Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eAppendix 1. Search strategies

Note. Searches were conducted from database inception with no date limits

Database: PubMed/MEDLINE Platform: National Library of Medicine Date Searched: 4/17/2024

Date	Date Searched: 4/17/2024				
	Concept:	Search Strategy:			
#1	Exercise	"Exercise"[Mesh] OR "Exercise Movement Techniques"[Mesh] OR "Exercise Therapy"[Mesh] OR "exercise*"[Title/Abstract] OR "Physical Fitness"[Mesh] OR "physical fitness"[Title/Abstract] OR "physical activit*"[Title/Abstract] OR "physical performanc*"[Title/Abstract] OR "Physical Exertion"[Mesh] OR "physical exertion"[Title/Abstract] OR "Physical Endurance"[Mesh] OR "physical exertion"[Title/Abstract] OR "Physical Endurance"[Mesh] OR "physical endurance"[Title/Abstract] OR "Physical endurance "[Title/Abstract] OR "Recreation"[Mesh:NoExp] OR "recreational activit*"[Title/Abstract] OR "Sports"[Mesh] OR "sports"[Title/Abstract] OR "Tai Ji"[Mesh] OR "stretching"[Title/Abstract] OR "Yoga"[Mesh] OR "yoga"[Title/Abstract] OR "Tai Ji"[Mesh] OR "Tai Ji"[Title/Abstract] OR "Tai Chi"[Title/Abstract] OR "muscle strength*"[Title/Abstract] OR "muscle strengths"[Title/Abstract] OR "strength training"[Title/Abstract] OR "muscle strengths"[Title/Abstract] OR "weight training"[Title/Abstract] OR "weight ifting"[Title/Abstract] OR "weight lifting"[Title/Abstract] OR "weight lifting"[Title/Abstract] OR "weight lifting"[Title/Abstract] OR "jogging"[Title/Abstract] OR "gait"[Title/Abstract] OR "jogging"[Title/Abstract] OR "gait"[Title/Abstract] OR "jogging"[Title/Abstract] OR "energy balanc*"[Title/Abstract] OR "energy intake*"[Title/Abstract] OR "energy balanc*"[Title/Abstract] OR "energy intake*"[Title/Abstract] OR "circuit*"[Title/Abstract] OR "high intensity intermittent*"[Title/Abstract] OR "HIIT"[Title/Abstract] OR "sprint interval*"[Title/Abstract] OR "biking*"[Title/Abstract] OR "Sedentary Behavior"[Mesh] OR "sedentary"[Title/Abstract] OR "biking*"[Title/Abstract] OR "Sedentary Behavior"[Mesh] OR "sedentary"[Title/Abstract] OR "physical inactivit*"[Title/Abstract] OR "Dancing"[Mesh] OR "plance Therapy"[Mesh] OR "dance*"[Title/Abstract] OR "plancing"[Title/Abstract] OR "plancing"[Title/Abstract] OR "plancing"[Title/Abstract] OR "plancing"[Title/Abstract] OR "plancing"[Title/Abstract] OR "plancing"[Title/Abstract] OR "plancing"[Tit			
#2	Cancer Survivor	"Cancer Survivors"[Mesh] OR "cancer survivor"[Title/Abstract:~4] OR "cancer survivors"[Title/Abstract:~4] OR "surviving cancer"[Title/Abstract:~2] OR "cancer survivorship*"[Title/Abstract] OR "cancer survivors"[Title/Abstract] OR "cancer diagnos*"[Title/Abstract] OR (("Survivors"[Mesh] OR "Survivorship"[Mesh] OR "surviv*"[Title/Abstract] OR "surviv*"[Title/Abstract] OR "neoplas*"[Title/Abstract] OR "cancer*"[Title/Abstract] OR "cancer*"[Title/Abstract] OR "denocarcinoma*"[Title/Abstract] OR "tumor*"[Title/Abstract] OR "malignan*"[Title/Abstract] OR "melanoma*"[Title/Abstract] OR "sarcoma*"[Title/Abstract] OR "lymphoma*"[Title/Abstract] OR "Leukemia"[Mesh] OR "leukemia*"[Title/Abstract]))			
#3	Communica-tion	"Communication" [Mesh:NoExp] OR "Health Communication" [Mesh] OR "communicat*" [Title/Abstract] OR "Access to Information" [Mesh] OR "Information Dissemination" [Mesh] OR "Information Seeking Behavior" [Mesh] OR "Information Literacy" [Mesh] OR "literacy" [Title/Abstract] OR "information" [Title/Abstract] OR "Communication Barriers" [Mesh] OR "Disinformation" [Mesh] OR "disinformation*" [Title/Abstract] OR "missinform*" [Title/Abstract] OR "Text Messaging" [Mesh] OR "messag*" [Title/Abstract] OR "Persuasive Communication" [Mesh] OR "persuas*" [Title/Abstract] OR "Marketing" [Mesh] OR "marketing*" [Title/Abstract] OR "Advertising" [Mesh] OR "advertis*" [Title/Abstract] OR "Internet" [Mesh:NoExp] OR "Internet*" [Title/Abstract] OR "Communications Media" [Mesh] OR "Social Media" [Mesh] OR "social media*" [Title/Abstract] OR "digital health*" [Title/Abstract] OR "electronic health*" [Title/Abstract] OR "Mass Media" [Mesh] OR "mass media*" [Title/Abstract] OR "television*" [Title/Abstract] OR "radio" [Title/Abstract] OR "movie*" [Title/Abstract] OR "social network*" [Title/Abstract] OR "Twitter*" [Title/Abstract] OR "Blogging" [Mesh] OR			

		"blog*"[Title/Abstract] OR "Facebook*"[Title/Abstract] OR "tiktok*"[Title/Abstract] OR "Youtube*"[Title/Abstract] OR "Instagram*"[Title/Abstract] OR "texting*"[Title/Abstract] OR "Consumer Health Information"[Mesh] OR "consumer health"[Title/Abstract] OR_"face to face"[Title/Abstract] OR "center based"[Title/Abstract] OR "Mobile Applications"[Mesh] OR "mobile app*"[Title/Abstract] OR "portal*"[Title/Abstract] OR "email*"[Title/Abstract] OR "mail*"[Title/Abstract] OR "ehealth*"[Title/Abstract] OR "e-health*"[Title/Abstract] OR "mhealth*"[Title/Abstract] OR "mhealth*"[Title/Abstract] OR "telecommunication*"[Title/Abstract] OR "teleconferenc*"[Title/Abstract] OR "video conferenc*"[Title/Abstract]
#4		#1 AND #2 AND #3
#5	Limits & Filters	((#1 AND #2 AND #3) NOT ("Animals"[Mesh] NOT ("Animals"[Mesh] AND "Humans"[Mesh]))) NOT ("Letter"[Publication Type] OR "Editorial" [Publication Type] OR "Comment"[Publication Type] OR "News"[Publication Type] OR "Retracted Publication"[Publication Type] OR "Retraction of Publication"[Publication Type] OR "retraction of publication"[Title/Abstract] OR "retraction notice"[Title] OR "retracted publication"[Title/Abstract] OR "protocol*"[Title] OR "symposium*"[Title/Abstract] OR "Congress"[Publication Type] OR "Consensus Development Conference"[Publication Type] OR "conference*"[Title] OR "conference abstract*"[Title/Abstract] OR "conference proceeding*"[Title/Abstract] OR "conference paper*"[Title/Abstract] OR "conference review*"[Title/Abstract] OR "proceeding*"[Title]) AND Filters: English

Database: Cochrane Library Platform: Wiley & Sons Date Searched: 4/17/2024

Date :	ate Searched: 4/17/2024				
	Concept:	Search Strategy:			
#1	Exercise	([mh "Exercise"] OR [mh "Exercise Movement Techniques"] OR [mh "Exercise Therapy"] OR exercise* OR [mh "Physical Fitness"] OR "physical fitness" OR (physical NEXT activit*) OR (physical NEXT performanc*) OR [mh "Physical Exertion"] OR "physical exertion" OR [mh "Physical Endurance"] OR (physical NEAR/4 endurance) OR "endurance training" OR (physical NEXT intensit*) OR [mh "Recreation"] OR (recreational NEXT activit*) OR [mh "Sports"] OR sport* OR stretching OR [mh "Yoga"] OR yoga OR [mh "Tai Ji"] OR "Tai Ji" OR "Tai Chi" OR (muscle NEXT strength*) OR (muscle NEAR/4 strengthening) OR "resistance training" OR (strength NEAR/4 training) OR (muscle NEXT strength*) OR "weight training" OR weightlifting OR "weight lifting" OR [mh "Walking"] OR walk* OR gait OR jog OR jogging OR running OR swimming OR aerobic* OR exertion* OR isometric* OR (energy NEXT expenditure*) OR (energy NEXT balanc*) OR (energy NEXT intake*) OR circuit* OR "high intensity interval" OR "high intensity interwittent" OR "high intensity intermittents" OR "HIIT" OR (sprint NEXT interval*) OR (stair NEAR/4 climbing) OR calisthenic* OR cycling* OR biking* OR [mh "Sedentary Behavior"] OR sedentary OR (physical NEXT inactivit*) OR [mh "Dancing"] OR [mh "Dance Therapy"] OR dance* OR dancing OR pilate* OR [mh "Pliability"] OR pliability OR flexibilit* OR [mh "Fitness Trackers"] OR (fitness NEXT tracker*) OR smartwatch* OR (activity NEXT track*)):ti,ab,kw			
#2	Cancer Survivor	([mh "Cancer Survivors"] OR (cancer* NEAR/4 survivor*) OR (surviving NEAR/2 cancer*) OR (cancer NEXT survivorship*) OR (cancer NEXT diagnos*) OR (([mh "Survivors"] OR [mh "Survivorship"] OR surviv*) AND ([mh "Neoplasms"] OR neoplas* OR cancer* OR carcinoma* OR adenocarcinoma* OR tumor* OR tumour* OR malignan* OR melanoma* OR sarcoma* OR lymphoma* OR [mh "Leukemia"] OR leukemia*))):ti,ab,kw			

#3	Communication	([mh ^"Communication"] OR [mh "Health Communication"] OR communicat* OR [mh "Access to Information"] OR [mh "Information Dissemination"] OR [mh "Information Seeking Behavior"] OR [mh "Information Literacy"] OR literacy OR information OR [mh "Communication Barriers"] OR [mh "Disinformation"] OR disinformation* OR missinform* OR [mh "Text Messaging"] OR messag* OR [mh "Persuasive Communication"] OR persuas* OR [mh "Marketing"] OR marketing* OR [mh "Advertising"] OR advertis* OR [mh ^"Internet"] OR Internet* OR [mh "Communications Media"] OR [mh "Social Media"] OR (social NEXT media*) OR (digital NEXT health*) OR (electronic NEXT health*) OR [mh "Mass Media"] OR (mass NEXT media*) OR television* OR radio OR movie* OR (social NEXT network*) OR Twitter* OR [mh "Blogging"] OR blog* OR Facebook* OR tiktok* OR Youtube* OR Instagram* OR texting* OR [mh "Consumer Health Information"] OR "consumer health" OR "face to face" OR "center based" OR [mh "Mobile Applications"] OR (mobile NEXT app*) OR portal* OR email* OR mail* OR ehealth* OR e-health* OR mhealth* OR m-health* OR telecommunication* OR teleconferenc* OR (video NEXT conferenc*)):ti,ab,kw	
#4		#1 AND #2 AND #3 (Word variations have been searched)	
#5	Limits	[mh "Letter"] OR [mh "Editorial"] OR [mh "Comment"] OR [mh "News"] OR [mh "Retracted Publication"] OR [mh "Retraction of Publication"] OR "retraction of publication" OR "retracted publication" OR symposium* OR [mh "Congress"] OR [mh "Consensus Development Conference"] OR (conference abstract*) OR (conference NEXT proceeding*) OR (conference NEXT review*)"	
#6	Limits	(protocol* OR conference* OR "retraction notice" OR proceeding*):ti	
#7		#5 OR #6 (Word variations have been searched)	
#8		#4 NOT #7 (Word variations have been searched)	

Database: Embase Platform: Elsevier Date Searched: 4/17/2024

Concept: Search Strategy: Exercise 'exercise'/exp OR 'kinesiotherapy'/exp OR 'fitness'/exp OR 'endurance'/exp OR 'physical performance'/exp OR 'physical activity, capacity and performance'/de OR 'recreation'/exp OR 'recreation'/de OR 'dancing'/de OR 'dancing'/exp OR 'sport'/exp OR 'yoga'/exp OR 'tai chi'/exp OR 'walking'/exp OR 'sedentary lifestyle'/exp OR 'dance therapy'/exp OR 'pliability'/exp OR 'activity tracker'/exp OR 'exercise*':ab,ti OR 'physical fitness':ab,ti OR 'physical activit*':ab,ti OR 'physical performanc*':ab,ti OR 'physical exertion':ab,ti OR ((physical NEAR/4 endurance*):ab,ti) OR 'endurance training':ab,ti OR 'physical intensit*':ab,ti OR 'recreational activit*':ab,ti OR 'sport*':ab,ti OR 'stretching':ab,ti OR 'yoga':ab,ti OR 'tai ji':ab,ti OR 'tai chi':ab,ti OR ((muscle NEAR/4 strengthening):ab,ti) OR 'resistance #1 training':ab,ti OR ((strength NEAR/4 training):ab,ti) OR 'muscle strength*':ab,ti OR 'weight training':ab,ti OR 'weightlifting':ab,ti OR 'weight lifting':ab,ti OR 'walk*':ab,ti OR 'gait':ab,ti OR 'jog':ab,ti OR 'jogging':ab,ti OR 'running':ab,ti OR 'swimming':ab,ti OR 'aerobic*':ab,ti OR 'exertion*':ab,ti OR 'isometric*':ab,ti OR 'energy expenditure*':ab,ti OR 'energy balanc*':ab,ti OR 'energy intake*':ab,ti OR 'circuit*':ab,ti OR 'high intensity interval*':ab,ti OR 'high intensity intermittent*':ab,ti OR 'hiit':ab,ti OR 'sprint interval*':ab,ti OR ((stair NEAR/4 climbing):ab,ti) OR 'calisthenic*':ab,ti OR 'cycling*':ab,ti OR 'biking*':ab,ti OR 'sedentary':ab,ti OR 'physical inactivit*':ab,ti OR 'dance*':ab,ti OR 'dancing':ab,ti OR 'pilate*':ab,ti OR 'pliability':ab,ti OR 'flexibilit*':ab,ti OR 'fitness tracker*':ab,ti OR 'smartwatch*':ab,ti OR 'activity track*':ab,ti 'cancer survival'/exp OR 'cancer survivor'/exp OR ((cancer NEAR/4 survivor*):ab,ti) OR ((cancer NEAR/4 survivors):ab,ti) OR ((surviving NEAR/2 cancer*):ab,ti) OR 'cancer survivorship*':ab,ti OR 'cancer survivors':ab,ti OR 'cancer diagnos*':ab,ti OR ('surviv*':ab,ti #2 Cancer Survivor AND ('neoplas*':ab,ti OR 'cancer*':ab,ti OR 'carcinoma*':ab,ti OR 'adenocarcinoma*':ab,ti OR 'tumor*':ab,ti OR 'tumour*':ab,ti OR 'malignan*':ab,ti OR 'melanoma*':ab,ti OR 'sarcoma*':ab,ti OR 'lymphoma*':ab,ti OR 'leukemia*':ab,ti))

