

BEING ACTIVE IS NOT ENOUGH – COMBINATION OF PHYSICAL ACTIVITY, SEDENTARY BEHAVIOUR AND SLEEP CHARACTERISTIC SHOWS MORE POSITIVE EFFECT ON INFERTILITY RELATED QUALITY OF LIFE IN WOMEN UNDERGOING ART

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OBJECTIVES

The relationship between the adherence to 24-hour movement behaviour (24-HMB) and mental-health-related outcomes are well known in general adult population. The current study investigates, whether physical activity (PA), sedentary behaviour (SB) and sleep characteristics (SC) prior to the assisted reproductive treatments associated with infertility related quality of life in women undergoing assisted reproductive technology (ART) treatments.

METHODS

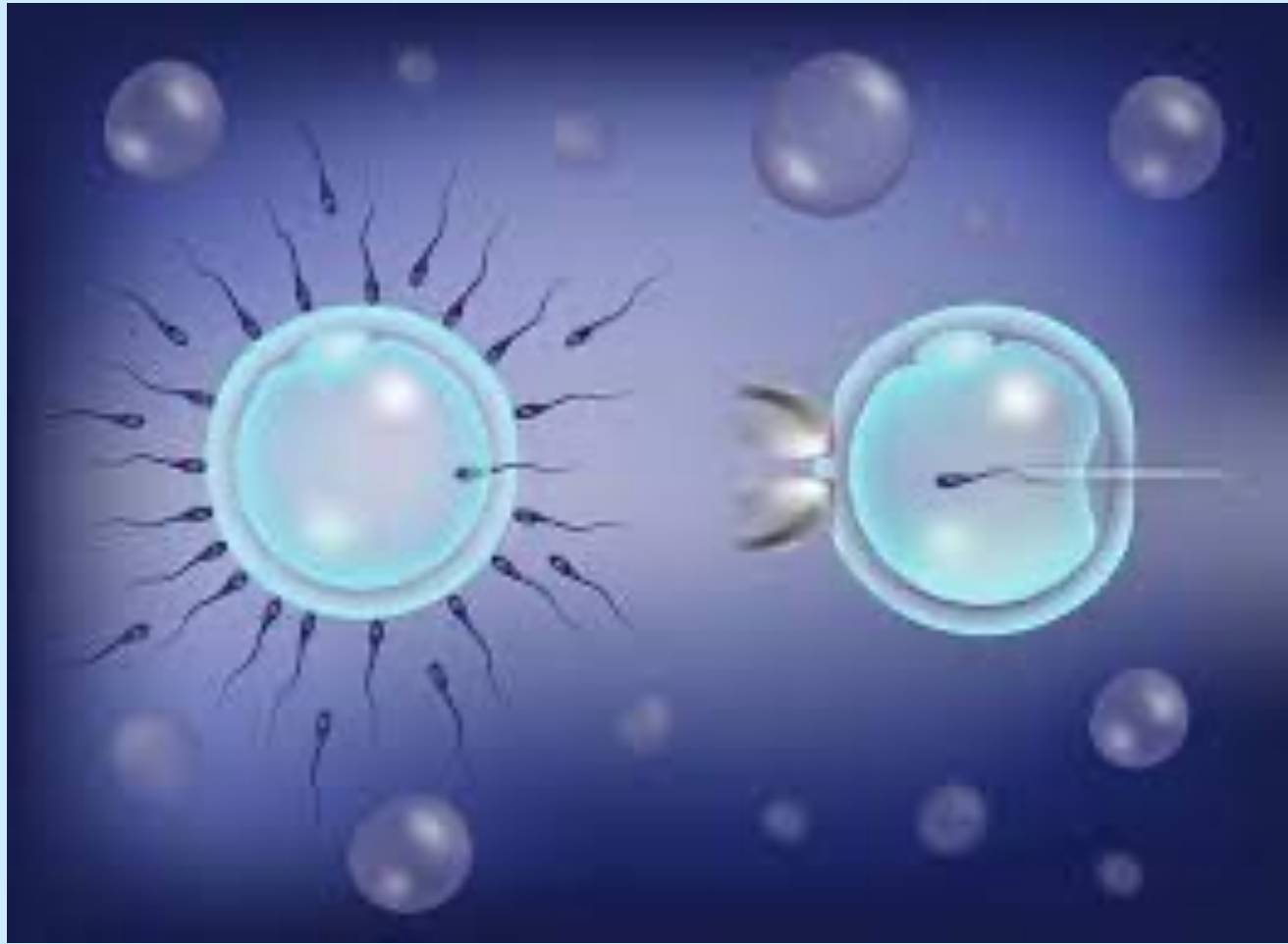
This cross sectional, pilot study was conducted among 52 women undergoing ART treatment between January and April 2022 at a university linked regional fertility centre in Hungary. Data were collected on infertility related quality of life using FertiQoL, components of 24-HMB using Pittsburgh Sleep Quality Index (PSQI), Sedentary Behaviour Questionnaire (SBQ), Global Physical Activity Questionnaire (GPAQ). 24-HMB index was measured based on the compliance with the 24-HMB components. One Sample Kolmogorov-Smirnov Test, Pearson correlation and Multivariate linear regression using the stepwise method was conducted

