

Table S1. Lifestyle factors associated with reduced fertility.

Factor	References	Sex		
		Male	Female	Unknown
Age	Japan Society of Obstetrics and Gynecology [35]	X	X	
	Ministry of Health, Labour and Welfare [36]	X	X	
Sexually transmitted diseases	The Cochrane Library [8]			X
	Japan Society of Obstetrics and Gynecology [35]		X	
	Ministry of Health, Labour and Welfare [36]	X	X	
Psychological stress	Japan Society of Obstetrics and Gynecology [35]	X		
	Ministry of Health, Labour and Welfare [36]	X		
Cigarette smoking	The Cochrane Library [8]	X	X	
	British Fertility Society [37]			X
Alcohol use	The Cochrane Library [8]	X	X	
	British Fertility Society [37]			X
Nutrition and diet	The Cochrane Library [8]	X	X	
Physical activity and exercise	The Cochrane Library [8]	X	X	
Underweight	The Cochrane Library [8]	X	X	
	Japan Society of Obstetrics and Gynecology [35]		X	
	Ministry of Health, Labour and Welfare [36]		X	
Overweight and obesity	The Cochrane Library [8]	X	X	
	Japan Society of Obstetrics and Gynecology [35]		X	
	British Fertility Society [37]			X
	Ministry of Health, Labour and Welfare [36]	X	X	
Environmental pollutants	The Cochrane Library [8]	X	X	

Table S2. Factors considered in the analysis.

Category (number of codes per broad category)	Factor ^a			Examples of terms used in coding ^b	Number of codes per factor
Nutritional factors (511)	Nutrition and diet	Male Female	Content directly related to ingredients, nutrients, and dietary habits is included.	Fatty foods, no breakfast, cold foods, unbalanced diet, eat at a certain time.	297
	Nutritional supplements	Male Female	Content directly related to nutritional supplements is included.	DHA, GABA, amino acids, calcium, barley grass, glutamic acid, ginseng, coenzyme Q10, enzymes, vitamins, folic acid.	132
	Non-caffeinated beverage intake	Male Female	Content directly related to non-caffeinated beverage intake, nutrients, and ingredients is included.	Green juice, almond juice, pomegranate juice, ginger tea, herbal tea, egg vinegar, soy milk, maca, amino acids, folic acid.	63
	Caffeine intake	Male Female	Content directly related to caffeine intake is included.	Energy drinks, coffee, tea, green tea, decaffeinated beverage, caffeine-free.	19
Alternative medicine (310)	Consumption of the herbal medicine kampo	Male Female	Content directly related to consumption of the herbal medicine kampo is included.	Kampo (herbal medicine), autumn turmeric, unkeito, hochuekkito, keishibukuryogan, syakuyaku, juzentaihoto, dandelion tea.	84
	Acupuncture and moxibustion	Male Female	Content directly related to acupuncture and moxibustion is included.	Acupuncture, moxibustion.	67

Body work and osteopathy	Male Female	Content directly related to body work and osteopathy is included.	Body work, osteopathy.	39
Aromatherapy (essential oils)	Male Female	Content directly related to aromatherapy (essential oils) is included.	Aromas, aromatic oils, essential oils.	37
Body deformation	Male Female	Content directly related to body deformation is included.	Body deformation, deformation of the body, deformation of the pelvis.	29
Massage	Female	Content directly related to massaging is included.	Massage, foot massage, reflexology, bowel massage, pressure point press.	13
Consuming herbs	Male Female	Content directly related to consuming herbs is included.	Herbs, echinacea, ginkgo, German chamomile, horsetail, thyme, passion flower.	11
Esthetic clinic	Female	Content directly related to esthetic clinics is included.	Esthetic clinic.	10
Phototherapy	Female	Content directly related to phototherapy is included.	Phototherapy.	5
Vaginal care	Female	Content directly related to vaginal care is included.	Vaginal care.	4
Highly concentrated vitamin C infusion	Female	Content directly related to highly concentrated vitamin C infusion is included.	Highly concentrated vitamin C infusion.	4

