

## Review

**The factors that influence referral to, attendance at and successful completion of exercise schemes and longer term participation in physical activity.**

## APPENDICES

<b>Produced by</b>	Support Unit for Research Evidence (SURE), Cardiff University <a href="http://www.cardiff.ac.uk/insrv/libraries/sure/index.html">http://www.cardiff.ac.uk/insrv/libraries/sure/index.html</a>
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## Appendix A – Evidence Table

Use of terms:

- **Before** = Relating to referral/uptake of ERS [Question 1]
- **During** = Relating to attendance/completion of programme [Question 2]
- **After** = Long term maintenance of activity post ERS [Question 3]

<p><b>Author and year:</b> Beaufort Research 2013</p> <p><b>Study design:</b> Cross-Sectional</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> To better understand public opinion on certain national health improvement programmes, in order to feed into Public Health Wales' Strategy. [Including the Welsh National Exercise Referral Scheme].</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structured interviews</li> <li>• <b>By whom:</b> Research team</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> September 2012</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 1000 respondents (n=312 aware of the ERS); Age ≥18</p> <p><b>What population were the sample recruited from:</b> Adults &gt;16 yrs old, living in Wales.</p> <p><b>How were they recruited:</b> Using the quarterly, nationally representative Wales Omnibus Survey</p> <p><b>How many participants were recruited:</b> 1000</p> <p><b>For client views, were they all completers:</b> Not applicable</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Aged &gt;16 Living in Wales</p> <p><b>Reason for referral of participants:</b> Not applicable</p> <p><b>Referred by:</b> Not applicable.</p>	<p><b>Brief description of method and process of analysis:</b> A total of 1,018 adults representative of the Welsh population were interviewed face-to-face in-home, using CAPI (Computer Aided Personal Interviewing) technology. Responses were analysed quantitatively, method not described.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p><i>Barriers:</i></p> <ul style="list-style-type: none"> <li>• Dislike of gym [general views about ERS]</li> </ul>	<p><b>Limitations (author):</b></p> <p><b>Limitations (review team):</b> CSS; low response rate. Questions not reported as having been piloted or validated. No information on participant recruitment or demographics.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not reported</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
<p><b>Author and year:</b> Beers 2006</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b></p>	<p><b>What was/were the research questions:</b> To gain a deeper understanding of the physical activity behaviour of those who participated in the ERS and those who did not and to explore factors that influenced this behaviour.</p>	<p><b>Description of study participants:</b> UK; Community; 181 (34%); mean age (all participants in scheme) 50.4 years; range 16-79;</p> <p><b>What population were the sample recruited from:</b> Exercise and Life-style Centres (ELC) programme patients.</p> <p><b>How were they recruited:</b></p>	<p><b>Brief description of method and process of analysis:</b> An evaluator-designed postal questionnaire survey of participants, 12-months after the programme finished.</p> <p>A sample of participants from the ELC were also interviewed in order to gain an understanding of the difference between those who took part in the</p>	<p><b>Limitations (author):</b> The ELC exercise advisers were all new exercise physiology graduates who had a narrow focus on fitness and no skills in working with individuals with health problems. Limitations in the data that could be collected and the time</p>

<p>[+]</p>	<p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b></p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Questionnaires and semi-structured interview.</li> <li>Postal survey.</li> <li>• <b>By whom:</b> Exercise programme advisors or researcher.</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 1st October 2001 and 31st January 2002</li> </ul>	<p>Random sampling.</p> <p><b>How many participants were recruited:</b> &gt;4,000 referrals.</p> <p><b>For client views, were they all completers:</b> Not applicable</p> <p><b>Were there specific exclusion criteria:</b> Unstable angina, blood pressure or diabetes. Previous heart attack/angina patients who had not been through rehabilitation.</p> <p><b>Were there specific inclusion criteria:</b> Residents of Wirral, aged &gt;16</p> <p>One or more CHD risk factors. Or - 3 of the following: inactivity, aged &gt;35, smoker, family history of CHD, or stress, anxiety or depression.</p> <p><b>Reason for referral of participants:</b> Obesity (BMI<math>\geq</math>30), hypertension (stable and &lt;180/110), Hypercholestromia (&gt;6.2mmol/L) or diabetes (stable).</p> <p><b>Referred by:</b> GP or health care practitioner</p>	<p>intervention and those who did not.</p> <p>The data were analysed at descriptive level only:</p> <ul style="list-style-type: none"> <li>• the profile of individuals</li> <li>• which individuals were significantly more likely to participate in the intervention, in terms of gender, age and area in relation to medical condition</li> <li>• comparison between those who adhered to the programme and those who dropped out</li> <li>• whether the intervention enabled participants to meet the required levels of physical activity to reduce the risk of CHD</li> <li>• Investigate leisure centre attendance three months post intervention versus general physical activity a year after the intervention</li> </ul> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Intimidating gym before programme</li> <li>• Health concerns before/during</li> <li>• Lack of time for exercise during</li> <li>• Negative effects on general or mental health during</li> <li>• Intimidating/dislike of gym during</li> <li>• Lack of knowledge re gym equipment during</li> <li>• Inconvenient timing of sessions</li> <li>• Distance to travel</li> <li>• Cost after</li> <li>• Lack of professional support after</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Motivation before-programme, including health/fitness/weight loss/social benefits as goal</li> <li>• Health concerns during</li> <li>• Enjoyment of activities</li> <li>• Importance of making time for exercise during</li> </ul>	<p>frame.</p> <p>The evaluation of the ELC was limited by the nature of an applied study.</p> <p><b>Limitations (review team):</b> Good study; data analysed by one researcher only for PhD thesis. Only one programme studied.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Consider others ways of measuring self-efficacy. Explore different options for measuring activity behaviour.</p> <p><b>Funding sources:</b> Not reported</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>
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			<ul style="list-style-type: none"> <li>• Health improvement noted during</li> <li>• Weight loss/tone improvement during</li> <li>• Personal autonomy improvement during</li> <li>• Provider supervision during</li> <li>• Choice of activities during</li> <li>• Tailored provision during</li> <li>• Peer support during</li> <li>• Increased energy/fitness after</li> </ul>	
<p><b>Author and year:</b> Carroll 2002</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [++]</p>	<p><b>What was/were the research questions:</b> To gather information specifically relating to Exercise on Prescription schemes and their actual and potential contribution to the promotion of physical activity in South Asian Muslim women.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Questionnaires and interviews.</li> <li>• <b>By whom:</b> Researchers</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> January 2000</li> </ul>	<p><b>Description of study participants:</b> UK; Community; South Asian Muslim women; 35 participants; 10 GP referrers; 13 providers</p> <p><b>What population were the sample recruited from:</b> Schemes were identified via family health services authority (FHSA) in England, agencies aware of physical activity promotion, health care databases.</p> <p><b>How were they recruited:</b> Theoretical sampling</p> <p><b>How many participants were recruited:</b> 35</p> <p><b>For client views, were they all completers:</b> Not applicable</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Not reported</p> <p><b>Referred by:</b> Self-referral in response to advertising.</p>	<p><b>Brief description of method and process of analysis:</b> Health authorities that had a South Asian population of at least 0.5% were identified and contacted and EoP schemes were identified. An initial questionnaire was sent to the 66 health authorities; then two more detailed questionnaires were sent, one to general practices and the other to leisure centres or agencies carrying out the exercise programmes. The quantitative analysis of the replies was undertaken.</p> <p>South Asian women enrolled on EoP schemes from 5 health authorities were interviewed along with key individuals involved with the EoPs. Theoretical sampling determined the groups of people for interviews. Interview data was analysed using the framework approach (familiarisation, identifying, thematic framework, indexing, charting, mapping and interpretation). Qualitative analysis was completed on the resulting data.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Cost concerns before-programme</li> <li>• Language issues before</li> <li>• Language issues during</li> <li>• Participants' perceptions re safety of location during</li> <li>• Lack of women-only sessions during</li> </ul> <p><i>Referrers</i></p>	<p><b>Limitations (author):</b> Small sample size for interviews with South Asian women.</p> <p>More researchers required to deal with bilingual nature of research.</p> <p><b>Limitations (review team):</b> No additional limitations identified.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Trials with large sample sizes, supported by qualitative methods in the form of in-depth interviews with EoP providers and recipients, and, possibly, participant observation.</p> <p><b>Funding sources:</b> HTA</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>

			<p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of engagement (paperwork needed before)</li> <li>• Perceived lack of patient motivation</li> <li>• Low priority</li> <li>• Lack of awareness of schemes</li> <li>• Concerns around legal responsibility/inappropriate referral</li> <li>• Distance to travel (for participants)</li> <li>• Perceived safety of location</li> </ul> <p>Providers</p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Language issues before</li> <li>• Failure to consider holy days during</li> <li>• Distance to travel during</li> <li>• Lack of women-only sessions during</li> <li>• Language issues during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Local provision of activities during</li> </ul>	
<p><b>Author and year:</b> Clarke 1996</p> <p><b>Study design:</b> CSS &amp; Longitudinal</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> To examine the application of key constructs (stages of change, self-efficacy, decisional balance) of the Trans theoretical Model to exercise behaviour in UK community samples.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Surveys and semi-structured interviews.</li> <li>• <b>By whom:</b> Health &amp; Fitness Advisors.</li> </ul>	<p><b>Description of study participants:</b> UK; Community; <i>Cross sectional sample</i> 391; mean age 45.1 years, SD 14.0, 69.5% F. <i>Longitudinal sample</i> 109; mean age 47.5, SD 14.8, 69% F 40% social class IV/V</p> <p><b>What population were the sample recruited from:</b> Patients that GP felt would benefit from 3 months exercise on prescription programme.</p> <p><b>How were they recruited:</b> Discussion &amp; assessment with GP or practice nurse.</p> <p><b>How many participants were recruited:</b> CSS: 391, Longitudinal: 109</p> <p><b>For client views, were they all completers:</b> Only uses completer data sets for analysis</p> <p><b>Were there specific exclusion criteria:</b> Angina, BP&gt;160/102, unstable Insulin</p>	<p><b>Brief description of method and process of analysis:</b></p> <p><b>CSS:</b> Recruited patients had to complete a stage of change questionnaire with their GP and then the following surveys during a 1hr semi-structured interview with the programme advisor:</p> <ul style="list-style-type: none"> <li>• decisional balance scale</li> <li>• self-efficacy scale</li> <li>• CSEBQ (revised) survey</li> </ul> <p>Demographic and lifestyle behavioural data was recorded and a fitness assessment completed.</p> <p>At the end of the 3 month programme, patients had to complete the same questionnaires and surveys (stage of change questionnaire, decisional balance scale, self-efficacy scale, CSEBQ (revised) survey).</p>	<p><b>Limitations (author):</b> There are limitations of multidimensional scaling techniques.</p> <p><b>Limitations (review team):</b> Good study; however data analyses completed by one researcher only for PhD thesis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Use assessment materials that have been evaluated with ACSM exercise guidelines. Employ staging algorithms that parallel classic trans theoretical models. Use a larger sample size and follow up on non-completers.</p> <p><b>Funding sources:</b></p>

