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, 2016

192 . 59
,73 16 .
350 , 61
289 . 3 2

” “ ” “ , - ,
05.02.2016 .

12.00 ” “ , - . 03.06.2016 .

- : <http://mu-pleven.bg>

	.
	5
1.	7
1.1.	7
1.2.	7
1.3. , ,	8
1.4.	8
2.	19
2.1.	19
, ,	
2.2.	21
2.3.	25
2.4.	30
	34
2.5.	36
2.6.	40
2.7.	41
2.8.	42
	52
	54
	55
	56
SUMMARY	57

ADL			
ANOVA			
ASRH		SRH	
BMI			
CHIS		—	
CNMP			
DEH (doctor-evaluated health)		,	
DHEAS			
EQ-5D		,	
EQ-VAS	EuroQol Group		
GSRH		EuroQol Group	
HDL		SRH	
HIV/AIDS	/		
HRQOL			
IADL			
LS			
NOVA			
CS			SF-36
NHANES			
NHIS		—	
PC		—	
PCS			SF-36
PS			
PSI			
PVI			
RR			
SES			
SF-36			
SRH (self-rated health)			
SRH		SRH	
WB			
WHO			

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SRH

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50%

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1.1.

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- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)
- 8)

1.2.

- 1. , - ,
- 2. , - 80-
- 3. - ,
- 4. - ,

5.

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, ; , ;) -

6.

(, ,)

7.

BMI,

8.

9.

1.3.

2012-2014 .

2012 .,

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2013 .

2012-2014 .
2014 .
11/2014 .

1.4.

758.

456

14-

, 219

4

237

34

4

, 6

2

(14

14 ,) .

22 4 (18.18%) :

” ” ” ” ” ”

9,10,11 238

219 92.02% .

.1.

. 1. (., %)

	” . ”	” . ”	” . ”	.	
9	26 (35.14)	15 (38.46)	10 (31.25)	30 (40.54)	81 (36.99)
10	18 (24.32)	12 (30.77)	10 (31.25)	22 (29.73)	62 (28.31)
11	30 (40.54)	12 (30.77)	12 (37.50)	22 (29.73)	76 (34.70)
	31 (38.57)	16 (46.51)	12 (62.96)	43 (58.11)	102 (46.58)
	43 (61.43)	23 (53.49)	20 (37.04)	31 (41.89)	117 (53.42)
	74 (100.00)	39 (100.00)	32 (100.00)	74 (100.00)	219 (100.00)

11 -

8 (72.73%) : ” ” , ” ”

” ” ” ” ” ” ” ”

” (.2 2).

. 2 . (., %)

()				.
5 - 45 (100.00)	1 - 22 (50.00)	1 - 13 (59.09)	4 - 32 (100.00)	
	3 - 22 (50.00)	3 - 9 (40.91)		
- 45 (100.00)	- 44 (100.00)	- 22 (100.00)	- 32 (100.00)	
	.	.	.	
2 - 24 (57.14)	1 - 10 (100.00)	2 - 6 (35.29)	1 - 15 (60.00)	
3 - 18 (42.86)		3 - 11 (64.71)	2 - 10 (40.00)	
- 42 (100.00)	- 10 (100.00)	- 17 (100.00)	- 25 (100.00)	

. 2 . (., %)

()			
- 30 (66.67)	- 20 (45.46)	- 9 (40.91)	- 32 (100.00)
- 15 (33.33)	- 24 (54.54)	- 13 (59.09)	- 32 (100.00)
- 45 (100.00)	- 44 (100.00)	- 22 (100.00)	- 32 (100.00)
	.	.	.
- 42 (100.00)	- 3 (30.00)	- 8 (47.06)	- 10 (40.00)
- 42 (100.00)	- 7 (70.00)	- 9 (52.94)	- 15 (60.00)
	- 10 (100.00)	- 17 (100.00)	- 25 (100.00)

(91.86%).

258
91.86%.

237

19.5±4.1

- 20-

20-

90

18 ,

2012 .

5 .

5,

8

(.3).

. 3. () , (., %)

	33 (36.67)	33 (36.67)	24 (26.66)	90 (100.00)
, :	33 (100.0)	33 (100.0)	24 (100.0)	90 (100.00)
-	12 (36.36)	14 (42.42)	5 (20.83)	31 (34.44)
-	21 (63.64)	19 (57.58)	19 (79.17)	59 (65.56)
, :	33 (100.0)	33 (100.0)	24 (100.0)	90 (100.00)
- 60 .	25 (75.76)	25 (75.76)	16 (66.67)	66 (73.33)
- 60 .	8 (24.24)	8 (24.24)	8 (33.33)	24 (26.67)

() . 2 () 2

.4
 , 94.44%
 70.00%

(75.55%), 63.71%
 , 55.05%

4. ()
 (, %)

	(%)		(%)
/	68 (75.56)	.	5 (5.56)
/	6 (6.66)	.	48 (53.33)
/	8 (8.89)	.	37 (41.11)
/	1 (1.11)	.	
/	7 (7.78)	.	
	49 (55.05)	310 .	27 (30.00)
	11 (12.36)	311-550 .	46 (51.11)
	27 (30.34)	551-1000 .	15 (16.67)
	2 (2.25)	1000 .	2 (2.22)
.	37 (41.11)	.	5 (10.00)
.	26 (28.89)	.	35 (70.00)
.	25 (27.78)	.	10 (20.00)
.	2 (2.22)	.	
.	90 (100.0)		

, , (. 4).
 - (81.11%), ,
 , .
 (2013 .), , (2013).
 50% 311-550 .,
 32.22% .
 - 30%

212

44 , 2 3 1 - (.5
5).

. 5 . (.,%)

		. (%)
1.	” - ” -	25 (25.77)
2.	” - - ” -	23 (23.71)
3.	” - ” -	23 (23.71)
4.	” - ” - .	14 (14.44)
5.	” - ” - .	12 (12.37)
		97 (100.00)

. 5 .