	Oxygen capsule use	Female	Content directly related to oxygen capsule use is included.	Oxygen capsules.	3
	Laser therapy	Female	Content directly related to laser therapy is included.	Laser therapy.	3
	Salt ball (shio bouru) massage	Female	Content directly related to salt ball (shio bouru) massage is included.	Salt ball (shio bouru) massage.	1
Psychological factors (268)	Psychological stress	Male Female	Content directly related to psychological stress is included.	Stress at work, frustration (iraira), stress from unstable income, anxiety about the future, stress in relation to the family, stress from housework.	218
	Fatigue	Male Female	Content directly related to fatigue is included.	Fatigue, tiredness, exhaustion.	34
	Meditation	Female	Content directly related to meditation is included.	Meditation, mindfulness, meditation art, painting nothingness into head.	7
	Breathing exercises	Female	Content directly related to breathing exercises is included.	Method of breathing, abdominal breathing.	5
	Psychological care/counseling	Female	Content directly related to psychological care/counseling is included.	Psychological care, psychological counseling, school of thought.	3
	Autogenic training	Female	Content directly related to autogenic training is included.	Autogenic training.	1
Factors related to daily life (259)	Sleeping habits	Male Female	Content directly related to sleeping habits is included.	Lack of sleep, poor sleep, inability to sleep, going to bed and waking up at a certain time, not getting enough sleep.	81

Bathing	Male Female	Content directly related to bathing is included.	Bathing, long baths, taking a bath, short warm baths, enzyme baths, cypress baths, hydrogen baths, steam therapy, showers, half-body baths.	38
Regular routine	Male Female	Content directly related to having a regular routine is included.	Changing an irregular routine, trying to produce offspring with an irregular routine, living with a regular routine, living an irregular life.	35
Computer use	Male Female	Content directly related to computer use is included.	Computer work on one's lap, distortion of body from computer use, late nights on the computer.	17
Exposure to the sun and tanning	Male Female	Content directly related to exposure to the sun and tanning is included.	Exposure to the sun and tanning, sunscreen, ultraviolet rays.	13
Sauna use	Male Female	Content directly related to sauna use is included.	Sauna, bedrock bath.	11
Riding a bicycle	Male	Content directly related to riding a bicycle is included.	Riding a bike, saddle, bike to work.	11
Job	Male Female	Content directly related to one's job is included.	Physical work (gaten-kei), office work, desk work, night shifts, too busy with work.	10
Crossing the legs	Female	Content directly related to crossing the legs is included.	Crossing the legs, distortion of the body from crossing the legs.	8
Smartphone use	Male Female	Content directly related to smartphone use is included.	Smartphone inside pants, smartphone, smartphone affects posture.	7

	Owning a pet	Female	Content directly related to owning a pet is included.	Pets.	5
	Holding a bag	Female	Content directly related to holding a bag is included.	Holding a bag, distortion of the body from holding a bag, dispersion of the weight of luggage.	5
	Long hours of driving	Male	Content directly related to long hours of driving is included.	Long hours of driving.	4
	Karaoke	Female	Content directly related to karaoke is included.	Relieving stress by karaoke, karaoke.	4
	Listening to music (onkatsu)	Female	Content directly related to listening to music (onkatsu) is included.	Listening to music (onkatsu), listening to classical music.	4
	Sitting on the train	Male	Content directly related to sitting on the train is included.	Sitting on the train.	2
	Excessive information seeking on the Internet	Male Female	Content directly related to seeking information on the internet is included.	Seeking information exclusively from the Internet.	2
	Using a vacuum cleaner	Female	Content directly related to using a vacuum cleaner is included.	Using a vacuum cleaner.	1
	Side-sleeping or lying face down on the floor	Female	Content directly related to side-sleeping or lying face down on the floor is included.	Side-sleeping, lying face down on the floor.	1
Hypersensitivity to cold (199)	Hypersensitivity to cold	Male Female	Content directly related to feeling cold or warm is included.	Coldness, hot activity (onkatsu), warming goods, mugwort (yomogi-mushi), warmth,	183

				warmth fashion, warmth retention.	
	Hypothermia	Female	Content directly related to hypothermia is included.	Hypothermia, low basal body temperature.	16
Healthcare-related factors (199)	Health check-up	Male Female	Content directly related to health checkups is included.	Semen testing, testing for sexually transmitted diseases, sperm testing kits, ultrasound, hormone testing, Huhner test.	144
	Vaccination	Male Female	Content directly related to vaccination is included.	Vaccinations for mumps, measles, rubella, flu, chickenpox, whooping cough, hepatitis B.	15
	Medication	Male Female	Content directly related to medication is included.	Drugs, medications, hair growth products.	13
	Obstetrician/gynecologist as primary-care physician	Female	Content directly related to obstetrician/gynecologist as primary-care physician is included.	Obstetrician/gynecologist as primary-care physician.	8
	History of lower abdominal surgery	Male Female	Content directly related to history of lower abdominal surgery is included.	History of lower abdominal surgery.	7
	Psychoactive medication use	Male Female	Content directly related to psychoactive medication use is included.	Psychoactive medication use.	7
	Dental care	Female	Content directly related to dental care is included.	Dental care.	5

