

Post-COVID-19 Telehealth Transition of an ACT-based Weight Management Intervention for Active-Duty Personnel

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 - >> Research funding from National Institutes of Health, Department of Defense, & Veterans Administration
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Goals of This Presentation

- Describe the COVID-19 transitions made to an RCT of ACT for weight management in active duty military personnel
- Compare in-person and virtual participants on demographics, biometric, and study experiences
- Examine participant experiences in the virtual format
- Identify lessons learned to make recommendations relevant to RCTs and interventions with active-duty military personnel



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Overview

- Background to the ACT-enhanced ShipShape RCT
- Aims and design of original study
- Intervention protocol
- Pandemic halt and adaptations to virtual
- Compare of in-person versus virtual study and intervention protocols
- Characteristics of participants
- Qualitative results from virtual participants
- Summary and conclusion



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Why Obesity and Weight Management in Active Duty?

- Surprisingly, about 2/3 of US military personnel classified as either overweight or obese
- Risk of failing physical fitness and body composition metrics
- Military weight management and physical fitness programs don't work well
- ShipShape is the Navy's weight management program
- Any weight management program for active duty must fit with the military culture
- Rationale for integrating ACT:
 - >> Limited efficacy of ShipShape
 - >> Bolster participants' commitment to behavior change
 - >> Build distress tolerance skills
 - >> Promote values-based weight related behaviors and goals



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ShipShape RCT

- Cohort-randomized pragmatic controlled trial funded by NIH
- Comparison to Navy's weight management program, ShipShape
- Active duty participants
 - >> Inclusion criteria: overweight/obese or failed/at risk of failing body composition test
 - >> Exclusion criteria: Pregnancy or planning to become pregnant
- Study aims:
 - >> Examine the effectiveness of ACT+SS compared to standard SS-only in active-duty Navy personnel
 - >> Examine psychological flexibility as a mechanism underlying intervention response
 - >> Explore potential moderators of intervention response
- Weight loss as primary outcome
- Both treatments comprised of 8-weekly, 2-hour groups

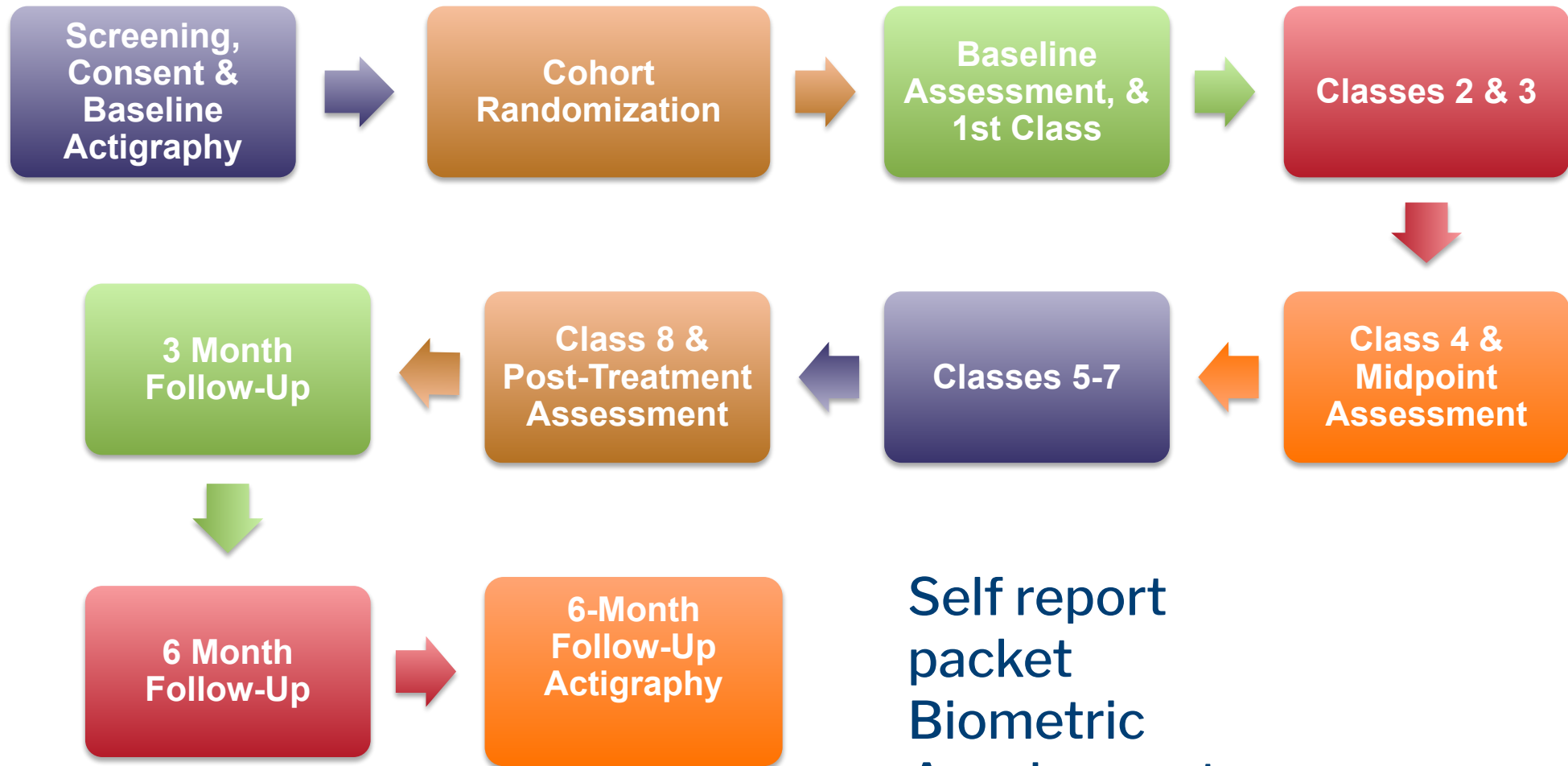
Afari et. al. (2019). Contemporary Clinical Trials Communications, 15. doi: 10.1016/j.conctc.2019.100408