	<p>• <b>What setting(s):</b> UK; Community</p> <p>• <b>When:</b></p>	<p>dependent diabetes, established cerebrovascular disease or MI in last 6 months.</p> <p><b>Were there specific inclusion criteria:</b> Aged 15-74, having 2 or more risk factors for CHD, suffering from mild/controlled asthma, chronic bronchitis, controlled diabetes, onset osteoporosis, borderline hypertensive, sedentary lifestyle.</p> <p><b>Reason for referral of participants:</b> Improve health, manage pre-existing health issues.</p> <p><b>Referred by:</b> GP</p>	<p>6 months post intervention patients were re-surveyed. All data was analysed using statistical methods including frequency and principle component analysis.</p> <p><b>Longitudinal:</b> This part of the study focused on patients that were referred due to sedentary lifestyle behaviour. They completed both the initial and 6 month follow up questionnaires and surveys. All data was analysed using statistical methods including frequency and multivariate analyses of variance.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i> Facilitators:</p> <ul style="list-style-type: none"> <li>• Increased physical activity after programme</li> </ul>	<p>University of Birmingham</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>
<p><b>Author and year:</b> Cock 2006</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> To investigate the factors affecting retention rates in ERSs.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <p>• <b>What method(s):</b> Postal questionnaire, semi-structured interviews and focus groups.</p> <p>• <b>By whom:</b> Researcher</p> <p>• <b>What setting(s):</b> UK; Community</p> <p>• <b>When:</b> Not reported</p>	<p><b>Description of study participants:</b> UK; Community; <i>Client questionnaire:</i> 1024 [33% response]</p> <p><i>Providers:</i> 10 interviews, 5 focus groups (attendance unstated, 3-7 per group)</p> <p><b>What population were the sample recruited from:</b> Clients of 5 ERS Programmes.</p> <p><b>How were they recruited:</b> Postal questionnaire sent out to all participants of the ERS schemes (3,117)</p> <p><b>How many participants were recruited:</b> 1024 clients</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Health, weight-loss, no specific criteria.</p> <p><b>Referred by:</b></p>	<p><b>Brief description of method and process of analysis:</b> Modified versions of SERVQUAL – REFERQUAL were distributed to clients of 5 selected ERS programmes. The data were gathered using mean scores and analysed by cross tabulation with the demographic factors. ANOVA methodology was then employed. The resulting data informed focus groups and interviews that were arranged with scheme organizers and exercise professionals. Qualitative data was collected and analysed using NUDIST to generate themes which were cross indexed and the qualitative data was interwoven with quantitative statistics.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i> Barriers:</p> <ul style="list-style-type: none"> <li>• Perceptions of intimidating gym before programme</li> <li>• Participants' perceptions re safety of location during</li> <li>• Distance to travel during</li> <li>• Intimidating gym/dislike of equipment during</li> </ul>	<p><b>Limitations (author):</b> The number of ANOVAs utilised resulted in a degree of type 1 errors. Self-reporting inconsistencies regarding programme adherence. REFERQUAL dimension labelling.</p> <p><b>Limitations (review team):</b> Information on questions used not described therefore not validated/piloted. Does not use formal thematic analysis. Data analyses completed by a single researcher only for PhD thesis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Investigate the dimensionality of REFERQUAL.</p> <p><b>Funding sources:</b> University of Central Lancashire.</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>

		GP or healthcare practitioner.	<ul style="list-style-type: none"> <li>• Music during not to taste</li> <li>• Poor environment for activities (waiting times for equipment, shabbiness, cold pool) during</li> <li>• Inconvenient timing/lack of flexibility in timing of sessions during</li> <li>• Lack of support from providers during/after</li> <li>• Lack of social support after</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Provider support as aid to motivation during</li> <li>• Enjoyment of activities during</li> <li>• Physical benefits of activities during</li> <li>• Support from spouse/partner during</li> <li>• Peer support during</li> <li>• Desirable outcomes: physical fitness, increased physical activity during</li> <li>• Music during decreasing anxiety/boredom</li> <li>• Support from providers during</li> <li>• Non gym options (swimming) during</li> <li>• Tailored provision during</li> </ul> <p><i>Referrers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Referral as low priority for GPs</li> </ul> <p><i>Providers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Dislike of gym equipment (older participants) during</li> <li>• Poor environment for activities (due to budget constraints) during</li> <li>• Lack of time/skill set to support participants (resource limitations) during</li> <li>• Participant over dependence on support during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Support for participants during</li> <li>• Tailored provision during</li> </ul>	
<b>Author and year:</b> Crone 2002, 2005	<b>What was/were the research questions:</b> Investigate the relationship	<b>Description of study participants:</b> UK; Community; 18; mean age 55.5 years;	<b>Brief description of method and process of analysis:</b> Purposive sampling used. Pre- and post-	<b>Limitations (author):</b> Study design was hindered by the differences between

<p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p>between physical activity and mental from the perspective of the participants who experience it within exercise referral schemes.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Grounded theory</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Focus groups and semi-structured interviews</li> <li>• <b>By whom:</b> Not reported but indicates researcher.</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not provided</li> </ul>	<p>M = 5, F = 13</p> <p><b>What population were the sample recruited from:</b> Participants of ERS at local authority leisure centre.</p> <p><b>How were they recruited:</b> Purposive sampling</p> <p><b>How many participants were recruited:</b> 18</p> <p><b>For client views, were they all completers:</b> Not stated, but appears so</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Address normal physical health concerns.</p> <p><b>Referred by:</b> GP</p>	<p>intervention interviews were conducted and then a respondent from each study selected for in-depth interviewing. Interviews were audio-taped and transcribed verbatim followed by coding and analysed using the grounded theory method.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Intimidating gym before/during programme (including image concerns)</li> <li>• Concerns re gym equipment before/during</li> <li>• Music in gym (not liked) during</li> <li>• Poor quality of facilities during (however, mixed views on whether a deterrent)</li> </ul> <p><i>Facilitators:</i></p> <ul style="list-style-type: none"> <li>• Weight loss/social inclusion as before-programme goals</li> <li>• Peer support/social engagement during</li> <li>• Satisfaction with willpower during</li> <li>• Benefits from programme – mental health/general health/physical fitness after</li> <li>• Friendly/similar fellow gym users during</li> <li>• Separate sessions for ERS during</li> <li>• Music in gym (as distraction) during</li> <li>• Supervision by providers during</li> <li>• Variety of activities on offer during</li> <li>• Exercise companion during</li> <li>• Increased energy/fitness after</li> </ul> <p><i>Providers</i></p> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Separate sessions for ERS during</li> </ul>	<p>schemes regarding the recruitment and acceptance of patients. Researcher's theoretical background in the sport and exercise sciences.</p> <p><b>Limitations (review team):</b> Good study but analysis by a single researcher only for a PhD thesis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Further research required investigating physical activity in a wider range of settings and social contexts.</p> <p><b>Funding sources:</b> Not reported, based on PhD studentship at University of Gloucestershire.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>
<p><b>Author and year:</b> Cummings 2010</p> <p><b>Study design:</b> CSS</p>	<p><b>What was/were the research questions:</b> Investigate and determine the exercise adherence patterns in post programme clients.</p>	<p><b>Description of study participants:</b> UK; Community; not reported; 54.8 ± 15.7; M = 104, F = 106</p> <p><b>What population were the sample</b></p>	<p><b>Brief description of method and process of analysis:</b> A descriptive, qualitative survey questionnaire was posted or issued in person to programme graduates. Raw data were converted to</p>	<p><b>Limitations (author):</b> None stated.</p> <p><b>Limitations (review team):</b> CSS; A fair study but questions</p>

<p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p>Evaluate clients' perceptions with regard to programme training conditions, namely, supervision, scheduled sessions and attendance as part of a group.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not reported</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Descriptive, qualitative survey questionnaire, follow up oral interview.</li> <li>• <b>By whom:</b> Not reported</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Before January 2009</li> </ul>	<p><b>recruited from:</b> "Exercise for Health Programme" graduates.</p> <p><b>How were they recruited:</b> Randomly selected using a random number generator.</p> <p><b>How many participants were recruited:</b> 200</p> <p><b>For client views, were they all completers:</b> 85% completion rate</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Broad range of clinical conditions: Cardiac rehabilitation, metabolic conditions, mental health , orthopaedic, hypertension</p> <p><b>Referred by:</b> Not reported</p>	<p>percentages and represented in graphical form. A follow up telephone interview and oral questionnaire was carried out on 10% of non-respondents to ascertain whether their responses differed from the initial responders.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Supervision from providers during</li> <li>• Social engagement with peers during</li> <li>• General health benefits as outcome during/after</li> </ul>	<p>not reported as having been piloted or validated.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Investigate what modalities of exercise referral scheme can best facilitate positive outcome.</p> <p><b>Funding sources:</b> Probably Armagh City and District Council and the Public Health Agency.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>
<p><b>Author and year:</b> Day 2001</p> <p><b>Study design:</b> CSS</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> Evaluate the Scottish Borders General Practitioners Exercise Referral Scheme (GPERS) after 5 years of its initiation.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not reported</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structured postal questionnaire.</li> <li>• <b>By whom:</b> Programme coordinator</li> </ul>	<p><b>Description of study participants:</b> UK; Community ;324</p> <p><b>What population were the sample recruited from:</b> "Exercise for Health Programme" graduates.</p> <p><b>How were they recruited:</b> Randomly selected using a random number generator.</p> <p><b>How many participants were recruited:</b> 129 of 324</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p>	<p><b>Brief description of method and process of analysis:</b> All 324 referred members of GPERS that were still alive and living in the areas were contacted in 1999 and were sent a semi-structured questionnaire. 40% were returned and the data were analysed as percentages as to the current frequency of activity, comparative frequency with pre-GPERS as well as other related topics.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Social engagement during programme</li> <li>• Mental health improvements during/after</li> <li>• Increased physical activity during/after</li> <li>• Weight loss/improved tone during/after</li> </ul>	<p><b>Limitations (author):</b> Moderately low response rate.</p> <p><b>Limitations (review team):</b> CSS; Questionnaire development methodology not reported. No report on validation or piloting. Low response rate, possibility biased to enthusiasts. No data on patient demographics.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None reported</p> <p><b>Funding sources:</b></p>

	<ul style="list-style-type: none"> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 1994-1996</li> </ul>	<p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Well but inactive</p> <p>Well-controlled disease (physical and mental)</p> <p><b>Referred by:</b> GP</p>		<p>Primary Care Development Fund of the Scottish Office.</p> <p><b>Applicable to UK?</b> (if appropriate): Yes</p>
<p><b>Author and year:</b> Fox 1997</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> To provide some insight into critical factors associated with the successful initiation and operation of schemes.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Postal survey or semi-structured telephone interviews. Scheme case studies (site visits/interviews with key personnel).</li> <li>• <b>By whom:</b> Researchers</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Prior to April 1994</li> </ul>	<p><b>Description of study participants:</b> UK; Community;</p> <p><b>What population were the sample recruited from:</b> Schemes were identified via family health services authority (FHSA) in England, agencies aware of physical activity promotion, health care databases.</p> <p><b>How were they recruited:</b> Contacted FHSA, identified all known primary care facilitators and requests for help made to professional journals.</p> <p><b>How many participants were recruited:</b> 157 existing schemes identified.</p> <p><b>For client views, were they all completers:</b> Not applicable</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Not reported</p> <p><b>Referred by:</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b> Existing schemes were identified and either postal surveys or 30-40min telephone interviews were conducted. A sample of 50 schemes was selected operating in different types of locality (inner city, suburban and rural), using different models of intervention (GP managed (patients directed to local community-based exercise classes), practice managed (patients directed to local community-based exercise classes) or leisure centre managed). Site visits were arranged as well as thematic interviews with key personnel for each of the schemes selected to use as basis for case studies.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Referrers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of awareness of schemes</li> </ul> <p><i>Providers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Moving from subsidised to full cost after programme for participants</li> <li>• Intimidating gym</li> <li>• Support from peers</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Support from peers</li> </ul>	<p><b>Limitations (author):</b> None stated</p> <p><b>Limitations (review team):</b> Lacking description of research design. Data collection/analysis methodology not described. No context or triangulation. Opportunistic sampling implied, potentially highly selective.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated.</p> <p><b>Funding sources:</b> Not reported</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>

