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| --- | --- | --- | --- | --- | --- | --- |
| 15. | Caulin-Glaser et al., 2007 | Determine the effects of depressive symptoms & sex on completion rates in CR[[1]](#footnote-2) and, in CR completers, examine clinical outcomes. | * Retrospective cohort analysis

Time-points:* Baseline: 4-6 weeks post hospital discharge
* Time 2: post-CR
 | 348 patients:Women: 100 (28.7%)Men: 248 (71.3%)Inclusion: Enrollment in a 12-wk CR program | * Depressive symptoms: BDI-II[[2]](#footnote-3)
* Completion of CR: >7 weeks’ participation of 12-week program
 | Baseline BDI-ll ≥14:* Women: 31%
* Men: 14.5%

53 people/29 women (54.7%) did not complete CR.* 29 (54.7%) CR non-completers had BDI-II ≥14 at baseline.

Pts with baseline BDI-ll ≥14 had greater symptom reduction after CR vs. pts with baseline BDI-ll<14* ≥14: pre-CR=20.6; post-CR=10.4
* <14: pre-CR=5.8; post-CR=3.5

No statistically significant difference between amount of change on BDI-II after CR between men & women |
| 16. | Doering et al., 2006 | Describe prevalence of clinical depression at 3 timepoints among women, comparing frequency of somatic & affective symptoms | * Longitudinal descriptive study

Time-points:* Baseline measure: inpatient
* Time 2: 2-4 weeks post discharge
* Time 3: 6 months
 | 75 women* 55 retained at 6 months

Inclusion: 1st-time CABG[[3]](#footnote-4) | * Depressive symptoms: DISH[[4]](#footnote-5)
* Hx depression
 | Baseline Depressed: 36%Time 2 Depressed: 16.3%Time 3 Depressed: 12.7%* Depressed women were younger (57 vs 64.2)
* More of the depressed women had hx of depression vs those with no hx of depression (40.7% vs 18.8%)

Depressed women consistently had higher rates of fatigue, anhedonia, & dysphoria vs non-depressed women over the 6-month period. |
| 17. | Hunt-Shanks et al., 2009 | Examine1. Autonomic

anxiety, negative affect, & depression over a 2-year period in cardiac pts.1. Whether

gender moderated the exercise/ affective relationship1. Whether

changes in exercise mediated the gender/affective relationship | * Longitudinal descriptive study

Time-points:* Baseline: inpatient
* Time 2: 6 months
* Time 3: 12 months
* Time 4: 24 months
 | 801 patientsWomen: 197 (24.5%)Men: 604 (75.4%)Inclusion: Cardiac patients, but no unstable cardiac conditions | * Depression & anxiety: HADS[[5]](#footnote-6)
 | HADS-D[[6]](#footnote-7)>7 Baseline:* Women: 27.9%
* Men: 18.7%

6 months* Women: 20.6%
* Men: 14.5%

12 months* Women: 19.2%
* Men: 14.4%

24 months* Women: 19.2%
* Men: 13.3%

Women demonstrated more autonomic anxiety & depression than men across entire studyExercise did not mediate any gender/affective relation-shipsNo moderation by gender |
| 18. | Josephson et al., 2006 | Investigate gender differences in depressive symptoms among cardiac pts in CR. | * Retrospective analysis of prospectively collected longitudinal data

Time-points:* Baseline: Pre-CR
* Time 2: post-CR
 | 402 patientsWomen: 113 (28%)Men: 289 (72%)Inclusion: Cardiac diagnosis | * Depressive symptoms: BDI[[7]](#footnote-8)
 | BDI≥10 Baseline:* Women: 36%
* Men: 22%

