

SUPPLEMENTAL TABLE 1

Univariate and final multivariable models summarizing probability of prevalence of worse support at 1 year postpartum according to the average daily MVPA in 5-minute bouts (average of 2–3 and 5–6 weeks postpartum)

	Univariate PR (95% CI)	Pvalue	Multivariable PR (95% CI) ^a	Pvalue
MVPA in 5-min bouts				
Q 2, 3, 4, 2 vs Q 1	1.53 (0.7–3.38)	.29	1.39 (0.62–3.13)	.43
Q 5 vs Q 1	2.02 (0.85–4.81)	.11	1.39 (0.56–3.43)	.48
Age, ≥30.4 (age Q 4, 5) vs <30.4 (age Q 1, 2, 3)	2.12 (1.26–3.56)	.005	2.06 (1.22–3.47)	.007
High-risk delivery factor (yes vs no)	1.43 (0.86–2.39)	.17	1.02 (0.65–1.58)	.94
Ethnicity (Hispanic vs non-Hispanic) ^b	0.78 (0.36–1.67)	.52	0.99 (0.47–2.11)	.99
Support in third trimester (worse vs better) ^c ^b	4.09 (2.03–8.24)	<.001	3.81 (2.02–7.20)	<.001
Education (professional vs college or less) ^b	1.36 (0.8–2.29)	.26	0.80 (0.43–1.46)	0.46
Chronic cough at 5–10 wk postpartum (yes vs no) ^d	1.30 (0.2–8.29)	.78	N/A	N/A
Breastfeeding at 5–10 wk postpartum (yes vs no) ^b	5.00 (0.71, 35.35)	.11	3.39 (0.48, 23.70)	.22
BMI at 5–10 wk postpartum^b				
25–<30 vs <25 kg/m ²	0.77 (0.44, 1.35)	.36	0.87 (0.49, 1.55)	.65
≥30 vs <25 kg/m ²	0.34 (0.12, 0.94)	.04	0.37 (0.13, 1.08)	.07

BMI, body mass index; CI, confidence interval; DAG, directed acyclic graph; MVPA, moderate to vigorous physical activity; N/A, not available; PR, prevalence ratio; Q, quintile.

^a Final model (n=562) includes multiple imputation on missing values; ^b The multivariable model based on the DAG designed to test the total effect of MVPA on worse support is also appropriate to test the total effect of age and high-risk delivery factor on worse support but reflects direct or "partial" effects for the other variables after MVPA, a downstream variable, has been adjusted. The total effects of these variables include indirect effects that may be mediated via MVPA. Therefore, guided by separate DAGs to determine adjustment factors for the other variables in the above model, we created additional models designed to test the total effect of each of the other variables after adjustment. The total effects of these other variables are as follows: Ethnicity: PR 0.96 (95% CI, 0.46–2.04), P=.93 (adjusted for age, high-risk delivery factor, antenatal support, education, breastfeeding at 5–10 weeks postpartum, BMI at 5–10 weeks postpartum). Antenatal support: PR 3.81 (95% CI, 1.98–7.34), P<.001 (adjusted for age, high-risk delivery factor, ethnicity, education, breastfeeding at 5–10 weeks postpartum, BMI at 5–10 weeks postpartum). Education: PR 0.83 (95% CI, 0.46–1.51), P=.55 (adjusted for age, high-risk delivery factor, antenatal support, ethnicity, breastfeeding at 5–10 weeks postpartum, BMI at 5–10 weeks postpartum). Breastfeeding at 5–10 weeks postpartum: PR 3.64 (95% CI, 0.52–25.43), P=.19 (adjusted for age, high-risk delivery factor, antenatal support, ethnicity, education, BMI at 5–10 weeks postpartum). BMI: PR 0.76 (95% CI, 0.37–1.57), P=.47 for 25 to <30 vs <25 kg/m², and PR 0.26 (95% CI, 0.07–0.93), P=.04 for ≥30 vs <25 kg/m² (adjusted for age, high-risk delivery factor, antenatal support, ethnicity, breastfeeding at 5–10 weeks postpartum, education, prepregnancy BMI); ^c Worse=maximal vaginal descent of ≥0 cm; Better=maximal vaginal descent of <0 cm; ^d Omitted from multivariable model because of small cell counts.