			<ul style="list-style-type: none"> <li>Participants noting improved looks/appearance as outcome</li> </ul>	
<p><b>Author and year:</b> Goodman 2011</p> <p><b>Study design:</b> CSS</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> What is the current level of nurse led involvement in activity promotion for older people in primary care? What are the knowledge and attitudes of primary care nurses about health benefits of activity promotion for older people?</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not reported</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li><b>What method(s):</b> Semi structured questionnaire</li> <li><b>By whom:</b> Researcher</li> <li><b>What setting(s):</b> UK; setting not reported</li> <li><b>When:</b> Not provided</li> </ul>	<p><b>Description of study participants:</b> UK; Setting not reported; Urban; 521;</p> <p><b>What population were the sample recruited from:</b> All nurses and health visitors working in five primary care organisations in an inner city area.</p> <p><b>How were they recruited:</b> Clinical Service Managers or the Practice Development Nurses of each participating PCT.</p> <p><b>How many participants were recruited:</b> 521 responded, 515 completed and were analysed but only 391 discussed in report.</p> <p><b>For client views, were they all completers:</b> 515 of 521 responders completed.</p> <p><b>Were there specific exclusion criteria:</b> Clinical nurse specialists working with particular patient groups e.g. palliative care nurses, continence nurses and mental health nurses.</p> <p><b>Were there specific inclusion criteria:</b> Regular contact with older people as part of everyday work.</p> <p><b>Reason for referral of participants:</b> Not applicable.</p> <p><b>Referred by:</b> Not applicable.</p>	<p><b>Brief description of method and process of analysis:</b> Relevant nurses working in primary care within the boundaries of the five primary care trusts (PCTs) were identified and invited to participate. Questionnaire was posted out with a stamped addressed envelope. Responses were coded and statistically analysed using SPSS or content analysis.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Referrers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>Lack of awareness of schemes</li> <li>Concerns about effects on participants' health</li> <li>Lack of skill sets for providers working with older people</li> </ul>	<p><b>Limitations (author):</b> None reported</p> <p><b>Limitations (review team):</b> CSS; Fair study, survey was piloted but not validated.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> 54% response rate. Exclusion of specialist community nurses working with particular older patient groups could lead to under reporting. Urban, high density context.</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
<p><b>Author and year:</b> Graham 2005, 2006</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Investigating the exercise referral process from the health professional's perspective, examining perceived barriers to referral, priority given to an ERS in day-to-day consultations,</p>	<p><b>Description of study participants:</b> UK; Community and Primary Care; urban; 71; M and F</p> <p>Interviews: 12 (M=6, F=6)</p> <p><b>What population were the sample recruited from:</b> GP's and other healthcare professionals.</p> <p><b>How were they recruited:</b></p>	<p><b>Brief description of method and process of analysis:</b> A questionnaire survey was mailed to all GPs in 52 practices. Data were entered into SPSS and quantified using counts. Health professionals volunteered for interview in response to the postal questionnaire using a tick box. Interviews were conducted privately in the primary health care setting and were recorded and transcribed</p>	<p><b>Limitations (author):</b> Small sample size due to low rate of referral from healthcare practitioners.</p> <p><b>Limitations (review team):</b> Good study but analysis by a single researcher only for a PhD thesis.</p>

	<p>perceived importance of their role in the process and referring practices.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Postal survey and semi-structured interview</li> <li>• <b>By whom:</b> Researcher</li> <li>• <b>What setting(s):</b> UK; majority in a community setting but some primary care-based</li> <li>• <b>When:</b> Not provided</li> </ul>	<p>Specific questionnaire sent out to all GP's registered in the borough.</p> <p><b>How many participants were recruited:</b> 71 GP's completed the questionnaire. 10 GP's and 2 practice nurses interviewed.</p> <p><b>For client views, were they all completers:</b> Not applicable</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Not applicable.</p> <p><b>Referred by:</b> Not applicable.</p>	<p>verbatim. Transcripts were analysed by topic for key theme development using content analysis techniques.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Health concerns before programme</li> <li>• Lack of motivation before/during</li> <li>• Intimidating gym before/during (poor body image)</li> <li>• Lack of professional support after</li> <li>• Losing habit of exercise after</li> <li>• Loss of social support after</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Health/fitness goals before programme</li> <li>• Support from spouse before/during</li> <li>• Support from providers (re safe exercise) during</li> <li>• Enjoyment/engagement with peers during</li> <li>• Health outcomes from programme (mental health/general health/physical fitness/weight loss &amp; tone during/after</li> </ul> <p><i>Referrers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Responsibility/paper work for referral</li> <li>• Low priority for GPs</li> <li>• Lack of awareness about schemes</li> <li>• Lack of motivation by clients before/during</li> <li>• Concerns around legal responsibility</li> <li>• Lack of feedback from schemes about clients referred (NB not recognised as important by providers)</li> <li>• Cost for participants</li> </ul> <p><i>Providers</i></p> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Having necessary skill set during</li> </ul>	<p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
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<p><b>Author and year:</b> Hardcastle 2001, 2002 (thesis), 2005</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> To extend understanding of referred older women's past and present experiences of physical activity and what blocks of motivates them to be active.</p> <p>How women change perceptions of their self and identity in response to ER programme. (2005)</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Interpretivist</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Unstructured interview and life story</li> <li>• <b>By whom:</b> Hardcastle</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not provided</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 15; 50-80 yrs; all female (2001)</p> <p>UK; Community; 23; 43-80 yrs; all female (2002)</p> <p>UK; Community; 8; 43-77 yrs; all female (2005)</p> <p><b>What population were the sample recruited from:</b> Participants of ERS at leisure centre</p> <p><b>How were they recruited:</b> Opportunistic sampling</p> <p><b>How many participants were recruited:</b> 23</p> <p><b>For client views, were they all completers:</b> 12 completed</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Various health concerns; Not specified for all individuals.</p> <p><b>Referred by:</b> GP &amp; self-referrals</p>	<ul style="list-style-type: none"> <li>• Tailored exercise programmes during</li> </ul> <p><b>Brief description of method and process of analysis:</b> Opportunistic sampling. Interviews conducted by first author which lasted 20-40 mins at 5 (mid - point) and 10 (end point) weeks of programme. Interviews were audio-taped and transcribed verbatim followed by coding and generation of themes.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of motivation before/during programme</li> <li>• Intimidating gym before/during</li> <li>• Health concerns during</li> <li>• Lack of time during</li> <li>• Outcomes from ERS - better mental health/general health/weight loss or tone/increased physical activity/better looks/increase personal autonomy/increase knowledge during/after</li> <li>• Cost during (including travel cost)</li> <li>• Inconvenient timing of sessions during</li> <li>• Cost after (for going rate following subsidised ERS)</li> <li>• Losing habit of exercise after</li> </ul> <p><i>Facilitators</i></p> <ul style="list-style-type: none"> <li>• Goals before programme - improved health/improved fitness/weight loss/improved appearance/social inclusion</li> <li>• Motivational support from staff before/during</li> <li>• Enjoyment of activities during</li> <li>• Support of spouse during</li> <li>• Similar peers during</li> <li>• Music as distraction during</li> <li>• Professional support during</li> <li>• Offering alternative activities during (yoga)</li> <li>• Tailored exercise schedule during</li> <li>• Peer support/social engagement during</li> </ul>	<p><b>Limitations (author):</b> Most participants were self-referrals.</p> <p><b>Limitations (review team):</b> Very good study but analysis by a single researcher only for a PhD thesis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> More research is needed to explore the extent to which people increase their lifestyle physical activity (following an exercise referral) and whether these changes are sustained over time.</p> <p><b>Funding sources:</b> Post-graduate support provided by University of Brighton</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>
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			<ul style="list-style-type: none"> <li>Habit of exercise after</li> </ul>	
<p><b>Author and year:</b> Joyce 2010</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> To explore patients' experiences of Condition Management Programmes (CMPs) in terms of health, well-being &amp; employability.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li><b>What method(s):</b> Focus groups &amp; semi-structured interviews</li> <li><b>By whom:</b> Researchers</li> <li><b>What setting(s):</b> UK; Community</li> <li><b>When:</b> Not provided</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 25; GP exercise referral 5; 3F 2M; 4/5 were 50 years +</p> <p><b>What population were the sample recruited from:</b> Participants of CMPs</p> <p><b>How were they recruited:</b> By intervention leaders</p> <p><b>How many participants were recruited:</b> 25 (no. for GP exercise referral unknown)</p> <p><b>For client views, were they all completers:</b> Not specified</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> To facilitate return to work</p> <p><b>Referred by:</b> GP (for exercise referral)</p>	<p><b>Brief description of method and process of analysis:</b> Four focus groups and 9 semi-structured interviews which were audio-recorded and anonymised. Focus groups (used for GPR) lasted between 30 &amp; 60mins and attended by 2 researchers. Thematic analysis undertaken and facilitated by Atlas TI. Themes checked for consistency between authors, discrepancies discussed by whole team</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>Scheduling of activities during</li> <li>Lack of professional support after</li> </ul> <p><b>Facilitators:</b></p> <ul style="list-style-type: none"> <li>Peer support during</li> <li>Health outcomes during- mental health/general health</li> <li>Social engagement/enjoyment during</li> </ul>	<p><b>Limitations (author):</b> Context specific and captured the views of only those individuals who agreed to participate. Participants were recruited through project coordinators, may have resulted in selection bias.</p> <p><b>Limitations (review team):</b> Minimal data from a single context. Small sample size, no triangulation.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Sedgefield Local Strategic Partnership</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>
<p><b>Author and year:</b> Khanam 2008</p> <p><b>Study design:</b> CSS</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Investigate the attitudes and beliefs held by UK Bangladeshi women on health and exercise and explore possible ways of increasing levels of physical activity in this group.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li><b>What method(s):</b></li> </ul>	<p><b>Description of study participants:</b> UK; Community; Urban; 25; 30-60; Mean age 47.3 (SD 9.1): F; Bangladeshi; Muslim</p> <p><b>What population were the sample recruited from:</b> Participants of ERS at local leisure centre and local mosque.</p> <p><b>How were they recruited:</b> Opportunistic sampling.</p> <p><b>How many participants were recruited:</b> 25</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b></p>	<p><b>Brief description of method and process of analysis:</b> Opportunistic sampling used. Interview-guided questionnaires were facilitated by first author in English and Sylheti. The interview lasted 20-30minutes and was conducted in a private room prior to their scheduled workout session. During the interview height and weight measurements were recorded and body mass index (BMI) was calculated for each subject. The responses to the interview-guided questionnaire and physical characteristics were expressed as percentages and analysed for key themes.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p>	<p><b>Limitations (author):</b> None stated</p> <p><b>Limitations (review team):</b> CSS; Fair study but limited description of recruitment methodology. Response rate unclear.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>