#3 Communication Com 'interest':ab,ti OR 'information':ab,ti OR 'marketing*:ab,ti OR 'marketing':ab,ti OR		OR 'persuasive communication'/exp OR 'marketing'/exp OR 'advertising'/exp OR 'internet'/de OR 'mass medium'/de OR 'social media'/de OR 'blogging'/de OR 'e-mail'/de OR 'radio'/de OR 'television'/de OR 'telecommunication'/de OR 'videoconferencing'/de OR 'web conferencing'/de OR 'consumer health information'/exp OR 'mobile application'/de OR 'communicat*':ab,ti OR 'literacy':ab,ti OR 'information':ab,ti OR 'disinformation*':ab,ti OR 'missinform*':ab,ti OR 'messag*':ab,ti OR 'persuas*':ab,ti OR 'marketing*':ab,ti OR 'advertis*':ab,ti OR 'internet*':ab,ti OR 'social media*':ab,ti OR 'digital health*':ab,ti OR 'electronic health*':ab,ti OR 'mass media*':ab,ti OR 'television*':ab,ti OR 'radio':ab,ti OR 'movie*':ab,ti OR 'social network*':ab,ti OR 'twitter*':ab,ti OR 'blog*':ab,ti		
#4	#1 AND #2 AND #3			
#5	Limits & Filters	#1 AND #2 AND #3 AND ([article]/lim OR [article in press]/lim) AND [english]/lim NOT ([animals]/lim NOT ([animals]/lim AND [humans]/lim)) NOT ('editorial'/exp OR 'letter'/exp OR 'note'/exp OR 'abstract report'/exp OR 'conference paper'/exp OR 'review'/exp OR 'systematic review'/exp OR 'systematic review (topic)'/exp OR 'meta analysis'/exp OR 'meta analysis (topic)'/exp OR 'case report'/exp OR 'practice guideline'/exp OR 'retraction notice'/exp OR 'retraction of publication':ab,ti OR 'retraction notice':ti OR 'retracted publication':ab,ti OR 'systematic review':ab,ti OR 'meta analysis':ab,ti OR 'meta analyses':ab,ti OR 'review':ti OR 'protocol':ti OR 'protocols':ti OR 'guideline*':ti OR 'case report*':ab,ti OR [conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim OR 'symposium*':ab,ti OR 'conference abstract*':ab,ti OR 'conference review*':ab,ti OR 'conference proceeding*':ab,ti OR 'conference paper*':ab,ti)		

Database: Web of Science (Core Collection)
Platform: Clarivate Analytics
Date Searched: 4/17/2024

Date	ite Searched: 4/17/2024			
	Concept:	Search Strategy:		
#1	Exercise	(TI=("exercise*" OR "physical fitness" OR "physical activit*" OR "physical performanc*" OR "physical exertion" OR (physical NEAR/4 endurance*) OR "endurance training" OR "physical intensit*" OR "recreational activit*" OR "sport*" OR "stretching" OR "yoga" OR "Tai Ji" OR "Tai Chi" OR "muscle strength*" OR (muscle NEAR/4 strengthening) OR "resistance training" OR (strength NEAR/4 training) OR "muscle strength*" OR "weight training" OR "weightlifting" OR "weight lifting" OR "walk*" OR "gait" OR "jog" OR "jogging" OR "running" OR "swimming" OR "aerobic*" OR "exertion*" OR "isometric*" OR "energy expenditure*" OR "energy balanc*" OR "energy intake*" OR "circuit*" OR "high intensity interval*" OR "high intensity interval*" OR "cycling*" OR "biking*" OR "sedentary" OR "physical inactivit*" OR "dance*" OR "dancing" OR "pilate*" OR "biking*" OR "flexibilit*" OR "fitness tracker*" OR "smartwatch*" OR "activity track*")) OR AB=("exercise*" OR "physical fitness" OR "physical activit*" OR "physical performanc*" OR "physical exertion" OR (physical NEAR/4 endurance*) OR "endurance training" OR "physical intensit*" OR "recreational activit*" OR "sport*" OR "stretching" OR "yoga" OR "Tai Ji" OR "Tai Chi" OR "muscle strength*" OR (muscle NEAR/4 strengthening) OR "resistance training" OR (strength NEAR/4 training) OR "muscle NEAR/4 strengthening) OR "resistance training" OR "weight lifting" OR "walk*" OR "gait" OR "jog" OR "jogging" OR "running" OR "swimming" OR "aerobic*" OR "exertion*" OR "gait" OR "jog" OR "jogging" OR "running" OR "swimming" OR "aerobic*" OR "exertion*" OR "isometric*" OR "energy expenditure*" OR "energy balanc*" OR "energy intake*" OR "circuit*" OR "high intensity interval*" OR "high intensity intermittent*" OR "energy intake*" OR "circuit*" OR "high intensity interval*" OR "high intensity intermittent*" OR "biking*" OR "sedentary" OR "physical inactivit*" OR "dance*" OR "dancing" OR "pilate*" OR "biking*" OR "flexibilit*" OR "fitness tracker*" OR "smartwatch*" OR "dancing" OR "pilate*" OR "bilability OR "f		
#2	Cancer Survivor	(TI=("cancer survivorship*" OR "cancer diagnos*" OR (cancer NEAR/4 survivor*) OR (cancer NEAR/4 survivors) OR (surviving NEAR/2 cancer*) OR ("surviv*" AND ("neoplas*" OR "cancer*" OR "carcinoma*" OR "adenocarcinoma*" OR "tumor*" OR "tumour*" OR "malignan*" OR "melanoma*" OR "sarcoma*" OR "lymphoma*" OR "leukemia*")))) OR AB=("cancer")		

		survivorship*" OR "cancer diagnos*" OR (cancer NEAR/4 survivor*) OR (cancer NEAF				
survivors) OR (surviving NEAR/2 cancer*) OR ("surviv*" AND ("neoplas*" OR						
		"carcinoma*" OR "adenocarcinoma*" OR "tumor*" OR "tumour*" OR "malignan*" OR				
		"melanoma*" OR "sarcoma*" OR "lymphoma*" OR "leukemia*")))				
			(TI=("communicat*" OR "literacy" OR "information" OR "disinformation*" OR "missinform*" OR			
			"messag*" OR "persuas*" OR "marketing*" OR "advertis*" OR "Internet*" OR "social media*"			
			OR "digital health*" OR "electronic health*" OR "mass media*" OR "television*" OR "radio" OR			
			"movie*" OR "social network*" OR "Twitter*" OR "blog*" OR "Facebook*" OR "tiktok*" OR			
			"Youtube*" OR "Instagram*" OR "texting*" OR "consumer health" OR "face to face" OR			
			"center based" OR "mobile app*" OR "portal*" OR "email*" OR "mail*" OR "ehealth*" OR "e-			
			health*" OR "mhealth*" OR "m-health*" OR "telecommunication*" OR "teleconferenc*" OR			
	#3	Communication	"video conferenc*")) OR AB=("communicat*" OR "literacy" OR "information" OR			
			"disinformation*" OR "missinform*" OR "messag*" OR "persuas*" OR "marketing*" OR			
			"advertis*" OR "Internet*" OR "social media*" OR "digital health*" OR "electronic health*" OR			
			"mass media*" OR "television*" OR "radio" OR "movie*" OR "social network*" OR "Twitter*"			
			OR "blog*" OR "Facebook*" OR "tiktok*" OR "Youtube*" OR "Instagram*" OR "texting*" OR			
			"consumer health" OR "face to face" OR "center based" OR "mobile app*" OR "portal*" OR			
			"email*" OR "mail*" OR "ehealth*" OR "e-health*" OR "mhealth*" OR "m-health*" OR			
			"telecommunication*" OR "teleconferenc*" OR "video conferenc*")			
	#4		#1 AND #2 AND #3			
		Limits & Filters	#1 AND #2 AND #3 and Mice or Animals (Exclude – MeSH Headings) and Preprint Citation			
	#5		Index (Exclude – Database) and Meeting or Abstract or Book or Editorial Material			
	#5		or Letter or Retracted Publication (Exclude – Document Types)			
			and English (Languages) and Web of Science Core Collection (Database)			

Database: Communication and Mass Media Complete Platform: EBSCO*host*Date Searched: 4/17/2024

Date of	Concept: Search Strategy:		
	Concept:	Search Strategy:	
#S1	Exercise	(DE "MASS media & sports" OR DE "RADIO broadcasting of sports" OR DE "SPORTS journalism" OR DE "TELEVISED sports" OR DE "DANCE" OR DE "PHYSICAL fitness mobile apps") OR TI ("exercise*" OR "physical fitness" OR "physical activit*" OR "physical performanc*" OR "physical exertion" OR (physical N4 endurance*") OR "endurance training" OR "physical intensit*" OR "recreational activit*" OR "sport*" OR "stretching" OR "yoga" OR "Tai Ji" OR "Tai Chi" OR "muscle strength*" OR (muscle N4 strengthening) OR "resistance training" OR (strength N4 training) OR "muscle strength*" OR "weight training" OR "weight lifting" OR "walk*" OR "gait" OR "jog" OR "jogging" OR "running" OR "swimming" OR "aerobic*" OR "exertion*" OR "isometric*" OR "energy expenditure*" OR "energy balanc*" OR "energy intake*" OR "circuit*" OR "high intensity interval*" OR "high intensity interval*" OR "hillT" OR "sprint interval*" OR (stair N4 climbing) OR "calisthenic*" OR "cycling*" OR "biking*" OR "sedentary" OR "physical inactivit*" OR "dance*" OR "dancing" OR "pilate*" OR "pliability" OR "flexibilit*" OR "fitness tracker*" OR "smartwatch*" OR "activity track*") OR AB ("exercise*" OR "physical fitness" OR "physical activit*" OR "physical performanc*" OR "physical exertion" OR (physical N4 endurance*") OR "endurance training" OR "physical intensit*" OR "recreational activit*" OR "sprot*" OR "stretching" OR "yoga" OR "Tai Ji" OR "Tai Chi" OR "muscle strength*" OR (muscle N4 strengthening) OR "resistance training" OR (strength N4 training) OR "muscle strength*" OR "weight training" OR "running" OR "swimming" OR "aerobic*" OR "exertion*" OR "jog" OR "jogging" OR "running" OR "swimming" OR "aerobic*" OR "exertion*" OR "isometric*" OR "energy expenditure*" OR "energy balanc*" OR "energy intake*" OR "circuit*" OR "high intensity interval*" OR "biking*" OR "seedentary" OR "physical inactivit*" OR "dance*" OR "dancing" OR "cycling*" OR "biking*	
#S2	Cancer Survivor	"cancer survivorship*" OR "cancer diagnos*" OR (cancer N4 surviv*) OR ("surviv*" AND ("neoplas*" OR "cancer*" OR "carcinoma*" OR "adenocarcinoma*" OR "tumor*" OR "tumour*" OR "malignan*" OR "melanoma*" OR "sarcoma*" OR "lymphoma*" OR "leukemia*"))	

#S3	Communication	(DE "COMMUNICATION") OR (DE "MEDICAL communication") OR (DE "ACCESS to information") OR (DE "INFORMATION dissemination") OR (DE "MASS media")) OR (DE "DIGITAL literacy")) OR (DE "SOCIAL media")) OR (DE "COMMUNICATION barriers")) OR (DE "DISINFORMATION")) OR (DE "TEXT messages")) OR (DE "PERSUASION (Rhetoric)")) OR (DE "MARKETING")) OR (DE "ADVERTISING")) OR (DE "INTERNET")) OR (DE "MASS media")) OR (DE "SOCIAL media")) OR (DE "BLOGS")) OR (DE "MOBILE apps")) OR TI ("communicat" OR "literacy" OR "information" OR "disinformation" OR "missinform*" OR "messag*" OR "persuas*" OR "marketing*" OR "advertis*" OR "Internet*" OR "social media*" OR "digital health*" OR "electronic health*" OR "mass media*" OR "television*" OR "radio" OR "movie*" OR "social network*" OR "Twitter*" OR "blog*" OR "Facebook*" OR "tikktok*" OR "Youtube*" OR "Instagram*" OR "texting*" OR "consumer health" OR "face to face" OR "center based" OR "mobile app*" OR "portal*" OR "email*" OR "mail*" OR "ehealth*" OR "e-health*" OR "mhealth*" OR "heasag*" OR "persuas*" OR "information" OR "disinformation*" OR "missinform*" OR "messag*" OR "persuas*" OR "marketing*" OR "davertis*" OR "Internet*" OR "social media*" OR "digital health*" OR "electronic health*" OR "mass media*" OR "television*" OR "digital health*" OR "electronic health*" OR "mass media*" OR "television*" OR "radio" OR "movie*" OR "social network*" OR "Twitter*" OR "blog*" OR "Facebook*" OR "tiktok*" OR "Youtube*" OR "Instagram*" OR "texting*" OR "consumer health" OR "face to face" OR "center based" OR "mobile app*" OR "portal*" OR "email*" OR "mail*" OR "ehealth*" OR "e-health*" OR "mhealth*" OR "mhealth*" OR "mhealth*" OR "mhealth*" OR "e-health*" OR "mhealth*" OR "mhealth*" OR "mhealth*" OR "leleconferenc*" OR "video conferenc*" OR "misleconferenc*" OR "video conferenc*" OR "video conferenc*
#4		#S1 AND #S2 AND #S3
#5	Limits & Filters	((#S1 AND #S2 AND #S3) Expanders - Apply equivalent subjects Narrow by Language: - English Search modes - Boolean/Phrase