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SUPPLEMENTAL TABLE 2

Univariate and final multivariable models summarizing the probability of prevalence of symptom burden outcome at 1 year postpartum according to the average daily MVPA in 5-minute bouts (average of 2–3 and 5–6 weeks postpartum)

	Univariate PR (95% CI)	Pvalue	Multivariable PR (95% CI) ^a	Pvalue
MVPA in 5-min bouts, averaged at 2–3 and 5–6 wk postpartum				
Q 2, 3, 4 vs Q 1	0.98 (0.82–1.18)	.85	0.99 (0.84–1.18)	.95
Q 5 vs Q 1	0.88 (0.69–1.11)	.27	0.89 (0.71–1.13)	.34
Age, per 5 y	1.03 (0.96–1.1)	.46	1.00 (0.98–1.02)	.82
High-risk delivery factor (yes vs no)	1.19 (1.03–1.37)	.02	1.21 (1.03–1.43)	.02
Ethnicity (Hispanic vs non-Hispanic) ^b	0.77 (0.61–0.97)	.03	0.81 (0.65–1.00)	.05
SUI, UUI, or AI in third trimester (present vs absent) ^b	1.93 (1.61–2.33)	<.001	1.92 (1.60–2.31)	<.001
Education (professional vs college or less) ^b	0.95 (0.81–1.12)	0.57	0.90 (0.76–1.07)	0.23
Chronic cough at 5–10 wk postpartum (yes vs no) ^c	0.52 (0.16–1.69)	.28	N/A	N/A
Breastfeeding at 5–10 wk postpartum (yes vs no) ^b	1.04 (0.81–1.34)	.75	0.97 (0.76–1.24)	.818
BMI at 5–10 wk postpartum ^b				
25–<30 vs <25 kg/m ²	1.05 (0.89–1.24)	.54	1.01 (0.86–1.19)	.929
≥30 vs <25 kg/m ²	1.05 (0.86–1.28)	.63	1.03 (0.86–1.24)	.731

AI, anal incontinence; BMI, body mass index; CI, confidence interval; DAG, directed acyclic graph; MVPA, moderate to vigorous physical activity; N/A, not available; PR, prevalence ratio; Q, quintile; SUI, stress urinary incontinence; UUI, urgency urinary incontinence.

^a Final model (n=609) includes multiple imputation on missing values; ^b The multivariable model based on the DAG designed to test the total effect of MVPA on symptom burden is also appropriate to test the total effect of age and high-risk delivery factor on worse support, but reflects direct or “partial” effects for the other variables after MVPA, a downstream variable, has been adjusted. The total effects of these variables include indirect effects that may be mediated via MVPA. Therefore, guided by separate DAGs to determine adjustment factors for the other variables in the above model, we created additional models designed to test the total effect of each of the other variables after adjustment. The total effects of these other variables are as follows: Ethnicity: PR 0.80 (95% CI, 0.64–0.99), *P*=.04 (adjusted for age; high-risk delivery factor; antenatal SUI, UUI, or AI; education; breastfeeding at 5–10 weeks postpartum; BMI at 5–10 weeks postpartum). Antenatal SUI, UUI, or AI: PR 1.94 (95% CI, 1.61–2.33), *P*<.001 (adjusted for age, high-risk delivery factor, antenatal support, ethnicity, education, breastfeeding at 5–10 weeks postpartum, BMI at 5–10 weeks postpartum). Education: PR 0.90 (95% CI, 0.76–1.06), *P*=.21 (adjusted for age; high-risk delivery factor; antenatal SUI, UUI or AI; ethnicity; breastfeeding at 5–10 weeks postpartum; BMI at 5–10 weeks postpartum). Breastfeeding at 5–10 weeks postpartum: PR 0.95 (95% CI, 0.75–1.20), *P*=.66 (adjusted for age; high-risk delivery factor; antenatal SUI, UUI, or AI; ethnicity; education; BMI at 5–10 weeks postpartum). BMI at 5–10 weeks postpartum: PR 1.01 (95% CI, 0.84–1.21), *P*=.95 for 25 to <30 vs <25 kg/m², and PR 1.02 (95% CI, 0.76–1.37), *P*=.91 for ≥30 vs <25 kg/m² (adjusted for age; high-risk delivery factor; antenatal SUI, UUI or AI; ethnicity; breastfeeding; education; prepregnancy BMI); ^c Omitted from multivariable model because of small cell counts.