	<p>Interview guided questionnaire</p> <ul style="list-style-type: none"> <li>• <b>By whom:</b> Khanam</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not provided</li> </ul>	<p>Not reported.</p> <p><b>Were there specific inclusion criteria:</b> Not reported.</p> <p><b>Reason for referral of participants:</b> Obesity, metabolic syndrome, risk of type 2 diabetes and high blood pressure.</p> <p><b>Referred by:</b> GP referral.</p>	<p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of support from family/friends before/during programme</li> <li>• Language problems before/during</li> <li>• Inappropriate/disliked music during</li> <li>• Distance to/difficulties with travel during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Choice of other activities (yoga, walking) during</li> <li>• Women only sessions during</li> <li>• Social engagement/enjoyment during</li> </ul>	
<p><b>Author and year:</b> Lord 1995</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> Investigation of 2 important questions that arose from Exercise on Prescription Scheme study: Do people turn up? Are people healthier having been prescribed exercise?</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Questionnaires; focus group discussions and semi-structured interviews.</li> <li>• <b>By whom:</b> Primary researcher and study steering group</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 1992</li> </ul>	<p><b>Description of study participants:</b> UK; Community; Urban; 252; under 30 – over 55 years; 198-F/53-M/1-Unknown; socially deprived area.</p> <p>27 participants randomly selected for focus group; interviews with 7 providers, 6 referrers.</p> <p><b>What population were the sample recruited from:</b> Participants and GP's being referred or referring to an ERS.</p> <p><b>How were they recruited:</b> Through the community health and fitness officer.</p> <p><b>How many participants were recruited:</b> 252 – participants and 6 – GP's</p> <p><b>For client views, were they all completers:</b> Of the 252 participants only 64 completed 6 month programme</p> <p><b>Were there specific exclusion criteria:</b> Not reported.</p> <p><b>Were there specific inclusion criteria:</b> Not reported.</p> <p><b>Reason for referral of participants:</b> Various physical and psychological health issues.</p>	<p><b>Brief description of method and process of analysis:</b> Questionnaires were distributed through the community health and fitness officer at various stages of the 6 month scheme. Exercise prescriptions were obtained from the GP and filled out by the community health and fitness officer. Random selections of 27 participants were invited to attend focus groups with the primary researcher or the study steering group. A series of semi-structured interviews were completed with GP's who were initially involved in the scheme that were conducted by the steering group. All data were analyses using SPSS and key themes identified.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Exacerbation of health problems during</li> <li>• Inconvenient timing of sessions during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• General health benefits noted during</li> <li>• Peer support during</li> <li>• Engagement/enjoyment during</li> </ul>	<p><b>Limitations (author):</b> Not able to follow the trends in physical and mental health indicators for those early drop outs. No clear means of measuring if ERS is responsible for the improvement or if they would have improved on their own.</p> <p><b>Limitations (review team):</b> Not information regarding method of data collection or analysis techniques.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> North Western Regional Health Authority, with contributions from Leisure Services and Stockport Health Commission.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>

		<b>Referred by:</b> GP referral.		
<p><b>Author and year:</b> Markland 2010</p> <p><b>Study design:</b> CSS</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Examine the relations between perceptions of need support provided by exercise facility practitioners and clients' behavioural regulations for exercise among individuals in an exercise referral scheme. Determine whether these relations are mediated differentially by satisfaction of the needs for competence, autonomy and relatedness.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Posted questionnaire packs.</li> <li>• <b>By whom:</b> Researchers</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not provided</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 136; age 23-80 (mean age 54.5; SD 12.9); all female.</p> <p><b>What population were the sample recruited from:</b> Participants of GP referred ERS</p> <p><b>How were they recruited:</b> Request for participant information from leisure centres.</p> <p><b>How many participants were recruited:</b> 136, data shown for 133 due to exclusion criteria</p> <p><b>For client views, were they all completers:</b> Yes, participants with missing data were excluded.</p> <p><b>Were there specific exclusion criteria:</b> Participants with missing data.</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Not specified. (BMI data indicates all participants were either overweight or obese.)</p> <p><b>Referred by:</b> GP (for exercise referral)</p>	<p><b>Brief description of method and process of analysis:</b> All former female exercise referral scheme clients identified were contacted by post with a series of questionnaires indicating measures of need support provided by their exercise practitioners (panel of six doctoral level judges assessed and approved the content validity and comprehensibility), satisfaction of the psychological needs for autonomy (Locus of Causality for Exercise Scale), competence (Intrinsic Motivation Inventory) and relatedness (panel of judges as above), and behavioural regulations for exercise (Behavioural Regulation in Exercise Questionnaire-2). All questionnaires were scores on a four point scale (0-4: Not true for me – Very true for me). In addition to this current physical activity was measured using a modification of the Leisure Time Exercise Questionnaire). Principal component analysis was then conducted on the resulting data using a macro to determine both the total indirect and specific indirect effects through each mediator. Finally using the bootstrapping method estimates for the total and specific indirect effects and effect contrasts, together with their standard errors and bias corrected and accelerated 95% confidence intervals were generated.</p> <p><b>Key themes relevant to this review:</b>  No themes in ES or associated text</p>	<p><b>Limitations (author):</b> Data were based on retrospective reports. The response rate was relatively low Only women were included in the study. Measures of need support and relatedness were developed using the same sample as the main analyses.</p> <p><b>Limitations (review team):</b> CSS; Fair study. Questionnaire was validated but not piloted. No information provided on recruitment methods.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not reported</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
<p><b>Author and year:</b> Martin 1999</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b></p>	<p><b>What was/were the research questions:</b> Examine the characteristics of men and women who embarked upon a 10-week general practitioner (GP) referral exercise prescription</p>	<p><b>Description of study participants:</b> UK; Community; 77; 53yrs average age; 28 – M/39 – F;</p> <p><b>What population were the sample recruited from:</b> Participants of ERS at 'Shapes Fitness Studio'.</p>	<p><b>Brief description of method and process of analysis:</b> Of the 490 participants that were contactable by telephone, a random selection of 60 individuals that finished the programme and 60 that did not complete the programme were identified and their assistance was requested.</p>	<p><b>Limitations (author):</b> Crude evaluation methodology.</p> <p><b>Limitations (review team):</b> Fair study but only looked at one programme. Written notes rather than recorded interviews, data may have been</p>

<p>[+]</p>	<p>programme and to compare those who completed a 10-week programme of exercise (Finishers) with those who failed to complete (Non-finishers).</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Case note reviews and semi-structured interviews</li> <li>• <b>By whom:</b> Independent interviewer</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> January 1994 – December 1997</li> </ul>	<p><b>How were they recruited:</b> Opportunistic sampling</p> <p><b>How many participants were recruited:</b> 884 recruited to ERS but only 77 participants' data selected for review.</p> <p><b>For client views, were they all completers:</b> No, data from 42 completers and 35 non-completers were analysed.</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Contactable by telephone.</p> <p><b>Reason for referral of participants:</b> Immediate family history of CHD/Stroke</p> <p>Current/past smoker</p> <p>Lipid profiles.</p> <p>Blood pressure</p> <p>BMI</p> <p><b>Referred by:</b> GP or practice nurse</p>	<p>Of this selection, 42 finishers and 35 non finishers agreed to complete the telephone interviews and the responses were recorded by hand, the results were analysed by 2 independent researchers to identify the key themes of interest and coded accordingly. These were prepared as an analysis grid.</p> <p>GP case notes were requested, data extracted and documented for grid analyses alongside the key themes.</p> <p>Statistical analysis (ANOVA) was completed to determine baseline pre-intervention CHD risk factor differences between the 2 groups and GLM was also employed to determine any gender effect upon the measured factors between the 2 groups.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Health concerns before/during</li> <li>• Lack of motivation before/during/after</li> <li>• Intimidating gym before/during</li> <li>• Dislike of music during</li> <li>• Concerns around gym equipment during</li> <li>• Travel problems during</li> </ul> <p><i>Facilitators:</i></p> <ul style="list-style-type: none"> <li>• Support from spouse during</li> <li>• Increased knowledge during</li> <li>• Professional supervision during</li> <li>• Tailored exercise schedule during</li> <li>• Working within a group during</li> </ul>	<p>lost. No triangulation with other methods.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not specified</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>
<p><b>Author and year:</b> Mills 2008, 2012</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b></p>	<p><b>What was/were the research questions:</b> To explore and reveal the constituents of "success," through comparison, contradiction, and integration of qualitative and quantitative research findings.</p>	<p><b>Description of study participants:</b> UK; Community; Participant focus group (17; 13 W, 4M; mean age 54.7 (SD 12.4); range 31-68). Facilitator interviews (4; mean age 33.5 (SD 9.63) Interviews with referrers (7; 1M 6F; 2 doctors, 6 nurses) + providers (4).</p> <p><b>What population were the sample</b></p>	<p><b>Brief description of method and process of analysis:</b> Consented participants were invited to attend a focus group along with 4-6 others, facilitated by the researcher. Sessions lasted 40-60 mins and were audio-taped and transcribed verbatim.</p> <p>Consented facilitators were interviewed for 30-40 mins using semi-structured questions. Interviews</p>	<p><b>Limitations (author):</b> Retrospective recording of patient attendance. Limited ethnic diversity of patients. Large proportion of missing data.</p>