Database: PsycInfo Platform: American Psychological Association Date Searched: 4/17/2024

Concept:	Search Strategy:
Exercise AND Cancer Survivor AND Communication	((IndexTermsFilt: ("Exercise") OR IndexTermsFilt: ("Exercise Therapy") OR IndexTermsFilt: ("Sports") OR IndexTermsFilt: ("Recreation") OR IndexTermsFilt: ("Woga") OR IndexTermsFilt: ("Sedentary Behavior") OR IndexTermsFilt: ("Dance Therapy")) OR title: ("exercise*" OR "physical fitness" OR "physical activit*" OR "physical performanc*" OR "physical exertion" OR (physical NEAR/4 endurance*") OR "endurance training " OR " physical intensit* " OR " recreational activit* " OR " sport* " OR " stretching " OR " yoga " OR " Tai Ji " OR " Tai Chi " OR " muscle strength* " OR (muscle NEAR/4 strengthening) OR " resistance training " OR strength NEAR/4 training) OR " muscle strength* " OR " weight Iraining " OR " weightlifting " OR " weight lifting " OR " walk* " OR " gait " OR " jogg ing " OR " running " OR " swimming " OR " aerobic* " OR " exertion* " OR " isometric* " OR " energy expenditure* " OR " energy balanc* " OR " energy intake* " OR " circuit* " OR " high intensity interval* " OR " high intensity interval* " OR " dance* " OR " cycling* " OR " biking* " OR " sedentary " OR " physical inactivit* " OR " dance* " OR " activity track* ") OR Abstract; (" exercise* " OR " physical fitness " OR " physical activit* " OR " physical performanc* " OR " physical exertion " OR (physical NEAR/4 endurance*") OR " endurance training" OR "physical intensit*" OR " recreational activit*" OR " sport* " OR " stretching" OR "yoga" OR "Tai Ji" OR "Tai Chi" OR "muscle strength*" OR "sport* " OR "stretching" OR "yoga" OR "Tai Ji" OR "Tai Chi" OR "muscle strength* " OR " logging" OR "running" OR "weight lifting" OR "walk*" OR " acerobic*" OR " weight training" OR "sedentary" OR "high intensity interval* " OR " logging" OR "running" OR "serereational activit* " OR " logging" OR "running" OR "serereational activit* " OR " logging" OR "running" OR "serereational activit* " OR " logging" OR "running" OR "serereational activit* " OR " logging" OR "running" OR "serereational activit* " OR " logging" OR "running" OR "serereational activit* " OR

AND IndexTermsFilt: ("Survivors")) OR (title: (cancer NEAR/4 survivor*)) OR (title: (cancer NEAR/4 survivors)) OR (title: (surviving NEAR/2 cancer*)) OR title: ("cancer survivorship*") OR title: ("cancer survivors") OR title: ("cancer diagnos*") OR (abstract: (cancer NEAR/4 survivor*)) OR (abstract: (cancer NEAR/4 survivors)) OR (abstract: (surviving NEAR/2 cancer*)) OR abstract: ("cancer survivorship*") OR abstract: ("cancer survivors") OR abstract: ("cancer diagnos*")) AND ((IndexTermsFilt: ("Communication") OR IndexTermsFilt: ("Information Dissemination") OR IndexTermsFilt: ("Information Seeking") OR IndexTermsFilt: ("Information Literacy") OR IndexTermsFilt: ("Text Messaging") OR IndexTermsFilt: ("Marketing") OR IndexTermsFilt: ("Advertising") OR IndexTermsFilt: ("Digital Interventions") OR IndexTermsFilt: ("Online Experiments") OR IndexTermsFilt: ("Communications Media") OR IndexTermsFilt: ("Social Media") OR IndexTermsFilt: ("Mass Media") OR IndexTermsFilt: ("Blog") OR IndexTermsFilt: ("Mobile Applications")) OR (title: ("communicat*") OR title: ("literacy") OR title: ("information") OR title: ("disinformation*") OR title: ("missinform*") OR title: ("messag*") OR title: ("persuas*") OR title: ("marketing*") OR title: ("advertis*") OR title: ("Internet*") OR title: ("social media*") OR title: ("digital health*") OR title: ("electronic health*") OR title: ("mass media*") OR title: ("television*") OR title: ("radio") OR title: ("movie*") OR title: ("social network*") OR title: ("Twitter*") OR title: ("blog*") OR title: ("Facebook*") OR title: ("tiktok*") OR title: ("Youtube*") OR title: ("Instagram*") OR title: ("texting*") OR title: ("consumer health") OR title: ("face to face") OR title: ("center based") OR title: ("mobile app*") OR title: ("portal*") OR title: ("email*") OR title: ("mail*") OR title: ("ehealth*") OR title: ("e-health*") OR title: ("mhealth*") OR title: ("mhealth*") OR title: ("telecommunication*") OR title: ("teleconferenc*") OR title: ("video conferenc*")) OR (abstract: ("communicat*") OR abstract: ("literacy") OR abstract: ("information") OR abstract: ("disinformation*") OR abstract: ("missinform*") OR abstract: ("messag*") OR abstract: ("persuas*") OR abstract: ("marketing*") OR abstract: ("advertis*") OR abstract: ("Internet*") OR abstract: ("social media*") OR abstract: ("digital health*") OR abstract: ("electronic health*") OR abstract: ("mass media*") OR abstract: ("television*") OR abstract: ("radio") OR abstract: ("movie*") OR abstract: ("social network*") OR abstract: ("Twitter*") OR abstract: ("blog*") OR abstract: ("Facebook*") OR abstract: ("tiktok*") OR abstract: ("Youtube*") OR abstract: ("Instagram*") OR abstract: ("texting*") OR abstract: ("consumer health") OR abstract: ("face to face") OR abstract: ("center based") OR abstract: ("mobile app*") OR abstract: ("portal*") OR abstract: ("email*") OR abstract: ("mail*") OR abstract: ("ehealth*") OR abstract: ("e-health*") OR abstract: ("mhealth*") OR abstract: ("mhealth*") OR abstract: ("telecommunication*") OR abstract: ("teleconferenc*") OR abstract: ("video conferenc*"))) AND Language: English AND Population Group: Human NOT Population Group: Animal NOT Document Type: Abstract Collection OR Chapter OR Column/Opinion OR Comment/Reply OR Dissertation OR Editorial OR Letter OR Retraction OR Review-Book AND Peer-Reviewed Journals only

eMethods.

Protocol and Registration

This review was conducted in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist.² The methodological framework proposed by Arksey and O'Malley, Levac and colleagues, and the Joanna Briggs Institute was followed.^{3,4} This review was registered in Open Science Framework (doi: 10.17605/OSF.IO/YXV6W).⁵

Eligibility Criteria

The focus of this review was studies describing the development and/or delivery of exercise communication for female breast cancer survivors (i.e., women diagnosed with breast cancer regardless of treatment status) in any geographical location or setting. It includes articles examining one-on-one communication, which were excluded from a previous review of physical activity messaging that screened articles at the title level and focused on the overall population (vs. breast cancer survivors only).⁶ Articles that focused on wider communication techniques, such as public health messages, or only implied communication of exercise information were excluded. The search was limited to full-text articles written in English. There were no inclusion/exclusion criteria regarding sample size or the date of publication. Inclusion and exclusion criteria are detailed in eTable 1.

Information Sources and Search Strategy

The comprehensive search strategy of six databases (i.e., PubMed, PsycInfo, Embase, Scopus, Web of Science, and Cochrane Database of Systematic Reviews) included keywords, synonyms, Medical Subject Headings (MeSH), and Emtree terms related to physical activity, cancer survivorship, and counseling, messaging, or communication (Appendix 1). A librarian from the National Institutes of Health Library (GB) pilot tested 50 articles, and the search strategy was refined based on initial results. We conducted a comprehensive search of the literature from the inception of each database until April 2024. Reference lists of included articles were searched for relevant studies.

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Selection of Sources of Evidence

Covidence (Veritas Health Innovation, Melbourne, Australia) was used to complete the data screening process.⁷ Titles and abstracts for all articles retrieved were screened for eligibility by two authors (OW, KW) based on the inclusion/exclusion criteria. Using the same criteria, articles were then reviewed at full text. Disagreements were resolved via discussion.

Data Charting Process and Items

Information was extracted on the following: study, survivor; and intervention characteristics (including duration, theoretical framework, and other relevant components); exercise communication content, format and delivery; and, intervention outcomes/effects. Information extracted on exercise communication content, format, and delivery were informed by the PAMC.⁸ Details on extracted information are reported in eTable 2. Study authors were contacted via email for additional information and clarification if information was missing or unclear. Findings were synthesized and articles from single studies were combined to report findings at the study level.⁹

Synthesis of Results

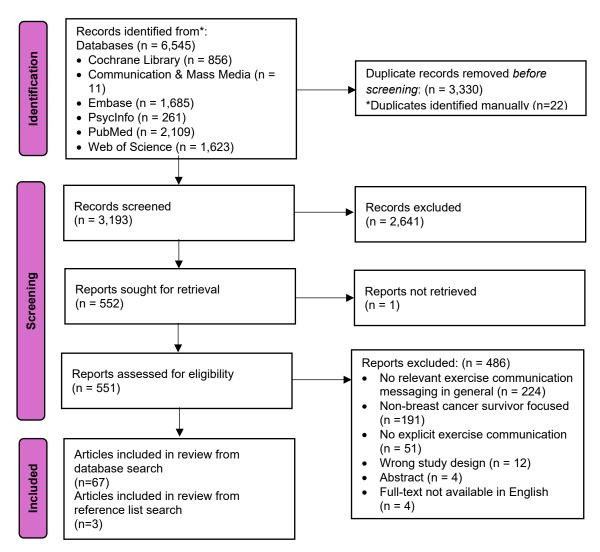
Extracted information was summarized using a narrative approach, as outlined by Cochrane. ¹⁰ Additional information is available in Tables 1-5 and eTables 3-11. Heterogeneity in intervention design (e.g., dietary advice or fitness trackers in addition to exercise information) and evaluation (e.g., intervention length and outcomes) limited our ability to conduct a quantitative synthesis of intervention effects across all studies. Therefore, a narrative approach was used to summarize information. Since narrative approaches to synthesizing results based on statistical significance are limited, ¹⁰ data were interpreted based on an evaluation of the magnitude, direction, and precision of the effect estimates rather than binary significance testing. ¹¹ This allowed us to evaluate the clinical relevance of the results where we categorized changes in outcomes as favorable, no change, or unfavorable. We stratified results into studies conducted within the U.S. and outside of the U.S. to facilitate further comparisons for study design and exercise communication content, format, and delivery.

eTable 1. Inclusion and Exclusion Criteria for the Scoping Review

Criteria	Inclusion		Exclusion
Population •	Female breast cancer survivors	•	Non-human subjects Non-females Non-breast cancer survivors
Concept	Report details on the development and/or delivery of exercise communication	•	Do not report details on the development and/or delivery of exercise communication
Context •	All countries, all contexts	•	Not applicable
• Study type	Primary empirical research studies (e.g., randomized controlled trials, interventions and cross-sectional studies) available in full text	•	Reviews (e.g., meta-analysis, systematic reviews, scoping reviews, narrative reviews) Editorials (e.g., perspectives, commentaries) Abstracts, Conference proceedings or posters Dissertations/theses Research protocols Case reports Patents Articles for full text cannot be obtained
Language •	English	•	Not available in English

eTable 2. Information Extracted for This Scoping Review

Domain	Information extracted	
Study characteristics	Study name and location (country, region)Study design	
	Year of publication	
Survivor	Demographic (age, race and ethnicity, weight status, menopausal status)	
characteristics	 Clinical (stage at diagnosis, treatment (e.g., chemotherapy,), time since diagnosis) 	
	 Contextual (education, income, employment, marital status) 	
Intervention	Intervention and follow-up length	
characteristics	Theoretical framework	
	 Additional exercise intervention component(s) (e.g. exercise trackers,)Non- exercise communication component(s) (e.g. diet) 	
Exercise communication	 What exercise to do, such as frequency, intensity, duration of aerobic and muscle-strengthening exercise 	
content	Why, or why not, to exercise (i.e., exercise benefits or risks)	
Contone	Communication individualization (i.e., tailoring)	
	Source that content was based on (e.g., specific exercise guidelines)	
Exercise communication	 Written vs. verbal, including specific method (e.g., handouts vs., face-to-face (including setting)) 	
format and	Who delivered information (e.g. oncologists vs. cancer exercise specialists)	
delivery		
Intervention outcomes/effects	The effect of the communication intervention on behavioral (e.g. exercise), psychological (e.g., intention to exercise), and health (e.g., weight, quality of life) outcomes	



eFigure 1. Article Identification Process Using PRISMA Research Framework¹

^{*}No automation tool was used to remove additional records

eAppendix 3. Study and Breast Cancer Survivor Characteristics

Most of the 39 studies were conducted in the U.S. (n=21, 53.8%). Other countries included Australia (n=3, 7.7%), Belgium (n=1, 2.6%), Canada (n=4, 10.3%), China (n=1, 2.6%), England (n=1, 2.6%), France (n=2, 5.1%), Spain (n=1, 2.6%), South Korea (n=3, 7.7%), and Sweden (n=1, 2.6%). The first article was published in 2007, 65 of the 70 articles were published from 2009 onwards, and 25 were published within the past five years. Most studies reported the results of a randomized controlled trial (RCT) or intervention (n=30, 76.9%); five (12.8%) reported on intervention development, 12-19 three (7.7%) were purely descriptive, 20-23 and one reviewed electronic health records (2.6%). 24

