Leisure-activity participation to prevent later-life cognitive decline: A systematic review

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Cognitive decline – a major public health issue

- Risk reduction through participation in activities - but what activities, and how?
Leisure activities: the pursuit of a range of tasks and activities outside work-related activities

- What does the construct capture?
- How to best measure it?
Aim:

- to describe the state of knowledge of the definition, categorization and operationalization of leisure activity in the empirical research that focused on preventing later-life cognitive decline.
Method

- Following PRISMA guidelines for a systematic review, the study examined peer-reviewed empirical research publications focused on leisure activity, cognitive decline, and prevention.

- Searches in the Pub Med, Medline, CINHAL, Ovid MEDLINE, Embase, Web of Science, PsychoINFO, Proquest ERIC, the Cochrane library, and PsycARTICLES databases for the years 2000 to 2011, identified 52 publications for inclusion (out of 123).

- Our theoretical framework; the Model of Human Occupation (Kielhofner et al)
Selected findings: Definition and categorization of leisure activity; "the pill":

- 16 studies (31%) provided some kind of definition, often by naming the dimension they had used in their research (e.g. social dimension of activity).

- 28 studies (53.8%) had a specific categorisation, most commonly cognitive activity or physical activity.

- The rest used combinations

- No theoretical or conceptual frameworks
Measuring participation in leisure activity; "the dose"

- As engagement or involvement
- Frequency of participation
- Activity time
- Activity level
- Number of activities
- Intensity, type of activity, number of social contacts or ties and network size, frequency of social contacts, social integration etc.

- Frequency, intensity, diversity, duration, level of participation,
- Dose most often measured by frequency of participation, time duration, activity level, number of activities or social contacts etc.
No study considered personal aspects such as interests, motivation, personal habits, or perceived sense of engagement and enjoyment, or any other personal experiences of participation in leisure activities.
The more activity, the better prevention?

- Most studies (90%) found preventive effects from leisure activity
  - 39% - cognitively stimulating activities
  - 29% - physical activity
  - 19% - social activity
Mechanisms or possible explanations

- Most studies leaned on mechanisms related to cognitive-reserve theories or neuropsychological explanations (84%), but lifestyle-related mechanisms also provided explanations, as did combinations.
Limitations in the studies

While the findings support a growing consensus that participation in leisure activities might significantly contribute to prevention of dementia, it also identifies major hindrances to progress:

- lack of theoretical underpinnings
- little consensus and standardization in categorizing and measuring key variables

For example:
- The same activity can be categorized differently – with different outcomes (e.g. Dancing)
A critical question:

- If these different ways to categorize leisure activities affect the preventive outcome, are the reported dimensions (cognitive, physical and social) the only effective ones, or are there other dimensions that are still ignored, dimensions that contribute to the preventive effects and should be considered in future research and clinical practice?
In conclusion;

- The findings show that participation in leisure activities might significantly contribute to prevention of later life cognitive decline.
- However, important limitations were detected in terms of a lack of theoretical underpinnings, and little consensus and standardization in measuring key variables.
- The study reinforces the critical need to overcome these limitations to enable health care professionals to make evidence-based recommendations for increased participation in activities as a means of promoting health and preventing cognitive decline.
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Thank you for listening!
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