<p>[+]</p>	<p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Grounded theory</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Focus groups with participants, interviews with referrers</li> <li>• <b>By whom:</b> Mills</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not reported</li> </ul>	<p><b>recruited from:</b> Selective sampling of patients (invited by letter).</p> <p><b>How many participants were recruited:</b> Not reported</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Not reported</p> <p><b>Referred by:</b> Healthcare provider</p>	<p>were recorded and fully transcribed.</p> <p>Telephone interviews were conducted with referrers using semi-structured questions; interview was recorded (fully transcribed) and lasted approximately 10mins.</p> <p>All transcripts were analysed through the process of open, axial coding, memoing, and the formation of a conceptual framework. Qualitative analysis was conducted using NVivo.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Health concerns during</li> <li>• Cost during</li> <li>• Intimidating gym before/during</li> <li>• Inconvenient timing of sessions during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Health concerns during (as motivator)</li> <li>• Enjoyment during</li> <li>• Physical benefits noted during</li> <li>• Reduced cost/subsidised facilities during</li> <li>• Outcomes noted during - improved mental health/physical fitness/weight loss or better tone/ improved personal autonomy/looks &amp; appearance/knowledge</li> <li>• Similar gym users during</li> <li>• Support from providers during</li> <li>• Choice of activities during</li> <li>• Tailored exercise schedule during</li> <li>• Social engagement/enjoyment during</li> </ul> <p><i>Referrers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of motivation before/during/after</li> <li>• Lack of engagement with ERS</li> <li>• Lack of awareness of ERS</li> <li>• Lack of feedback from ERS concerning clients referred</li> <li>• Concerns around legal</li> </ul>	<p>Limited sample size in the qualitative study.</p> <p><b>Limitations (review team):</b> Good study but analysis by a single researcher.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Research into the long term outcomes of participation.</p> <p><b>Funding sources:</b> Greenwich Leisure Ltd, Greenwich Primary Care Trust, Woolwich Development Agency..</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>
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			responsibility/inappropriate referral <ul style="list-style-type: none"> <li>• Perceived safety of location during <i>Providers</i></li> </ul> Barriers: <ul style="list-style-type: none"> <li>• Concerns around legal responsibility/inappropriate referral</li> </ul> Facilitators: <ul style="list-style-type: none"> <li>• Outcomes noted during - improved knowledge/looks &amp; appearance/physical fitness</li> <li>• Scheduling sessions off-peak to reduce intimidation</li> </ul>	
<b>Author and year:</b> Morton 2008 <b>Study design:</b> CSS <b>Quality score: (inc external validity for surveys)</b> [+]	<b>What was/were the research questions:</b> Is self-determined motivation fostered through an ERS? Are patients motives related to their exercise adherence? <b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not reported <b>How were the data collected:</b> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> .</li> <li>• <b>By whom:</b> Not reported</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b></li> </ul>	<b>Description of study participants:</b> UK; Community; 30; 51.9yrs mean; M = 8, F = 22. <b>What population were the sample recruited from:</b> Not reported <b>How were they recruited:</b> Not reported <b>How many participants were recruited:</b> 30 <b>For client views, were they all completers:</b> Of the 30, 7 dropped out <b>Were there specific exclusion criteria:</b> Not reported <b>Were there specific inclusion criteria:</b> Not reported <b>Reason for referral of participants:</b> Not reported <b>Referred by:</b> Not reported	<b>Brief description of method and process of analysis:</b> The Behavioural Regulation in Exercise Questionnaire-2 was used to assess patients' motives towards exercise, pre-programme, at 6-weeks and post-programme. An overall self-determination score was calculated through use of a relative autonomy index (RAI) and analysed for statistical significance. Adherence rates were recorded. <b>Key themes relevant to this review:</b>  <i>Participants</i>  Barriers: <ul style="list-style-type: none"> <li>• Health concerns during</li> <li>• Inconvenient timing of sessions during</li> </ul>	<b>Limitations (author):</b> Only one ERS studied. Small sample size. Only focused on first 6 weeks of programme. <b>Limitations (review team):</b> CSS; No information on recruitment methods, patient demographics. However it does use a standard, validated/ piloted questionnaire. <b>Evidence gaps and/or recommendations for future research:</b> Longitudinal study of the ERS programme. Look at multi-scheme studies. Investigate whether the participant psychological needs are supported in an SDT framework. <b>Funding sources:</b> None declared. <b>Applicable to UK? (if appropriate):</b> Yes
<b>Author and year:</b> Murphy 2010, Moore 2011, 2012, 2013	<b>What was/were the research questions:</b> To evaluate the Welsh	<b>Description of study participants:</b> UK; Community; 1080; >16 - >60 yrs; M=372, F=708	<b>Brief description of method and process of analysis:</b> Patients completed a baseline questionnaire about	<b>Limitations (author):</b> Recording consultations may have led to Hawthorne effects.

<p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p>National Exercise Referral Scheme (NERS).</p> <p>To explore exercise professionals' experiences of engaging diverse clinical populations and emergence of local practices to support uptake and adherence (Moore 2011)</p> <p>To explore providers' views on delivering MI within an exercise referral scheme and consistency of consultations with MI before and after a 2-day workshop. (Moore 2012)</p> <p>To explore how NERS facilitates adherence to physical activity and the emergence of social patterning in response (Moore 2013).</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Routine monitoring data, structured observation, semi-structured interviews &amp; questionnaires.</li> <li>• <b>By whom:</b> Moore.</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> August 2008 – March 2009</li> </ul>	<p>In addition; 41 (31 professionals, 10 area coordinators).</p> <p><b>What population were the sample recruited from:</b> Patients were referred for CHD risk factors (including weight management), mental health problems, or both.</p> <p><b>How were they recruited:</b> Opportunistic sampling.</p> <p><b>How many participants were recruited:</b> 1080, 913 attended the first consultation.</p> <p><b>For client views, were they all completers:</b> 473 completed 16 week programme.</p> <p><b>Were there specific exclusion criteria:</b> Not reported.</p> <p><b>Were there specific inclusion criteria:</b> Sedentary (i.e. active &lt;3 times per week) Plus one other health condition (e.g. mild to moderate depression or anxiety, diabetes, high blood pressure).</p> <p><b>Reason for referral of participants:</b> Sedentary along with mild to moderate depression or anxiety, diabetes, high blood pressure.</p> <p><b>Referred by:</b> Healthcare professional or patient request for help.</p>	<p>themselves and also the General Practice Physical Activity Questionnaire on entry to the intervention.</p> <p>32 patients were sampled from 6 leisure centres delivering NERS. Two researchers attended the beginning of classes and invited patients to take part in an interview about their experiences of NERS after the class. Interviews were conducted one to one in centre coffee shops, audio recorded and transcribed verbatim.</p> <p>41 exercise professionals appointed by the 12 LHBs participating in the NERS trial were contacted and consented to telephone interviews with a researcher. All interviews were recorded and lasted approximately 45minutes. Data were transcribed.</p> <p>Transcription accuracy was checked for all interviews and each transcript was coded using QSR Nvivo v8. Data were grouped into distinct themes and sub-themes. Resulting data was qualitatively analysed alongside any quantitative data collected applying mixed methods statistical analysis.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Intimidated by gym equipment pre programme</li> <li>• Disappointment with failure to lose weight during</li> <li>• Distance to/difficulties with travel during</li> <li>• Cost after (when moving from subsidised scheme)</li> <li>• Unable to integrate into gym environment after</li> <li>• Lack of professional support after</li> <li>• Loss of social support after</li> </ul> <p><i>Facilitators:</i></p>	<p>Small sample size limited power. Telephone interview might have missed understanding gained from face to face.</p> <p><b>Limitations (review team):</b> Good study, data analysed by a single researcher only for PhD thesis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Economic and Social Research Council.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>
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			<ul style="list-style-type: none"> <li>• Professional/provider support during</li> <li>• Personalised exercise schedule during</li> <li>• Social engagement/enjoyment during</li> <li>• Variety of activity options during</li> <li>• Weight loss/improved tone during/after</li> <li>•</li> </ul> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of engagement with ERS by referrers</li> <li>• Concerns around legal responsibility and appropriate referral</li> <li>• Health concerns about clients</li> <li>• Lack of skills for working with patients with depression</li> <li>• Cost after (when moving from subsidised scheme)</li> <li>• Loss of social support after</li> </ul>	
<p><b>Author and year:</b> Myron 2009</p> <p><b>Study design:</b> CSS (Referrers)</p> <p>Qualitative (participants)</p> <p><b>Quality score: (inc external validity for surveys)</b> CSS [-]</p> <p>Qualitative [-]</p>	<p><b>What was/were the research questions:</b> Investigate the successes and barriers in place in sites currently running exercise referral schemes.</p> <p>Present key recommendations and lessons learned.</p> <p>Revisit what GPs think about exercise referral four years on from the first report.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Online survey; focus groups and individual interviews with service users and staff.</li> <li>• <b>By whom:</b></li> </ul>	<p><b>Description of study participants:</b> UK; Community; 100 GPs &amp; 41 ERS participants; 42yrs mean age; M=29%, F=71%</p> <p><b>What population were the sample recruited from:</b> A nationally representative, quota controlled group of two hundred NHS GPs were surveyed online.</p> <p>Participants enrolled on either Bedfordshire (Flitwick), Camden or Cambridge ERS programmes.</p> <p><b>How were they recruited:</b> Patients who were referred to ERS due to health issues and completed and returned the Recovery Evaluation Form (REF).</p> <p><b>How many participants were recruited:</b> 41 REF forms were returned from Bedfordshire, Camden and Cambridge ERS'.</p> <p><b>For client views, were they all completers:</b></p>	<p><b>Brief description of method and process of analysis:</b> Email invitations were sent out to a random 'rolling' sample of approximately 2000 GPs, all being members of Doctors.net.uk's web community. From this pool of doctors a nationally representative, quota-controlled sample of 200 NHS GPs completed the semi-structured survey online. Data was analysed in a quantitative manner for emerging themes and statistical significance.</p> <p>Initial patient REFs and follow-up forms were completed from Bedfordshire (Flitwick), Camden and Cambridgeshire ERS sample population and quantitative analysis was conducted. Qualitative information was gathered from focus groups and individual interviews with service users and staff from 2 selected leisure/exercise settings. Emerging themes were identified and analysed for statistical significance.</p> <p><b>Key themes relevant to this review:</b> No themes in Evidence Statements</p>	<p><b>Limitations (author):</b> Small number of patient responses from ERS. 10% of GPs surveyed.</p> <p><b>Limitations (review team):</b> No description of data collection methodology or presentation of resulting data. CSS; potential for bias in sampling. Questionnaire not validated or piloted. Low response rate.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>

	<p>Review team</p> <ul style="list-style-type: none"> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 2007</li> </ul>	<p>Not reported</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Diabetes, osteoporosis, coronary heart disease, cardiovascular disease, chronic obstructive pulmonary disease, mental illnesses and people aged sixty or older, who are sedentary.</p> <p><b>Referred by:</b> GP</p>		
<p><b>Author and year:</b> Rahman 2011</p> <p><b>Study design:</b> CSS</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Do changes in psychological need satisfaction and motivational regulation during and 6 months following ER, predict changes in behavioural and psychological outcomes?</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not reported</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Questionnaires and interviews.</li> <li>• <b>By whom:</b> Not reported</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b></li> </ul>	<p><b>Description of study participants:</b> UK; Community; 653; 18-83yrs; M = 31.4%, F = 68.6%.</p> <p><b>What population were the sample recruited from:</b> Not reported</p> <p><b>How were they recruited:</b> GP</p> <p><b>How many participants were recruited:</b> 293</p> <p><b>For client views, were they all completers:</b> 261 completers</p> <p><b>Were there specific exclusion criteria:</b> Patients with the following conditions: Cardiac problems, stroke, uncontrolled hypertension and arrhythmia</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Osteoporosis, asthma, anxiety, and depression, obesity and hypertension.</p> <p><b>Referred by:</b> GP</p>	<p><b>Brief description of method and process of analysis:</b> The SF-36v2, Satisfaction with Life Questionnaire and the HADS were posted to participants to complete before commencing classes. Individual interviews were conducted with participants and they completed the Baecke Habitual Physical Activity Questionnaire before the first class. The BREQ-2 and the PNSS were sent to participants following the second exercise class and the final class. A further interview was completed along with a Baecke Habitual Physical Activity Questionnaire.</p> <p>6 months after the programme all completers were sent a Baecke Habitual Physical Activity Questionnaire, optional forms were sent out to those who opted in (SF-36v2, HADS, satisfaction with Life Scale, BREQ-2, PNSS).</p> <p>Assumptions for multicollinearity, independence of outcome variables, independent errors homoscedasticity, normally distributed errors and linearity were tested. Psychological need satisfaction, motivational regulations and psychological outcome data was assess using Wilcoxon signed rank and Friedman tests to describe temporal changes in variables. Residual scores were generated and used in regression analysis. Hierarchical linear regression was used to</p>	<p><b>Limitations (author):</b> The programme was not designed with a theoretical underpinning to deliberately support psychological needs or foster more self-determined motivation. Perceived autonomy support or exercise motives were not measured.</p> <p><b>Limitations (review team):</b> CSS; Overall well conducted.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Explore longitudinal relationships in an SDT-based intervention. Consider the frequency or regularity of attendance. Use more objective measures of activity.</p> <p><b>Funding sources:</b> None declared.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>