RESULTS

In relation to the PA component, self-rated health (SRH) showed negative correlation to GPAQ work related vigorous PA ($R=-0.286$, $p=0.040$) but positive correlation to moderate recreational activities ($R=0.383$, $p=0.005$). SB were in inverse correlation with the Mind-body subscale of FertiQoL ($R=-0.333$, $p=0.016$). Negative relationship between sleep disturbances and SRH ($R=-0.284$, $p=0.043$) and positive relationship between Emotional subscale and duration and efficiency ($R=0.305$, $p=0.030$; $R=0.331$, $p=0.018$) were found. Environmental subscale correlated with sleep quality and sleeping medication ($R=0.305$, $p=0.035$ in both components). Daytime dysfunction affected Relational, Tolerability and Total FertiQoL. Half of the patients met the 24-HMB guidelines components (PA 44,20%; SB 57.70%; SC 58.80%), 41.20% met at least two recommended values. FertiQoL Total was significantly predicted by 24-HMB index ($B=7.081$, $p=0.002$)

BASIC CHARECTERISTICS	
Sample size	52
Age	31.79±4.64 years
BMI	25.51±5.32 kg/m2
Length of partnership	7.65±3.91 years
Child-wish	3.88±2.52 years
Study period	January-April 2022

Table 1. Basic charcteristics of the study sample



WHOQOL Breef	Domains					
	Quality of life	Self rated health	Physical health	Psychological	Social relationships	Environment
Mean	83.08	75.38	80.12	67.13	75.90	77.83
SD	10.01	14.61	12.18	15.79	17.62	11.85

Table 2. Quality of Life and and health status of women undergoing ART based on WHOQOL Breef

	WORK vigorous	WORK moderate	ACTIVE transport	RECREATION vigorous	RECREATION moderate	TOTAL time
Mean	296.83	531.35	267.60	68.08	78.94	1607.69
Median	0.00	30.00	137.50	0.00	0.00	770.00
SD	594.80	865.58	344.33	180.60	120.97	1947.99
IQR L	0.00	0.00	41.25	0.00	0.00	271.25
IQR U	405.00	690.00	300.00	108.75	120.00	2445.00

Table 3. Physical activity patterns of women undergoing ART based on Global Physical Activity Questionnaire