Breast cancer survivor characteristics are summarized in eAppendix 3. The average age and body mass index of survivors were 55.5 years and 31.4 kg/m², respectively. The studies predominantly included Non-Hispanic White and post-menopausal women (see eAppendix 3 demographic characteristic details). The average time since diagnosis was 2.9 years, most were diagnosed with stage I (Md: 32.2%) through II (Md: 37.5%) cancer, nearly all had received some form of surgery (Md: 98.8%), and most had received chemotherapy (Md: 66.7%), hormone therapy (Md: 63.2%), or radiotherapy (Md: 75.0%) (see eTable 4 for clinical characteristics details). Most survivors had an education equivalent to a college graduate or greater (Md: 50.7%), were employed (Md: 53.8%), and were married, in de facto relationship, or living with a partner (Md: 74.4%). Income was reported by eight studies, though results are not comparable across studies. Only five studies reported on urbanicity/rurality. Two reported that most survivors resided in rural areas, ²⁵⁻²⁸ another reported that 29.7% were rural residents, ²⁹ and the vast majority did not reside in a rural area in the remaining two. ^{23,30-38} Details on participant contextual characteristics are reported in eTable 5.

eTable 3. Participant Characteristics

Characteristic	Studies	Md (Range; SE)
	reporting (n)	
	Demographic	
Age	34	55.5 years (41.0-67.0 years; 1.00)
Race/ethnicity		
Asian	9	21.8% (0.6-100%; 0.14)
Black	14	16.7% (1.7-100%; 0.10)
Hispanic	9	7.0% (0.9-100%; 0.09)
Indigenous	2	0.6% (0.6-0.6%; 0.05)
Pasifika	1	0.3
White	18	85.5% (47.4-98.7%; 0.08)
Other*	15	5.0% (1.2-23.1%; 0.05)
Weight status	20	31.4kg/m ² (23.9-36.1kg/m ² ; 0.77)
Menopausal status	14	90 10/ /24 4 1000/ · 0 10)
Postmenopausal	Clinical	80.1% (24.4-100%; 0.10)
Ctorro	Cillical	
Stage	27	0.0% (0-25.8%; 0.00)
0	27 27	32.2% (0-62.8%; 0.00)
ii	27	37.5% (0-59.0%; 0.10)
iii	26	13.5% (0-43.3%; 0.07)
IV	26	0.0% (0-100%; 0.00)
Treatment		0.076 (0.10076)
Chemotherapy	23	66.7% (29.0-100%; 0.10)
Hormone therapy	19	63.2% (16.7-100%; 0.11)
Radiotherapy	19	75.0% (53.0-100%; 0.10)
Surgery (general)	12	98.8% (72.4-100%; 0.03)
Surgery (mastectomy)	7	48.0% (28.3-81.0%; 0.19)
Targeted therapy	1	15.4%
Immunotherapy	1	20.6%
Time since diagnosis	14	3.1 years (0.4-8.4 years; 0.66)
	Contextual	
Education		
<high school<="" td=""><td>14</td><td>11.0% (0-41.0%; 0.08)</td></high>	14	11.0% (0-41.0%; 0.08)
≥High school- <college< td=""><td>16</td><td>28.1% (11.0-73.3%; 0.11)</td></college<>	16	28.1% (11.0-73.3%; 0.11)
graduate		
≥College graduate	22	50.7% (25.5-77.0%; 0.11)
Employment		
Some form of employment	13	53.8% (20.5-76.0%; 0.14)
Marital status		
Married/partnered	18	74.4% (18.8-91.0%; 0.10)

Notes. *The definition of the 'other' race and ethnicity group differed across studies. Md = Median, SE = Standard Error

eTable 4. Participant Demographic Characteristics

Country - Study name or setting	Age (years)			Race/ethnicity		_ Weight status (M	Menopausal
	• • • •	Asian	Black	White	Other*	(Range or SD)	status
Australia - NSW (EMPOWER) ^{39,40}	53.8 (9.6)	21.8%	=	47.4%	23.1%	33.7kg/m ² (27.6-39.9)	-
Australia - QLD (Living Well after Breast Cancer) ⁴¹⁻⁴³	55.9 (9.1)	-	-	98.7%	1.3%	31.4kg/m ² (4.9)	57% Post
Australia - National (Move More for Life Trial) ²⁶⁻²⁸	55.5 (35-78)	-	-	-	-	27.2kg/m ² (5.2)	85.5% Post
Australia, Germany, Netherlands, Spain, Sweden (EFFECT) ¹⁷	≥18			N/A – Me	ethodological paper, no data collected		
Belgium (Step <i>By</i> Step) ⁴⁴	41 (8)	-	-	-	-	-	-
Canada - AB (ACTION) ⁴⁵⁻⁴⁷	58 (30-90)	-	-	-	-	27.7kg/m ² (5.6)	62.0% Post
Canada - ON (LISA Trial)48,49	61.6 (6.7)	1.8%	2.3%	94.2%	0.6% Native American; 1.2% Other	31.4kg/m ² (5.0)	100% Post
Canada - National (MatchQEP) ¹⁶	≥18				ethodological paper, no data collected		
Canada - AB (PROACTIVE) ²⁹	52.8 (9.8)	-	-	95%	5%	66.2kg (10.0)	45% Post
China (WMFHAB) ⁵⁰	47.2 (6.0)	Chinese (predominantly)	-	-	-	50.0% ~24-28kg/m² 50.0% ≥28kg/m²	-
England (PHAB) ^{51,52}	52.4 (10.3)	-	3%	97%	-	68.7kg (10.5)	81% Post
France (Falzon et al. 2015) ⁵³	57.1 (12.1)	-			-	-	-
France (Martin et al. 2021) ²³	46.4 (8.4)	-			-	-	-
South Korea (Kong et al. 2021) ⁵⁴	47.1 (7.9)	South Korean (predominantly)	0%	0%	0%	23.9kg/m ² (3.3)	-
South Korea (Smart After Care)55,56	50.4 (9.5)	South Korean (predominantly	0%	0%	0%	-	-
South Korea (WSEDI) ⁵⁷	41.5 (6.3)	South Korean (predominantly)	0%	0%	0%	66.7% >18.5-<23 kg/m ²	-
Spain (Travier and colleagues) ^{58,59}	55.1 (8.3)	-	-	-	-	30.5kg/m ² (3.9)	62.2% Post
Sweden (Bergqist et al. 2021) ²²	41-78	Not measured	-	-	-	Not measured	-
U.S TX (ALIVE) ⁶⁰	52.2 (8.6)	0%	83%	0%	11% Hispanic 6% Mixed	30.8kg/m ² (6.0)	-
U.S AL, IL (BEAT Cancer) ^{61,62}	54.9 (9.3)	0%	11.3%	83.8%	2.7% Hispanic 4.9% Other	-	84.6% Post
U.S NC, TX (DAMES) ^{63,64}	61.3 (7.4)	1%	18%	74%	7% Hispanic	31.0kg/m ² (2.6)	100% Post
U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷	56.1 (9.4)	1.5%	10.4%	83.2%	0.6% American Indian; 0.3% Hawaiian/Pacific Islander; 3.8% Mixed/Other	31.6kg/m² (4.7)	85.8% Post
U.S National (Fit2Thrive) ¹²⁻¹⁵	52.5 (9.9)	-	5.9%	87.0%	6.7% Hispanic 7.1% Other	28.0kg/m ² (6.3)	-
U.S CA (I Can!) ⁶⁸	≥40			N/A – Me	ethodological paper, no data collected		
U.S CT (LEAN) ^{69,70}	59.0 (7.5)	-	-	91%	9%	33.1kg/m ² (6.6)	82% Post
U.S CA (Memory and Motion) ⁷¹⁻⁷³	58.2 (11.4)	-	-	83.7%	18.6% Hispanic; 16.3% non-White	26.7kg/m ² (6.2)	=
U.S NY (Mi Vida Saludable) ^{18,19}	56.8 (9.9)	-	-	-	100% Hispanic	≥18.5-<25.0kg/m² (=17.2%; ≥25.0-<30. 0kg/m²=44.8%; ≥30.0kg/m² =38.0%	-
U.S TX (MOCHA) ⁷⁴	57 (9)	-	-	-		32.7kg/m² (5.7)	-
U.S GA, NC (Reach) ³⁰⁻³⁸	57.3 (10.8)	0.6%	16.7%	81.4%	1.2% Other; 1.9% Hispanic	-	-
U.S NJ (Spark People) ⁷⁵	61.5 (8.8)	-	100%	-	-	36.7kg/m ² (8.8)	-
U.S NC (STRENGTH trial) ⁷⁶	41.8 (5.6)	-	12%	85%	3%	25.8kg/m² (6.1)	100% Pre
U.S DC (The Stepping STONE Study) ⁷⁷	54.7 (9.8)	-	100%	-	-	35.2kg/m ² (4.8)	-
U.S NC (WELL Body Study) ⁷⁸	52.4 (8.3)	-	100%	=	-	33.3kg/m ² (5.7)	79.2% Post
U.S NC (WWE) ^{20,21}	67 (46-87)	-	-	86%	14%	29kg/m² (19-41)	-
U.S NC, TX (Nyrop et al. 2020) ²⁴	56.5 (25-86)	-	37%	58%	5%	36kg/m² (30-59)	-
U.S KS (Fazzino et al. 2017 ²⁵	58.6 (8.0)	-	-	97%	3%	33.7kg/m² (4.0)	-
U.S MA (Ligibel et al. 2010) ⁷⁹	47.0 (7.3)	-	-	-	-		24.4% Post
U.S CT (Park et al. 2016) ⁸⁰	56.7 (10.8)	-	1.7%	95.7%	0.9% Hispanic; 1.7% Other	-	-
U.S MA(Quintiliani et al. 2016) ⁸¹	58.6 (6.1)	-	30%	50%	10% Hispanic; 10% Other		-
O.S. THE I CANTENIAN OF ALL ZOTO	00.0 (0.1)		0070	0070	1070 Thopatho, 1070 Other		

Notes. With the exception of one study that used electronic health records,²⁴ race and ethnicity data were self-reported by survivors; *The definition of the 'other' race and ethnicity group differed across studies; M = Mean; SD = Standard Deviation; ALIVE = A Lifestyle Intervention Via Email; DAMES = Daughters and Mothers Against Breast Cancer; ENERGY = Exercise and Nutrition to Enhance Recovery and Good Health for You; I Can! = Improving Cognition After Cancer; MOCHA = Methodist Hospital Cancer Health Application; PHAB = A Home-based Physical Activity Intervention in Breast Cancer Survivors; PROACTIVE = Promoting Physical Activity during Chemotherapy; STRENGTH = Survivor Training for Enhancing Total Health; WSEDI = Web-based self-management exercise and diet intervention; WWE = Walking With Ease; WMFHAB = Weight Management for Health and Beauty; NA = Not applicable; kg/m² = kilograms per meter squared; Post = Postmenopausal; - = Not reported

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eTable 5. Participant Clinical Characteristics

