

**TITLE OF WORK:** The effectiveness of leisure activities on older people with depression

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**CLINICAL SCENARIO:**

The ageing population in New Zealand is increasing rapidly. The age bracket 60 plus is seen as the fastest growing age group, it is predicted by 2051 one in four people will be 65 plus (Statistics New Zealand, 2006). In later life, depression is one of the most common psychiatric conditions. (Blazer, 2003) Therefore it is important for it to be addressed, as it can affect overall wellbeing (Bruce, Seeman, Merrill, Blazer, 1994). Leisure becomes more important after the person retires, as it helps to sustain life satisfaction and reduce depressive symptoms .Occupational therapists use leisure activities with depressed elderly to restore or maintain individual's ability to function in everyday life in order to reduce symptoms.

**FOCUSSED CLINICAL QUESTION:**

Does the participation in leisure activities have a positive impact on depression and/or depressive symptoms in the elderly?

**SUMMARY OF SEACH, 'BEST EVIDENCE' APPRAISED, AND KEY FINDINGS:**

There was not a significant amount of relevant research on our chosen topic. Majority of the articles tended to be quantitative. For the purposes of this assignment we had to search further for varying types of research. The annotated review was used because this was the only other type of research available which addressed our clinical question and was not quantitative. The key findings from the appraisal were that more frequent participation in leisure activities (lifestyle activities) have a positive effect on decreasing depressive symptoms (Arai et al 2007, Fine, 2000).However Fine (2000) also stated that the research available today in this area has limitations in study designs. This prevents one from drawing conclusive statements regarding leisure activities and depression.

**CLINICAL BOTTOM LINE:**

There is sufficient evidence to suggest that participation in leisure activities has a positive effect on depression and depressive symptoms in the elderly.

## LIMITATIONS OF THIS CAT:

This critical appraisal has been peer reviewed by two reviewers and one lecturer as a part of an assignment.

## SEARCH STRATEGY:

CINAHL, OT seeker, Cochrane Library, Google Scholar and PubMed was used. To identify relevant articles we used the search terms, "leisure activities" OR "recreation" OR "hobbies" OR "social engagement OR "social interaction" AND "depression OR "depressed mood" AND "old\* people"

## INCLUSIONS AND EXCLUSION CRITERIA:

### Inclusion criteria:

- Published in English language.
- Included leisure activities.
- Participants over 65
- Depression as only mental health diagnosis.
- Research
- Quantitative studies
- Qualitative studies
- Systematic reviews
- Review of high quality research studies but not a Cochrane systematic review.

### Exclusion criteria:

- Literature reviews of a wide range of articles
- Opinion pieces
- "Scholarly" work
- Informal case studies

## RESULTS OF THE SEARCH:

Study design	Level:	Author (year)
Systematic Review (annotated review)	5	Fine (2000)
Quantitative (cross sectional)	4	Arai, Ishida, Tomimori, Katsumata, Grove & Tamashiro (2006)
Quantitative (secondary data analysis)	3	Stouffer (2001)
Quantitative (pilot study)	4	Wressle, Filipsson, Anderson, Jacobson,

		Matinsson & Engel (2006)
Quantitative (longitudinal)	3	Glass, Mendes De Leon, Bassuk & Berkman (2006)
Qualitative	1	Murray, Banerjee, Byng, Tylee, Bhugra & Macdonald (2006)

## **BEST EVIDENCE**

### Fine, J. (2000).

This was chosen because we had majority of quantitative search results, this one was chosen because it was relevant to the topic, and was a different form of evidence.

Although this is an annotated review, it is similar to a systematic review in the way it critiques a range of research articles that are relevant to the topic. With the permission of our lecturer we were able to critique this as a systematic review.

### Arai et al (2007).

This articles was selected because it was most relevant to our clinical question and was well set out and easy to understand. We decided to use a quantitative research article because it has higher levels of evidence than a qualitative.

## **SUMMARY OF BEST EVIDENCE:**

**TITLE:** Association between lifestyles activity and depressed mood among home-dwelling older people: A community- based study in Japan.