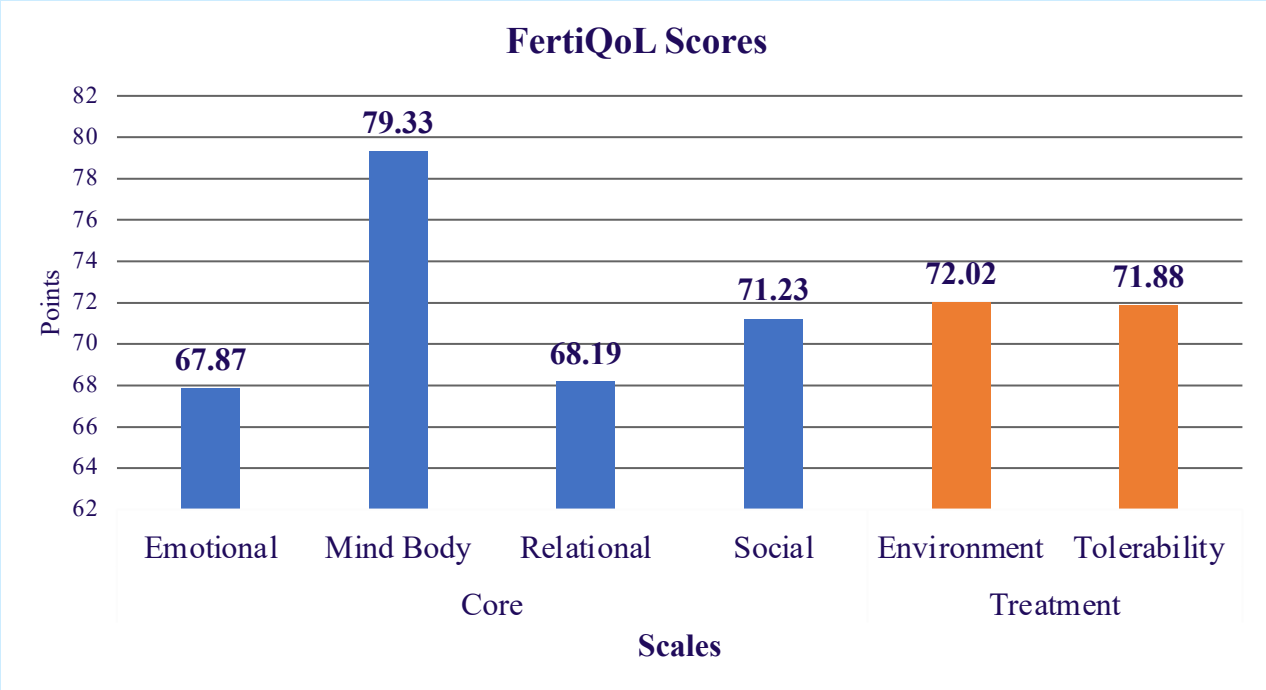


Figure 1. Infertility related quality of life of women undergoing ART based on FertiQoL

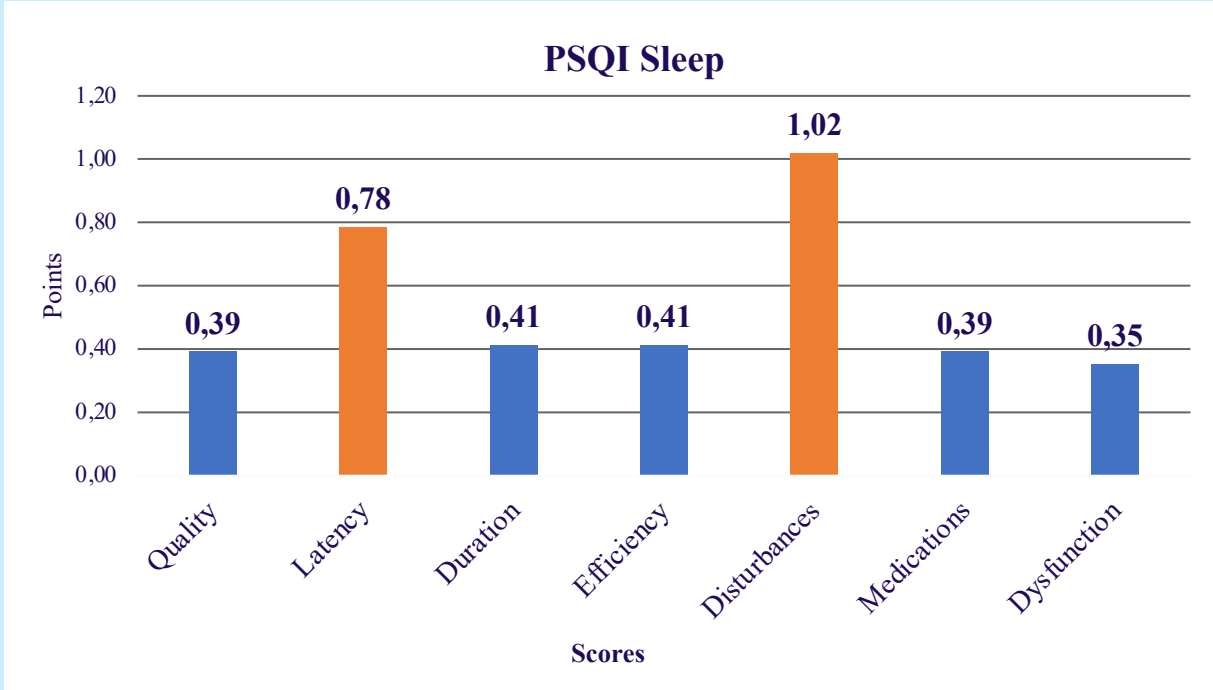


Figure 1. Sleep patterns of women undergoing ART based on Pittsburg Sleep Quality Inventory

CONCLUSIONS

The relationship between the adherence to 24-hour movement behaviour (24-HMB) and mental-health-related outcomes are well known in general adult population. The current study investigates, whether physical activity (PA), sedentary behaviour (SB) and sleep characteristics (SC) prior to the assisted reproductive treatments associated with infertility related quality of life in women undergoing assisted reproductive technology (ART) treatments.

ISPOR Europe 2022
6-9 November 2022



Acknowledgement: This work was supported by the National Laboratory for Human Reproduction as part of the "Establishment of National Laboratories 2020" program and by the UNKP-21-4-II-PTE-1241 New National Excellence Program of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund.

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