(.,%)

	/	. (%)
1.		15 (13.05)
2.		10 (8.69)
3.		9 (7.83)
4.		13 (11.30)
5.		17 (14.78)
6.		10 (8.69)
7.		9 (7.83)
8.		11 (9.57)
9.		10 (8.69)
10.		11 (9.57)
		115 (100.00)

, - . : 44 ,
- . :
(, ,), (,
) ,
(. , , , ,),
, , ,
.
: 97 115
,
2012 .

(. 6).

6. , (., %)

	48 (51.06) 46 (48.94)	50 (43.86) 64 (56.14)	98 (100.00) 110 (100.00)
45-49 .	14 (14.58)	25 (21.74)	39 (100.00)
50-59 .	28 (29.17)	30 (26.09)	58 (100.00)
60-69 .	29 (30.21)	26 (22.61)	55 (100.00)
70-79 .	17 (17.71)	20 (17.39)	37 (100.00)
80+ .	8 (8.33)	14 (12.17)	22 (100.00)
	69 (71.88) 0 (0.00) 27 (28.12)	44 (38.26) 47 (40.87) 24 (20.87)	113 (100.00) 47 (100.00) 51 (100.00)
	97 (45.75)	115 (54.25)	212 (100.00)

. 7

31.10%. 6.67%, 14.28%, 44.29%, 34.76%, 55.02%

7.		(., %)			
	(%)		(%)		(%)
/	136 (64.76)	-	2 (0.96)		73 (34.76)
.	6 (2.86)	.	6 (2.87)		14 (6.67)
/	13 (6.19)		21 (10.05)		93 (44.29)
/	19 (9.05)		115 (55.02)		30 (14.28)
/	36 (17.14)		65 (31.10)		
310 .	107 (51.94)	.	69 (33.17)	.	212 (100.0)
311-550 .	77 (37.38)	.	25 (12.02)		97 (45.75)
551-1000 .	19 (9.22)		92 (44.23)		115 (54.25)
1000 .	3 (1.46)		22 (10.58)		

/) (: (1

-51.94% 310 ., 54.81%

2.
41 (GSRH TSRH),
24 ,

² ()-

, , BMI,

6.

63 ,
(GSRH TSRH).
(

6 . .).).

HRQOL EQ-5D (*EuroQoL*
Group, 1990).

“ ” “ ” “ ”

” “ ” 2

” “ ”

(, , ,)

Cochan's perceived stress scale (1983).

GHQ-12 scale (D. Goldberg, 1978). 10 ,
4- (0-3)
0-36 . ,

Prof. Ed Diener 1985). (SWLS,
5-35 .

(, BMI,

).

7.

39

GSRH, ASRH TSRH.

: ”

...”

”” - ...”””

, ...”””

” - ””

4

(, BMI,

),

(8),

20

().

2016

22

(

14).

7

45-95

()

GHQ-12 scale (D. Goldberg, 1978) [348].

LOT-R (Scheier, Carver & Bridges, 1994),

[196].

-
- (ANOVA)
- : - , - ,
- -
- (Spearman rho)
- SRH

(SD),

(S).

0.05.

2.

2.1.

16.74%
 23.33% 43.06%
 19.62% (. 8). 3.33%,

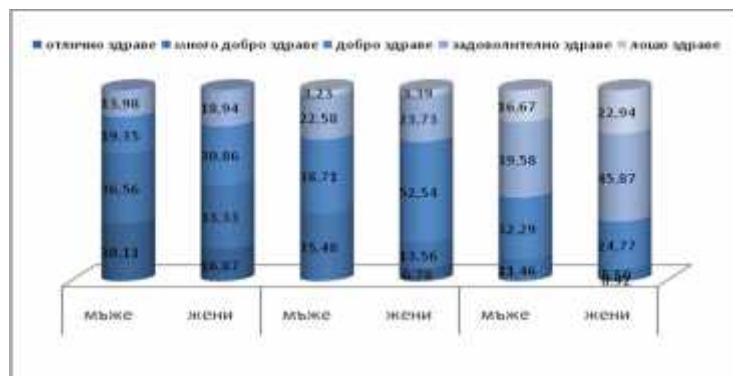
8. (GSRH) – .,%, S_p

	8 .(%)	9 .(%)	10 .(%)
	106 (23.66±2.12)	4 (4.44±2.17)	2 (0.96±0.68)
	152 (33.93±2.35)	19 (21.12±4.22)	17 (8.13±1.89)
	115 (25.67±2.09)	43 (47.78±5.35)	59 (28.23±3.16)
	75 (16.74±1.83)	21 (23.33±4.43)	90 (43.06±3.43)
		3 (3.33±1.95)	41 (19.62±2.73)
	448 (100.00)	90 (100.00)	209 (100.00)

30%
 , 23% 45%

2.1.1.

(. 1).



. 1. (%)

8 () – .
 9 – . 18-75 .
 10 – . 45-95 .

(=0.001).

2.1.2.

()

GSRH

(.9).

9.

GSRH (., %)

	20 .	20 .	60 .	60 .	45-49 .	50-59 .	60-69 .	70-79 .	80 .
	62 (30.10)	34 (16.19)	4 (6.06)	0 (0.00)	2 (5.26)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	77 (37.38)	69 (32.86)	17 (25.76)	2 (8.33)	9 (23.68)	5 (8.62)	1 (1.84)	2 (5.56)	0 (0.00)
	42 (20.39)	65 (30.95)	34 (51.52)	9 (37.50)	9 (23.68)	23 (39.66)	14 (25.93)	6 (16.67)	7 (31.82)
	25 (12.13)	42 (20.00)	11 (16.66)	10 (41.67)	12 (31.59)	23 (39.66)	25 (46.30)	21 (58.33)	8 (36.36)
	0 (0.00)	0 (0.00)	0 (0.00)	3 (12.50)	6 (15.79)	7 (12.06)	14 (25.93)	7 (19.44)	7 (31.82)
	206 (100.00)	210 (100.00)	66 (100.00)	24 (100.00)	38 (100.00)	58 (100.00)	54 (100.00)	36 (100.00)	22 (100.00)
² ;	² =17.826; =0.001		² =17.674; =0.001		² =38.090; =0.001				

80-

(²=17.028; =0.149).