### **1. Aim.**

The aim of the study was to investigate whether more frequent activity involvement was associated with a lower prevalence of depression symptoms among home dwelling older people by gender.

### **Study design:**

Quantitative, cross sectional.

### **Setting:**

Minami Furano Town, located in the rural upcountry area in Hokkaido, at the Northern most part of Japan.

### **Participants:**

Participants were recruited by sending a questionnaire to all home-dwelling subjects over 65 in the area (822), of those 91 were excluded as they were institutionalised or hospitalised. Of the remaining 731 participants, 24 were excluded for expected dementia. These participants were screened by an experienced public health nurse by assessing level independence in ADL's. 16 refused to participate, 27 could not be contacted and 8 people had missing responses. The remaining surveys were analysed, (656) 46.5% were men, 53.5% were woman. Mean age was 73.8 yrs and participants were aged between 65 and 93.

**Method:**

A cross sectional design was used to assess subjects. Data was collected by means of a self administered questionnaire, which was mailed out with an explanatory note. For those that had incomplete response, a phone call was made, for those that did not respond a follow up home visit was completed. The questionnaire consisted of 18 different types of activities that were selected from the findings of other studies as most common in older people's lifestyles. The participant were asked to rank their involvement over the past year, with responses seldom/never (low activity level) and sometime/often (high activity level). Depression symptoms were measured by a set of 30 items in the geriatric depression scale (GDS), which has a simple yes no format. Respondents with a score of 14 or above were classified as exhibiting depressive symptoms. Participants were asked to self report chronic health conditions diagnosed by a physician (hypertension, heart disease, stroke, cancer or diabetes). Alcoholism tendency was evaluated by using CAGE.

**Results:**

The prevalence of depressive symptoms was 29.3%, women were more likely to be depressed than men after adjusting for age. Alcoholism and chronic diseases were significantly associated with depression. "High level of participating in most types of lifestyle activities tended to be related to lower prevalence of depressive symptoms in men and women" (pg 550). It was identified through differences in frequency, that men and women had different preferences of lifestyle activities. These gender specific activities then impacted differently on depression.

**Authors Conclusions**

This research suggests that more frequent participation in a majority of the identified life style activities, decreases depressive symptoms. However it is important to consider gender differences. Social activities were significantly important for both men and

women, although they were concerned with different aspects. For men it was suggested that stronger emotional ties are important, as they are often out working for long periods. For women, it was important for them to engage in several types of social activities. These different activity styles between genders may be relevant to different coping strategies. Community interventions must recognise these gender differences in order to be effective.

## **2. Critical appraisal:**

### **ARE THE RESULTS VALID?**

The research had a clear aim, as stated above. However a research question was not stated as such. The research clearly explains the population being studied. Inclusion criteria included 65+, living at home in Minami Furano. Exclusion criteria included, participants with dementia, those that were hospitalised or institutionalised. Participants were not randomised. Because it was a relatively small rural community in Japan, they want to use the whole population over 65. Blinding was not relevant as there was no control group and consent had to be signed before completing questionnaire. Approval to conduct the study was given by the Ethics committees of Hokkaido University Graduate School of Medicine. Explanatory note and informed consent was mailed out with the questionnaire.

It was clearly identified that the intervention was participation in lifestyle activities in relation to depression symptoms. However there was no control group to compare results to, as the research was not trying to compare interventions they were trying to find out if the involvement of lifestyle activities had an effect on depression or depressive symptoms.

The literature provided is up to date and relevant providing a comprehensive background for the research, and the need for it. There was a range of research articles used from a broad range of journals, reflecting a non-bias approach and preventing an underlying preconception from being illustrated.

### **WHAT ARE THE RESULTS?**

The process of data collection was clearly described. This was achieved by a mailed questionnaire (as stated above in method). The tool used to measure depression was

the GDS and was well explained in the research. It had good levels of sensitivity (80%) and specificity (100%) making it a relevant tool to use. A reference is identified, however there is no review of the validity or reliability of the GDS. CAGE was used to evaluate alcoholism tendency, there was a reference provided however no additional information was included.

