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Essential oil (EO) of *Nepeta Cataria* didn't make any effect on psychoemotional state of tested people. In a test proof the EO stimulated mental capacity and improved its accuracy a bit. EO of *Nepeta Cataria* possesses some hypotensive and bradycardial effect.

Key words: *essential oil; aroma session; aromatherapy; Nepeta Cataria; psychorelaxing record; mental capacity; psychoemotional state*

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ESSENTIAL OIL OF *SALVIA SCLAREA* AND ITS EFFECT ON PSYCHOPHYSIOLOGICAL STATE OF ELDERLY PEOPLE BREATHING IT IN LOW CONCENTRATION

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Introduction

Essential oil of *Salvia sclarea* L. is quite popular in aromatherapy [6]. It was found as an antidepressant [8], stress-limiting [9] and hypotensive remedy [5]. *Salvia sclarea* L. composition is rather close to *Lavandula angustifolia*: its main components are linalil acetate, linalool, geranyl acetate and terpineol [7]. To minimize body burden in terms of aromatherapy is an important task. It's possible due to reduction of EO content in the air. It

especially concerns elderly people. But at the same time this result can be achieved on account of aromatherapy effect.

Research objective is to investigate effect of *Salvia sclarea L.* EO of low content on some functions of human central nervous system and cardiovascular system to rate if it does for aromatherapy.

Objects and methods

Researches involved a group of 20 people, mainly women aged by 55-80 years old. There was a control group, the same by composition and number. Tested people of a control group were in rest listening to psychorelaxing record for 20 minutes. Experimental group were placed in the same room during the same time listening to the same psychorelaxing record but breathing evaporated EO of *Salvia sclarea L.* till the final concentration in the air of $0,1 \text{ mg/m}^3$. Tests were conducted before and after procedures.

To assess procedure effect on cardiovascular system we measured heart rate (HR), systolic (BPS) and diastolic (BPD) blood pressure (BP).

Correction task, WAM test (well-being, activity, mood) and mental speed test were applied to rate EO effect on nervous system [1,3,4].

Results were processed statistically due to paired test t-criterion by Student [2].

Results and discussion

According to parameters of WAM test experimental and control groups didn't have any reliable difference (table 1).

After psychorelaxation session (control) well-being and mood of tested people improved reliably.

After aromapsychorelaxation session (experiment) well-being tended to improve. Otherwise, aroma session with *Salvia sclarea L.* EO didn't influence on psychoemotional condition of tested people.

Table 1

**Effect of *Salvia sclarea L.* EO on psychoemotional condition of tested people
(Parameter of WAM-test, standard units)**

Parameter	Experimental group initially	Control group initially	Experim.group after test	Po b/a<	Control after test	Pк b/a<
General condition	118,2±6,6	115,5±6,0	127,4±5,5		118,2±6,0	
Well-being	115,1±6,7	113,0±6,7	128,1±5,6	0,06	118,3±6,4	0,02
Mood	125,7±7,5	124,6±11,8	129,9±5,7		138,3±9,3	0,06
Weakness - capacity to work	111,4±8,5	113,5±7,9	123,6±6,4		116,4±8,0	
Tension – relaxation	115,2±7,0	108,2±6,4	125,5±6,1		113,1±7,3	
Inertness –vivacity	120,2±8,3	122,2±9,6	125,8±6,9		126,7±6,6	
Absend-mindedness – attentiveness	118,8±8,6	122,6±6,5	128,7±6,2		121,3±6,9	

Procedures effect on mental capacity of tested people from both groups (experimental and control) according to correction task (numeric variant) didn't present any reliable differences (table 2).

Session of psychorelaxation didn't reveal any reliable variations of test parameters in control group, while session of aroma psychorelaxation considerably increased work rate during the second minute of the test in experimental group. At the same time a number of mistakes rose reliably during both test minutes.

Table 2

**Effect of *Salvia sclarea L.* EO on mental capacity of tested people
(according to data of correction task)**

Parameter	Group	Before procedure	After procedure	P b/a<
Tempo 1, symbol/min	control	285,20±16,98	305,30±17,05	
	experimental	284,70±20,36	306,80±20,63	
Mistakes 1, symbols	control	1,70±0,45	2,50±0,59	
	experimental	1,50±0,39	3,20±0,37	0,0002
Tempo 2, symbols/min	control	283,45±20,04	274,80±23,02	
	experimental	288,60±17,17	330,20±24,96	0,01
Mistakes 2, symbols	control	2,35±0,75	2,95±0,66	
	experimental	1,60±0,48	3,85±0,81	0,01

Test that included more complicated intellectual processes (restore of missed letters in words) initially didn't present reliable differences between groups (table 3). A lack of reliable variations became a result of psychorelaxation procedures in a control group and aroma psychorelaxation in experimental group.

Table 3

**Effect of *Salvia sclarea L.* EO on mental speed
(according to test of restoring the missed letters)**

Parameter	Group	Initially	After procedures
A number of words, units	control	23,50±1,58	22,70±1,67
	experiment	24,30±1,20	25,00±1,91
A number of mistakes, units	control	1,20±0,29	1,85±0,44
	experiment	1,20±0,25	1,80±0,37

Initially (before test) reliable differences between values of BP and HR in both groups (control and experiment) weren't registered (table 4). At the same time either experimental or control group presented normal average value of BPS, BPD – optimum by JNC6, HR were normal as well.

After session of psychorelaxation parameters of BP and HR in control group didn't differ from initial data. But in experimental group session of aromarelaxation caused reliable reduction of BPS and HR.

Table 4

Relaxation effect on BP and HR using *Salvia sclarea L.* EO

Group	Experimental group initially	Control group initially	Experimental group after test	Po b/a<	Control group after test
BPS, mm of mercury	124,75 ±3,93	126,10 ±4,14	118,25 ±3,68	0,003	124,25 ±4,24
BPD, mm of mercury	78,35 ±2,11	78,85 ±1,96	76,50 ±1,76		77,45 ±2,29

HR, heartbeat/min	77,00 ±2,49	73,40 ±1,89	73,95 ±1,94	0,05	72,15 ±1,86
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Therefore *Salvia sclarea* L EO breathing it in low concentration didn't have any effect on psychoemotional condition of tested people and complicated mental work. Though it stimulated mental capacity (reliable increasing of work rate during the second minute of the test), accuracy went down.

Consequently the principal result of *Salvia sclarea* L EO effect on human higher nervous activity is stimulation of quite simple processes. Light hypotensive and bradycardial influence of *Salvia sclarea* L EO is considered as a positive property for its practical appliance, especially in work with people suffered from hypertension.

Pointed positive changes were registered in case of very low *Salvia sclarea* L EO concentration in the air, that is 0,1 mg/m³.

Conclusions

1. *Salvia sclarea* L. EO didn't effect on psychoemotional condition of tested people.
2. *Salvia sclarea* L. EO presented a light stimulative effect on mental capacity making rather simple tasks.
3. *Salvia sclarea* L. EO possesses light hypotensive and bradycardial effect.

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Essential oil of *Salvia Sclarea* of 0,1 mg/m³ didn't effect on psychoemotional state of people being tested, it called forth some stimulant influence on mental capacity only in case of a quite simples tasks, some hypotensive and bradycardial effect was fixed as well.

Key words: *essential oil, aroma session, aromatherapy, Salvia sclarea L., psychorelaxing record, mental capacity, psychoemotional state.*