TABLE1 Demographic characteristics of participants (n=430)

Characteristic	n(%)	score（$\bar{x}\pm s$）	t/F value	P
Age(years)				
60~	116(27.0)	113.53±9.39	7.624[b]	0.001
70~	216(50.2)	114.34±11.80		
80~	98(22.8)	109.13±11.39		
Gender				
Male	164(38.1)	112.17±11.08	-1.094[a]	0.274
Female	266(61.7)	113.39±11.38		
Education level				
Primary school or less	69(16.0)	116.62±10.29	12.168[b]	<0.001
Middle school	166(38.5)	115.28±10.35		
High school	136(31.6)	110.45±11.02		
College or above	59(13.7)	107.71±12.41		
Marital status				
Unmarried	3(0.7)	118.67±7.51	1.136[b]	0.334
Married	313(72.6)	112.99±11.01		
Divorce	10(2.3)	107.20±11.60		
Widowed	104(24.1)	113.13±12.02		
Primary caregiver				
Spouse	138(32.0)	112.12±8.84	2.984[b]	0.019
Child	154(35.7)	111.53±10.21		
Nursing workers	39(9.0)	114.67±15.15		
No	86(20.0)	116.22±13.63		
Other	13(3.0)	111.00±12.28		
Income per month(RMB)				
＜2000	83(19.3)	116.93±10.13	17.315[b]	<0.001
2000~	149(34.6)	115.83±11.20		
3000~	135(31.3)	110.01±10.06		
＞4000	63(14.6)	107.03±11.37		
Living status				
Lives with spouse only	233(54.1)	113.31±10.23	0.199[b]	0.897
Lives with children only	84(19.5)	112.58±12.46		
Lives with both spouse and children	70(16.2)	112.33±11.86		
Lives alone	43(10.0)	112.51±13.38		
Health conditions(diagnoses)				
High blood pressure	362(84.0)	112.95±11.37	-0.095	0.924
Stroke	199(46.2)	113.20±11.22	-0.466	0.641
Diabetes	255(59.2)	113.73±11.22	-1.794	0.074

Hyperlipidemia	281(65.2)	111.99±19.70	2.385	0.022
Coronary heart disease	254(58.9)	112.30±10.74	1.383	0.176
Chronic obstructive pulmonary disease	134(31.1)	115.22±10.72	-2.867	0.004
Number of medicines				
5~10	174（40.4））	109.71±10.31	25.901 [b]	<0.001
11~15	203（47.1））	113.41±11.15		
＞15	53（12.3）	121.66±9.86		
Frequency of medicines				
Once per day	49(11.4)	105.16±9.97	16.367 [b]	<0.001
Twice per day	91(21.1)	110.36±11.49		
Three per day	224(52.0)	114.16±10.71		
More than three times per day	66(15.3)	118.06±10.09		
Monthly self-paid medication(RMB)				
<100	44(10.2)	104.20±9.69	13.573 [b]	<0.001
100~	98(22.7)	110.28±9.93		
300~	128(29.7)	113.64±11.57		
500~	129(29.9)	115.89±10.12		
800~	31(7.2)	118.42±12.37		

Tips:a represents T value; b represents F value

TABLE 2 Responses to individual statements in the C-LMQ-3and 8 domains score (n=430)

Statements /domains	Agree/ Strongly Agree N (%)	Neutral opinion N (%)	Disagree/ Strongly Disagree N (%)
Practical difficulties (6 items; Mean (SD)=17.2 (2.5))			
I find getting my prescriptions from the doctor difficult	113 (26.2)	134(31.2)	183(42.6)
I am comfortable with the times I should take my medicines	262(60.9)	93(21.6)	75(17.5)
I am concerned that I may forget to take my medicines	207(48.1)	132(30.7)	91(21.2)
It is easy to keep my medicines routine	250(58.1)	123(28.6)	57(13.3)
I find using my medicines difficult (eg: taking the medication from the package, keeping in mind the precautions for medication use, etc.).	216(50.2)	71(16.5)	143(33.3)
I have to put a lot of planning and thought into taking my medicines	107(24.9)	163(37.9)	160(37.2)
lack of effectiveness (5 items; Mean (SD)=13.3 (2.6))			
My medicines prevent my condition getting worse	219(50.9)	160(37.2)	51(11.9)
My medicines live up to my expectations	208(48.4)	164(38.1)	58(13.5)
My medicines allow me to live my life as I want to	205(47.7)	102(23.7)	123(18.6)
My medicines are working	232(54.0)	114(26.5)	84(19.5)
The side effects are worth it for the benefits I get from my medicines	181(42.1)	159(37.0)	90(20.9)
Cost-related burden (3 items; Mean (SD)=9.4 (2.3))			
I worry about paying for my medicines	229(53.3)	91(21.1)	110(25.6)
I sometimes have to choose between buying basic essentials or medicines	103(24.0)	143(33.3)	184(42.8)
I have to pay more than I can afford for my medicines.	167(38.8)	161(37.4)	102(23.8)
Communication/relationships with HCPs (5 items; Mean (SD)=13.6 (3.4))			
I trust the judgement of my doctor(s) in choosing medicines for me.	293(68.1)	49(11.4)	88(20.5)
My doctor(s) listen to my opinions about my medicines	218(50.7)	99(23.0)	113(26.3)
My doctor takes my concerns about side effects seriously.	164(38.1)	145(33.7)	121(28.1)
I get enough information about my medicines from my doctor(s)	256(59.5)	90(21.0)	84(19.5)
The health professionals providing my care know enough about me and my medicines	159(37.0)	160(37.2)	111(25.8)
Concerns about medicine use (7 items; Mean (SD)=21.8 (4.1))			
I worry that I have to take several medicines at the same time	213(49.5)	73(17.0)	144(33.5)
I would like more say in the brands of medicines I use	203(47.2)	70(16.3)	157(36.5)
I feel I need more information about my medicines	204(47.4)	138(32.1)	88(20.5)
I am concerned about possible damaging long-term effects of taking medicines	194(45.1)	50(11.6)	186(43.3)
I am concerned that I am too reliant on my medicines	178(41.4)	129(30.0)	123(28.6)
I am concerned that my medicines interact with eating habits (other food, alcohol, drinks, etc.).	101(23.5)	129(30.0)	200(46.5)
I worry that my medicines may interact with each other	150(34.9)	171(39.8)	109(25.3)