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Study Design



Self report
packet
Biometric
Accelerometry



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RCT During COVID-19 Pandemic



- 15 cohorts completed: 150 of 164 randomized
- Naval Medical Center no longer offering ShipShape classes due to Covid-19
- ShipShape Coordinator reassigned
- NIH and IRB approval to virtualize study including all study procedures and interventions



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Covid-19 Adjustments

- Recruitment through the community via Social Media by BuildClinical
- Online screening and virtual consent
- Participants mailed all necessary study materials
- Trained to measure and report body composition
- Interventions virtualized by fusion of recorded videos and live discussions
- Qualitative and quantitative questions assessed participants' experience with the virtual format



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Intervention Transitions

- Recordings of ShipShape coordinator and study interventionists to maintain integrity of ShipShape and ACT content
- Recordings played during telehealth sessions based on study arm
- Live discussions interspersed with recorded materials in both groups
- All virtual sessions reviewed for adherence, competence, content, and logistics
- Session content for the SS condition did not require many modifications because there were fewer physically interactive activities embedded in the program



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ACT Protocol to Virtual Format

- Objective was to make modifications to the ACT exercises and metaphors while still targeting the same ACT processes
- ACT Matrix platform transitions well to virtual delivery
- Example: “Tug of War” -> “Unwanted Party Guest”
- Example: “Cravings & Trigger Foods”



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Characteristic of Participants

	Total N = 178	In-person n = 149	Virtual n = 29
Age, years, mean (SD)	29.7 (6.9)	28.7 (6.6)	34.4 (6.6)
Female, n (%)	110 (61.8)	94 (63.1)	16 (55.2)
Asian or Pacific Islander, n (%)	15 (8.4)	14 (9.4)	1 (3.4)
Black or African American, n (%)	44 (24.7)	39 (26.2)	5 (17.2)
White (not of Hispanic origin), n (%)	106 (59.6)	86 (57.7)	20 (69)
Hispanic/Latino Ethnicity, n (%)	51 (28.7)	40 (26.8)	11 (37.9)
Enlisted, n (%)	166 (93.3)	140 (94)	26 (89.7)
Living on base, n (%)	45 (25.3)	41 (27.5)	4 (13.8)
Married/Partnered, n (%)	126 (70.8)	106 (71.1)	20 (69.0)
Weight, mean (SD)	208.7 (36.4)	207.5 (36.4)	215.1 (36.5)
Body fat %, mean (SD)	35.6 (8.9)	35.3 (8.6)	37.5 (10.0)
BMI, mean (SD)	33.1 (3.9)	33.0 (4.0)	33.8 (3.5)