Australia - NSW (EMPOWER) ^{38,40} 0% 100% 0% 62.3% 66.7% 88.5% 100% 11 Australia - QLD (Living Well after Breast Cancer) ^{51,43} 0% 51% 38% 11% 0% 61% 59% 80% 38% (M) Australia - National (Move More for Life Trial) ^{54,560} 2.7% 22.4% 35.2% 21.0% 1.4% 67.6% 55.7% 68.5% 91.8% Australia, Ceramy, Netherlands, Spain, Sweden (EFFECT) ¹⁷ 0% 0% 0% 0% 0% 0% 100% 0	other diagnosi	Oth										
Australia - NSW (EMPOWER) - 10%	years (M	Otti	Surg	RT	НТ	СТ	IV	III		ı	0	Country (Study name or authors)
Australia - CLD (Living Well after Breast Cancor)****1.3	5.4% TT		100%	88.5%	66.7%	62.3%	0%		100%		0%	Australia - NSW (EMPOWER) ^{39,40}
Australia, Germany, Netherlands, Spain, Sweden 0% 0% 0% 0% 100%	- 0.9 (0.4		38% (M)	80%	59%	61%	0%	11%	38%	51%	0%	Australia - QLD (Living Well after Breast Cancer)41-43
Belgium (StepByStep)**		-				67.6%	1.4%				2.7%	
Canada - AB (ACTION)***-1" 0% 51.5% 42.7% 5.8% 0% 53.9% 66.8% 69.2% 100% 28.3% 28.0%		-	-	-	-							(EFFECT) ¹⁷
Canada - AB (ACTION)****		-	-	-	-	-			-			Belgium (StepByStep) ⁴⁴
Canada - ON (LISA Trial)**** Canada - Machinal (Mach CEP)** Canada - AB (PROACTIVE)*** O% 16% 58% 26% 0% 100% (ACT)	- 3.3 (0.9	-	100%	69.2%	66.8%	53.9%	0%	5.8%	42.7%	51.5%	0%	Canada - AB (ACTION) ⁴⁵⁻⁴⁷
Canada - AB (PROACTIVE)*** 3.3% 16.7% 40.0% 13.3% 0% 100% (ACT)	- 0.8	-		81.3%	100%	56.1%	0%	21.6%	56.1%	22.2%	0%	· · · · · · · · · · · · · · · · · · ·
China (WMFHAB) P					cal paper, no data collected							
England (PHAB) ^{51,52} 09% 100% 0% 52.5%	= =	-			=							
France (Falzon et al. 2015)³³ 0% 100% 0% 0% 0		-	100%	100%	73.3%		0%	13.3%	40.0%	16.7%	3.3% 0	
France (Martin et al. 2021) ²³ South Korea (Kong et al. 2021) ⁵⁴ 0% 18.4% 40.8% 40.8% 0% 66.4% 63.2% 100% 72.4% 50.00	- 0.8 (0.5		-		-	52.5%			100%		0%	
South Korea (Kong et al. 2021) ⁵⁴ 0% 18.4% 40.8% 40.8% 0% 66.4% 66.2% 10.0% 72.4%			-	-	=	-	0%		100%		0%	France (Falzon et al. 2015) ⁵³
South Korea (Smart After Care) 55.56 6.2% 35.1% 32.2% 13.6% 64.3% - 68.4% 98.8%		-		88.9%	88.9%	100%			-			France (Martin et al. 2021) ²³
South Korea (WSEDI) ⁵⁷ 0% 6.7% 40.0% 43.3% 10.0% 86.7% - 90.0% 33.3% (M) - Spain (Travier and colleagues) ^{58,59} 0% 45.9% 43.2% 10.8% 0% - <td< td=""><td></td><td>-</td><td>72.4%</td><td>100%</td><td>63.2%</td><td></td><td></td><td></td><td>40.8%</td><td>18.4%</td><td>0%</td><td>South Korea (Kong et al. 2021)⁵⁴</td></td<>		-	72.4%	100%	63.2%				40.8%	18.4%	0%	South Korea (Kong et al. 2021) ⁵⁴
South Kofea (WSEDI)*** Spain (Travier and colleagues)**5.59* 0% 45.9% 45.9% 10.8% 0%		-	98.8%	68.4%	-	64.3%	6%	13.	32.2%	35.1%	6.2%	South Korea (Smart After Care) ^{55,56}
Sweden (Bergqist et al. 2021) ²²	- <2	-		90.0%	-	86.7%	10.0%	43.3%	40.0%	6.7%	0%	,
U.S TX (ALIVE) ⁶⁰ 20% 54% 26% 75% 44% 69% 94% U.S AL, IL (BEAT Cancer) ^{61,62} 11.8% 42.7% 33.6% 11.8% 0% 53.6% 49.1% 71.8% - U.S NC, TX (DAMES) ^{63,64} 18% 43% 31% 4% 0% Completed primary treatment U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ 0% 32.2% 48.4% 19.4% 0% 77% 54.6% - - U.S National (Fit2Thrive) ¹²⁻¹⁵ 0% 39.0% 42.0% 16.0% 0% 23 months since primary treatment U.S CA (I Can!) ⁶⁸ 0% 100% 0% - - - - U.S CT (LEAN) ^{68,70} 15% 51% 24% 7% 0% 29% 78% 53% 100% U.S CA (Memory and Motion) ⁷¹⁻⁷³ 0% 62.8% 27.9% 9.3% 0% 53.5% 72.1% ? 100% U.S NY (Mi Vida Saludable) ^{18,19} 24.6% 30.5% 18.6%		-	-	-	-	=	0%	10.8%	43.2%	45.9%	0%	
U.S AL, IL (BEAT Cancer) ^{61,62} 11.8% 42.7% 33.6% 11.8% 0% 53.6% 49.1% 71.8% - U.S NC, TX (DAMES) ^{63,64} 18% 43% 31% 4% 0% Completed primary treatment U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ 0% 32.2% 48.4% 19.4% 0% 77% 54.6% - - U.S National (Fit2Thrive) ¹²⁻¹⁵ 0% 39.0% 42.0% 16.0% 0% -		-	-		100% (ACT)							
U.S NC, TX (DAMES) ^{63,64} 18% 43% 31% 4% 0% Completed primary treatment U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ 0% 32.2% 48.4% 19.4% 0% 77% 54.6% - - U.S National (Fit2Thrive) ¹²⁻¹⁵ 0% 39.0% 42.0% 16.0% 0% -	- 8.4 (6.5	-	94%	69%	44%	75%					20%	U.S TX (ALIVE) ⁶⁰
U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ 0% 32.2% 48.4% 19.4% 0% 77% 54.6% - - U.S National (Fit2Thrive) ¹²⁻¹⁵ 0% 39.0% 42.0% 16.0% 0% ≥3 months since primary treatment U.S CA (I Can!) ⁶⁸ 0% 100% - - - - - U.S CT (LEAN) ^{69,70} 15% 51% 24% 7% 0% 29% 78% 53% 100% U.S CA (Memory and Motion) ⁷¹⁻⁷³ 0% 62.8% 27.9% 9.3% 0% 53.5% 72.1% ? 100% U.S NY (Mi Vida Saludable) ^{18,19} 24.6% 30.5% 18.6% 10.8% 0% 61.7% 47.3% 63.5% 98.8% U.S TX (MOCHA) ⁷⁴ 0% 0% 0% Not in active treatment U.S NJ (Spark People) ⁷⁵ 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 20 U.S NC (STRENGTH trial) ⁷⁶ 0% 33.3% 59% <td< td=""><td>- 4.8 (4.</td><td>-</td><td>=</td><td>71.8%</td><td>49.1%</td><td>53.6%</td><td></td><td>11.8%</td><td>33.6%</td><td>42.7%</td><td>11.8%</td><td>U.S AL, IL (BEAT Cancer)^{61,62}</td></td<>	- 4.8 (4.	-	=	71.8%	49.1%	53.6%		11.8%	33.6%	42.7%	11.8%	U.S AL, IL (BEAT Cancer) ^{61,62}
U.S National (Fit2Thrive)¹²²¹⁵ 0% 39.0% 42.0% 16.0% 0% ≥3 months since primary treatment U.S CA (I Can!)⁶в² 0% 100% 0% - - - - - U.S CT (LEAN)⁶в?¹⁰ 15% 51% 24% 7% 0% 29% 78% 53% 100% U.S CA (Memory and Motion)²¹¹⁻³ 0% 62.8% 27.9% 9.3% 0% 53.5% 72.1% ? 100% U.S NY (Mi Vida Saludable)¹¹8.¹9 24.6% 30.5% 18.6% 10.8% 0% 61.7% 47.3% 63.5% 98.8% U.S TX (MOCHA)²⁴ 0% 16.1% 46.6% 27.3% 9.9% 0% Not in active treatment U.S NJ (Spark People)²⁵ 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 2 U.S NC (STRENGTH trial)²⁶ 0% 33% 59% 8% 0% 100% (ACT) 50% - - - U.S DC (The Stepping S	2.0 (1.			ment	Completed primary treat		0%	4%	31%	43%	18%	U.S NC, TX (DAMES) ^{63,64}
U.S CA (I Can!) ⁶⁸ 0% 100% 0% -	- ≤5	-	-	-	54.6%	77%	0%	19.4%	48.4%	32.2%	0%	U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷
U.S CT (LEAN) ^{69,70} 15% 51% 24% 7% 0% 29% 78% 53% 100% U.S CA (Memory and Motion) ⁷¹⁻⁷³ 0% 62.8% 27.9% 9.3% 0% 53.5% 72.1% ? 100% U.S NY (Mi Vida Saludable) ^{18,19} 24.6% 30.5% 18.6% 10.8% 0% 61.7% 47.3% 63.5% 98.8% U.S TX (MOCHA) ⁷⁴ 0% 100% 0% Not in active treatment — U.S GA, NC (Reach) ³⁰⁻³⁸ 16.1% 46.6% 27.3% 9.9% 0% 77.1% 57.1% 68.6% 97.1% 2 U.S NJ (Spark People) ⁷⁵ 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 2 U.S NC (STRENGTH trial) ⁷⁶ 0% 33% 59% 8% 0% 100% (ACT) 50% - - U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 32.3% - - - 0.5-5 years post-active treatment	-			eatment	≥3 months since primary tre		0%	16.0%	42.0%	39.0%	0%	
U.S CA (Memory and Motion) ⁷¹⁻⁷³ 0% 62.8% 27.9% 9.3% 0% 53.5% 72.1% ? 100% U.S NY (Mi Vida Saludable) ^{18,19} 24.6% 30.5% 18.6% 10.8% 0% 61.7% 47.3% 63.5% 98.8% U.S TX (MOCHA) ⁷⁴ 0% 100% 0% Not in active treatment 10.5		-	-		=	-	0%		100%		0%	U.S CA (I Can!) ⁶⁸
U.S NY (Mi Vida Saludable) 18.19 24.6% 30.5% 18.6% 10.8% 0% 61.7% 47.3% 63.5% 98.8% U.S TX (MOCHA) 74 0% 100% 0% Not in active treatment Not in active treatment U.S GA, NC (Reach) 30-38 16.1% 46.6% 27.3% 9.9% 0% - - U.S NJ (Spark People) 75 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 21 U.S NC (STRENGTH trial) 76 0% 33% 59% 8% 0% 100% (ACT) 50% - - U.S DC (The Stepping STONE Study) 77 25.8% 32.3% - - 0.5-5 years post-active treatment	- 2.9 (2.	-	100%	53%	78%	29%	0%	7%	24%	51%	15%	U.S CT (LEAN) ^{69,70}
U.S TX (MOCHA) ⁷⁴ 0% 100% 0% Not in active treatment U.S GA, NC (Reach) ³⁰⁻³⁸ 16.1% 46.6% 27.3% 9.9% 0% - U.S NJ (Spark People) ⁷⁵ 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 2 U.S NC (STRENGTH trial) ⁷⁶ 0% 33% 59% 8% 0% 100% (ACT) 50% - - U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 32.3% - - 0.5-5 years post-active treatment	- <5	-	100%	?	72.1%	53.5%	0%	9.3%	27.9%	62.8%	0%	U.S CA (Memory and Motion) ⁷¹⁻⁷³
U.S GA, NC (Reach)³0-38 16.1% 46.6% 27.3% 9.9% 0% - U.S NJ (Spark People) ⁷⁵ 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 21.0% U.S NC (STRENGTH trial) ⁷⁶ 0% 33% 59% 8% 0% 100% (ACT) 50% - - U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 32.3% - - 0.5-5 years post-active treatment	- 6.0 (4.9	-	98.8%	63.5%	47.3%	61.7%	0%	10.8%	18.6%	30.5%	24.6%	U.S NY (Mi Vida Saludable) ^{18,19}
U.S NJ (Spark People) ⁷⁵ 41.9% 35.5% 22.6% 0% 77.1% 57.1% 68.6% 97.1% 20.5% 20.5% 20.5% 20.5% 0% 100% (ACT) 50% - - - U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 32.3% - - 0.5-5 years post-active treatment - -	-			nt	Not in active treatmen		0%		100%		0%	U.S TX (MOCHA) ⁷⁴
U.S NC (STRENGTH trial) ⁷⁶ U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 33.9% 22.6% 0% 177.1% 57.1% 66.6% 97.1% 100% (ACT) 50% 0.5-5 years post-active treatment	2.6 (1.4				-		0%	9.9%	27.3%	46.6%	16.1%	U.S GA, NC (Reach) ³⁰⁻³⁸
U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 32.3% - 0.5-5 years post-active treatment	0.6% IT 6.6 (4.5		97.1%	68.6%	57.1%	77.1%	0%	22.6%	35.5%	9%	41.	* * * * * * * * * * * * * * * * * * * *
U.S DC (The Stepping STONE Study) ⁷⁷ 25.8% 32.3% - 0.5-5 years post-active treatment			-		50%	100% (ACT)	0%	8%	59%		0%	U.S NC (STRENGTH trial) ⁷⁶
11.5 NC (MELL Body Study) ⁷⁸ 00/ 25.0 50.00/ 25.00/ 25.00/ 20.00	-				0.5-5 years post-active trea			_		32.3%	25.8%	
	3.3% 95.8%	83.3	16.7%	79.2%	0%	25.0%	50.0%		25.0		0%	U.S NC (WELL Body Study) ⁷⁸
U.S NC (WWE) ^{20,21} 0% 100% 0% 67% 100% (ACT) 75% 81% (M)			81% (M)		100% (ACT)		0%		100%		0%	
U.S NC, TX (Nyrop et al. 2020) ²⁴ 0% 27% 46% 25% 0% 65% 80% 76% 48% (M)			48% (M)	76%	80%	65%	0%	25%				
U.S KS (Fazzino et al. 2017 ²⁵ 9% 41% 37% 12% 0% -	~5				-		0%	12%	37%	41%	9%	
U.S MA (Ligibel et al. 2010) ⁷⁹ 0% 26.8% 36.6% 34.2% 0% 97.6% - 53.7% ^{56.1%} (M)	- 0.4 (0.2	-		53.7%		97.6%	0%	34.2%	36.6%	26.8%	0%	
U.S CT (Park et al. 2016) ⁸⁰ 0% 100% 0% Completed primary treatment in <3 months	<1.5		s	<3 months	ompleted primary treatment in	C	0%	0%	0%	10	0%	U.S CT (Park et al. 2016)80
U.S MA(Quintiliani et al. 2016) ⁸¹ - 6 months post treatment	-			ent	6 months post treatme				-			U.S MA(Quintiliani et al. 2016)81

Notes. M = Mean; SD = Standard Deviation; ALIVE = A Lifestyle Intervention Via Email; DAMES = Daughters and Mothers Against Breast Cancer; ENERGY = Exercise and Nutrition to Enhance Recovery and Good Health for You; I Can! = Improving Cognition After Cancer; MOCHA = Methodist Hospital Cancer Health Application; PHAB = A Home-based Physical Activity Intervention in Breast Cancer Survivors; PROACTIVE = Promoting Physical Activity during Chemotherapy; STRENGTH = Survivor Training for Enhancing Total Health; WSEDI = Web-based self-management exercise and diet intervention; WWE = Walking With Ease; WMFHAB = Weight Management for Health and Beauty; WELL Body = Weighing Every day for Love of Life and Body; ACT = Active treatment; CT = Chemotherapy; HT = Hormone therapy; RT = Radiotherapy; Surg = Surgery; TT = Targeted therapy; IT = Immunotherapy; M = Mastectomy; - = Not reported.