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SUPPLEMENTAL TABLE 3

Post hoc comparison of physical activity and other factors according to quintiles of MVPA in early postpartum

	Quintiles of MVPA			Pvalue
	1, 2	3, 4	5	
RAPA score before pregnancy (recall)	N (%)	N (%)	N (%)	.11
Sedentary	1 (0.45)	3 (1.34)	0	
Underactive	107 (47.77)	96 (42.86)	39 (34.82)	
Active	116 (51.79)	125 (55.80)	73 (65.18)	
RAPA score at third trimester				.10
Sedentary	12 (5.36)	7 (3.13)	2 (1.79)	
Underactive	173 (77.23)	162 (72.32)	79 (70.54)	
Active	39 (17.41)	55 (24.55)	31 (27.68)	
Self-reported heavy lifting or work in third trimester				.88
No	154 (68.75)	149 (66.52)	75 (67.57)	
Yes	70 (31.25)	75 (33.48)	36 (32.43)	
Activities involving hard running or straining in third trimester				.17
No	215 (95.98)	208 (92.86)	102 (91.07)	
Yes	9 (4.02)	16 (7.14)	10 (8.93)	
Activities involving some bouncing or easy running and/or greater effort in third trimester				.25
No	171 (76.34)	171 (76.34)	77 (68.75)	
Yes	53 (23.66)	53 (23.66)	35 (31.25)	
Activities not involving bouncing, jumping, straining, or heavy lifting in third trimester				.51
No	42 (18.83)	33 (14.80)	18 (16.07)	
Yes	181 (81.17)	190 (85.20)	94 (83.93)	
Injured as result of physical activity during pregnancy				.70
No	165 (95.38)	166 (97.08)	89 (95.70)	
Yes	8 (4.62)	5 (2.92)	4 (4.30)	
Pattern of physical activity (per RAPA) between pre-pregnancy and 5–10 wk postpartum				.001
Sedentary/underactive pre-pregnancy and sedentary/underactive postpartum	97 (45.54)	82 (37.79)	32 (29.91)	
Sedentary/underactive pre-pregnancy and active postpartum	8 (3.76)	12 (5.53)	5 (4.67)	
Active pre-pregnancy and sedentary/underactive postpartum	86 (40.38)	70 (32.26)	42 (39.25)	
Active pre-pregnancy and active postpartum	22 (10.33)	53 (24.42)	28 (26.17)	
Urgency urinary incontinence at 5–10 wk postpartum				.83
No	172 (80.37)	173 (79.36)	88 (82.24)	
Yes	42 (19.63)	45 (20.64)	19 (17.76)	
BMI at 5–10 wk postpartum				.66
<25 kg/m ²	98 (44.34)	111 (50.00)	54 (50.47)	
25–<30 kg/m ²	79 (35.75)	71 (31.98)	37 (34.58)	

SUPPLEMENTAL TABLE 3

Post hoc comparison of physical activity and other factors according to quintiles of MVPA in early postpartum (continued)