TSRH

20
20 (²=13.582; =0.009).

2.1.3.

, (p>0.05).

2.1.4.

($\chi^2=25.873$; $p=0.001$).

72.41%

- ($\chi^2=31.747$; $p=0.001$).

($\chi^2=23.776$; $p=0.022$).

28.57%

, ($\chi^2=26.995$; $p=0.001$).

- ($\chi^2=22.700$; $p=0.030$)

($\chi^2=22.347$; $p=0.034$).

(p>0.05).

GSRH

2.2.

2.2.1.

, -

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- -

(, , , , , ,)

, , (, , , , ,)

, ,)

- 9

- GSRH, 4

(, , , , , , , ,)

GSRH.

8

(

=0.040).

11

(PSI),

$\chi^2=69.345$; $p=0.001$, $\chi^2=20.151$; $p=0.001$ $\chi^2=31.544$; $p=0.001$, .2.



. 2. *PSI*
(Median) $\chi^2=69.345$; $p=0.001$, $\chi^2=20.151$, $p=0.001$, $\chi^2=31.544$; $p=0.001$.

PSI

TSRH

($\chi^2=41.190$; $p=0.001$).

PSI ($\chi^2=8.668$; $p=0.034$).

11

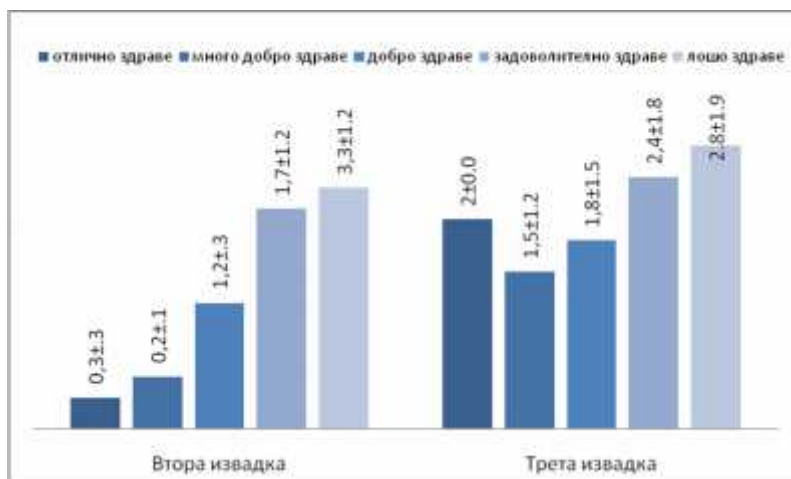
18-75 ;

45-95 .

2.2.2. , 40%
 - , 3-4
 20.62% , 5 -
 60- , 60-
 ($\chi^2=21.889$; $p=0.001$).

, - GSRH,
 - (p=0.001).
 ASRH ($\chi^2=45.152$; $p=0.001$).
 3 , 40%

, F=10.037; $p=0.002$ F=5.328; $p=0.001$.
 , F=5.752;
 $p=0.001$ F=3.016; $p=0.019$ (. 3).



3. GSRH (%)

2.2.3. 40% , 15%
 , 40%
 ,
 60-
 ()

5D (, / , /)
EQ-5D .

2.2.4.

42%

52.54% ($\chi^2=7.478$; $p=0.006$), 75.49%
20 ($\chi^2=4.260$; $p=0.039$ 62.50%
60 ($\chi^2=5.516$; $p=0.019$).

¹²
($\chi^2=12.095$; $p=0.007$ $\chi^2=7.721$; $p=0.050$), ¹³ ¹⁴ -
GSRH ,
 $\chi^2=11.982$; $p=0.017$ $r=0.222$; $p=0.002$.

() -
($\chi^2=14.682$; $p=0.005$).
50% 21%
6 , ,
80 .), $\chi^2=16.593$; $p=0.035$. (60-69 .
($p<0.05$).

-
ASRH ($\chi^2=16.339$; $p=0.038$).
GSRH ($\chi^2=17.078$; $p=0.029$),
($\chi^2=23.563$; $p=0.001$). (33.33%)
(36.67%),
(40.28% 59.24%).

¹² () - .
¹³ - . 18-75 .
¹⁴ - . 45-95 .

($P_{e50}=1$), (U=4248.5; p=0.006). (P_{e50}=2), GSRH ($\chi^2=21.787$; p=0.001) TSRH ($\chi^2=13.410$; p=0.009).

2.2.5.

()

($\chi^2=10.339$; p=0.035).

2.3.

2.3.1.

10-33 .

20.5±4.3,

47.19%

(.10).

. 10.

a

GSRH (ANOVA) –

<i>GSRH</i>	<i>(Mean)</i>
	20.5±1.7
	18.2±2.8
	20.6±4.1
	22.2±5.4
	21.7±3.8
<i>Sig.</i>	<i>F=2.470; p=0.05</i>

2.3.2.

Goldberg,

9-35 .,

21.0±5.4. -

44.44%

(. 11).

<i>GSRH</i>	<i>Goldberg's index</i> (Mean)	<i>TSRH</i>	<i>a</i>	<i>GSRH</i>	<i>SRH</i>
(ANOVA) –					
<i>GSRH</i>	<i>Goldberg's index</i> (Mean)	<i>TSRH</i>		<i>Goldberg's index</i> (Mean)	
	12.3±3.5	-		18.9±4.9	
	19.4±4.8	-		17.0±3.9	
	20.6±4.9	,	1 .	20.8±4.8	
	21.3±7.6	-		23.9±6.2	
	25.1±4.4	-		30.5±.7	
Sig.	F=6.510; p=0.001			F=4.527; p=0.002	

2.3.3.

15

(Me=66) (Me=60) (Me=36).
 (WB) =0.030 =0.026. =0.001,
 20 . (U=16438.0; p=0.001) WB
 p=0.004), 45-49 . (U=15.388;

(. 4).



. 4.