eTable 6. Participant Contextual Characteristics

Australia - NSW (EMPOWER) ^{38,40} 34.3% 28.9% 36.8% - 65.3% FT/PT Australia - QLD (Living Well after Breast Cancer) ^{11,1-3} 41% 20% 39% 41.8% 28ZK AUD 63.3% FT/PT/Casual Australia - National (Mowe More for Life Trial) ²⁸⁻²⁸ 46.6% 38.8% >52K AUD 20.5% FT Australia - Germany, Netherlands, Spain, Sweden (EFFECT) ⁷⁷	Marital status	Employment	Annual income	Education		Study name or cetting	
Australia - OLD (Living Well after Breast Cancer) 14-3	Maritai Status	Employment	Annual Income	≥College	≥HS- <college< th=""><th><hs< th=""><th>Country - Study name or setting</th></hs<></th></college<>	<hs< th=""><th>Country - Study name or setting</th></hs<>	Country - Study name or setting
Australia - National (Move More for Life Trial)**** Australia - National (Move More for Life Trial)**** Belgium (StepByStep)**	64.9% Married/DeFacto		-		28.9%	34.3%	Australia - NSW (EMPOWER)39,40
Australia, Germany, Netherlands, Spain, Sweden - - - - - - - - -	68.4% Married/DeFacto			39%	20%	41%	
EFFECT) ⁷ Seligium (StepByStep) ⁴⁴	77.2% Married/DeFacto	20.5% FT	38.8% >52K AUD	46.6%	-	-	Australia - National (Move More for Life Trial) ²⁶⁻²⁸
Selgium (StepByStep)**	-	-	-	-	-	-	
Canada - AB (ACTION) Set Property							
Canada - NA (LISA Trial)*8-9	-	-	-	-	-	-	elgium (Step <i>By</i> Step) ⁴⁴
anada - National (MatchQEP)¹6 anada - AB (PROACTIVE)²9 22% 77% - 143% FT/PT hina (WMFHAB)³0 0% 73.3% 26.7% - 1- ngland (PHAB)§¹18 - 1- ngland (PHAB)§¹18 - 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1	72.1% Married	30.2% FT	26.3% >80K CAD	29.7%	-	-	anada - AB (ACTION) ⁴⁵⁻⁴⁷
anada - AB (PROACTIVE)*** 22% 77% - 43% FT/PT 1 hina (WMFHAB)*** 0% 73.3% 26.7% - - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage - 1 sage -	71.9% Married	-	-	-	-	-	anada - ON (LISA Trial) ^{48,49}
hina (WMFHAB) ⁵⁰ 0% 73.3% 26.7%		lata collected	A – Methodological paper, no o	N			anada - National (MatchQEP) ¹⁶
ngland (PHAB) ^{61,52} 38% - 53% FT/PT rance (Falzon et al. 2015) ⁵³ 1.9% 40.4% 57.7% rance (Martin et al. 2021) ²³ outh Korea (Kong et al. 2021) ²⁴ 54.6% outh Korea (Kong et al. 2021) ⁵⁴ 54.6% outh Korea (Smart After Care) ^{55,56} 76.7% outh Korea (WSEDI) ⁵⁷ 76.7% outh Korea (WSEDI) ⁵⁷ 76.7% outh Korea (WSEDI) ⁵⁸ 76.7% pain (Travier and colleagues) ^{58,59} 6.7 weden (Berggist et al. 2021) ²² Not measured s TX (ALIVE) ⁶⁰ 76% S AL, IL (BEAT Cancer) ^{61,62} 15.7 years (2.7) 71.6% ≥50K USD 69.1% S NL, TX (DAMES) ^{63,64} 1.5% 64.2% 34.3% 69% ≥40K USD S AL, CA, CO, MO (ENERGY) ^{85,67} 15.6 years (2.5) S CA (I Canl) ⁶⁸ S CA (I Canl) ^{68,70} 0% 34% 66% S CC (LEAN) ^{69,70} 0% 34% 66% S CA (I Canl) ^{68,70} 32.7% 67.5% S CA (Homory and Motion) ^{71,73} 32.7% 67.5% S S NY (Mi Vida Saludable) ^{16,19} 27.5% 47.0% 25.5% 11.9% ≥60K USD 22.2% FT S S NY (Mi Vida Saludable) ^{16,19} 27.5% 47.0% 25.5% 11.9% ≥60K USD 22.2% FT S NJ (Spark People) ⁷⁵ 48.6% 51.4% - 35.3% S NJ (Spark People) ⁷⁵ 48.6% 51.4% - 35.3% S NJ (Spark People) ⁷⁵ 48.6% 51.4% S CD (The Stepping STONE Study) ⁷⁷ S CN (WELL Body Study) ⁷⁸ 25.0% 75.0% 50.0% ≥60K USD 53.8% FT	83.7% Married	43% FT/PT	-		22%		anada - AB (PROACTIVE) ²⁹
1.9% 40.4% 57.7%	-	-	-		73.3%	0%	
rance (Martin et al. 2021) ²³	91% Married/DF	53% FT/PT	-				
outh Korea (Kong et al. 2021) ⁵⁴ 54.6% 54.0%	69.2% Married/DF		-	57.7%	40.4%	1.9%	rance (Falzon et al. 2015) ⁵³
outh Korea (Smart After Care) ^{55,56} ? ?	66.7% Married	-	-	-	-	-	rance (Martin et al. 2021) ²³
outh Korea (WSEDI) ⁵⁷ 76.7% 76.7%	80.3% Married	-	-	54.6%	-	-	outh Korea (Kong et al. 2021) ⁵⁴
pain (Travier and colleagues) 58,59		-	-	?	-	-	outh Korea (Smart After Care)55,56
Not measured Sergist et al. 2021) ²² Not measured - - - - - - - - -	90% married	-	-	76.7%	-	-	outh Korea (WSEDI) ⁵⁷
Not measured Sergist et al. 2021) ²² Not measured - - - -	81.0% Married/relationshi	-	-	-	-	-	pain (Travier and colleagues) ^{58,59}
S AL, IL (BEAT Cancer) ^{61,62} 15.7 years (2.7) 71.6% ≥50K USD 69.1% S NC, TX (DAMES) ^{63,64} 1.5% 64.2% 34.3% 69% ≥40K USD - S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ 15.6 years (2.5) - - S National (Fit2Thrive) ¹²⁻¹⁵ - - - - S CA (I Can!) ⁶⁸ - - - - - S CT (LEAN) ^{69,70} 0% 34% 66% - - - S CA (Memory and Motion) ⁷¹⁻⁷³ 32.7% 67.5% - - - S NY (Mi Vida Saludable) ^{18,19} 27.5% 47.0% 25.5% 11.9% ≥60K USD 22.2% FT S TX (MOCHA) ⁷⁴ - - - - - - S NO (Reach) ³⁰⁻³⁸ 5.0% 27.3% 67.7% - 69.5% FT/PT S NJ (Spark People) ⁷⁵ 48.6% 51.4% - - - S NC (STRENGTH trial) ⁷⁶ - - - - - S NC (WELL Body Study) ⁷⁸ 25.0% 75.0% 50.0% ≥60K USD 53.8% FT	-	-	-		Not measured		weden (Bergqist et al. 2021) ²²
.S NC, TX (DAMES) ^{63,64} .S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ .S National (Fit2Thrive) ¹²⁻¹⁵ .S National (Fit2Thrive) ¹²⁻¹⁵ .S CA (I Can!) ⁶⁸ .S CT (LEAN) ^{69,70} .S CA (I Can!) ⁶⁸ .S CA (Memory and Motion) ⁷¹⁻⁷³ .S CA (Memory and Motion) ⁷¹⁻⁷³ .S NY (Mi Vida Saludable) ^{18,19} .S NY (Mi Vida Saludable) ^{18,19} .S TX (MOCHA) ⁷⁴ .S TX (MOCHA) ⁷⁴ .S GA, NC (Reach) ³⁰⁻³⁸ .S NJ (Spark People) ⁷⁵ .S NJ (Spark People) ⁷⁵ .S NJ (Spark People) ⁷⁵ .S NJ (STRENGTH trial) ⁷⁶ .S DC (The Stepping STONE Study) ⁷⁷ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸	-	76%	-	65%	-	-	
.S NC, TX (DAMES) ^{63,64} .S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ .S National (Fit2Thrive) ¹²⁻¹⁵ .S National (Fit2Thrive) ¹²⁻¹⁵ .S CA (I Can!) ⁶⁸ .S CT (LEAN) ^{69,70} .S CA (I Can!) ⁶⁸ .S CA (Memory and Motion) ⁷¹⁻⁷³ .S CA (Memory and Motion) ⁷¹⁻⁷³ .S NY (Mi Vida Saludable) ^{18,19} .S NY (Spark People) ⁷⁵ .S NY (STRENGTH trial) ⁷⁶ .S NC (STRENGTH trial) ⁷⁶ .S NC (WELL Body Study) ⁷⁷ .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC (STRENGTH USD) .S NC (WELL Body Study) ⁷⁸ .S NC	68.2% Married/cohabitatir	69.1%	71.6% ≥50K USD		15.7 years (2.7)		.S AL, IL (BEAT Cancer) ^{61,62}
.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷ .S National (Fit2Thrive) ¹²⁻¹⁵ .S National (Fit2Thrive) ¹²⁻¹⁵ .S CA (I Can!) ⁶⁸ .C C C C C C.	-	-	69% ≥40K USD	34.3%	64.2%	1.5%	.S NC, TX (DAMES) ^{63,64}
S CA (I Can!) ⁶⁸ - -	-	-	-		15.6 years (2.5)		.S AL, CA, CO, MO (ENERGY)65-67
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	-	-	-	-	-	-	.S National (Fit2Thrive) ¹²⁻¹⁵
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	-	-	-	-	-	-	
S CA (Memory and Motion) ⁷¹⁻⁷³ 32.7% 67.5% - - S NY (Mi Vida Saludable) ^{18,19} 27.5% 47.0% 25.5% 11.9% ≥60K USD 22.2% FT S TX (MOCHA) ⁷⁴ - - - - - - S GA, NC (Reach) ³⁰⁻³⁸ 5.0% 27.3% 67.7% - 69.5% FT/PT S NJ (Spark People) ⁷⁵ 48.6% 51.4% - 35.3% S NC (STRENGTH trial) ⁷⁶ - - - - S DC (The Stepping STONE Study) ⁷⁷ - 51.6% - - S NC (WELL Body Study) ⁷⁸ 25.0% 75.0% 50.0% ≥60K USD 53.8% FT	74.4% Married/cohabitatir	-	-	66%	34%	0%	
S NY (Mi Vida Saludable) 18,19 27.5% 47.0% 25.5% 11.9% ≥60K USD 22.2% FT S TX (MOCHA) 74	-	-	-				.S CA (Memory and Motion) ⁷¹⁻⁷³
S TX (MOCHA) ⁷⁴	-	22.2% FT	11.9% ≥60K USD	25.5%	47.0%	27.5%	.S NY (Mi Vida Saludable) ^{18,19}
.S NJ (Spark People) ⁷⁵ 48.6% 51.4% - 35.3% .S NC (STRENGTH trial) ⁷⁶	-	-		-	-		.S TX (MOCHA) ⁷⁴
.S NJ (Spark People) ⁷⁵ 48.6% 51.4% - 35.3% .S NC (STRENGTH trial) ⁷⁶	-	69.5% FT/PT	-	67.7%	27.3%	5.0%	.S GA, NC (Reach) ³⁰⁻³⁸
.S NC (STRENGTH trial) ⁷⁶ .S DC (The Stepping STONE Study) ⁷⁷ - 51.6% .S NC (WELL Body Study) ⁷⁸ 25.0% 75.0% 50.0% ≥60K USD 53.8% FT	18.8% Married		-	51.4%			
.S DC (The Stepping STONE Study) ⁷⁷ - 51.6%S NC (WELL Body Study) ⁷⁸ 25.0% 75.0% 50.0% ≥60K USD 53.8% FT	-	-	-	-	-	-	
.S NC (WELL Body Study) ⁷⁸ 25.0% 75.0% 50.0% ≥60K USD 53.8% FT	-	-	-	, 0	51.69	-	
	53.8% Married	53.8% FT	50.0% ≥60K USD				
	_			-			
.S NC, TX (Nyrop et al. 2020) ²⁴ Not measured	-	-	-				
S KS (Fazzino et al. 2017 ²⁵ 0% 61% 39%	76% Married/cohabitating	-	-	39%		0%	
S MA (Ligibel et al. 2010) ⁷⁹ ?	-		-		-	-	
.S CT (Park et al. 2016) ⁸⁰ 0.9% 38.3% 60.9% 72.7% ≥60K USD -	78.8% Married/relationshi		72.7% ≥60K USD	· · · · · · · · · · · · · · · · · · ·	38.3%	0.9%	
J.S MA(Quintiliani et al. 2016) ⁸¹ 50% 50% - 66.7%	-					0.070	