Baseline (mean score)* Women: 8.73 ± 7.68
* Men: 6.44 ± 6.2

Post-CR* Women: 5.44 ± 5.76
* Men: 4.21 ± 4.76

Pts had significantly higher BDI scores prior to CR compared to after.Women showed a larger reduction in BDI scores after CR than men.Pts who did not complete CR had higher BDI scores than those who did complete CR. |
| 19. | Lavie et al., 1999 | Investigate theeffects of depression in women withCHD[[8]](#footnote-9), & assessed the modulatory effects of CR & exercise training programs | * Prospective longitudinal descriptive study

Time-points:* Baseline: pre-CR (4-5 wks post cardiac event)
* Time 2: 1 week after CR completion.
 | 102 women * Depressed: 23
* Non-depressed: 79

Inclusion: CHD dx | * Anxiety, somati-zation, hostility, & depression: Kellner Symptom Question-naire
* (Depression cutoff: ≥7)
 | Baseline depression ≥7: 22.5%Post-CR depression ≥7: 12%* Study supported frequency of depression in women with CHD.
* Improvement in depressive symptoms following CR.

Baseline characteristics failed to identify the depressed women who improved following CR |
| 20. | Norris et al., 2007 | Examine gender differences in specific depressive symptoms as they relate to HRQOL[[9]](#footnote-10) post MI[[10]](#footnote-11). | * Longitudinal, prospective cohort study

Time-points:* Baseline: inpatient
* Time 2: 1 year
 | 486 patientsWomen: 102 (21%)Men: 384 (79%)Inclusion: Admission through ED[[11]](#footnote-12) w. dx of MI | * Depressive symptoms: BDI-II
 | Baseline BDI-II ≥10:* Women: 40.3%
* Men: 32.7%

1-yr BDI-II≥10:* Women: 40.4%
* Men: 31.9%

No significant differences in depression scores between men & women at baseline.Women had worsening mean BDI-II scores over the 1st year post-AMI.Women more likely to have DM[[12]](#footnote-13), HTN[[13]](#footnote-14) |
| 21. | Sanderson & Bittner, 2005 | Compare baseline characteristics between CR completers & non-completers; ID factors associated w. CR completers; describe outcomes among CR completers. | Longitudinal descriptive studyTime-points:Baseline: pre-CRTime 1: post-CR | 228 women:121 CR completers107 CR non-completersInclusion: Dx of ischemic heart disease | Depression: BDI-II | Baseline BDI-II≥14: 31%After CR:* 67% of women had improved BDI-II scores
* 6% had no change
* 27% had higher scores compared to baseline

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* 50% of CR non-completers had a BDI-II score >14 vs 16% among completers.
* CR non-completers were younger, more obese than completers.
* Women who had higher scores after CR than at baseline still had mean score <14.
 |
| 22. | Shin et al., 2010 | Explore gender differences in the hx of depression, depressive symptoms, & use of anti-depressants in pts hospitalized for ACS[[14]](#footnote-15) & 1-month post-discharge. | * Prospective longitudinal design

Time-points:* Baseline: inpatient
* Time 1: 4 weeks after discharge
 | 100 patientsWomen: 49Men: 511 mo.: 82Women: 38Men: 44Inclusion: Documented ACS | * Depression: BDI-II
* Hx depression
 | BDI-II≥14Baseline:* Women: 38.8%
* men=29.4%

1 month:* women: 26.3%
* men=25%

Hx depression:* Women: 34.7%
* Men: 17.6%

Taking antidepressants (baseline)* Women: 38.8%
* Men: 15.7%

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_No statistical difference in severity of depressive symptoms by gender at either time-point.No improvement from baseline to 1 monthMore women than men had hx of depression |
| 23. | Bogg et al., 2000 | Assess the influence of gender on outcomes after a cardiac episode.  | * Prospective longitudinal cohort study

Time-points:* Baseline: 3-4 days post MI
* Time 2: 1 month post MI
* Time 3: 3 months post MI
* Time 4: 6 months post MI
 | 220 patients:Women: 51 (23%)Men: 169 (77%)Inclusion: MI within 4 days of admit, age<75. | * Depression: HADS
 | Baseline depression (nonsignificant)* Women: 4.7 ± 3.4
* Men: 4.0 ± 3.2

