls in Jordan. *Appetite*, 54, 196-201. doi:10.1016/j.appet.2009.10.008

Nathalie, G., Sylvie, B., Florence, C., Fabienne, P., Jenny, W., Anne, S. Horreard & Ire`ne, K. (2012). A randomized controlled trial of adjunctive family therapy and treatment as usual following inpatient treatment for anorexia nervosa adolescents. *Plos one*, 7(1), 120-131.

Paulson-Karlsson, G., Engström, I., & Nevenon, L. (2008). A Pilot Study of a Family-Based Treatment for Adolescent Anorexia Nervosa: 18- and 36Month Follow-ups. *Eating Disorders*, 17(1), 72-88. doi:10.1080/10640260802570130

Rhodes, P., Baille, A., Brown, J., & Madden, S. (2008). Can parentto- parent consultation improve the effectiveness of the Maudsley model of family-based treatment for anorexia nervosa? A randomized control trial. *Journal of Family Therapy*, 30(1), 96–108.

Rhonda, M., Merwin, B., Nancy, L., Zucker, V., & Alix, C. (2013). A pilot study of an acceptance-based separated family treatment for adolescent anorexia nervosa. *Cognitive and Behavioral Practice*, 16(4), 101-112.

Smink, F., Hoeken, D., & Hoek, H. (2012). Epidemiology of Eating Disorders: Incidence, Prevalence and Mortality Rates. *National institution of health*, 14(4), 406-414. doi:10.1007/s11920-012-0282-y

Touyz, S & Hay, P. (2013). A new era of open access publishing in eating disorders. *Journal of Eating Disorders*, 1(23), 1102-1014.

Wade, T., Tiggeman, M., Bulik, C., Fairburn, C., Wray, N., & Martin, N. (2008). shared temperament risk factors for anorexia nervosa: A twin study. *Psychosomatic Medicine*, 70, 239-244.

Wozniak, G., Rekleiti, M., & Roupá, Z. (2012). Contribution of social and family factors in anorexia nervosa. *Health science journal*, 6(2), 257-269.

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