Notes. ALIVE = A Lifestyle Intervention Via Email; DAMES = Daughters and Mothers Against Breast Cancer; ENERGY = Exercise and Nutrition to Enhance Recovery and Good Health for You; I Can! = Improving Cognition After Cancer; MOCHA = Methodist Hospital Cancer Health Application; PHAB = A Home-based Physical Activity Intervention in Breast Cancer Survivors; PROACTIVE = Promoting Physical Activity during Chemotherapy; STRENGTH = Survivor Training for Enhancing Total Health; WSEDI = Web-based self-management exercise and diet intervention; WWE = Walking With Ease; WMFHAB = Weight Management for Health and Beauty; WELL Body = Weighing Every day for Love of Life and Body; HS = High school; NA = Not applicable; AUD = Australian dollars; CAD = Canadian dollars; USD = United States dollars; FT = Full-time; PT = Part-ti

eTable 7. Intervention Characteristics and Nonexercise Communication Components

Country - Study name or setting	Intervention / follow- up length	Theoretical framework	Non-exercise communication component(s)	Additional exercise intervention component(s)
Australia - NSW (EMPOWER) ^{39,40}	6 month intervention	SCT	Diet; medication adherence and side effects; social or emotional wellbeing; and, general breast cancer information	-
Australia - QLD (Living Well after Breast Cancer) ⁴¹⁻⁴³	12 month intervention; 6 month follow-up	SCT	Diet	Pedometer, scale, measuring tape, and monitoring materials
Australia - National (Move More for Life Trial) ²⁶⁻²⁸	12 week intervention	SCT	-	-
Australia, Germany, Netherlands, Spain, Sweden (EFFECT) ¹⁷	9 month intervention	-	-	Multi-modal supervised exercise program that covered balance, aerobic, and muscle-strengthening exercise. Encouragement to participate in unsupervised exercise
Belgium (Step <i>By</i> Step) ⁴⁴	NA – Intervention development	TPB, TTM	-	Pedometer
Canada - AB (ACTION) ⁴⁵⁻⁴⁷	One off intervention; 4 and 12 week follow-ups	ТРВ	-	Pedometer
Canada - ON (LISA Trial) ^{48,49}	24 month intervention	SCT	Diet; breast cancer; therapy compliance; osteoporosis; and, other general medical issues	Goals; Two year subscription to Canadian Health Magazine
Canada - National (MatchQEP) ¹⁶	10 week intervention; 12 week follow-up	-	-	Fitbit. MatchQEP survivors received tailored exercise programs, Match survivors received generic exercise programs
Canada - AB (PROACTIVE) ²⁹	6 month intervention	TPB	-	Pedometer and step logbook
China (WMFHAB)50	12 week intervention	Self-determination theory	Diet; weight management guidance	-
England (PHAB) ^{51,52}	6 month intervention	-	Basic lifestyle information	-
France (Falzon et al. 2015) ⁵³	One off	TPB	-	-
France (Martin et al. 2021) ²³	NA - Descriptive study		-	Pedometer
South Korea (Kong et al. 2021) ⁵⁴	5 week intervention	TTM	-	Fitbit and Smartphone app
South Korea (Smart After Care) ^{55,56}	12 week intervention	-	-	Pedometer and Smartphone app
South Korea (WSEDI)57	12 week intervention	TTM	Diet	-
Spain (Travier and colleagues) ^{58,59}	12 week intervention	-	Diet; weight	Pedometer
Sweden (Bergqist et al. 2021) ²²	NA - Descriptive study	-	Drug compliance; self-care activities; smoking; treatment; and, symptoms	-
U.S TX (ALIVE) ⁶⁰	3 month intervention	SCT, TTM, goal-setting theory, social marketing,	-	-
U.S AL, IL (BEAT Cancer) ^{61,62}	3 month intervention; 3 month follow-up	SCT	Diet	-
U.S NC, TX (DAMES)63,64	12 month intervention	SCT	Diet	-
U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷	4 year intervention	SCT	Diet; weight	Pedometer
U.S National (Fit2Thrive) ¹²⁻¹⁵	12 week intervention; 12 week follow-up	SCT	-	Fitbit and Smartphone app
U.S CA (I Can!) ⁶⁸	6 month intervention; 6 month follow-up	SCT	-	Fitbit
U.S CT (LEAN) ^{69,70}	6 month intervention	SCT	-	Fitbit and journal
U.S CA (Memory and Motion) ⁷¹⁻⁷³	3 month intervention	SCT, TTM	-	Fitbit
U.S NY (Mi Vida Saludable) ^{18,19}	12 month intervention; 6 month follow-up	SCT	Diet	-
U.S TX (MOCHA) ⁷⁴	4 week intervention	-	Diet; Wellness	Fitbit
U.S GA, NC (Reach) ³⁰⁻³⁸	9 month intervention; 3 month follow-up	SCT, TTM	-	-

Country - Study name or setting	Intervention / follow- up length	Theoretical framework	Non-exercise communication component(s)	Additional exercise intervention component(s)
U.S NJ (Spark People) ⁷⁵	12 month intervention; 6 month follow-up	SCT	Diet; weight	Fitbit
U.S NC (STRENGTH trial) ⁷⁶	6 month intervention	SCT	Diet	Videotape, exercise equipment
U.S DC (The Stepping STONE Study) ⁷⁷	12 week intervention	ТРВ	Diet	Pedometer and notebooks to track their behaviors
U.S NC (WELL Body Study) ⁷⁸	6 month intervention	Self-regulation theory	Diet; weight	Exercise tracker and scale
U.S NC (WWE) ^{20,21}	NA - Descriptive study	SCT	Aromatase inhibitor side effects	-
U.S NC, TX (Nyrop et al. 2020) ²⁴	NA - EHR review	-	Nutrition, weight	-
U.S KS (Fazzino et al. 2017 ²⁵	6 month intervention; 12 month follow-up	-	Diet	Pedometer and self-monitoring charts
U.S MA (Ligibel et al. 2010) ⁷⁹	12 week intervention	-	-	Pedometer, exercise protocol, exercise log, and heart rate monitor
U.S CT (Park et al. 2016)80	4 month intervention; 3 month follow-up	-	Diet	-
U.S MA(Quintiliani et al. 2016) ⁸¹	10 week intervention	-	Diet; sleep; and, fatigue	Pedometer and scale

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eTable 8. Content of Exercise Information Communicated to Breast Cancer Survivors

Country (Study name or authors)	Aerobic exercise	Muscle-strengthening exercise	Source	Benefits/safety	Individualization
Australia - NSW (EMPOWER) ^{39,40}	10,000 steps/day	?	WHO (not specified)	Mental wellbeing	?
Australia - QLD (Living Well after Breast Cancer) ⁴¹⁻⁴³	To ≥210min/wk, 10,000 steps/day; ≥30min/day MPA	2-3session/wk	ACSM 2009 ⁸² ; WCRF/AICR 2018 ⁸³	?	?
Australia - National (Move More for Life Trial) ²⁶⁻²⁸	30min, on most days/wk	1-3 days/wk	Australian guidelines ⁸⁴	Recurrence, mortality, fitness, mental wellbeing ⁸⁵	Yes
Australia, Germany, Netherlands, Spain, Sweden (EFFECT) ¹⁷	30min, 5days/wk; 150min/wk	?	Roundtable* 2019 ⁸⁶	?	Yes
Belgium (StepByStep)44	10,000 steps/day	?	?	?	Yes
Canada - AB (ACTION) ⁴⁵⁻	30min, 5 days/wk, 10,000 steps	?	?	Recurrence, mortality, fitness, mental wellbeing ⁸⁵	?
Canada - ON (LISA Trial) ^{48,49}	150-200min/wk MPA	Mentioned, not specified	?	?	Yes
Canada - National (MatchQEP) ¹⁶	≥150min/wk MVPA	?	ACSM 2010 ⁸⁷ ; Roundtable* 2019 ⁸⁶ ; Cancer Care Ontario 2017 ⁸⁸	Benefits communicated (no details reported); Stress, sleep covered	?
Canada - AB (PROACTIVE) ²⁹	≥150min/wk	?	?	Recurrence, mortality, fitness, mental wellbeing ⁸⁵	?
China (WMFHAB) ⁵⁰	Progression up to 4–5 day/wk MPA, 40–60 min/day	Progression up to 3 days/wk, 2 sets of 12–15 reps, 2-min rest between sets	Roundtable* 2019 ⁸⁶ ; ACSM 2009 ⁸²	Safety - why survivors can exercise	Yes
England (PHAB) ^{51,52}	30min MPA, 5-7days/wk	?	UK National Guidelines89	Benefits communicated (no details reported)	?
France (Falzon et al. 2015) ⁵³	Regular moderate intensity exercise	Mentioned, not specified	?	Fatigue, social ties, recurrence, rebuild muscle, self- image, help with daily tasks Safety - No risk of lymphedema if supervised	?
France (Martin et al. 2021) ²³	6000 steps/day	?	?	Pain, tiredness, fatigue, fun	?
South Korea (Kong et al. 2021) ⁵⁴	150min/wk, 10,000 steps/day (up to 300min/wk, or 12,000 steps/day)	?	ACSM 201190	?	Yes
South Korea (Smart After Care) ^{55,56}	150min/wk OR 90min/wk depending on physical function	Twice/wk, 4-8 major muscle groups, 2 sets of 10 repetitions	?	?	Yes
South Korea (WSEDI)57	150min/wk, self-adjust intensity duration and frequency	?	ACS 2006 ⁹¹	?	?
Spain (Travier and colleagues) ^{58,59}	10,000 steps	?	?	?	?
Sweden (Bergqist et al. 2021) ²²	150min/wk	?	WHO (unspecified)	Benefits communicated (no details reported)	?
U.S TX (ALIVE) ⁶⁰	150min/wk (MVPA)	?	Federal recommendations (unspecified)	?	?
U.S AL, IL (BEAT Cancer) ^{61,62}	150min/wk	?	ACS (unspecified)	Benefits communicated (no details reported)	?
U.S NC, TX (DAMES) ^{63,64}	150min/wk	Twice/wk strength training	ACS 2006 ⁹¹	?	Yes
U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷	INTERVENTION: Start with 10min/day, incremental increases, building towards 60min MPA/day / 10,000 steps/day CONTROL: 30min/day	2-3 sessions/wk	Institute of Medicine (unspecified)	?	Yes
U.S National (Fit2Thrive) ¹²⁻¹⁵	Gradual increase to 150min/wk, plus step goals	?	?	Physical and psychological well-being, and chronic disease risk	Yes

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Country (Study name or authors)	Aerobic exercise	Muscle-strengthening exercise	Source	Benefits/safety	Individualization
U.S CA (I Can!) ⁶⁸	Goal to meet 150min/week of MVPA discussed	?	ACSM 2010 ⁸⁷	?	Yes
U.S CT (LEAN) ^{69,70}	150min/wk MPA, 10,000 steps/day	?	ACS 2012 ⁹²	Weight loss	?
U.S CA (Memory and Motion) ⁷¹⁻⁷³	150min/wk	?	ACSM 2010 ⁸⁷	?	Yes
U.S NY (Mi Vida Saludable) ^{18,19}	30min, 5 days/wk; 150min/wk	?	ACS 2012 ⁹² ; AIRC/WCRF 2020 ⁹³	Happiness	?
U.S TX (MOCHA) ⁷⁴	Personal messages regarding activity goals (see app images)	?	?	?	?
U.S GA, NC (Reach) ³⁰⁻³⁸	150min/wk	?	National guidelines	?	Yes
U.S NJ (Spark People) ⁷⁵	30min/day; 10,000 steps/day	?	ACC/AHA/TOS 201494	?	?
U.S NC (STRENGTH trial) ⁷⁶	≥30min/day, ≥ 3times/week	Every other day	Abernathy et al. 1994 ⁹⁵	?	?
U.S DC (The Stepping STONE Study) ⁷⁷	Gradual progression to 10,000 steps/day	?	ACS 2006 ⁹¹	Risk-related information (details unclear)	Yes
U.S NC (WELL Body Study) ⁷⁸	Gradual increase to 150-225min/wk (30-45min/day on 5days/wk)	?	Ballard-Barbash et al. 2009 ⁹⁶	Benefits outlined by cancer exercise guidelines (reduce your risk of recurrence, function better physically and emotionally, Improve quality of life, Reduce anxiety and depression Improve mood and boost self-esteem); Safety - information about staying safe when exercise unsupervised	Yes
U.S NC (WWE) ^{20,21}	150min/wk MPA, 30min, 5 days/wk	?	?	Joint pain reduction	?
U.S NC, TX (Nyrop et al. 2020) ²⁴	Progress towards ≥30min/day, 5 days/wk	?	?	Weight management	Yes
U.S KS (Fazzino et al. 2017 ²⁵	225 min/wk of MVPA (gradually increase towards)	?	ACSM 200982	?	?
U.S MA (Ligibel et al. 2010) ⁷⁹	150min/wk, 10,000 steps/day	?	?	?	?
U.S CT (Park et al. 2016) ⁸⁰	150min/wk	?	?	Benefits communicated (no details reported)	?
U.S MA(Quintiliani et al. 2016) ⁸¹	10,000 steps/day	?	?	?	Yes

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eTable 9. Why Exercise Information Was Communicated

Country (Study name or authors)	Why
Australia - NSW (EMPOWER) ^{39,40}	Increase exercise, manage treatment/medication side effects (e.g. fatigue,
	muscle soreness, etc.), improve mental wellbeing, connect with friends
Australia - QLD (Living Well after	Weight loss
Breast Cancer)41-43	<u></u>
Australia - National (Move More for	Increase exercise
Life Trial) ²⁶⁻²⁸	
Australia, Germany, Netherlands,	-
Spain, Sweden (EFFECT) ¹⁷ Belgium (Step <i>By</i> Step) ⁴⁴	
Canada - AB (ACTION) ⁴⁵⁻⁴⁷	Quality of life
Canada - ON (LISA Trial) ^{48,49}	Weight loss
Canada - National (MatchQEP) ¹⁶	Increase exercise
Canada - AB (PROACTIVE) ²⁹	Increase exercise
China (WMFHAB) ⁵⁰	Weight management
England (PHAB) ^{51,52}	Increase exercise
France (Falzon et al. 2015) ⁵³	-
France (Martin et al. 2021) ²³	
South Korea (Kong et al. 2021) ⁵⁴	
South Korea (Smart After Care) ^{55,56}	
South Korea (WSEDI) ⁵⁷	Health-related quality of life
	Treatti-related quality of me
Spain (Travier and colleagues) ^{58,59}	-
Sweden (Bergqist et al. 2021) ²²	Quality of life
U.S TX (ALIVE) ⁶⁰ U.S AL, IL (BEAT Cancer) ^{61,62}	<u>•</u>
U.S NC, TX (DAMES) ^{63,64}	- Weight
U.S AL, CA, CO, MO	vveigni
(ENERGY) ⁶⁵⁻⁶⁷	Weight loss
U.S National (Fit2Thrive) ¹²⁻¹⁵	Increase exercise
U.S CA (I Can!) ⁶⁸	Cognitive functioning
U.S CT (LEAN) ^{69,70}	Weight loss
U.S CA (Memory and Motion) ⁷¹⁻⁷³	Cognitive functioning
U.S NY (Mi Vida Saludable) ^{18,19}	Lifestyle change
U.S TX (MOCHA) ⁷⁴	-
U.S GA, NC (Reach) ³⁰⁻³⁸	Psychosocial outcomes (Quality of life, fatigue, physical functioning, mood)
U.S NJ (Spark People) ⁷⁵	Weight loss
U.S NC (STRENGTH trial) ⁷⁶	Body composition
U.S DC (The Stepping STONE	
Study) ⁷⁷	Increase exercise
U.S NC (WELL Body Study) ⁷⁸	Prevent weight gain
U.S NC (WWE) ^{20,21}	Reduce joint pain
U.S NC, TX (Nyrop et al. 2020) ²⁴	Weight management
U.S KS (Fazzino et al. 2017 ²⁵	Weight loss or maintenance
U.S MA (Ligibel et al. 2010) ⁷⁹	Weight loss
U.S CT (Park et al. 2016)80	•
U.S MA (Quintiliani et al. 2016)81	-
Notes ALIVE = A Lifestyle Intervention	Via Fmail: DAMES = Daughters and Mothers Against Breast Cancer:

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Cancer; MOCHA = Methodist Hospital Cancer Health Application; PHAB = A Home-based Physical Activity

Intervention in Breast Cancer Survivors; PROACTIVE = Promoting Physical Activity during Chemotherapy;

STRENGTH = Survivor Training for Enhancing Total Health; WSEDI = Web-based self-management exercise and

diet intervention; WWE = Walking With Ease; WMFHAB = Weight Management for Health and Beauty; WELL Body = Weighing Every day for Love of Life and Body; - = Not reported

eAppendix 4. Other Exercise Information Content

Considerations

In the MatchQEP study, ¹⁶ personal circumstances, including cancer-related characteristics, side effects, current fitness level, and available space and equipment were considered. Patient/survivor enjoyment were considered in the Weight Management for Health and Beauty study. ⁵⁰ The ENERGY study ⁶⁵⁻⁶⁷ considered: convenience, enjoyment, time management, the environment, social support, overconcern with weight, problems and body image, showering, hair styling, and bathroom accessibility were also considered. The Stepping STONE study ⁷⁷ accounted for concerns/motivations around physical activity, personal barriers, core values, and goals. Finally, Quintiliani et al. ⁸¹considered influences on their behavior, such as finances, stress, family/friends/neighborhood.