1 month post MI (p≥0.01; T=2.68)* Women: 5.6 ± 3.1
* Men: 4.4 ± 3.9

3 months: ( p≥0.01; T=2.62)* Women: 5.9 ± 3.4
* Men: 3.9 ± 3.1

6 months (nonsignificant)* Women: 4.7 ± 3.0
* Men: 3.9 ± 3.5

Depression was a major predictor of physical quality of life.  |
| 24. | Brink et al., 2005 | Detect changes in HRQOL over time, and predict HRQOL at 1 year based on measures at 1 week & 5 months post 1st-time MI. | * Longitudinal descriptive study

Time-points:* Baseline: 1 week post MI
* Time 2: 5 months
* Time 3: 1 year
 | 98 patients:Women: 33 (34%)Men: 65 (66%) | * Depression: HADS
 | Baseline depression (estimated, based on graphic)* Women: 2.4
* Men: 2.7

5 months* Women: 4.1 ± 3.2
* Men: 3.8 ± 3.8

12 months* Women: 2.8 ± 2.8
* Men: 3.4 ± 3.5

Statistically significant decrease in women between 5 months and 1 year (p<0.01)13% of all respondents scored possible or likely depression 1 year after MI.No gender differences at 1 year post MI. |
| 25. | Duits et al., 1998 | Examine variations over time in anxiety & depression in pts undergoing CABG | * Longitudinal descriptive study

Time-points:* Time 1: 2 weeks pre-op
* Time 2: 1 day pre-op
* Time 3: 7 days post-op
* Time 4: 6 months post-op
 | 217 patients:Women: 41 (19%)Men: 176 (81%)Inclusion: elective CABG | * Depression: HADS
 | Time 1* Women: 7.5 ± 4.7
* Men: 4.7 ± 3.7

Time 3* Women: 5.4 ± 3.4
* Men: 4.9 ± 3.6

Time 4* Women: 4.9 ± 4.0
* Men: 3.4 ± 3.5

Both significant time effect, & significant time modified by gender effects were noted. |
| 26. | Grace et al., 2008 | Prospectively assess changes in psychosocial health, comparing women who participated in CR with those who did not. | * Secondary analysis of prospective, controlled quasi-experimental design study

Time-points:* Baseline (inpatient)
* 18 months
 | 1. women
* 110 retained at 18 months

Inclusion: ACS, PCI, or CABG. | * Anxiety & depressive symptoms: HADS
 | 51 women (45.1%) participated in CRBaseline: (nonsignificant difference between groups)* CR: 4.6 ± 3.5
* Non-CR: 5.0 ± 2.8

18 months:* CR: 4.3 ± 3.7
* Non-CR: 4.1 ± 3.3

Women who did ***not*** participate in CR by 18 months had improvement in depressive symptoms**.** |
| 27. | Gravely-Witte et al., 2007 | Examine the impact of angina and cardiac hx on depression and HRQOL in CHD pts. | * Prospective longitudinal study

Time-points:* Baseline: 45 days post-cardiac event
* Time 2: 6 months after baseline
 | 171 patients:Women: 27 (16%)Men: 147 (84%)@6 mo: 121Women: 17 (14%)Men: 104 (86%)Inclusion: MI, PCI[[15]](#footnote-16), CABG; age<70. | * Depression: SCL-90
 | Baseline:* Women no prior CHD: 1.45 ± 0.17
* Men no prior CHD: 1.39 ± 0.14
* Women prior CHD: 1.51 ± 0.11
* Men prior CHD: 1.45 ± 0.13

6 months* Women no prior CHD: 1.39 ± 0.17
* Men no prior CHD: 1.34 ± 0.13
* Women prior CHD: 1.47 ± 0.11
* Men prior CHD: 1.44 ± 0.13

