



Evaluation of the Status of Vitamin D₃ and Vitamin K₂ of Bangladeshi Postmenopausal Women: A Cross-Sectional Study

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Supplementary Information

S. Table 1| **Socio-demographic status of the postmenopausal women (N=55)**

Variables	Variables status	Frequency
Age (years) ^a	50	9(16.4)
	51	1(1.8)
	52	2(3.6)
	53	2(3.6)
	54	5(9.1)
	55	6(10.9)
	56	2(3.6)
	57	7(12.7)
	58	4(7.3)
	59	5(9.1)
	60	12(21.8)
Marital status ^a	Married	50(91)
	Widowed	5(9)
Educational background ^a	No formal schooling	3(5.5)
	Less than primary school	2(3.6)
	Primary school completed	3(5.5)
	Secondary school completed	14(25.5)
	Graduation completed	18(32.7)
	Post graduate degree completed	15(27.3)
Ethnic background ^a	Islam	51(93)
	Hindu	4(7)
Job ^a	Nothing	2(3.6)
	Employer	3(5.5)
	Government employee	4(7.3)
	Autonomous	5(9.1)
	Retired from services	5(9.1)
	Non-government employee	8(14.5)
	Housewife	28(50.9)
Family monthly income (Taka) ^a	10000	1(1.8)
	20000	4(7.3)
	30000	0(0)
	40000	3(5.5)
	60000	6(10.9)
	70000	8(14.5)
	80000	6(10.9)
	90000	5(9.1)
	100000	5(9.1)
	>100000	10(18.2)

^a Data are presented as frequency (percentage)

S. Table 2| Association of socioeconomic factors with Nutritional Status

Chronic conditions	Suffering status & treatment		Frequency
Back pain ^a	Yes, 33 (60)	Suffering days	
		1	2 (3.6)
		2	1 (1.8)
		3	6 (10.9)
		4	1 (1.8)
		7	7 (12.7)
		15	3 (5.5)
		30	5 (9.1)
		90	8 (14.5)
	No, 22 (40)	-	-
	Taken pain killer		
Waist and joint pain ^a	Yes, 49 (89)	Yes	46 (84)
		No	9 (16)
		Suffering days	
		1	1 (2)
		2	5 (9)
		3	4 (7)
		4	1 (2)
		5	4 (7)
		7	7 (13)
		10	2 (4)
		15	3 (6)
	No, 6 (11)	18	1 (2)
		30	5 (9)
		60	3 (6)
		90	13 (24)
		-	-
Urinary incontinence ^a	Taken pain killers		
	Yes		14 (25)
	No		41 (75)
	Yes, 28 (51)	Timing	Status
		During exercise	Yes
			No
		During sneezing	Yes
			No
		During coughing	Yes
			No
		During laughing	Yes
			No
		Lifting heavy objects	Yes
			No
	No, 27 (49)		-

^a Data are presented as frequency (percentage)* Significant *p* value at *p*<0.05

S. Table 3| **Descriptive distribution of suffering from different diseases of postmenopausal women (N=55)**

Suffering from diseases	N	Minimum (year)	Maximum (years)	Mean	Std. Deviation
Hypertension	55	1	20	7.56	5.55
CVD	55	1	15	7.57	5.77
Diabetes	55	1	17	6.81	5.65
Asthma	55	1	30	9.75	8.01
Dental problem	55	1	20	5.30	4.83
Gastric	55	1	20	7.44	5.40
Malabsorption	55	1	7	2.83	2.50
Vision problem	55	1	30	7.61	6.12
Hearing problem	55	1	20	3.96	2.98
Osteoporosis	55	1	10	3.06	2.50

S. Table 4| **Binary logistic regression for cardiovascular disease (CVD)**

Variables in the equation								
Variables		B	S.E.	Wald	d.f	R ²	P value	Exp (B)
Step 1 ^a	Serum vitamin D ₃	0.08	0.09	0.81	1	0.74	0.37	1.08
	Serum vitamin K ₂	-1.84	2.66	0.48			0.49	0.16
	BMI	-0.26	0.18	2.03			0.15	0.77
	WHR (cm)	4.24	4.78	0.79			0.38	69.16
	Diabetes	-2.54	1.39	3.36			0.05	0.08
	Dental problem	-0.87	1.13	0.58			0.44	0.42
	Gastric	0.39	1.05	0.14			0.71	1.48
	Vision problem	0.76	1.36	0.31			0.58	2.14
	Hearing problem	-0.94	1.17	0.65			0.42	0.39
	Osteoporosis	1.27	1.28	0.99			0.32	3.58

a. Variable (s) entered on step 1: Serum vitamin D₃, Serum vitamin K₂, BMI, WHR (cm), Diabetes, Dental problem, Gastric, Vision problem, Hearing problem, and Osteoporosis. BMI: body mass index; WHR: waist-hip ratio; B: Intercept; S.E: standard error; d.f.: degree of freedom; Exp (B): the expected value of B.