WB

15

18-75 .;

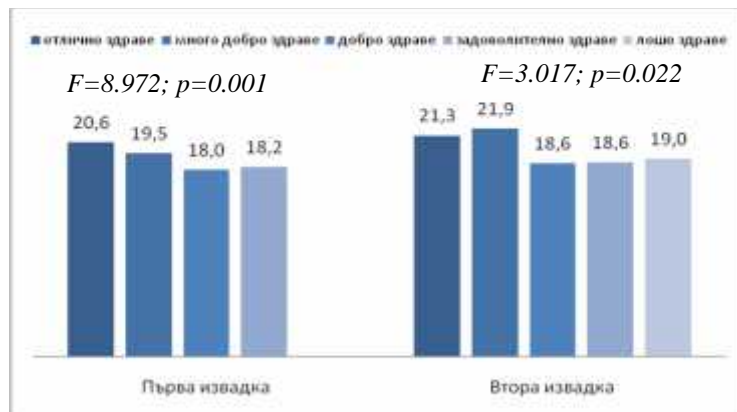
45-95 .

$\chi^2=17.042; p=0.002$ $\chi^2=40.582; p=0.001$. $\chi^2=56.280; p=0.001$,

2.3.4.

4-30,

(. 5).



5.

GSRH

2.3.5.

, 32.38% (17.78%)
 ($\chi^2=12.435$;
 $p=0.014$).
 5.13% 45-49 . 54.54% 80-
 ($\chi^2=48.653$; $p=0.001$).
 70% , 63.91% 57.90%
 33.34% ,
 ($\chi^2=39.349$; $p=0.001$).

2.3.6.

Personal Social Scale,

Chen et al (2009).

4 (Cap1-Cap4)¹⁶,
bonding capital¹⁷.

5- Cap1,2,3,4, 5 (bonding capital 1 5. Cap1-Cap4.

12. 1- 4 bonding capital – (ANOVA) –

Capital				20	20
1	3.8±.7	3.8±.7	3.8±.7	3.9±.7	3.8±.7
2	3.9±.7	3.9±.7	3.8±.7	3.7±.6	3.8±.7
3	3.3±.8	3.5±.9*	3.2±.8*	3.4±.9	3.3±.8
4	3.7±.7	3.8±.7*	3.6±.7*	3.7±.7	3.6±.7
Bonding capital	14.7±2.3	15.1±2.3*	14.3±2.2*	14.8±2.1	14.5±2.2

*Sig. =0.001

3.3÷3.9 (. 12).

(F=9.650; =0.002).

capital, ANOVA

ANOVA

(Cap2 Cap4)

(. 13).

¹⁶ 1 – ; 2 – ; 3 –

¹⁷ Bonding capital ; 4 – ,

13.

ANOVA

GSRH

GSRH	Cap1 Mean	Cap2 Mean	Cap3 Mean	Cap4 Mean	Bonding Cap Mean
	3.9±.7	3.9±.7	3.4±.8	3.8±.7	14.9±2.2
	3.8±.8	3.9±.6	3.4±.8	3.8±.6	14.9±2.1
	3.8±.7	3.8±.6	3.2±.9	3.6±.7	14.4±2.2
	3.7±.8	3.7±.8	3.2±.9	3.5±.9	13.9±2.6
<i>Sig.</i>	<i>F=1.947; p=.122</i>	<i>F=4.210; p=.006</i>	<i>F=1.736; p=.159</i>	<i>F=3.010; p=.030</i>	<i>F=3.103; p=.027</i>

1 . 20%
- (12.44%).

(3 (10.04%)
13%

(²=16.254; =0.012).
(²=15.545; =0.049),

2.4.

2.4.1.

() / (²). . 14
 BMI ,

. 14. BMI
 BMI

BMI	BMI		
	18 n (%)	19 n (%)	20 n (%)
(Median)	20.8	25.6	27.1
(< 18 kg/m ²)	62 (14.94)	5 (5.81)	7 (6.60)
(18.50-24.99 kg/m ²)	278 (66.99)	35 (40.70)	53 (50.00)
(25.00-29.99 kg/m ²)	57 (13.73)	32 (37.21)	46 (43.40)
(> 30 kg/m ²)	18 (4.34)	14 (16.28)	

(=20.8 kg/m²).

” “.

(=22.1 kg/m²)

(=19.9 kg/m²), U=13451.0; p=0.001.

BMI

0.001, 0.013 0.026.

BMI

(. 15).

GSRH

(BMI > 25 kg/m²).

18 () - .
 19 - .
 20 - .

45-95 . 18-75 .

Kruskal-Wallis

GSRH	BMI ()	BMI ()	BMI ()
	20.7	21.4	26.2
	20.8	26.3	25.4
	21.0	24.2	26.3
	20.5	27.1	27.9
		31.1	25.9
Sig.	$\chi^2=0.667; p=0.881$	$\chi^2=12.035; p=0.016$	$\chi^2=5.317; p=.0256$

2.4.2.

50%
60%
33.98%
($\chi^2=13.318$;
=0.010).

2.4.3.

(4-5) 8.49%
, 16.67% 8.53%
GSRH
“ ” “ ” $\chi^2=33.492$; =0.006, . 6.
(p<0.05).



2.4.4.

1/3 ($\chi^2=53.664; p=0.001$).

($\chi^2=7.548; p=0.056$).

($\chi^2=8.183; p=0.001$)

45-49 . 50-59 .

($p>0.05$).

2.4.5.

1-6, 1 „ “; 6 –

” “.

4 . 24 .

=11, -

45.56% .

($\chi^2=9.121; p=0.058$).

2.4.6.

0-10.

6. 4

9.37% , - 64.18%.

GSRH ($\chi^2=5.515; p=0.276$),

2.4.7.

