

## **Influencing adolescent girls' with creative dance twice weekly. A randomised, controlled study. (The Dance project)**

The aim of this study is to evaluate if creative dance twice weekly can influence girls wellbeing. The focus lies on girls 13-18 years old that suffer from repeatedly psychosomatic problems and/or stress. Specific objectives are

- To assess the effect of the dance intervention in reducing psychosomatic problems (such as pain in the head, neck, shoulder or stomach), stress and depression
- Determine which factors are important for continuing dancing and keeping up new habits
- A cost-effectiveness analyse of the health outcome.

The Dance Project is a 3-year research study. Project period: May 2008 to June 2011.

Geographical area: Örebro County (population 276,000)

### **Target groups of the project**

The target group is girls in upper level of compulsory school grade 7, 8 and 9 and high school grade 1 and 2 which have recurrent psychosomatic problems and/ or experiences of stress or depression leading to frequent visits the school nurse. The schools included are those within 5 km from the centre of the city Örebro.

### **Partners**

The study is collaboration between the Centre for Health Care Sciences in Örebro County Council and School Health Care in Örebro Municipality.

### **Practical background and needs assessment of the project**

Recent research has found an increasing prevalence of psychological health problems among children and adolescents, especially girls. Girls are generally unhappier with their lives compared to boys in all scientific represented ages; 13, 15 and 16 years old.

Depression in young people is associated with poor academic performance, social dysfunction, substance abuse, suicide attempts and complete suicide.

In the county of Örebro, Sweden, the prevalence of girls with repeatedly psychosomatic problems has reached the level of almost one third. This is a problem for the school health care system because the school nurses often feel that they have limited resources to offer these girls enough support. Many of these girls are too healthy to be patients in the Child and Adolescent Psychiatric Care but they still need more support than the school or primary health care can offer.

Exercise is promoted as an active strategy to prevent and treat depression and anxiety. Dance can be a suitable intervention for adolescent girls with psychosomatic symptoms due to the fact that it is an often-appreciated physical activity for girls and it is in a social context. Dance can be a protection factor in preventing and treating symptoms of depression. Group activities can reduce feelings of alienation and social isolation.

## **Theoretical background of the project**

The school nurses asked girls aged 13-18 years old, who searched for psychosomatic problems, if they wished to participate in the dance project. Recruitment of girls were also carried out in information about the project at parent meetings and in school classrooms. 143 girls completed the base-line questionnaire, 138 met the inclusion criteria and were included. Randomization was carried out to intervention and control group.

The quantitative data collection is carried out with a questionnaire. Participants in the dance intervention and the control group will response to this questionnaire at 7 times during the study, at start and every six months over a total period of 3 years.

Girls who are found to be at risk of having severe depression (> 34 points) in the depression scale CES-DC met with an experienced licensed psychologist. This was to explore if there was a need for extended support and help and the girl's parents and Child and Adolescent Psychiatric Care was contacted in most cases and if there was a risk for suicide. The results from the depression scale at base - line (CES-DC) showed that 81% of the girls in the study had depressive symptoms and 29% had high levels of depressive symptoms.

The qualitative interviews were performed in order to explore the girls experience of the dance lessons and to assess if and/or how dance intervention has affected her self-esteem in any way. These interviews were conducted on a strategic sample of 20 girls who participated in the dance intervention.

The dance intervention took place in a gym in Örebro twice weekly for a period of 1 year under the guidance of two dance class teachers (one at a time). The duration of the class was 75 minutes and the dance training was always carried out to popular and suitable music. The dance choreography was adjusted to the level of the participants' skills in order to make them feel successful in their exercise. During the intervention year, the theme of dance styles varied from hip hop, jazz, aerobic dance and contemporary dance. African dance, to the music of African drums, was used in the warm up section. The dance class always ended with a 10-min-relaxation training. The dance intervention had a strong focus on emphasizing the participants' resources and creates a feeling of affinity. The dance teachers encouraged them to listen to signals from the body, reducing focus on the performance and "become part of the movement".

## **Practical experience**

The project teaches us that;

- it is possible to offer girls with psychosomatic problems and depression an intervention twice weekly during a whole year and make them want to come!
- It is possible to have dance as an intervention activity even if the girls had not danced before and even if they were shy.
- It is possible to develop new skills in dancing during a short period of time and that can affect the self-esteem in a positive way.