			<p>control for age, gender and physical activity scores.</p> <p><b>Key themes relevant to this review:</b></p> <p>Participants</p> <p><i>Barriers</i></p> <p><i>Facilitators</i></p> <ul style="list-style-type: none"> <li>• Motivation during</li> <li>• Enjoyment during</li> <li>• Health outcomes – increased level of physical activity during/after</li> </ul>	
<p><b>Author and year:</b> Schmidt 2008 <b>NON-UK</b></p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Explore the socio-demographic and psychosocial characteristics of female participants in ERS located in deprived neighbourhoods; Determine which elements of the intervention make it appealing to participate.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structured questionnaire and interviews.</li> <li>• <b>By whom:</b> Researchers and exercise professionals</li> <li>• <b>What setting(s):</b> Netherlands; Community</li> <li>• <b>When:</b> May 2005 – April 2006</li> </ul>	<p><b>Description of study participants:</b> Netherlands; Community; Urban; 523; Low SES and ethnic minority women aged 24-55; 38 interviewed.</p> <p><b>What population were the sample recruited from:</b> All female participants of an ERS.</p> <p><b>How were they recruited:</b> On registration to the programme. Followed by purposive sampling for the interviews.</p> <p><b>How many participants were recruited:</b> 523</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Between the ages of 24 and 55.</p> <p><b>Reason for referral of participants:</b> Not reported</p> <p><b>Referred by:</b> GP or healthcare professional.</p>	<p><b>Brief description of method and process of analysis:</b> A questionnaire on patient socio-demographic psychosocial characteristics was completed by all female participants on registration. The questionnaire data were analysed by using SPSS which generated descriptive statistics.</p> <p>In-depth interviews were conducted with 38 ERS participants who were chosen using purposive sampling techniques. Interviews were recorded and transcribed verbatim and the first 2 transcriptions were coded independently by 2 researchers, discussed and agreed. The remaining transcripts were coded by one researcher. Coding was facilitated by using MAXQDA. The resulting themes were categorized and statistically analysed with the socio-demographic characteristics.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p><i>Barriers:</i></p> <ul style="list-style-type: none"> <li>• Language issues before/during</li> <li>• Cost during</li> <li>• Cost after (move to non subsidised activities)</li> <li>• Intimidating gym before-during (body image issues)</li> <li>• Distance to travel during</li> </ul>	<p><b>Limitations (author):</b> None stated</p> <p><b>Limitations (review team):</b> Good study however, only a single scheme is investigated. Limited participant demographics included and full details of questions not reported.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Follow-up to find activities suitable to their socio-economic and socio-cultural characteristics.</p> <p><b>Funding sources:</b> Netherlands Organisation for Health Research and Development (ZonMW) and the Dutch Ministry of Health, Welfare and Sport.</p> <p><b>Applicable to UK? (if appropriate):</b></p>

			<ul style="list-style-type: none"> <li>• Perceived safety of location during</li> <li>• Lack of professional support after</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Separate gym times during to reduce intimidation</li> <li>• Provider support during</li> <li>• Social engagement/enjoyment during</li> <li>• Women only sessions during</li> </ul>	
<p><b>Author and year:</b> Sharma 2012</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Explore stroke survivors' experiences of undertaking exercise in the context of an exercise referral scheme for people with chronic stroke.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Constructivist framework</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structured interviews</li> <li>• <b>By whom:</b> Lead researcher</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not reported</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 9; 37–61yrs; M = 5, F = 4;</p> <p><b>What population were the sample recruited from:</b> Stroke patients referred to an ERS based at a South London leisure centre.</p> <p><b>How were they recruited:</b> NHS records used to identify and invite patients to an interview.</p> <p><b>How many participants were recruited:</b> 41 participants but only 12 consented for interview. Data for 8 included.</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Sufficiently fluent in English.</p> <p><b>Reason for referral of participants:</b> Stroke</p> <p><b>Referred by:</b> GP</p>	<p><b>Brief description of method and process of analysis:</b> Potential participants were identified by the lead researcher using NHS patient records and were sent invitation letters, information sheets and consent forms. Those returning consent forms were telephoned to screen for factors that would render an in-depth interview unfeasible. The participants were offered interviews at their venue of choice (45-80 minutes). An interview topic guide was developed to address the study aims, informed by relevant literature. Interviews were audiotaped and transcribed verbatim. Participant verification of initial interpretation took place using interview summaries. In-depth analysis used an iterative coding process and thematically grouped the responses for analysis using a word processing package.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Intimidating gym before/during (incl. body image)</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Mental health improvements during</li> <li>• Peer support during</li> <li>• Social engagement/enjoyment during</li> </ul>	<p><b>Limitations (author):</b> Low response rate – small sample size. Not necessarily representative of the wider stroke population.</p> <p><b>Limitations (review team):</b> Good study but low sample size and investigated only one scheme.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Use purposive sampling to explore successful and unsuccessful experiences. Collect data relating to time since participation and frequency of participation. Explore how uptake and continued exercise engagement after stroke can be optimised.</p> <p><b>Funding sources:</b> Not specified</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
<p><b>Author and year:</b> Shaw 2012</p> <p><b>Study design:</b></p>	<p><b>What was/were the research questions:</b> Determine which elements of</p>	<p><b>Description of study participants:</b> UK; Community; 174; mean 69.9yrs; M = 41, F = 43;</p>	<p><b>Brief description of method and process of analysis:</b> Patients who were referred to PESS were</p>	<p><b>Limitations (author):</b> 50% response rate. 40% of interviewees did not complete</p>

<p>Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p>the ER programme work for these patients in terms of encouraging participation and adherence and which elements require adjustment.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Transtheoretical model (readiness to change)</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structured telephone interviews</li> <li>• <b>By whom:</b> 3 trained researchers/authors</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 1 June 2006 – 1 June 2007</li> </ul>	<p><b>What population were the sample recruited from:</b> Patients referred to the Pre-Exercise Screening Service (PESS).</p> <p><b>How were they recruited:</b> GP referral.</p> <p><b>How many participants were recruited:</b> 174 referrals - 84 interviewed.</p> <p><b>For client views, were they all completers:</b> Not reported</p> <p><b>Were there specific exclusion criteria:</b> Unable to contact by telephone. Refuse consent</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Angina, myocardial infarction (MI), CHD, a history of coronary artery bypass graft or percutaneous coronary intervention (PCI)</p> <p><b>Referred by:</b> GP</p>	<p>contacted to request consent for a telephone interview regarding their experiences of the programme. All that consented, regardless of completion were interviewed during an individual semi-structured 30minute interview. Interviews were transcribed, analysed by coding, agreed by two independent analysts and categorized using Atlas.ti.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Cost during</li> <li>• Poor facilities (not enough equipment) during</li> <li>• Lack of flexibility in activity times during</li> <li>• Distance to travel during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Support from providers (supervision)</li> <li>• Gym based activities during (protected from weather)</li> <li>• Choice of activities during</li> <li>• Working in like-minded group during</li> <li>• Social engagement/enjoyment during</li> </ul>	<p>ERS. Not necessarily representative of the wider stroke population.</p> <p><b>Limitations (review team):</b> Good study but only uses a single method of analysis, no triangulation. Questions are also not well described.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Scottish Executive</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
<p><b>Author and year:</b> Singh 1997</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> How do the patients receive the exercise referral scheme and in what ways do they feel their health has been enhanced?</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b></p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Direct observation and semi-structured interviews</li> <li>• <b>By whom:</b></li> </ul>	<p><b>Description of study participants:</b> UK; Community; Urban; 13; 30-61; M = 2, F = 11;</p> <p><b>What population were the sample recruited from:</b> Exercise referral patients attending a community leisure centre for exercise classes.</p> <p><b>How were they recruited:</b> Random selection with assistance from the coordinator of exercise classes.</p> <p><b>How many participants were recruited:</b> 13</p> <p><b>For client views, were they all completers:</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b> Patients that were attending an exercise class at a leisure centre as part of the Wavelengths or Heart-exercise schemes were approached individually and interviewed regarding the GP exercise scheme, its organization and its participants. Interviews were recorded and the transcriptions were divided into categories of responses. Themes were separated according to Spradley (1997) methodology.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Cost during</li> </ul>	<p><b>Limitations (author):</b> No data from non-completers. Not a large enough pool to draw generalised conclusions.</p> <p><b>Limitations (review team):</b> Pilot study only. Limited detail on recruitment and methodology. No description of how the questions were decided on (no validation/piloting). Limited data analysis. Data was analysed by a single researcher only.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Further prospective work</p>

	<p>Main researcher (SS)</p> <ul style="list-style-type: none"> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Four months over the summer 1996.</li> </ul>	<p><b>Were there specific exclusion criteria:</b> No one was excluded</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Various health issues (cellulitis, blood pressure, breathing problems)</p> <p><b>Referred by:</b> GP</p>	<p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Improved health as pre-programme goal</li> <li>• General health benefits as outcome during</li> <li>• Companion/buddy to exercise with during</li> </ul>	<p>comparing the regular attendees with those who attend intermittently.</p> <p><b>Funding sources:</b> Not reported</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>
<p><b>Author and year:</b> Stathi 2004</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> How physical activity (PA) is situated in notions of successful ageing of people participating in ERS and to highlight points for achieving client-based targets through ERS.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b></p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Individual or group semi-structured interviews</li> <li>• <b>By whom:</b> Main researcher (SS)</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> .</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 13; 63-79; M = 8, F = 5;</p> <p><b>What population were the sample recruited from:</b> ER patients enrolled on a leisure centre based scheme.</p> <p><b>How were they recruited:</b> Approached and selected from 1 of 3 ER schemes.</p> <p><b>How many participants were recruited:</b> 13</p> <p><b>For client views, were they all completers:</b> All patients actively sharing in various stages of scheme.</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Heart condition, stroke, arthritis, knee injury, insomnia, spinal injury, diabetes and poor balance</p> <p><b>Referred by:</b> GP</p>	<p><b>Brief description of method and process of analysis:</b> Patients that agreed to the interview were interviewed for 60minutes at either their homes or the leisure centre. The interviews were audio-taped and transcribed in full. Data was analysed and a thematic framework was identified and coded using the QSR N-Vivo qualitative software. Analytical tables were constructed and verification strategies of data analysis were completed.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Health concerns before-programme</li> <li>• Intimidating gym before/during</li> <li>• Problems operating gym equipment during</li> <li>• Not all able to benefit from increased social engagement during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Positive health outcomes during – mental health, general health, fitness, increased physical activity, increased personal autonomy, social inclusion, looks and appearance</li> <li>• Support from providers during</li> <li>• Choice of activities during</li> <li>• Peer support during</li> </ul>	<p><b>Limitations (author):</b> Low study number, unable to draw generalised conclusions. Only investigated patients at one point during programme.</p> <p><b>Limitations (review team):</b> Fair study, however only a single method of data collection and no triangulation. Questions were not piloted.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Explore the preferences of older adults and the characteristics of activities that they find appealing. Explore the long term response of such a group.</p> <p><b>Funding sources:</b> Greek State Scholarship Foundation.</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>