(33.33%) , -

(23.93%) –

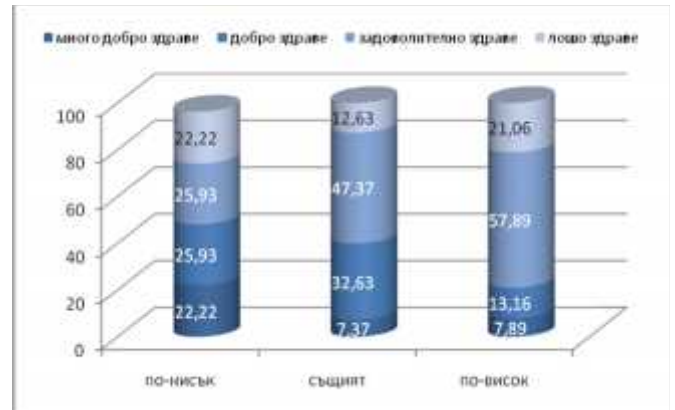
. 7-8

, 69.39% ,
 ($\chi^2=16.938$; $p=0.031$), . 7.
 80%

($\chi^2=19.075$; $p=0.014$), . 8.



. 7.



. 8.

(%)

(%)

, $\chi^2=18.335$; $p=0.005$ $\chi^2=14.147$; $p=0.028$.
 50% ,
 ($\chi^2=22.622$; $p=0.001$).

2.4.8.

2/3

Е 23.21% , ($p=0.001$).

– 8.70% , 45-49 . 78.57%
 80 ($\chi^2=34.886$; $p=0.001$).

, 40%

- (61.29%) 50-59 .
($\chi^2=27.319$; $p=0.001$).

, 50 ,
PSA (34.52%),
($\chi^2=2.268$; $p=0.972$).

2/3

- GSRH ($\chi^2=15.408$; $p=0.052$).

(
)
GSRH, TSRH ASRH ($p>0.05$).

• 21 , PSI
1.1 . -
2.6 - 2) ($p=0.001$,
• 22
GSRH (1) 2
,
1.7 , -
(60 .) 4.6 - ,
[1.436÷14.577].
1.1

²¹ ()- .
²² - .

• , (PSI,)
 =0.001. 1.1
 6 , 2
 4.3 - (GSRH 4.7
 - , -3.4

• , GSRH.
 - 1.8 -
 20 (CI=1.151-3.541).

• 0.9 -
 , . . . 60 6.4
 - GSRH 60 ,

• 0.97
 - GSRH .
 9 - 4
 , (p=0.001). , -
 - (=0.073; p=0.019),

•

, WB 4^{24} .
 (=0.988; =0.075).
 (Cap4)
 (=0.647; =0.051). 20-
 2 -
 (=0.036).

•

WB.
 5 2.5
 (0.970).
 (=0.001).

2.5.

(. 11),

2.5.1.

•

. 16

GSRH , SRH
 50-59

²⁴ 4 -

16.

20	20	60	60	50-59 .	60-69 .	70-79 .	80 .
$\chi^2=23.687; =0.005$	$\chi^2=25.783; =0.002$	$\chi^2=16.829; =0.051$	$\chi^2=21.184; =0.012$	$\chi^2=27.871; =0.001$	$\chi^2=29.496; =0.001$	$\chi^2=17.882; =0.037$	$\chi^2=12.560; =0.051$
$\chi^2=32.812; =0.001$	$\chi^2=25.646; =0.002$	$\chi^2=26.379; =0.002$	$\chi^2=25.918; =0.002$	$\chi^2=17.213; =0.015$	$\chi^2=34.617; =0.001$		$\chi^2=14.306; =0.026$
$\chi^2=19.669; =0.020$	$\chi^2=26.039; =0.002$	$\chi^2=22.698; =0.007$		$\chi^2=18.921; =0.026$			$\chi^2=9.478; =0.050$
$\chi^2=21.340; =0.011$	$\chi^2=22.475; =0.007$	$\chi^2=17.018; =0.048$		$\chi^2=17.834; =0.037$			
$\chi^2=20.597; =0.015$	$\chi^2=21.005; =0.013$	$\chi^2=20.676; =0.014$		$\chi^2=16.642; =0.055$			
	$\chi^2=31.329; =0.001$			$\chi^2=20.160; =0.017$			
	$\chi^2=18.022; =0.035$			$\chi^2=28.219; =0.001$			
	$\chi^2=21.577; =0.010$			$\chi^2=24.144; =0.004$			
	$\chi^2=17.504; =0.041$			$\chi^2=22.618; =0.007$			
				$\chi^2=20.798; =0.014$			

- GSRH ($\chi^2=34.977; p=0.001$)

($\chi^2=27.981; p=0.001$),

50-59 . ($\chi^2=24.550; p=0.004$).

1/3 20- (),

3-4 ($\chi^2=22.590; p=0.031$).

- SRH

ANOVA

() (

) ($p>0.05$).

- GSRH EQ-5D

60- ,

GSRH

45-49 ., 50-59 . 70-

79 .

GSRH ,

GSRH

45-69 .,

GSRH

($p<0.05$).

(45-59 .),

- GSRH

GSRH -

GSRH -

20- ()²⁶ 50-59 . 60-69 . ()²⁵, 60- ()²⁷.
 70-79 . (²=14.279; =0.027).
 60 - GSRH (²=12.800; =0.005),
 TRSH ,
 ()
 , ²=11.509; =0.021 ²=9.334;
 =0.053.

2.5.2.

() , , () , , ()
 (p>0.05).
 45-49 . 70-79 . () ,
 , ²=35.526; =0.003 ²=24.853; =0.003.
 ,
 (p>0.05).

2.5.3.

(p>0.05).
 GSRH
 70-79 . -

²⁵ ()- .
²⁶ - .
²⁷ - . 45-95 . 18-75 .

p=0.032),

- GSRH ($\chi^2=13.796$;

50-59 . ($\chi^2=11.417$; p=0.014).

2.6.

∴ ”
..? “.

4.5

SRH

Idler et all (1999).

43
 () , - 6
)
 -
 69.74%
 (30.26%)
 (70.89%). 13% -
 9%
 (5.06%)

2.7.

Idler et all (1999).

GSRH

. 17

4

1, 2 3
4 ()

. 17.