	Quintiles of MVPA			P value
	1, 2	3, 4	5	
≥30 kg/m ²	44 (19.91)	40 (18.02)	16 (14.95)	
SUI at 5–10 wk postpartum				.40
No	146 (68.54)	152 (69.72)	81 (75.70)	
Yes	67 (31.46)	66 (30.28)	26 (24.30)	
AI at 5–10 wk postpartum				.24
No	155 (72.43)	173 (79.36)	80 (74.77)	
Yes	59 (27.57)	45 (20.64)	27 (25.23)	
UI affects ability to do household chores postpartum at 5–10 wk postpartum				.12
No	142 (66.36)	154 (70.97)	82 (77.36)	
Yes	72 (33.64)	63 (29.03)	24 (22.64)	
UI affects ability to do physical recreation postpartum at 5–10 wk postpartum				.53
No	137 (64.93)	141 (64.98)	75 (70.75)	
Yes	74 (35.07)	76 (35.02)	31 (29.25)	
Sensation of vaginal bulge at 5–10 wk postpartum				.24
No	194 (91.94)	208 (95.85)	100 (93.46)	
Yes	17 (8.06)	9 (4.15)	7 (6.54)	
Work status at 5–10 wk postpartum				.61
Other (maternity leave, homemaker, student, etc)	177 (82.71)	185 (84.86)	93 (86.92)	
Working part-time (<30 h/wk)	17 (7.94)	14 (6.42)	9 (8.41)	
Working full-time	20 (9.35)	19 (8.72)	5 (4.67)	
Breastfeeding at 5–10 wk postpartum				.63
No	20 (9.39)	21 (9.63)	7 (6.54)	
Yes	193 (90.61)	197 (90.37)	100 (93.46)	
Injured as result of physical activity between delivery and 5–10 wk postpartum				.35
No	184 (99.46)	191 (99.48)	96 (97.96)	
Yes	1 (0.54)	1 (0.52)	2 (2.04)	
RAPA score at 5–10 wk postpartum				<.001
Sedentary	10 (4.67)	5 (2.29)	3 (2.80)	
Underactive	174 (81.31)	148 (67.89)	71 (66.36)	
Active	30 (14.02)	65 (29.82)	33 (30.84)	
Self-reported heavy lifting or work at 5–10 wk postpartum				.007
No	171 (79.91)	148 (68.20)	71 (66.36)	
Yes	43 (20.09)	69 (31.80)	36 (33.64)	

SUPPLEMENTAL TABLE 3

Post hoc comparison of physical activity and other factors according to quintiles of MVPA in early postpartum (continued)

	Quintiles of MVPA			P value
	1, 2	3, 4	5	
Activities involving hard running or straining at 5–10 wk postpartum				.002
No	194 (90.65)	177 (81.94)	82 (76.64)	
Yes	20 (9.35)	39 (18.06)	25 (23.36)	
Activities involving some bouncing or easy running and/or greater effort at 5–10 wk postpartum				.037
No	147 (68.69)	130 (59.91)	59 (55.14)	
Yes	67 (31.31)	87 (40.09)	48 (44.86)	
Activities not involving bouncing, jumping, straining, or heavy lifting at 5–10 wk postpartum				.004
No	71 (33.49)	44 (20.28)	23 (21.50)	
Yes	141 (66.51)	173 (79.72)	84 (78.50)	
Self-rated health, last 7 d, at 5–10 wk postpartum				.06
Excellent	31 (14.49)	44 (20.18)	24 (22.43)	
Very good	86 (40.19)	89 (40.83)	52 (48.60)	
Good	74 (34.58)	72 (33.03)	29 (27.10)	
Fair	20 (9.35)	12 (5.50)	2 (1.87)	
Poor	3 (1.40)	1 (0.46)	0	
Total average ENMO at 2–3 and 5–6 wk postpartum ^a , mg, mean (SD)	18.83 (2.43)	23.98 (2.43)	29.04 (3.71)	<.001
At least 1 5-min bout of MVPA at 2–3 and 5–6 wk postpartum				<.001
No	73 (32.44)	26 (11.56)	1 (0.89)	
Yes	152 (67.56)	199 (88.44)	111 (99.11)	
At least 1 5-min bout of vigorous physical activity at 2–3 and 5–6 wk postpartum				<.001
No	219 (97.33)	191 (84.89)	90 (80.36)	
Yes	6 (2.67)	34 (15.11)	22 (19.64)	

AI, anal incontinence; BMI, body mass index; ENMO, Euclidean Norm Minus One; mg, milli-gravity; MVPA, moderate to vigorous physical activity; RAPA, Rapid Assessment of Physical Activity scale; SLI, stress urinary incontinence; UI, urinary incontinence.

^a ENMO is a summary metric for acceleration data and represents the vector magnitude of 3 axial measures minus the contribution of gravity.

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