A logistic regression was used to adjust for age group and gender when a comparison was made between the prevalence of depressive symptoms and each of the categories (it was not explained why it was selected). Mantel-Haenzel Chi-Square test was used to compare the prevalence of depressive symptoms in the high activity group to those the low activity group by gender (it was not explained why it was selected). Lifestyle activities and depressed mood measured by GDS were compared and associations were identified using canonical correlation. This was used because it is a generalisation of multiple correlations for analysing the relationship between two sets of variables. Lifestyle variables and depressed mood variables were examined using linear combinations to identify the effect of each lifestyle activity on depressed moods, by coding the frequency of participation of activity lifestyle and depression variables dichotomously. The degree of correspondence between lifestyle activities and depressed mood by gender was then identified.

Results were broken up into several subheadings to discuss each relevant aspect. Four tables were used to provide comparisons and canonical correlations. The analysis of the data showed that participation in lifestyle activities is associated with lower depression and depressive symptoms. Comparisons were made between genders, differences in activity lifestyles were noted and the prevalence of depression symptoms was higher in woman than men.

The criterion for statistical significance was p value less than 0.05 for all analyses. In table two, there were six lifestyle activities that had a p value less than 0.05 and there were 21 activities with a p value less than 0.01. In table three the first canonical correlation had a p value less than 0.001 in both men and woman, whereas the second canonical correlation had a p value less than 0.04 in men and was not significant for woman with p value of 0.17.

## **HOW WILL THE RESULTS HELP ME TO WORK WITH MY CLIENTS**

The nature of these participants are significantly different to the nature of our client group, rural Japan is significantly different to rural New Zealand, in such ways of what is farmed and technology used etc. Because they have excluded people who are hospitalised and institutionalised it may be hard to relate it to people who are within a hospital or institution.

Occupational therapists identify that leisure activities or 'lifestyle activities' are important to people. They are already widely used by therapist and therefore there are limited harms and costs, for the therapist and the individual. Although depending on the selected activity there may be financial costs involved for the individual or department.

From using the Taylor guidelines to critique this research article, it is evident that this research has good validity and trustworthiness. However although the research did not have a defined research question the researcher managed to use the aim to guide there research, as a question would do. The statistical analysis of correlations between depressed mood and lifestyle activities was hard to understand and it was not stated how they worked out the first and second canonical variables.

**TITLE:** The effect of leisure activity on depression in the elderly: Implications for the field of Occupational therapy.

### **Aim.**

The aim was to complete an annotated review to examine the effects of leisure activity on depression in the elderly.

### **Study design:**

Annotated review.

### **Search strategy:**

Using Medline and CINAHL it produced 6 relevant research studies that have investigated the effect of leisure activity in the elderly. Two other studies were also included that related to leisure activity and self esteem. No specific search terms were identified however it was stated that leisure activities included physical exercise such as range of motion, dance, hobbies and games. Low self esteem was included as a search term because it is considered a component of depression.

### **Method:**

No strategies were mentioned specifically, it was only stated that the articles were analysed according to their strengths and weaknesses, results, recommendations, and the implications for occupational therapy.

**Results:**

Based on the review of these articles it appears that leisure activity may be associated with decreases in depression and increases in self esteem among elderly. However the research articles that identify this have several key limitations they are as follows: concerns with measuring depression quantitatively or qualitatively in different studies, activities viewed as dichotomous or continuous, biases in the type of data collection, failure to distinguish between correlation and causation and failing to state if intrinsic factors impact on leisure activity.

**Authors Conclusions:**

The author concluded “that leisure activity has an effect on depression and self esteem.” (p.56) “However a variety of limitations in study design prevent one from drawing conclusive statements regarding the relationship among activity, depression and self esteem.” (p. 54)

**Critical appraisal:** critical analysis of systematic reviews was completed, however this is an annotated review.

**ARE THE RESULTS VALID?**

The research has a clearly focused issue, it identifies a clear aim, as stated above and a research question “does leisure activity have an effect on depression in the elderly? If so, what type of effect does it have?” (pg. 45) The researcher stated that the review would discuss the strengths and weaknesses of the studies, implications for occupational therapy and the recommendations for future research. However there was no tool identified that assessed the methodological quality of the research.