Life planning and health management (186)	Basal body temperature	Female	Content directly related to measuring basal body temperature is included.	Measuring basal body temperature.	81
	Life planning (pregnancy and childbirth)	Male Female	Content directly related to life planning (pregnancy and childbirth) is included.	Life planning, fertility (ninkatsu) planning.	50
	Health management with partner	Male Female	Content directly related to health management with partner is included.	Pregnancy preparation for couples, partners, men and women.	37
	Knowledge of medical and family history	Male Female	Content directly related to knowing medical and family history is included.	Knowing the association between pre-existing conditions and pregnancy, knowing own illnesses (lifestyle and genetic diseases), knowing family members' illnesses.	18
Physical activity and exercise (181)	Physical activity and exercise (except yoga)	Male Female	Content directly related to physical activity and exercise is included. Content related to yoga is excluded.	Muscle training, hula hoops, belly dancing, running, Pilates, stretching, ballet, gym, golf, gymnastics, pressure training, intense exercise.	137
	Yoga	Male Female	Content directly related to yoga is included.	Yoga, yoga meditation, yoga abdominal breathing, yoga cold relief.	43
	Qigong (Chinese mind-body exercise and mediation in order to improve	Female	Content directly related to qigong is included.	Qigong.	1

	the equilibrium, flexibility and muscle strength)				
Age (158)	Age	Male Female	Content directly related to age is included.	Egg aging, egg rejuvenation, time limits.	158
Overweight and underweight (102)	Underweight	Male Female	Content directly related to underweight is included.	Excessive dieting, carbohydrate-free diet.	54
	Overweight and obesity	Male Female	Content directly related to overweight and obesity is included.	Overweight, obesity, overeating.	48
Factors related to sexual behavior (78)	Sexual behavior	Male Female	Content directly related to sexual behavior is included.	Positions (missionary, rear, cowgirl, seated), foreplay, frequency of sexual activity, resting after intercourse, resolving sexlessness, standing on one's head after intercourse.	58
	Masturbation	Male Female	Content directly related to masturbation is included.	Abstinence, inappropriate masturbation.	20
Alcohol use (69)	Alcohol use	Male Female	Content directly related to alcohol use is included.	Excessive drinking causes erectile dysfunction, alcohol consumption increases sex drive, alcohol consumption relieves stress, cold beer is a cause of body coldness, sweet wine (amazake).	69

Cigarette smoking and substance use (66)	Smoking cigarettes and exposure to second-hand smoke	Male Female	Content directly related to smoking cigarettes and exposure to second-hand smoke is included.	Smoking cigarettes, second-hand smoke, e-cigarettes.	62
	Illicit drugs (kiken dorakku)	Male Female	Content directly related to illicit drugs (kiken dorakku) use is included.	Illicit drugs (kiken dorakku).	4
Infectious diseases (63)	Sexually transmitted infections	Male Female	Content directly related to sexually transmitted infections is included.	Sexually transmitted infections, chlamydial infections, syphilis, gonorrhea.	52
	Infections (except sexually transmitted infections)	Male Female	Content directly related to infections is included. Content related to sexually transmitted infections is excluded.	Rubella, influenza.	11
Factors related to clothing (59)	Underwear	Male Female	Content directly related to underwear is included.	Boxer shorts, trunks, men's tights, cooling underwear, constrictive underwear, body-shaping underwear, stockings, warming underwear.	21
	Clothing	Male Female	Content directly related to clothing is included.	Miniskirts, shorts, skinny pants, cooler clothes, warmer clothes, non-constrictive clothes.	15
	Tightening the body	Male Female	Content directly related to tight feeling in the body is included.	Tightness in the crotch, underwear, stockings.	14
	Footwear	Female	Content directly related to footwear is included.	High-heeled pumps, flats.	9

Scrotal heat (17)	Scrotal heat	Male	Content directly related to scrotal heat is included.	Scrotal heat, cooling testicles, testicular cooling sheets, avoiding warming the crotch using a plastic bottle to cool down after a bath.	17
Chemical-related factors (12)	Environmental pollution	Male Female	Content directly related to environmental pollution is included.	Pesticide sprays, dioxin, photochemical smocks, trihalomethanes, acid rain, PM _{2.5} , yellow sand, exhaust fumes, old houses with old water pipes, organic mercury, cadmium, lead, aluminum.	9
	Household chemicals	Male Female	Content directly related to household chemicals is included.	Harmful chemicals, dishwashing detergents, shampoos and cosmetics with unknown ingredients, dental filling material with unknown ingredients, plastic products, old batteries, paint.	3

^a All content related to impact on in vitro fertilization or post-conception period is excluded.

^b The authors translated terms from Japanese to English.