S. Table 5| **Binary logistic regression for diabetes**

Variables in the equation								
Variables		B	S.E.	Wald	d.f	R ²	P value	Exp(B)
Step 1 ^a	Serum vitamin D ₃	0.02	0.06	0.18	1	0.36	0.67	1.02
	Serum vitamin K ₂	-2.65	1.64	2.62			0.11	0.07
	BMI	0.19	0.14	1.81			0.18	1.21
	WHR(cm)	-5.62	4.41	1.63			0.20	0.00
	Hypertension	1.64	0.94	3.05			0.08	5.18
	CVD	-2.41	1.26	3.68			0.05	0.09
	Dental problem	-1.91	0.74	6.57			0.01	0.15
	Gastric	-0.03	0.71	0.00			0.97	0.97
	Vision problem	0.72	0.83	0.75			0.39	2.05

a. Variable(s) entered on step 1: Serum vitamin D₃, Serum vitamin K₂, BMI, WHR (cm), Hypertension, CVD, Dental problem, Gastric, and Vision problem. BMI: body mass index; WHR: waist-hip ratio; CVD: cardiovascular disease; B: Intercept; S.E: standard error; d.f: degree of freedom; Exp (B): the expected value of B.

S. Table 6| **Binary logistic regression for osteoporosis**

Variables in the equation								
Variables		B	S.E.	Wald	d.f	R ²	P Value	Exp(B)
Step 1 ^a	Serum vitamin D ₃	-0.01	0.05	0.02	1	0.28	0.88	0.99
	Serum vitamin K ₂	0.30	1.55	0.04			0.85	1.35
	BMI	0.16	0.13	1.56			0.21	1.17
	WHR	-6.21	3.94	2.48			0.12	0.00
	Hypertension	0.32	0.89	0.13			0.72	1.38
	Diabetes	0.90	0.74	1.47			0.23	2.45
	Gastric	0.52	0.68	0.58			0.45	1.68
	Dental problem	0.91	0.74	1.54			0.21	2.49

	Vision problem	0.35	0.80	0.19			0.66	1.42
	Hearing problem	1.22	0.65	3.57			0.05	3.40

a. Variable(s) entered on step 1: Serum vitamin D₃, Serum vitamin K₂, BMI, WHR, Hypertension, Diabetes, Gastric, Dental problem, Vision problem, and Hearing problem. BMI: body mass index; WHR: waist-hip ratio; B: Intercept; S.E: standard error; d.f: degree of freedom; Exp(B): the expected value of B.

S. Table 7| **Binary logistic regression for asthma**

Variables in the equation								
Variables		B	S.E.	Wald	d.f	R ²	P Value	Exp(B)
Step 1 ^a	Serum vitamin D ₃	0.04	0.08	0.23	1	0.60	0.63	1.04
	Serum vitamin K ₂	-1.61	1.87	0.74			0.39	0.20
	BMI	-0.26	0.18	1.98			0.16	0.77
	WHR	7.46	5.87	1.62			0.20	1736.72
	Hypertension	-1.37	1.08	1.61			0.20	0.25
	CVD	-20.07	13819.65	0.00			1.00	0.00
	Diabetes	0.93	0.89	1.09			0.30	2.54
	Dental problem	1.72	0.94	3.34			0.05	5.59
	Gastric	-0.64	0.86	0.54			0.46	0.53
	Vision problem	-2.46	1.07	5.29			0.02	0.09
	Hearing problem	0.37	0.80	0.21			0.65	1.45
	Osteoporosis	0.42	0.90	0.22			0.64	1.52

a. Variable(s) entered on step 1: Serum vitamin D₃, Serum vitamin K₂, BMI, WHR, Hypertension, CVD, Diabetes, Dental problem, Gastric, Vision problem, Hearing problem, and Osteoporosis. BMI: body mass index; WHR: waist-hip ratio; CVD: cardiovascular disease; B: intercept; S.E: standard error; d.f: degree of freedom; Exp(B): the expected value of B.