SRH

	46.68%	23.33%	11.11%	18.88%
<i>SRH</i>	R+ 19 (45.24)	R+ 3 (14.29)	O 1 (10.00)	O 0 (00.0)
23 (25.56)	U 20 (47.62)	R+ 10 (47.62)	O 5 (50.00)	O 8 (47.07)
43 (47.78)	U 3 (7.14)	U 8 (38.09)	R- 3 (30.00)	R- 7 (41.17)
21 (23.33)	U 0 (0.00)	U 0 (00.0)	R- 1 (10.00)	R- 2 (11.76)
3 (3.33)	90 (100.00)	42 (100.00)	21 (100.00)	10 (100.00)
	17 (100.00)			

28

50%

35.56%

– 14.44%. 34%

(15.56%) –

GSRH

. 18.

²⁸ R+ „ „; R- „ „; O- „ „; U- „ „
($\chi^2=28.963$; $p=0.001$)

SRH	OH1 3.17%	OH2 6.35%	OH3 29.37%	OH4 28.57%	OH5 32.54%
2 (1.61)	R+ 0 (0.00)	R+ 0 (0.00)	O 2 (5.41)	O 0 (0.00)	O 0 (0.00)
5 (4.03)	R+ 0 (0.00)	R+ 1 (12.50)	O 0 (0.00)	O 1 (2.78)	O 3 (7.69)
32 (25.81)	U 1 (25.00)	R+ 2 (25.00)	R+ 13 (35.14)	O 7 (19.44)	O 9 (23.08)
56 (45.16)	U 3 (75.00)	U 4 (50.00)	U 14 (37.84)	R- 14 (38.89)	R- 21 (53.84)
29 (23.39)	U 0 (0.00)	U 1 (12.50)	U 8 (21.61)	R- 14 (38.89)	R- 6 (15.39)
124 (100.00)	4 (100.00)	8 (100.00)	37 (100.00)	36 (100.00)	39 (100.00)

29

),
(
)
(OH1- 5),
(OH)
5
,
,
OH1
2
4
,
(
20).
57.25%
12.90%
, 44.35% -

2.8.

„User’s Guide to Implementing Patient-Reported Outcomes Assessment in Clinical Practice“, Version 11/2011,

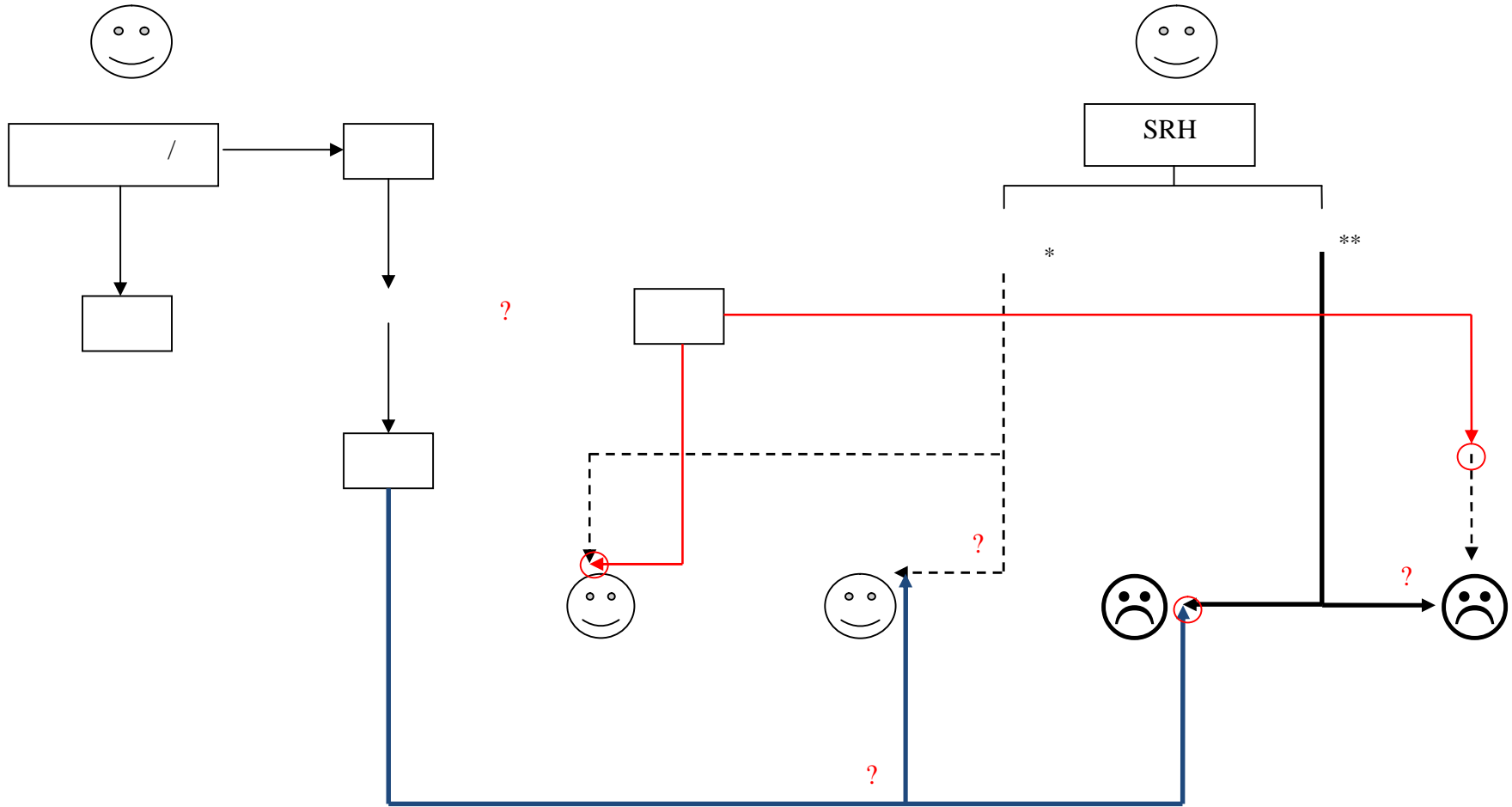
3

²⁹ OH “objective health”; R+ „
; U – , ($\chi^2=19.534$; $p=0.242$)

