**SDC 2.** Summary of Reports from Psychological Risk Factors in CR

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| **Citation** | **Purpose / Objectives** | **Population Characteristics** | **Summary of Findings** |
| Gathright et al.35 | Examine changes in depressive symptoms and affect following CR completion | 637 CR completers, 63.63 ± 11.32 yr, 27% female | From intake to discharge, depressive symptoms and negative affect decreased while positive affect increased  Predictors of depressive symptom reduction were increased vitality and decreased bodily pain.  Predictors of positive affect increase were increased vitality, social support, and physical role functioning.  Predictors of negative affect reduction were increased vitality and social support.  Changes in indicators of physical health were not related to depressive symptom or affect change |
| Zhu et al.34 | Examine associations between depression and unhealthy lifestyle behaviors in Chinese patients with acute coronary syndromes | 4043 patients with ACS, of which 135 were considered clinically depressed (PHQ-9 >10) | Compared with nondepressed patients, depressed patients were:  1.7 times likely to be physically inactive  4.6 times likely to have poor sleep quality  After adjusting for demographic characteristics, there were no significant associations of depression with smoking, unhealthy drinking, and unhealthy BMI  Higher depression scores were found to be associated with a greater number of unhealthy lifestyle behaviors. |
| Edwards et al.36 | Explore the association  between depression and outpatient CR completion | Meta-analysis of 19 independent samples consisting of 30,586 cardiac patients | Depressed CR patients were significantly less likely to complete their prescribed CR programs.  No significant moderator variables were identified. |
| Gecaite et al.37 | Examine associations between cardiovascular reactivity to social stress and mental distress in patients after acute coronary syndrome | 116, 52 ± 8 yr, 14% female, patients with CAD 2 wk after ACS | Type D personality and high trait anxiety were associated with blunt­ed HR reactivity to acute social stressors, independently from sociodemographic, clinical characteristics, and CAD risk factors in patients after ACS  Symptoms of depression were associated with increased levels of SBP during Trier Social Stress Test |
| Peersen et al.38 | To identify medical and psychosocial factors associated with PA status and increasing exercise level after a coronary event. | 1101 patients, 61.6 ± 9.6 yr, 21% female, hospitalized with MI and/or a revascularization procedure. | 18% of patients reported inactivity, 42% low, and 40% adequate activity at follow-up after median 16 mo.  Low PA-index was significantly associated with smoking, obesity, unhealthy diet, depression, female, low education, MI as index diagnosis, and ≥ 1 previous coronary event.  Motivation, risk and illness perceptions, and low reported need of help to increase PA were significantly associated with self-reported increasing PA level. |
| Dougherty et al.39 | Evaluate QOL, psychological function and self-efficacy outcomes in the Anti-Arrhythmic Effects of Exercise After an ICD trial. | 160 patients, 54.9 ± 12.2 yr, 22.5% female, who received an ICD, 69 of which for primary prevention and 57% for secondary prevention | The exercise group significantly decreased depression severity and improved self-efficacy at 8 wk but no significant effects at 24 wk  Adherent exercisers had significant improvements in QOL, psychological, and self-efficacy outcomes at 8 and 24 wk compared with those who were nonadherent. |
| Edwards et al.40 | Investigate symptoms of PTSD in women who have experienced  SCAD | 14 female SCAD patients, mean age 51 yr who responded to standardized psychosocial questionnaires at a median of 35 mo post-SCAD. | Symptoms included stress (93%), insomnia (57%), anxiety (71%), depression (36%), and PTSD (43%).  Eight of the 11 women who reported having a mental health history indicated that their symptoms were related to having experienced SCAD.  Patterns of perceived control were more similar to those of patients with cancer than other cardiac patients in that SCAD patients ranked “chance” as more likely than “self-control” to impact medical outcomes. |
| Gonzalez-Roz et al.33 | Conduct a systematic review to examine available depression questionnaires and their capability to accurately identify depressed patients and sensitivity to detect changes in depression after receiving cardiac rehabilitation. | 23 studies performed in North America, and compared the performance of depression questionnaires  versus a clinical diagnostic interview for detecting depression  were included. | The BDI-II and the HADS-D are among the most widely used questionnaires.  The BDI-II and the HADS-D showed the best sensitivity and negative predictive values for detecting depression.  The BDI-II, the HADS-D, the Center for Epidemiological Studies—Depression Scale, and the 15-item Geriatric Depression Scale best captured depression changes after cardiac rehabilitation delivery. |
| Abbreviations: ACS, acute coronary syndrome; BDI-II, Beck Depression Inventory-II; BMI, body mass index; CR, cardiac rehabilitation; HADS-D, Hospital Anxiety Depression Scale; ICD, implantable cardioverter-defibrillator; PA, physical activity; PHQ-9, Patient Health Questionnaire-9; PTSD, post-traumatic stress disorder; QOL, quality of life; SCAD, spontaneous coronary artery dissection | | | |