<p><b>Author and year:</b> Tai 1999</p> <p><b>Study design:</b> Longitudinal</p> <p><b>Quality score: (inc external validity for surveys)</b> [++]</p>	<p><b>What was/were the research questions:</b> Is the cost of exercise programmes in leisure centres a barrier to uptake in a British population?</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b></p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Questionnaire</li> <li>• <b>By whom:</b> Main researcher (SS)</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 1995-1996</li> </ul>	<p><b>Description of study participants:</b> UK; Community; Urban; 152; 16-75; M = 44, F = 108;</p> <p><b>What population were the sample recruited from:</b> ER patients from 10 GP led primary care centres.</p> <p><b>How were they recruited:</b> GP referral, exercise specialist distributed questionnaire.</p> <p><b>How many participants were recruited:</b> 152</p> <p><b>For client views, were they all completers:</b> 33 completers. 119 non-completers.</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Physical problems (e.g. overweight, muscle and joint disorders), psychological problems (e.g. depression, anxiety), or combinations of both.</p> <p><b>Referred by:</b> GP</p>	<p><b>Brief description of method and process of analysis:</b> Referred patients were assessed for fitness and counselled on exercise by trained personnel at the leisure centre. Demographic data were collected, and patients were asked to complete the London Health and Fitness questionnaire (LHFQ). of twenty sessions over ten weeks was documented. After completion of the programme they were reassessed by the fitness consultant and referred back to their general practitioners. To determine predictors of adherence a forward stepwise logistic regression was completed using adherence or drop-out as the dependent variable, and all relevant responses from the LHFQ as explanatory variables, under the categories of personal and environmental factors influencing supervised exercise uptake. By so doing they were able to examine several variables simultaneously to determine which had the strongest association with adherence, while allowing variables to be adjusted for each other.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Cost during</li> </ul>	<p><b>Limitations (author):</b> May not apply to all UK communities.</p> <p><b>Limitations (review team):</b></p> <p><b>Evidence gaps and/or recommendations for future research:</b> Further investigation of factors that promote adherence to ERS.</p> <p><b>Funding sources:</b> Camden and Islington Family Health Services Authority.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based</p>
<p><b>Author and year:</b> Taket 2006, Guavin 2007</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Examine how effective and acceptable the DOROTHEA programme was to users and health professionals who were involved in referral.</p> <p>How different aspects of the programme contributed to physical activity promotion for type 2 diabetics.</p> <p>Evaluation of the ability of scheme to achieve high</p>	<p><b>Description of study participants:</b> UK; Community; Urban; 225; ≤44 - ≥65; M = 105, F = 120.</p> <p><b>What population were the sample recruited from:</b> Type 2 diabetics from Lambeth and Southwark.</p> <p><b>How were they recruited:</b> GP referral.</p> <p><b>How many participants were recruited:</b> 225</p> <p><b>For client views, were they all completers:</b></p>	<p><b>Brief description of method and process of analysis:</b> Referral patients were invited to attend 3 consultations over a 12 month period. 0, 3 and 12 months. Exercise specialists used semi-structured interviews to obtain quantitative data for evaluation. They used 4 validated questionnaires ('Seven Day Activity Recall', SF-36, 'Stage of Change', MDQoL - Audit of Diabetes-Dependent Quality of Life) as well as recording physiological measures (Resting heart rate, BMI, waist hip ratio, smoking and alcohol habits, medication, blood pressure and full blood work). All data was analysed for statistical significance.</p>	<p><b>Limitations (author):</b> Large amounts of missing data. Data not statistically significant.</p> <p><b>Limitations (review team):</b> Interview questions not described, written notes were taken for data collection. No specific triangulation.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Larger data pool which could lead to the use of more sophisticated statistical analysis</p>

	<p>retention levels.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Trans-theoretical model</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structure consultations and telephone interviews.</li> <li>• <b>By whom:</b> Primary author</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Prior to April 1994</li> </ul>	<p>148 attended all 3 consultations over 12 month period</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Type 2 diabetes patients living within 2 inner London PCT's.</p> <p><b>Reason for referral of participants:</b> Type 2 diabetes</p> <p><b>Referred by:</b> GP</p>	<p>Semi-structured interviews were also conducted with 14 non-participants, 37 participants and 32 health professionals.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Health concerns before/during</li> <li>• Lack of time during</li> <li>• Inconvenient timing of sessions during</li> <li>• Distance to travel during</li> <li>• Problems with travel during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Assurances from staff that health would improve during</li> <li>• Outcomes noted during – mental health, general health/fitness, weight loss &amp; improved tone, physical activity</li> <li>• Supportive gym environment during ('sporty' image overcome)</li> <li>• Gym based activities during (not affected by weather)</li> <li>• Choice of activities during</li> <li>• Tailored, personalised programmes during</li> <li>• Local provision during</li> <li>• Companion/buddy to exercise with during</li> <li>• Ongoing professional support after</li> </ul> <p><i>Referrers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Referral a low priority for GPs</li> <li>• Lack of awareness of schemes</li> <li>• Hospital setting inappropriate for ERS (negative connotations for participants)</li> <li>• Distance to travel during</li> <li>• Lack of motivation before/during/after</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Tailored, personalised programmes during</li> </ul>	<p>methods.</p> <p><b>Funding sources:</b> Not reported</p> <p><b>Applicable to UK? (if appropriate):</b> Yes</p>
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<p><b>Author and year:</b> Taylor 1996, 1998</p> <p><b>Study design:</b> Qualitative (within RCT)</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> Evaluation of the fully operational 'Oasis Scheme' with a randomised controlled study.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Semi-structured questionnaires and interviews.</li> <li>• <b>By whom:</b> Taylor.</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b></li> </ul>	<p><b>Description of study participants:</b> UK; Community; 142; Mean age 54; M=53, F=89.</p> <p><b>What population were the sample recruited from:</b> Drawn from those registered with 5 GP's in the area with CHD risk factors.</p> <p><b>How were they recruited:</b> Invited by mail</p> <p><b>How many participants were recruited:</b> 142 (97 exercise group, 45 control group)</p> <p><b>For client views, were they all completers:</b> 17% of exercise group attended all prescribed sessions</p> <p><b>Were there specific exclusion criteria:</b> MI, coronary angioplasty, cardiac surgery, regular chest discomfort, light-headedness with exercise, excessive shortness of breath with exercise, unusual cardiac findings, stroke, peripheral arterial disease, severe pulmonary disease, recent hospitalisation/major surgery, severe orthopaedic problems.</p> <p><b>Were there specific inclusion criteria:</b> Age 40-70 At least one of following: BMI &gt;25 Systolic BP 140-200 Diastolic BP 90-120 Smoker.</p> <p><b>Reason for referral of participants:</b> Reduce CHD risk factors.</p> <p><b>Referred by:</b> Researcher.</p>	<p><b>Brief description of method and process of analysis:</b> Pre-ERS questionnaires were completed by patients regarding their physical exercise and smoking habits, background information, self-perceptions profile, alcohol consumption and body composition. These data were collected additionally though the programme. A control group was set up and monitored in the same way but without access to the ERS. Semi-structured interviews were also conducted with all the patients. Brief notes were taken and later collated. All data were analysed fully using statistical methods.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of support from family &amp; friends before/during</li> <li>• Intimidating gym before/during (body image)</li> <li>• Lack of time during</li> <li>• Cost during</li> <li>• Dislike of music during</li> <li>• Quality of facilities during (shabby changing area)</li> <li>• Inconvenient scheduling of activities during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>• Outcomes noted during – improved mental health, improved fitness, more physical activity, social inclusion</li> <li>• Provider support during</li> </ul>	<p><b>Limitations (author):</b> 'High incompleteness rates'</p> <p><b>Limitations (review team):</b> Primarily an RCT with minimal details on qualitative methodology. No thematic analysis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Assess long term effects of such ERS programmes. Evaluate different strategies and referral processes.</p> <p><b>Funding sources:</b> The South Thames Regional Health Authority Primary Care Development Fund.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>
<p><b>Author and year:</b> Walsh 2012</p>	<p><b>What was/were the research questions:</b> The aims were to audit a 12-</p>	<p><b>Description of study participants:</b> UK; Community; 2101; &gt;45 yrs</p>	<p><b>Brief description of method and process of analysis:</b> Pre-existing databases were analysed to determine</p>	<p><b>Limitations (author):</b> 36% completion rate.</p>

<p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p>week local authority subsidised exercise programme for osteoarthritis (OA) and to report on participant and instructor views of this scheme.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> On-line survey, semi-structured interviews and focus group sessions.</li> <li>• <b>By whom:</b> Not reported</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> 2 year period, years not stated</li> </ul>	<p><b>What population were the sample recruited from:</b> Patients with diagnosed OA /chronic joint pain and instructors on ER programmes..</p> <p><b>How were they recruited:</b> Pre-existing databases.</p> <p><b>How many participants were recruited:</b> 2101 – inc. 88 instructors.</p> <p><b>For client views, were they all completers:</b> 36% completed the 12 week programme</p> <p><b>Were there specific exclusion criteria:</b> Not reported</p> <p><b>Were there specific inclusion criteria:</b> Not reported</p> <p><b>Reason for referral of participants:</b> Osteoarthritis and/or chronic joint pain</p> <p><b>Referred by:</b> GP</p>	<p>participation and health outcomes, an on-line survey and semi-structured interviews recorded instructor beliefs, whilst focus groups were used to collect data regarding participant views of community-based exercise. Data was analysed for statistical significance.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Health concerns during</li> </ul> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of necessary skill set for working with patients with arthritis during</li> </ul>	<p><b>Limitations (review team):</b> Conference abstract: minimal data.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Investigate specific training of instructors in specific disorders and how that would affect perceived success/value of programme.</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>
<p><b>Author and year:</b> Ward 2007</p> <p><b>Study design:</b> CSS</p> <p><b>Quality score: (inc external validity for surveys)</b> [-]</p>	<p><b>What was/were the research questions:</b> To evaluate the Heartlinks programmes, centres, staff is training and other issues including barriers and facilitators to success. [Seven objectives]</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not stated</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Consultation and follow up telephone interviews</li> </ul>	<p><b>Description of study participants:</b> UK; Community; Urban; 24-88yrs; M = 105, F = 212;</p> <p><b>What population were the sample recruited from:</b> Patients who were identified by GP or Heartlink Advisor as meeting the inclusion criteria from Merthyr Tydfil Borough.</p> <p><b>How were they recruited:</b> Referred either by telephone or referral form to the Heartlink Advisor. Or patients were identified from chronic disease registers and invited by mail.</p> <p><b>How many participants were recruited:</b> 317</p> <p><b>For client views, were they all completers:</b></p>	<p><b>Brief description of method and process of analysis:</b> Referred patients were invited to attend ‘clinics’ at various locations and they received a physical activity assessment and a CHD risk factor score from the project officer, they also completed an SF-36 (an additional SF-36 was also completed at the completion of the programme). A personal action plan was agreed and at 1, 3, 6, 12 months follow up motivational telephone interviews took place. Data was collected and included issues/accessibility of clinics, any issues with patient referral, and patient physiological data Inc. outcomes over time, progress of leisure services, effectiveness of targeted alternative exercise programmes, problems and benefits of having a pool of heart health advisors and frequency and effectiveness of cross-referral.</p>	<p><b>Limitations (author):</b> Low participation rate (317 over 6years).</p> <p><b>Limitations (review team):</b> Limited methodology for data collection. Interview questions provided in the text but no validation/piloting. Data reported from several methods but from different populations. Lacking formal thematic analysis.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b></p>

