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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 | Examine   1. Autonomic   anxiety, negative affect, & depression over a 2-year period in cardiac pts.   1. Whether   gender moderated the exercise/ affective relationship   1. 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 patients  Women: 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 study  Exercise did not mediate any gender/affective relation-ships  No 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 patients  Women: 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 the  effects of depression in women with  CHD[[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 patients  Women: 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 study  Time-points:  Baseline: pre-CR  Time 1: post-CR | 228 women:  121 CR completers  107 CR non-completers  Inclusion: 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 patients  Women: 49  Men: 51  1 mo.: 82  Women: 38  Men: 44  Inclusion: Documented ACS | * Depression: BDI-II * Hx depression | BDI-II≥14  Baseline:   * 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 month  More 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 CR  Baseline: (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: 121  Women: 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) gender  differences post cardiac event in baseline exercise capacity, obesity, lipids, behavior characteristics, & QOL & 2) improvement  in these after CR. | * Retrospective data review   Time-points:   * Baseline: pre-CR * Time 2: post-CR | 458 people  Women: 85 (18.5%)  Men: 375 (81.8%)  151 post-CR  Women: 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 subjects  Women: 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 baseline  280 at 1 year  No number breakdown by gender  Inclusion:  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: 377  Men: 518  3601 w/o CHD:  Women: 1899  Men: 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 patients  Women: 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)