Cardiac hx not predictive of higher depression levels at baseline, but predictive at 6 months.Women had higher depression levels than men at baseline.Depression scores in pts with CHD hx remained stable, whereas pts with no cardiac hx had improvement. |
| 28. | Gupta et al., 2007 | To see if benefits from CR are maintained at 1 yr, & if there are any gender-specific differences. | * Longitudinal descriptive study

Time-points:* Baseline: CR entry
* Time 2: 6 months
* Time 3: 1 year
 | 533 patients.Women: 161 (30.2%)Men: 372 (69.8%)244 at 1-yr* Women: 68 (28%)
* Men: 176 (72.1%))

Inclusion: dx of CHD | * Depression: BDI-II
 | Baseline* Women: 9.7
* Men: 9.29

CR completion* Women: 6.9
* Men: 5.4

1 year* Women: 7.3
* Men: 5.81

Both men & women showed significant improvement in depressive symptoms…* between baseline & end of CR, and
* between baseline & 1 yr

but *not* between end of CR & 1 yr. |
| 29. | Lavie & Milani, 1995 | Assess 1) genderdifferences post cardiac event in baseline exercise capacity, obesity, lipids, behavior characteristics, & QOL & 2) improvementin these after CR. | * Retrospective data review

Time-points:* Baseline: pre-CR
* Time 2: post-CR
 | 458 peopleWomen: 85 (18.5%)Men: 375 (81.8%)151 post-CRWomen: 31 (20.5%)Men: 120 (79.5%)Inclusion: major ischemic CHD event | * Anxiety, somati-zation, hostility, & depression: Kellner Symptom Question-naire
* Depression cutoff: ≥7
 | Baseline* Women: 3 ± 4
* Men: 3 ± 5

Post-CR* Women: 3 ± 5
* Men: 2 ± 4

Depressive symptoms were significantly reduced in men following CR but ***not*** in women. |
| 30. | McGrady et al., 2009 | Determine the effects of depression & anxiety on patient completion of structured CR. | * Longitudinal, descriptive, retrospective chart review

Time-points:* Baseline: start of CR
* Time 2: end of CR
 | 380 subjectsWomen: 139 (37%)Men: 241 (63%)Inclusion: MI, CABG, angina, or CHF[[16]](#footnote-17) (NYHA class I or II) or other (A-fib, diastolic dysfunction, aortic repair, heart transplant) | * Depression: BDI-II
 | Baseline (mean)* Women: 10.9 ± 8.4
* Men: 8.3 ± 7.3

Baseline (BDI-II >10 or BAI>15)* Women: 17.4 ± 6.6
* Men: 20.0 ± 8.1

Post-CR (BDI-II >10 or BAI>15 at baseline)* Women: 10.5 ± 6.2
* Men: 12.9 ± 9.4

Women had overall higher BDI-II scores than men at baseline.No statistically significant gender differences in outcomes post-program.Significant differences in baseline BDI-II between completers & dropouts (8.6 vs 11.7, p=0.001)Younger, female patients had higher dropout rates. |
| 31. | Phillips Bute et al., 2003 | Examine QOL & cognitive outcomes after CABG in men & women, carefully adjusting for baseline differences & known pre-op risk factors for poor outcomes. | * Prospective longitudinal observational study

Time-points:* Baseline: inpatient
* Time 2: 1 year
 | 343 pts at baseline280 at 1 yearNo number breakdown by genderInclusion:Elective CABG | * Depression: CES-D[[17]](#footnote-18)
 | Baseline* Women: 16.95 ± 11.06
* Men: 11.10 ± 9.39

12 months* Women: 13.91 ± 9.58
* Men: 9.02 ± 8.48

Women’s scores significantly higher than men’s at both time points.Women’s recovery not significantly different from men’s - differences could be attributed to pre-op differences in depression levels. |
| 32. | Zaninotto et al., 2016 | Explore gender-specific changes in well-being in older people with CHD vs those without over a 6-year period. | * retrospective longitudinal case-control study