Comparison of Study Experiences

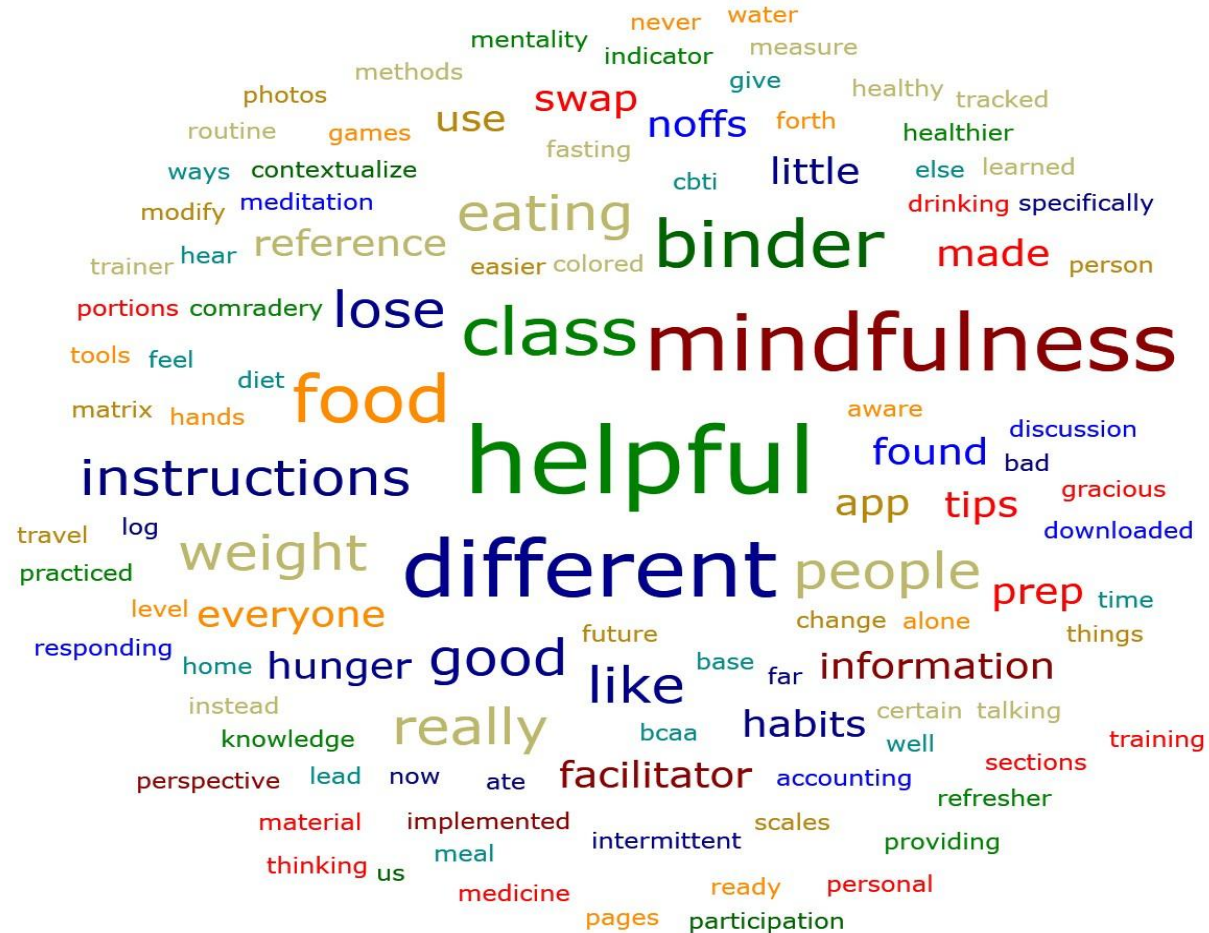
	Total N = 178	In-person n = 149	Virtual n = 29
Motivation, mean (SD)	8.1 (1.7)	8.2 (1.7)	7.8 (1.6)
Confidence, mean (SD)	7.6 (1.9)	7.7 (1.9)	7.6 (1.7)
Attendance, n (%)	1082 (77.2)	904 (77.2)	178 (77.1)
Participation, mean (SD)	2.6 (.5)	2.5 (.5)	2.9 (.4)
Credibility & Expectations for Improvement, mean (SD)	-.12 (4.1)	-.13 (4.3)	-.5 (3.5)
Credibility, mean (SD)	-.70 (1.9)	-.13 (1.9)	.20 (1.6)
Expectancy, mean (SD)	-.02 (2.7)	.01 (2.8)	-.20 (2.5)
Satisfaction with Intervention, mean (SD)	29.3 (3.2)	29.6 (3.2)	27.7 (3.0)

Feedback from Virtual Participants (n = 16)