The researcher only used two data bases (Medline and CINAHL) to search which may have limited the results. There were only 8 articles found that were relevant, there was no inclusion or exclusion applied or stated in the article.

Research articles were presented in a table format. After comparing them we found that there was similarities between study designs and interventions however outcome measures were different but measured similar aspects.

### **CRITIQUE OF RESULTS?**

For overall results, see above. There was no meta analysis used in the review. This is because the findings of the studies were presented in a narrative form. The researcher evaluated the studies individually rather than using a statistical technique to summarise the results.

The results of the study address the research question. However this is done briefly with more emphasis placed on the limitations and strengths of the studies. Refer to results stated above. The results were not presented with confidence intervals therefore it is hard to identify how precise the results were. Although as the researcher extensively identified the limitations and strengths of each of the studies we were able to make a judgement for ourselves.

The researcher reasonably concluded the actual findings and did not include his opinion. What the researcher found from reviewing the articles was clearly reflected in his conclusion and recommendations which related back to the original aim and research question.

### **HOW WILL THESE RESULTS HELP ME WORK WITH MY CLIENTS?**

The research articles come from a range of settings. These include inpatient units, community settings, nursing homes and independent living individuals. This can therefore be applied to a range of settings. As leisure activity is recognised as important by occupational therapists, this study illustrates the importance of activity to decrease depression, as a result the study can be used to support evidence based practice.

There was no discussion included in the review relating to harms and costs. However we believe that this intervention has strength as it exhibits minimal harms and costs when it is applied. As stated above there may be costs involved depending on the type of activity.

### **SUMMARY:**

To summarise we believe this is a high quality annotated study. The researcher explains in depth the strengths, limitations and results of each of the studies chosen. He concludes based on the findings from the studies, rather than his personal opinion. However a weakness of this study was that the researcher discussed the results of the studies separately and failed to conclude the results of the studies in depth related to depression and leisure activity.

### **IMPLICATIONS FOR PRACTICE, EDUCATION and FUTURE RESEARCH:**

Based on the critique of the two articles we believe that they are both relatively trustworthy and valid, although there were some aspects missing from the articles. Such as a clinical question in Arai et al (2007) and a meta analysis in Fine (2007).

The two articles suggest that, participation in leisure activities has a positive effect on depression and depressive symptoms in the elderly. However Fine, (2007) states that the articles that were reviewed had significant limitations that had to be considered when making a conclusive statement about the results.

We believe that further research is still required. Arai et al (2007) stated that treatment studies should be implemented and for further research to have improved experimental design, valid and reliable measuring tools and the use of control and continuous variables when assessing leisure activities and depression. Fine, (2007) suggests that further research could include studies that show temporal relationships, we agree with these suggestions as it will provide valuable evidence for future. Because the aging population is increasing it is important for this to be completed as the number of depressed elderly will be increasing. Therefore we need to know the most effective means of intervention.

Both articles identify implications for practice. Fine, (2007) states that occupational therapists are the most appropriate to use leisure activities with depressed elderly as they have experience in both areas. Arai et al. (2007) states that when planning community interventions for depressed elderly, it is important that gender differences are considered when planning activity options to have activities that are meaningful for male and females.

From the results within the articles we would recommend making changes to practice. Given that leisure activities are an important component of occupational therapy, it is essential to utilise leisure activities as an intervention with depressed elderly. This is because both articles provide evidence that suggests leisure activities have an impact on depression and depressive symptoms in older people. Because it helps individuals build skills to give back to the community, provides life's satisfaction, purpose and social network support systems.

However funding may be a limitation of using leisure activities as an intervention. This is because some activities may be too expensive for the budget or the individual. Within some communities there may be isolation and a limitation in resources which may prevent some engagement in activities. For example rural communities and the lack of public transport, this will mean that therapist will need to be more creative in developing alternative ideas for activities.

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