We learned that it is a challenge to find the right time for the dance intervention because the girls go to different schools with different curriculums. Our dance intervention took place at a central gym at 4 pm. School schedules can change over a year which can change

the possibility for the girls to participate in the dance class. However, most of the girls appreciated a time on the afternoon directly after school. Some of the girls living outside Örebro should not have participated at all if it had been later in the evening due to the inconvenience in catching buses back and forth.

It is of great importance to remember that girls with psychosomatic problems often have other difficulties. Anxiety and social phobia can be hard to cope with during a dance lesson with other girls. The dance instructors benefit from knowing the girls specific problem and taking these problems in consideration in the dance class through conveying a permissive atmosphere. We emphasized that no part of the dance class was compulsory and the girls were free to sit down and watch if they wanted to. On the other hand it was important to remind them that they always have the power to do more than they think they are able to, and within their limits gradually challenge them to try new things.

One thing that turned out to be an important success factor in the project was the focus on joy and not on performance in the dance intervention. There was no dance show or display to rehearse for; the dance was just for them and just for fun. Feedback from the girls reveals that this unconditional atmosphere was crucial to keep up the motivation to come to the dance twice weekly.

### **Effect and evaluations**

The study has been carried out as planned with few dropouts and a response rate of 84%.

- Compliance to the dance intervention has been very high; consistent 70% during the whole intervention year.
- The dance group had significant lower frequency of visits to the school nurse compared to the control group.
- The analysis of further data is still in process.

The first quantitative results are to be completed in the autumn 2010. However, the analysis of the qualitative results has started and it indicates several positive effects. The girls experienced the dance class as a sanctuary from everyday problems and found it to be a good way to learn to appreciate their own body even if they had not danced before. For many girls this led to improved self-esteem and reduced their problems with stress and psychosomatic pain. They felt more successful in social situations and had more courage to reach for new goals in life.

### **Perspectives and exchange of experiences**

Although the project is not completed yet, the dance has ended and we can summarize some of our experiences regarding the intervention.

Important factors for the dance intervention:

- Support for the project from the school health care nurses.
- Commitment and involvement from the dance instructors.
- Location – at a central gym. Not at a school, not at a hospital but in a classy healthy gym in order to emphasize that they are girls with a lot of resources, not patients.

- Exclusive for girls. Many of the girls were shy and had low self-esteem. For them, to be among solely girls was very important in order to make them feel relaxed. The fact that the intervention was directed to girls also made them feel special, in the centre.
- If there are mirrors in the dance room, play down and defuse it. Sometimes it can be a good tool to use and sometimes it can be a good idea to turn away from them.
- To improve mood - always reach a high level of oxygen uptake in order to increase the endorphin level and reduce the level of stress hormone cortisol.
- The relaxation at the end of the class was very appreciated. The girls often said that this made them leave the room in harmony, with a calm feeling.
- Don't talk about problems. The dance class can be a sanctuary from their everyday troubles if the music and the movement lies in focus.

#### Future:

- It would be valuable to have the opportunity to repeat the project in a different context and culture.

#### Contacts

**Anna Duberg**, +46 19-602 58 48 / +46 705-50 93 24 [anna.duberg2@orebroll.se](mailto:anna.duberg2@orebroll.se)

Doctorial student, R.P.T., Centre for Health Care Sciences, Örebro county council

**Margareta Möller** +46 19 602 58 49 [margareta.moller@orebroll.se](mailto:margareta.moller@orebroll.se)

Professor, R.P.T., Head of department, Centre for Health Care Sciences, Örebro county council

**Lars Hagberg**, +46 19-602 70 58 [lars.hagberg@orebroll.se](mailto:lars.hagberg@orebroll.se)

Healthcare Economist, Ph.D., Centre for Health Care Sciences, Örebro county council

**Helena Sunvisson** +46 19-602 57 70 [helena.sunvisson@orebroll.se](mailto:helena.sunvisson@orebroll.se)

Reg. Nurse, Lecturer, Ph.D. Örebro University

**Homepage:** <http://www.orebroll.se/vfc>