Other content characteristics

Details were lacking regarding other characteristics of exercise communication content such as framing (gain vs. loss) and tone. One study compared tailored information (i.e. individualized communication informed by age, current exercise, health status, and outcome expectations) to targeted information (communication of information specifically on exercise for breast cancer survivors). ²⁶⁻²⁸ Another compared tailored information (plus a pedometer) to generic communication. ²⁹

eTable 10. Format and Delivery of Exercise Information Communicated to Breast Cancer Survivors

Country - Study name or setting	Written cor	nmunicated	Ver	bal communication
	Form(s)	Who communicated	Form(s)	Who communicated
Australia - NSW (EMPOWER)39,40	Text	Researcher(s)	-	-
Australia - QLD (Living Well after Breast Cancer) ⁴¹⁻⁴³	Text	?	Phone	Dietician
Australia - National (Move More for Life Trial) ²⁶⁻²⁸	Newsletter of booklet	?	-	-
Australia, Germany, Netherlands, Spain, Sweden (EFFECT) ¹⁷	?	?	?	?
Belgium (Step <i>By</i> Step) ⁴⁴	Website	Medical staff	-	-
Canada - AB (ACTION) ⁴⁵⁻⁴⁷	Guidebook	?	- Dh	On the Uttack day
Canada - ON (LISA Trial)48,49	Workbook	?	Phone	Coach (lifestyle)
Canada - National (MatchQEP) ¹⁶	Infographic	?	Video conference	Peer partner or qualified exercise professional
Canada - AB (PROACTIVE) ²⁹	Guidebook	?		December(s)
China (WMFHAB) ⁵⁰ England (PHAB) ^{51,52}	WeChat Leaflets	?	Face-to-face Face-to-face	Researcher(s) Researcher(s)
France (Falzon et al. 2015) ⁵³	Testimony	?	Face-to-face	Researcher(s)
France (Martin et al. 2021) ²³	?	?	?	?
South Korea (Kong et al. 2021) ⁵⁴	Арр	?	Face-to-face, Phone	Exercise physiologist
South Korea (Smart After Care)55,56	?	?	?	?
South Korea (WSEDI) ⁵⁷	?	?	?	?
Spain (Travier and colleagues) ^{58,59}	-	-	?	?
Sweden (Bergqist et al. 2021) ²²	Арр	?	-	-
U.S TX (ALIVE) ⁶⁰	?	?	?	?
U.S AL, IL (BEAT Cancer) ^{61,62}	Education notebook	?	Face-to-face	?
U.S NC, TX (DAMES) ^{63,64}	Workbook	?	-	-
U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷	Email, print materials	?	Phone	?
U.S National (Fit2Thrive) ¹²⁻¹⁵	App, packet, text	?	Phone	Coach
U.S CA (I Can!) ⁶⁸	-		Face-to-face, Phone	Coach (health)
U.S CT (LEAN) ^{69,70}	Book, Brochure	?	Face-to-face, Phone	Dietician
U.S CA (Memory and Motion) ⁷¹⁻⁷³		-	Phone	Clinical psychologist
U.S NY (Mi Vida Saludable) ^{18,19}	Email, Newsletter, Text	?	Face-to-face	Researchers(s) (Study staff)
U.S TX (MOCHA) ⁷⁴	App	?	-	-
U.S GA, NC (Reach) ³⁰⁻³⁸	Text	?	Phone	?
U.S NJ (Spark People) ⁷⁵ U.S NC (STRENGTH trial) ⁷⁶	Handout Workbook	?	Phone,	Researchers(s) (Study staff)
U.S DC (The Stepping STONE	-	-	videotape Phone	Coach (trained survivor)
Study) ⁷⁷ U.S NC (WELL Body Study) ⁷⁸	Email	Researcher(s)	Face-to-face	Researcher(s)
U.S NC (WEEL Body Study)	Brochure	Researcher(s)	-	-
U.S NC, TX (Nyrop et al. 2020) ²⁴	Handout	?	Face-to-face	Physician, Nurse Practitioner or Physician Assistant
U.S KS (Fazzino et al. 2017 ²⁵	-	-	Phone	?
U.S MA (Ligibel et al. 2010) ⁷⁹	-	-	Face-to-face, Phone	Exercise physiologist
U.S CT (Park et al. 2016)80	Materials	?	-	-
U.S MA(Quintiliani et al. 2016)81	?	?	?	?

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eTable 11. Intervention Outcomes and Effects

Country - Study name or setting	Intervention outcomes and effects
Australia - NSW (EMPOWER) ^{39,40}	Exercise increased, BMI decreased, QOL improved, self-efficacy improved. No change in mental health symptoms, or other anthropometric variables. No difference from control group who received usual medical care
Australia - QLD (Living Well after Breast Cancer) ⁴¹⁻⁴³	Anthropometric variables, metabolic syndrome risk factors, QOL (physical and mental), musculoskeletal pain, and body image, and psychological menopause symptoms all improved. There was no difference in adverse events between intervention and the control group who received usual care, and not all improvements were due to the intervention
Australia - National (Move More for Life Trial) ²⁶⁻²⁸	Tailored and targeted messaging were both associated with a small increase in aerobic and muscle-strengthening exercise, meeting aerobic guidelines compared to standard care. Both also had a moderate to large association with meeting muscle-strengthening guidelines. Tailored messaging had a small association with the FACT-B (QOL) and FACIT-F (fatigue) scales, whereas targeted messaging had not association with FACT-B (QOL), but a strong association with FACIT-F (fatigue)
Australia, Germany, Netherlands, Spain, Sweden (EFFECT) ¹⁷	NA - Methods only
Belgium (StepByStep)44	NA - Communication usability was the focus
Canada - AB (ACTION) ⁴⁵⁻⁴⁷	Exercise increased; QOL did not change. Intention, attitude, and planning were greater in the intervention group. Intention and planning partially mediated the effects of the intervention on exercise, Increases in exercise were not maintained post-intervention
Canada - ON (LISA Trial)48,49	Those who received goals (intervention) in addition to information only (comparison) decreased their weight without adverse effects on QOL, hospitalizations, or medical events, and also had greater rates of disease free survival at 8 years follow up. Physical QOL improved, whereas no change was found for mental QOL
Canada - National (MatchQEP) ¹⁶	NA - Methods only
Canada - AB (PROACTIVE)29	Tailored print materials plus a pedometer and step log book were no more effective than standard public health guidelines at increasing exercise
China (WMFHAB) ⁵⁰	Exercise increased; anthropometric variables improved; grip strength increased An intervention effect was only observed for changes in exercise and grip strength in comparison to a group who received information about weight management and exercise compared to the fortnightly exercise prescriptions (intervention group)
England (PHAB) ^{51,52}	Exercise increased; HRQOL, functional wellbeing, and VO2 max improved; body mass, BMI, and LDL-C decreased Only changes in exercise and VO2 max were different from the control group who received standard care
France (Falzon et al. 2015) ⁵³	Exercise self-efficacy and intention were higher in those who received narratives/testimony than the expert recommendations group, whereas beliefs about benefits and risks were more favorable among the expert recommendation group
France (Martin et al. 2021) ²³	NA - Qualitative evaluation of intervention
South Korea (Kong et al. 2021) ⁵⁴	The addition of a Fitbit and Smartphone app increased exercise more compared to exercise information alone
South Korea (Smart After Care) ^{55,56}	The addition of a pedometer and Smartphone app increased exercise more compared to exercise information alone
South Korea (WSEDI) ⁵⁷	Exercise increased, and physical functioning fatigue, and motivational readiness all improved. Self-efficacy for exercise management improvement was greater in the intervention group Improvements were greater compared to the control group
Spain (Travier and colleagues) ^{58,59}	Anthropometric variables, cardiorespiratory fitness, physical functioning, general health, mental health, and global health status, metabolic risk biomarkers, and insulin resistance indicators all improved There was no control group
Sweden (Bergqist et al. 2021) ²²	NA - focused on app usability
U.S TX (ALIVE) ⁶⁰	Exercise increased, sedentary time decreased Improvements were greater compared to dietary change intervention group
U.S AL, IL (BEAT Cancer) ^{61,62}	Exercise increased, QOL improved Improvements were greater compared to the control group who received usual care
U.S NC, TX (DAMES) ^{63,64}	Exercise increased, exercise capacity improved Improvements were greater compared to the control group who received weight management information
U.S AL, CA, CO, MO (ENERGY) ⁶⁵⁻⁶⁷	Exercise increased, blood pressure improved, weight decreased Improvements were more favorable in the intervention compared to the control who received a less intensive intervention
U.S National (Fit2Thrive) ¹²⁻¹⁵	Exercise increased; and, anxiety, depression, fatigue, physical functioning, and sleep-related impairment all improved No control group

Country - Study name or	Intervention outcomes and effects
setting	
U.S CA (I Can!) ⁶⁸	NA - Methods only
U.S CT (LEAN) ^{69,70}	Weight decreased, but extra counselling and tracking behavior were no more effective
· , ,	No control group
U.S CA (Memory and	Anxiety, depression, fatigue, and physical functioning each improved
Motion) ⁷¹⁻⁷³	Improvements in anxiety and physical functioning were greater in the intervention group compared to the waitlist control group
U.S NY (Mi Vida Saludable) ^{18,19}	NA - Methods only
U.S TX (MOCHA) ⁷⁴	NA - focused on app usability
U.S GA, NC (Reach) ³⁰⁻³⁸	Physical wellbeing (FACT-B), symptoms, physical functioning (SF-36), fatigue (FACIT-F), and mood (POMS) each improved
	Exercise participation, exercise self-efficacy, and social support for exercise did not change over time or differ between groups. Exercise goal setting and
U.S NJ (Spark People) ⁷⁵	planning increased in both groups. Cardiopulmonary fitness and QOL improved. Weight and BMI decreased
	Only weight and BMI changes differed between the intervention and control group
U.S NC (STRENGTH trial) ⁷⁶	Exercise, anthropometric characteristics, QOL, and anxiety and depression, and serologic indices did not change
U.S DC (The Stepping	Exercise increased, anthropometric variables improved, improved
STONE Study) ⁷⁷	cardiovascular fitness
,	Improvements were greater compared to the control group
U.S NC (WELL Body	Energy expenditure, and weight decreased (in group that received information + tracker); the group had less negative perceptions about daily self-
Study) ⁷⁸	weighing
U.S NC (WWE) ^{20,21}	NA - Non-intervention
U.S NC, TX (Nyrop et al. 2020) ²⁴	NA - Non-intervention
U.S KS (Fazzino et al.	Exercise was associated with weight change (loss and gain) at different time points
2017 ²⁵	There was no control group
U.S MA (Ligibel et al.	Exercise increased, QOL improved, fatigue improved, anthropometric variables did not change
2010) ⁷⁹	There was no control group
	Exercise increased
U.S CT (Park et al. 2016) ⁸⁰	Improvements were similar for the standard lifestyle management and targeting the teachable moment groups, which differed from the control group who
	received standard care
U.S MA(Quintiliani et al.	Exercise and steps increased, weight and fatigue decreased
2016)81	There was no control group

Notes. ALIVE = A Lifestyle Intervention Via Email; DAMES = Daughters and Mothers Against Breast Cancer; ENERGY = Exercise and Nutrition to Enhance Recovery and Good Health for You; I Can! = Improving Cognition After Cancer; MOCHA = Methodist Hospital Cancer Health Application; PHAB = A Home-based Physical Activity Intervention in Breast Cancer Survivors; PROACTIVE = Promoting Physical Activity during Chemotherapy; STRENGTH = Survivor Training for Enhancing Total Health; WSEDI = Web-based self-management exercise and diet intervention; WWE = Walking With Ease; WMFHAB = Weight Management for Health and Beauty; WELL Body = Weighing Every day for Love of Life and Body; MSE = Muscle-strengthening exercise; MPA = Moderate-intensity physical activity; MVPA = Moderate-to-vigorous intensity physical activity; - = Not reported; NA = Not applicable; QOL = Quality of life; BMI = Body mass index

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