Time-points:* Baseline: within 2 yrs of a CHD event
* Time 2: 1 year after baseline
* Time 3: 2 years after baseline
 | 895 with CHD:Women: 377Men: 5183601 w/o CHD:Women: 1899Men: 1702 | * Depression: CES-D8[[18]](#footnote-19)
 | Prevalence of depressive “caseness” was higher in CHD vs healthy group* For women with CHD, presence of depressive caseness was constant between baseline and 2-yr f/u, but 8% lower at 4-yr f/u compared to baseline.
* At baseline & 2-yr f/u, women had 13% higher probability of depressive caseness vs men.
	+ This decreased to 5% at 4-yr f/u.

Among CHD pts, depressive caseness was constant over time among men while women reported improvements. |
| 33. | Barth et al., 2009 | Examine whether women & men benefit equally from outpatient CR in reduction in psychological symptoms, & whether women show more impaired psychological health at baseline than men. | * Quasi-experimental, longitudinal

Time-points:* Baseline: 2-4 weeks post acute event
* Time 2: post-CR
 | 441 patients:Women: 89 (20.2%)Men: 352 (79.8%)Inclusion: post acute coronary event, cardiac decomp., PCI, or heart surgery | Anxiety & Depression: German version of HADS | Baseline prevalence of HADS-D>7: 15% (no separation by gender)* Baseline depression (difference: p=0.29)
	+ Women: 3.6 ± 3.0
	+ Men: 3.9 ± 3.5
* Depressive symptoms post CR (p=0.626)
	+ Women: 3.1 ±3.2
	+ Men: 3.1 ± 3.1

No age difference between men & women in this study (unusual) |
| 34. | Grace et la., 2005 | Examine the prevalence & course of depressive symptoms x 1 yr after ACS, & the effect of CR on this trajectory | * Longitudinal observational study

Time-points:* Baseline: inpatient
* Time 2: 6 months
* Time 3: 1 year
 | 913 patientsWomen: 323 (35%)Men: 590 (65%)Inclusion: MI or UA[[19]](#footnote-20) | * Depression: BDI
 | Baseline:* Women: 10.72 ±8.10
* Men: 7.59 ±6.90

6 months:* Women: 9.65 ± 8.78
* Men: 6.38 ± 6.38

12 months* Women 8.25 ± 7.54
* Men: 5.91 ± 6.18

Those with higher BDI scores at 6 months attended significantly fewer CR sessions than those with lower BDI scores (p=0.02).Depressive symptoms improved for all, regardless of CR participation.Younger participants were more depressed |

1. Cardiac Rehabilitation [↑](#footnote-ref-2)
2. Beck Depression Inventory - ll [↑](#footnote-ref-3)
3. Coronary artery bypass graft [↑](#footnote-ref-4)
4. Diagnostic Interview & Structured Hamilton [↑](#footnote-ref-5)
5. Hospital Anxiety & Depression Scale [↑](#footnote-ref-6)
6. Hospital Anxiety & Depression Scale – Depression subscale [↑](#footnote-ref-7)
7. Beck Depression Inventory [↑](#footnote-ref-8)
8. Coronary Heart Disease [↑](#footnote-ref-9)
9. Health-related Quality Of Life [↑](#footnote-ref-10)
10. Myocardial Infarction [↑](#footnote-ref-11)
11. Emergency Department [↑](#footnote-ref-12)
12. Diabetes Mellitus [↑](#footnote-ref-13)
13. Hypertension [↑](#footnote-ref-14)
14. Acute Coronary Syndrome [↑](#footnote-ref-15)
15. Percutaneous Coronary Intervention [↑](#footnote-ref-16)
16. Congestive Heart Failure [↑](#footnote-ref-17)
17. Center for Epidemiologic Studies Depression (Scale) [↑](#footnote-ref-18)
18. Center for Epidemiologic Studies Depression (Scale) – 8-item [↑](#footnote-ref-19)
19. Unstable angina [↑](#footnote-ref-20)