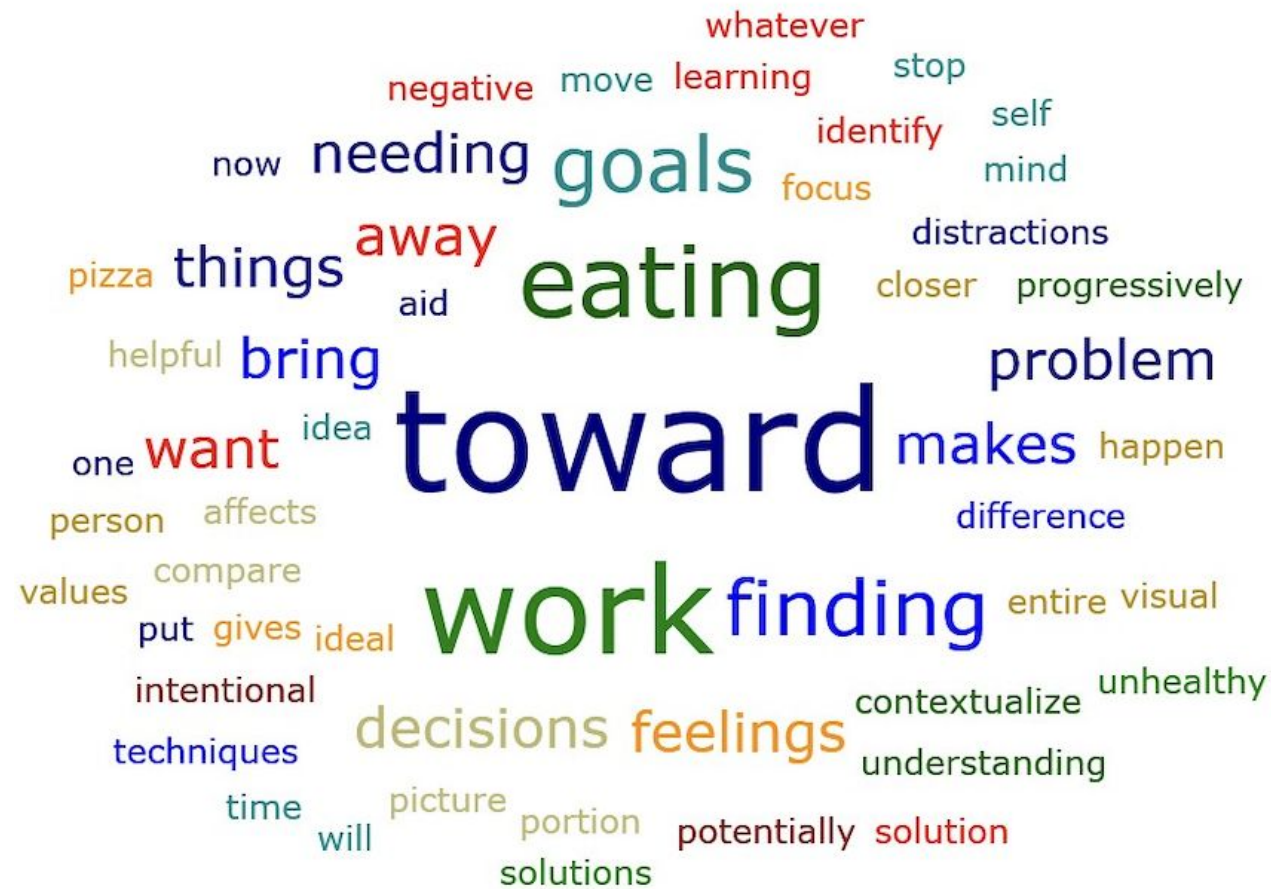
	Strongly Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Strongly Satisfied
<i>How satisfied were you with the information provided in the video recordings?</i>	0%	0%	0%	62.5%	37.5%
<i>How satisfied were you with the live discussion portion of each class?</i>	0%	0%	0%	50%	50%
	Never	Monthly	Weekly	Few times/wk	Daily
<i>How frequently did you use the binder (packet of written materials) outside of the classroom?</i>	12.5%	0%	50%	37.5%	0%
	Never	Monthly	Weekly	Few times/wk	Daily
<i>How often have you used the skills learned during this course?</i>	0%	12.5%	25%	43.8%	18.8%



Overall, what did you find most useful in the course? (n = 16)



Describe how you would explain the take-away message of the ACT Matrix to a family member or friend. (n = 8)



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Summary & Lessons Learned

- Modifications to virtual format deemed successful
- Community recruitment of active duty is possible
- Similar levels of satisfaction and attendance
- Positive feedback regarding virtual experiences and study materials
- Word clouds reflected critical aspects of interventions
- Intervention materials were delivered effectively virtually and resonated with participants

- Virtual ACT-based weight management may be a promising approach to increase accessibility and reach among a highly mobile population such as active-duty personnel



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Limitations

- Not a planned prospective comparison
- Potential self-selection of participants into virtual format
- Weight and height assessments were self-measured and self-reported in the virtual format



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- Develop a more robust digital/virtual weight management training program for active duty
 - » Obtain stakeholder input to ensure culturally appropriate
- Prospectively randomize into intervention groups
- Examine the credibility, acceptability and engagement with a digital program
- Assess feasibility of all virtual procedures
- Generate preliminary group comparisons for effects on weight



VA San Diego Healthcare System

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