

Short Communication

Differences between anorexia patients and participants of the Minnesota hunger experiment: Consequences for treatment

Greta Noordenbos*

Dr. H. Jacoblaan 50, 3571 BN, Utrecht, The Netherlands

The Minnesota hunger experiment

The hunger experiment was carried out in 1944 by Anselm Keys and others in the American city of Minnesota. The aim was to investigate the consequences of starvation in order to be able to restore the health of hunger victims of the Second World War. How could they be treated in the best possible way to regain a healthy weight?

For this purpose 36 physical and psychosocial healthy young men were selected from a large group of men who refused to serve in the American Army. They were examined very carefully in the period before the hunger experiment which lasted 6 months. In this period they received only two meals a day with half of the number of calories they were used to eat. This period of malnutrition was followed by 3 months of refeeding. Not only their weight recovered quite well, but also the psychosocial consequences of starvation disappeared completely [1].

Similarities with anorexia patients

Striking were the many similarities between the participants of the hunger experiment and anorexia patients. They not only showed many similar physical consequences, such as severe emaciation, decrease in blood pressure, heart rate and body temperature, fatigue and lethargy, but also many psychosocial consequences, such as extreme obsession with food, lack of concentration, sad feelings, apathy and social withdrawing.

Because of these strong similarities with anorexia patients the hope was that anorexia patients could also recover in a few months by refeeding and developing a healthy weight. But that hope turned out to be an illusion, because weight recovery in anorexia patients is very difficult and is often followed by relapse. Why is recovery of anorexia patients so more difficult than for the participants of the hunger experiment?

More Information

*Address for Correspondence:

Dr. Greta Noordenbos, Dr. H. Jacoblaan 50,
3571 BN, Utrecht, The Netherlands,
Tel: 0031(0)6.33806206; Email: noordenbos@
FSW.Leidenuniv.nl

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Differences were overlooked

Because of the striking similarities between the participants of the hunger experiment and anorexia patients the differences were often overlooked. But when we focus on these differences they even surpass the similarities, not only in the period before the start of starvation, but also during the period of malnutrition and even more in the period of recovery.

In order to be selected for the hunger experiment the men were extensively tested, for only physical and psychosocial healthy men were included. Anorectic patients however have many psychological problems in the period before they start to lose weight. They suffer from low self-esteem, a negative body attitude, problems in coping with stress, conflicts and negative emotions. However, when they manage to eat less and lose weight they get more self-esteem, control, feelings of identity and a more positive body attitude. By losing weight they feel strong, which motivates them to continue to lose even more weight [2].

During the period of starvation the participants of the hunger experiment longed the whole day to have the two meals they received. The mealtimes were the best moments of their day. But for anorexia patients the mealtimes are confronted with much anxiety and stress, and often cause many conflicts and crisis in their families. Their resistance to eat can be so strong that they develop severe underweight and are forced



to be tube fed. Because of their strong resistance they have to be held by several adults, or fixed to their bed.

Whereas participants in the hunger experiment felt physically and mentally much better and stronger when they gained weight, anorexia patients experience weight gain as a failure, because they lose control over food and weight ('I'm a loser, a weakling') and evaluate their extra pounds as very negative ('I'm a disgusting dirty fatted pig') [3].

Consequences for treatment of anorexia patients

The differences between the participants of the hunger experiment and anorexia patients have important consequences for their treatment. It is a misconception to think that anorexia patients can eat more and regain a healthy weight within a few months as was the case with the men in the Minnesota hunger experiment. Anorexia nervosa

is much more than malnutrition and recovery requires intensive psychosomatic treatment aimed at developing more self-esteem confidence, a more positive body experience and better emotion regulation strategies. Only when their underlying psychological problems are solved and they are no longer motivated to lose weight anorexia patients are able to recover fully from their anorexia nervosa [4].

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