“; R- „
“; O – ,

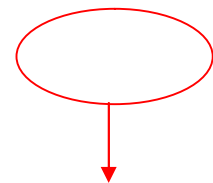
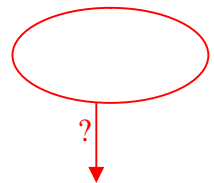
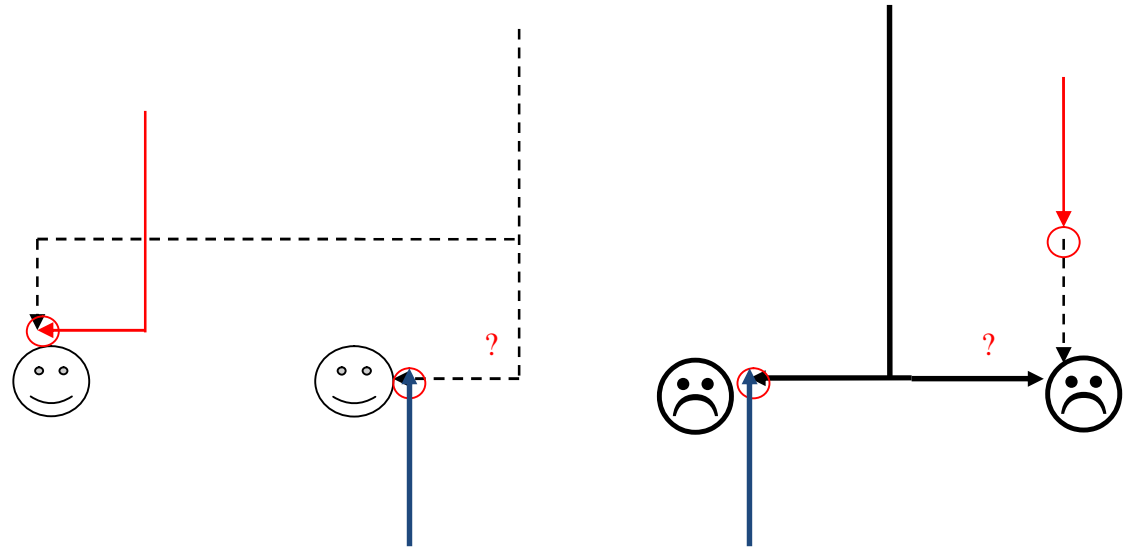
; , SRH.
 ; -
 , .
 ,
 4
 (;).
 , :
 . 9
 , ,
 .
 . 2016 . 20
 , - ().
 . 73.
 44-74 . 62.3
 8 , 12 -
 , ,
 .
 , -
 : upward comparasion,
 - (5)³⁰, -
 (5), (8)
 (6).
 , -
 :
 (6), downward comparasion,
 - (4),
 (4), (7) -
 (3).

30



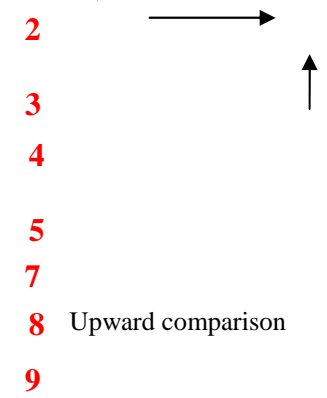
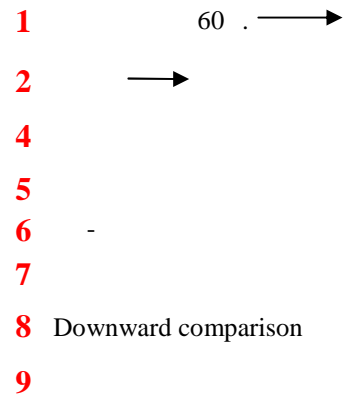
. 9.

4



:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.



(downward or upward comparison).

9.

upward comparasion.

, - .

6 60 - .

60 ,

. 60 .

, - .

. - .

. 5

, 2 , 6

, 1 - , 1

. -

. -

, -

. -

. 73.

2016 .

1	2	3	4	5	6	7	8	9	10
		<i>GSRH</i> ³¹				()	” ”	.	<i>ASRH</i> ³²
1.									-
1.			,						-
2.							,		-
3.			,				,		-
4.			,				,		
5.									-
6.			,						
7.			,						- ³³
8.			,						-

³¹ GSRH –

³² ASRH –

³³

9.									-
10.			,				,		-
11.			,						-
12.			,	1					-
13.			,				,		-
14.			,	1			,		-
15.									
16.				2					
17.			,				,		-
18.							,	-	-
19.									-

. 73.

2016 .

1	11	12	13	14	15	16	17	18	19
			((SRH)
1.		5 .	21 .	16 .	48 .	44 .			upward comparasion, ,
20.		5 .	23 .	18 .	64 .	60 .			upward comparasion, ,
21.		8 .	21 .	21 .		65 .			, downward comparasion,
22.		5 .	21 .	17 .	65 .	63 .			, upward comparasion, ,
23.		7 .	16 .	24 .	60 .	62 .			, , -
24.		4 .	23 .	18 .	60 .	58 .			upward comparasion, ,
25.		4 .	20 .	14 .	76 .	74 .			, ,

26.		3 .	25 .	14 .	75 .	73 .			· , , -
27.		4 .	23 .	15 .	65 .	62 .			· , , -
28.		8 .	18 .	22 .	58 .	65 .			· , downward comparasion, , , -
29.		5 .	21 .	21 .		70 .			· , downward comparasion,
30.		5 .	19 .	13 .	80 .	73 .			· upward comparasion,
31.		4 .	25 .	16 .	60 .	55 .			· ,
32.		5 .	25 .			74 .			· ,
33.		7 .	16 .	26 .		65 .			· , downward comparasion, ,

34.		6 .	15 .	21 .		49 .			,
35.		6 .	17 .	24 .	65 .	70 .			,
36.		6 .	15 .	23 .		68 .			, downward comparasion
37.		5 .	55 .	14 .	55 .	52 .			,
38.		8 .	26 .	21 .	40 .	44 .			upward comparasion,

1. (18-44).