Side-effect-burden (4 items; Mean (SD)=11.9 (1.9)**)**			
The side effects I get are sometimes worse than the problems for which I take my medicines	205(47.7)	152(35.3)	73(17.0)
The side effects that I get from my medicines interfere with my day to day life	143(33.3)	149(34.7)	138(32.1)
The side effects I get from my medicines are bothersome	147(34.2)	173(40.2)	110(25.6)
The side effects I get from my medicines adversely affect my wellbeing	70(16.3)	106(24.6)	254(59.1)
Interference to day-to-day life (6 items; Mean (SD)=17.4 (2.6)**)**			
My medicines interfere with my social or leisure activities	109(25.3)	256(59.6)	65(15.1)
Taking medicines affects my going out (walking, Cycling, driving, etc.)	81(18.8)	159(37.0)	190(44.2)
My medicines interfere with my social relationships with (family, friends, colleagues)	64(14.9)	132(30.7)	234(54.4)
Taking medicines causes problems with daily tasks	135(31.4)	218(50.7)	77(17.9)
My medicines interfere with my sexual life	79(18.4)	135(31.4)	216(50.2)
My life revolves around using medicines	170(39.5)	193(44.9)	67(15.6)
Autonomy/control (3 items; Mean (SD)=8.5 (2.2)**)**			
I can vary the dose of the medicines I take	231(53.7)	133(30.9)	66(15.4)
I can choose whether or not to take my medicines	181(42.1)	100(23.3)	149(43.6)
I can vary the times I take my medicines	154(35.8)	147(34.2)	129(30.0)

TABLE3 The top 10 items with the highest scores in C-LMQ-3.

Item	score（ $\overline{x} \pm s$ ）	sort
3. I worry about paying for my medicines	3.37 ± 1.05	1
7. I feel I need more information about my medicines	3.37 ± 0.94	2
19. The side effects I get are sometimes worse than the problems for which I take my medicines	3.33 ± 0.78	3
8. I am concerned that I may forget to take my medicines	3.31 ± 0.92	4
39. My life revolves around using medicines	3.28 ± 0.78	5
4. I worry that I have to take several medicines at the same time	3.24 ± 1.07	6
31. I have to pay more than I can afford for my medicines.	3.22 ± 0.94	7
27. I find using my medicines difficult (eg: taking the medication from the package, keeping in mind the precautions for medication use, etc).	3.20 ± 0.95	8
6. I would like more say in the brands of medicines I use	3.18 ± 1.24	9
34. My medicines interfere with my social or leisure activities	3.16 ± 0.76	10

TABLE4 Multivariable stepwise linear model analysis for the association with the multiple medication

burden among elderly patients with chronic diseases (n= 430)[a]

Variables((Reference)	β	SE	t	Pvalue
Age(per 10years)	-2.044	0.637	-3.211	0.001
Education(College or above)	-1.960	0.534	-3.671	<0.001
Income per month(RMB>4000)	-1.799	0.513	-3.508	<0.001
Types of medicines(>11)	3.728	0.685	5.441	<0.001
Monthly self-paid medication(RMB>800)	2.125	0.423	5.022	<0.001
Frequency of medicines(≥ 3 times daily)	3.213	0.532	6.043	<0.001
Constant	101.03	4.108	24.596	0.000

$R^2 = 0.345$, Adj $R^2 = 0.329$; $F = 10.31$, $P< 0.0001$

[a]Adjustment for age (60-69,70-79,≥80), education level (Primary school or less, Middle school, High school, College or above), Income per month(RMB) (<2000,2000~,3000~,>4000), Types of medicines (5~10,11~15,>15), Frequency of medicines (Once per day, Twice per day, Three per day, More than three times per day), Monthly self-paid medication(RMB)(100,100~,300~,500~,800~)and other variables in the models.