2. , , 60- 60- .

3. , .

4. 5 3 .

5. (1.1 2) 2.6 , - 4.3 , - 2 .

6. GSRH. GSRH. (,) .

7.

BMI,

GSRH

8.

70%

(8.86%)

(12.66%),

(5.06%).

9.

50%

34%

57.25%

25%

18-

15.56%

17.42%

❖ ():
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 •
 (12).
 •
 ().
 ❖
 (12).
 ,
 ():
 ❖
 (12).
 ❖ :
 “ ”
 ” (16). ” ” ” ”

-
1. Simeonova J, Velkova A, Tsvetkova S, Kostadinova P, Hristova P, Kamburova M. **Correlation between self-rated health and socioeconomic and psychological characteristics of ambulatory and hospitalized patients over 44 years of age.** *Journal of Biomedical and Clinical Research* 2014; 14(2):49-55.
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3. Simeonova J, Velkova A, Tsvetkova S, Kostadinova P, Hristova P, Kamburova M. **18-20 years old patients with self-rated health and socioeconomic and psychological characteristics.** *Journal of Biomedical and Clinical Research* 2013; 13(1):62-66.

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4. **Simeonova J, Velkova A. Factors influencing self-assessed health of high school and university students in Pleven, Bulgaria.** In: Abstracts, **Resume O101.** *32nd Balkan Medical Week, 21-23 September 2012, Nish, Serbia.*

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1. **Simeonova J, Velkova A, Tsvetkova S, Kostadinova P, Hristova P, Kamburova M. Correlation between self-rated health and socioeconomic and psychological characteristics of ambulatory and hospitalized patients over 44 years of age.** [*Jubilee Scientific Conference “40th Anniversary of Medical University – Pleven”*](#). 30 Oct-01 Nov 2014.

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2. **Simeonova J, Velkova A. Factors influencing self-assessed health of high school and university students in Pleven, Bulgaria.** *32nd Balkan Medical Week, 21-23 September 2012, Nish, Serbia.*

SUMMARY

Factors of formation and dynamics of self-rated health

Joana Simeonova

Introduction: Self-rated health (SRH) is one of the most commonly used indicators for subjective health assessment, which is characterized by high reliability and validity, low requirements for application, low cost and high predictive abilities for many health outcomes at individual and population level. The self-rated health concept reflects multidimensional nature of health, as it combines personal ideas and expectations about health the individual experience modified by the effect of environment. That scientific field is investigated insufficiently in Bulgaria, which creates opportunities for further research and knowledge enrichment.

Objective: To identify the factors affecting formation of self-rated health and to explore the age related changes in subjective health.

Material and methods: Three cross-sectional studies were carried out during the period 2012-2014. Seven hundred and fifty-eight respondents were included. The personal information was collected through 6 questionnaires. Self-rated health was measured by using general indicator (GSRH) and two comparative indicators (ASRH, TSRH). A number of physical health variables were used. Functional deficits were measured by EuroQol Group's questionnaire. The influence of mental health variables was examined by analyzing the effect of psychological stress, chronic stressors, depression, self-esteem, psychological well-being, life satisfaction, etc., which were measured on scales with high reliability and validity (Cohen's Perceived stress scale, 1983; Goldberg's GHO-12 scale, 1978; Rosenberg's Self-esteem scale, 1965; WHO-Five Well-Being Index, 1999). According to the characteristics of each sample we applied a specific approach to assess the emotional, informational and instrumental social support. The influence of many factors of health behavior on SRH was studied: physical activity, BMI, weekly intake of fresh fruits and vegetable, smoking, alcohol consumption, drug and coffee use, condom use, index of sleep, perceived control on health and perceived vulnerability to cardiovascular diseases or malignancies. The frequency of annual check-ups and participation in screening programs were examined. Data were processed by SPSS.v.19. ANOVA and nonparametric methods (chi-square, Mann-Whitney, Kruskal-Wallis) were employed to compare the differences between SRH categories. Simultaneous effect of multiple factors on SRH was studied by logistic regression analysis. The significance level was set at 0.05. An inductive procedure was applied during the second study which allowed to construct the different dimensions of SRH. The objective and subjective health ratings were compared and the individuals were classified in 4 groups: good health realists and poor health realists, health optimists and health pessimists.

Results: Most of the analyzed factors were significantly associated with subjective health. We found that higher frequency of some psychosomatic symptoms and higher PSI determined fair or poor SRH. Female gender, older age, lower family and social status, higher number of chronic diseases, frequent illness, higher frequency of health services consumption and medication use, higher indices of psychological stress and depression, experienced physical violence, higher BMI, lower intake of fresh vegetables, higher alcohol consumption or being abstainer, and higher perceived vulnerability to cardiovascular or malignant disease were significantly associated with negative SRH. Protective effect on SRH was detected for higher indices of self-esteem and psychological well-being. The logistic regression analysis added a lower educational level to these protective factors. Dynamics of subjective health was determined by the family status, frequency of some psychosomatic symptoms, frequency of health services consumption and medication use, functional deficits and perceived vulnerability to cardiovascular or malignant disease. The qualitative analysis confirmed the findings of other researchers that physical dimension has a leading role in formation of SRH. The objective assessment of health and SRH matched in about fifty percent of the individuals in the second and the third sample. The proportion of health pessimists was higher in the second sample while the proportion of health optimists was higher in the third sample.

Conclusion: The study confirmed the multifaceted nature of SRH. Most of our results approach those established by other researchers. Some results differ from the existing knowledge. That might be due to the differences in study design, in selection of study subjects, in methodology used to measure SRH, and the existing complex associations between the variables. Complexity of SRH hampers the application of a single theory to clarify the concept. Subsequent longitudinal research is needed to solve some of these problems. The present study enriches knowledge about the effect of 94 variables on formulation and dynamics of SRH of Bulgarian population. The study results are applicable in clinical practice allowing medical professionals to improve case management by implementation of an integrated approach to patient, adding the unique perspective of subjective health assessment and understanding it better.

Key words: *self-rated health, factors, physical health, health optimists, health pessimists*