	<p>• <b>By whom:</b> Project Officer</p> <p><b>What setting(s):</b> UK; Community</p> <p>• <b>When:</b> 2001 - 2007</p>	<p>127</p> <p><b>Were there specific exclusion criteria:</b> Previous MI, angina, heart bypass, angioplasty.</p> <p>Previously unreported BP &gt;160/100.</p> <p><b>Were there specific inclusion criteria:</b> Ages &gt;16</p> <p>No previous history of CHD</p> <p>Sedentary patient (&lt;5 x 30min moderate activity/week)</p> <p>1 or more CHD risk factors (family history of CHD, overweight/obese, diabetes, controlled hypertension, smoking, moderately raised cholesterol).</p> <p><b>Reason for referral of participants:</b> Physical problems (e.g. overweight, muscle and joint disorders), psychological problems (e.g. depression, anxiety), or combinations of both.</p> <p><b>Referred by:</b> GP</p>	<p>All data collected was analysed using a number of evaluation methodologies and statistical significance.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>Lack of awareness of schemes by referrers</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>Outcomes noted during – improved mental health, general health, physical fitness, weight loss or improved tone, social inclusion</li> </ul> <p><i>Providers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>Limitations on support available from providers</li> </ul>	<p>Welsh Assembly Government (Inequalities in Health Fund).</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based</p>
<p><b>Author and year:</b> Wiles 2008, 2007</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [++]</p>	<p><b>What was/were the research questions:</b> Identify the views of physiotherapists, stroke patients and fitness instructors about the appropriateness and acceptability of referral to EoP schemes for stroke patients following discharge from formal rehabilitation.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b> • <b>What method(s):</b> In-depth interviews &amp; focus</p>	<p><b>Description of study participants:</b> UK; Community; 25</p> <p><b>What population were the sample recruited from:</b> Recovering stroke patients discharged from formal rehabilitation.</p> <p><b>How were they recruited:</b> PC physiotherapy team.</p> <p><b>How many participants were recruited:</b> Not specified, 25 interviewed which included patients, fitness instructors and physiotherapists.</p> <p><b>For client views, were they all completers:</b> Not specified</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b></p>	<p><b>Brief description of method and process of analysis:</b> In depth interviews were conducted with stroke patients referred to EoP schemes, interviews with fitness instructors running EoP schemes and a focus group with physiotherapists. The interviews and focus group were transcribed and a thematic analysis conducted. Comparisons were undertaken of the key themes identified within each group.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>Lack of provider support during</li> </ul> <p>Facilitators:</p> <ul style="list-style-type: none"> <li>Goal of improved health before programme</li> <li>Individualised programme during</li> <li>Companion/buddy to exercise with during</li> </ul>	<p><b>Limitations (author):</b> None stated</p> <p><b>Limitations (review team):</b> Very good study although it does lack detailed patient demographics.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK?</b> (if appropriate): Yes, UK based.</p>

	<p>groups</p> <ul style="list-style-type: none"> <li>• <b>By whom:</b> Researchers</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not provided</li> </ul>	<p>Not provided</p> <p><b>Reason for referral of participants:</b> Encourage them to take responsibility for their continued rehabilitation.</p> <p><b>Referred by:</b> Physiotherapist</p>	<ul style="list-style-type: none"> <li>• Within like-minded group during</li> </ul> <p><i>Providers</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Legal responsibility/appropriate referral before programme</li> <li>• Health concerns before</li> <li>• Lack of provider support during</li> <li>• Participants too dependent on support during</li> <li>• Concerns about lack of skills set for stroke patients during</li> </ul>	
<p><b>Author and year:</b> Wormold 2004</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Explore patients' perceptions of general practitioner (GP) exercise referral (ER) schemes with a view to providing a better service for future patients.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Focus group sessions</li> <li>• <b>By whom:</b> Researchers</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not reported</li> </ul>	<p><b>Description of study participants:</b> UK; Community; 30; 25-84 yrs; M=10, F=20</p> <p><b>What population were the sample recruited from:</b> Enrolled participants of a GP referred ERS in the north Yorkshire region.</p> <p><b>How were they recruited:</b> ERS participant GPs were contacted regarding their suitability for the study. Suitable individuals were then contacted and invited to consent to being part of the study.</p> <p><b>How many participants were recruited:</b> 125 invited to attend, 41 consented and 30 were randomly selected for the focus groups.</p> <p><b>For client views, were they all completers:</b> 23 of 30 interviewees were completers.</p> <p><b>Were there specific exclusion criteria:</b> Not provided</p> <p><b>Were there specific inclusion criteria:</b> Not provided</p> <p><b>Reason for referral of participants:</b> Not specified.</p> <p><b>Referred by:</b></p>	<p><b>Brief description of method and process of analysis:</b> Six focus groups were conducted with groups of 2 and 8 participants which lasted between 40 – 65mins. The discussions were audio taped and transcribed verbatim. The transcripts were studied independently by 2 researchers and coded for emergent themes.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Not all participants could benefit from social opportunities during</li> <li>• Dislike of gym during (boredom)</li> </ul> <p><i>Facilitators:</i></p> <ul style="list-style-type: none"> <li>• Outcomes noted during – improvements in mental health, general health, physical fitness, personal autonomy, social inclusion, increased knowledge</li> <li>• Supervision from providers during</li> <li>• Range of activities during</li> <li>• Individualised, personalised provision during</li> <li>• Ongoing professional support after</li> </ul>	<p><b>Limitations (author):</b> Majority interviewees were completers Restricted to North Yorkshire areas</p> <p><b>Limitations (review team):</b> Very good study although limited patient demographic recorded.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> Interview more non-completers and look at other areas of UK.</p> <p><b>Funding sources:</b> Not reported.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>

<p><b>Author and year:</b> Wormold 2006</p> <p><b>Study design:</b> Qualitative</p> <p><b>Quality score: (inc external validity for surveys)</b> [+]</p>	<p><b>What was/were the research questions:</b> Explore participants' perceptions of the operation and effectiveness of the 'Active Lifestyles' (AL) service.</p> <p><b>What theoretical approach (e.g. grounded theory, IPA) does the study take (if specified):</b> Not specified</p> <p><b>How were the data collected:</b></p> <ul style="list-style-type: none"> <li>• <b>What method(s):</b> Focus group sessions</li> <li>• <b>By whom:</b> Experienced facilitators.</li> <li>• <b>What setting(s):</b> UK; Community</li> <li>• <b>When:</b> Not reported</li> </ul>	<p>A few by GP, others by self-referral</p> <p><b>Description of study participants:</b> UK; Community; 16; 15-73 yrs; M=5, F=11.</p> <p><b>What population were the sample recruited from:</b> Participants of at least one session of the AL service.</p> <p><b>How were they recruited:</b> Letters requesting consent to be included in the study were sent out 110 participants of AL service.</p> <p><b>How many participants were recruited:</b> 29 were consented, 19 agreed to participate; only 16 attended the focus groups.</p> <p><b>For client views, were they all completers:</b> Not specified</p> <p><b>Were there specific exclusion criteria:</b> Not reported.</p> <p><b>Were there specific inclusion criteria:</b> Aged 12 or over. Sedentary lifestyle and/or a range of mild to moderate physical or mental health problems.</p> <p><b>Reason for referral of participants:</b> Mild to moderate physical or mental health problems such as: being overweight, obese, or suffering from hypertension, anxiety or depression</p> <p><b>Referred by:</b> Health care practitioner.</p>	<p><b>Brief description of method and process of analysis:</b> 5 focus groups, with 1-7 participants/group were arranged in and around the Kingston-upon-Hull area. Discussions lasted about 45-65 minutes, conducted by 2 experienced facilitators and were audiotaped and transcribed verbatim. Two researchers independently studied the transcriptions and identified emerging themes. Following discussions a thematic framework was devised.</p> <p><b>Key themes relevant to this review:</b></p> <p><i>Participants</i></p> <p>Barriers:</p> <ul style="list-style-type: none"> <li>• Lack of motivation before/during/after</li> <li>• Travel problems during</li> </ul> <p><i>Facilitators:</i></p> <ul style="list-style-type: none"> <li>• Health concerns before programme (as motivator)</li> <li>• Outcomes noted during – improvements in mental health, general health, physical fitness, personal autonomy, social inclusion, increased knowledge</li> <li>• Supervision from providers during</li> <li>• Exercise 'as habit' after</li> </ul>	<p><b>Limitations (author):</b> Limited to the Kingston-upon-Hull area</p> <p><b>Limitations (review team):</b> Good study but limited participant demographics reported on a small sample size. Role of the researcher not explained.</p> <p><b>Evidence gaps and/or recommendations for future research:</b> None stated</p> <p><b>Funding sources:</b> Hull and East Riding Specialist Health Promotion Service and Eastern and West Hull Primary Care Trusts.</p> <p><b>Applicable to UK? (if appropriate):</b> Yes, UK based.</p>
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## Appendix B Quality summary of included studies: Cross-sectional surveys (CSS), Longitudinal studies (Long)

**Cross sectional surveys:** Given the inherent problems with bias and confounding associated with design of cross sectional surveys, these studies were quality rated (for internal validity) only as + or –.

Eligible population representative of source ; 1.3 Selected population representative of eligible; 2.1 selection bias minimised; 2.2 explanatory variables based on sound theoretical basis; 2.3 contamination acceptably low; 2.4 confounding factors identified and controlled; 2.5 [XSS] Were rigorous processes used to develop the questions (e.g. were the questions piloted / validated?) 2.6 setting applicable to the UK; 3.1 Reliable outcomes; 3.2 Complete outcomes; 3.3 Important outcomes assessed; 3.4 Relevant outcomes; 3.5 Similar follow up times; 3.6 Meaningful follow up; 4.1 Groups similar at baseline; 4.2 study sufficiently powered to detect an effect; 4.3 multiple explanatory variables considered in the analyses; 4.4 analytical methods appropriate; precision of association given or calculable; 5.1 Internally valid; 5.2 Externally valid. ++ Minimal bias; +Bias unclear; – Risk of bias; nr Not reported; na Not applicable

Author/ Year	Study design	Population			Method of selection of exposure/comparison group						Outcomes					Analyses				Summary	
		1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	5.1	5.2
Beaufort Research 2013	CSS –	++	nr	nr	na	na	na	na	–	++	nr	++	+	na	na	na	na	++	na	nr	nr
Clarke 1996	CSS +	+	++	+	na	na	na	na	+	++	+	++	+	na	na	na	na	nr	++	++	++
Cock 2006	CSS +	++	++	++	na	na	na	na	++	++	++	+	++	na	na	na	na	++	++	++	+
Cummings 2010	CSS +	++	++	++	na	na	na	na	–	++	+	+	+	na	na	na	na	+	nr	+	++
Day 2001	CSS –	++	++	–	na	na	na	na	–	++	+	–	–	na	na	na	na	+	nr	nr	–
Goodman 2011	CSS +	+	++	+	na	na	na	na	+	++	+	+	na	na	na	na	na	++	nr	+	+
Khanam 2008	CSS +	++	+	–	na	na	na	na	++	++	na	na	+	na	na	na	na	+	nr	++	+
Markland 2010	CSS +	+	nr	+	na	na	na	na	+	++	++	++	++	na	na	na	na	++	++	+	nr
Morton 2008	CSS +	+	nr	nr	na	na	na	na	++	++	+	++	na	na	na	na	na	++	++	–	nr
Myron 2009	CSS –	++	+	+	na	na	na	na	–	++	+	nr	++	na	na	na	na	+	na	–	+
Rahman 2011	CSS +	+	++	++	na	na	na	na	++	++	+++	++	++	na	na	na	na	++	++	nr	+
Tai 1999	Long ++	++	na	na	na	na	na	na	na	++	+	++	++	na	na	na	na	++	++	+	++

## Appendix C – Quality summary of included studies: Qualitative Studies\*\*

\*\* Or Mixed methods studies incorporating qualitative research component

**Key to headings (brief summary from Appendix H, NICE 2009):** 1.1 qualitative approach appropriate; 1.2 study clear in what it seeks to do; 2.1 defensible/rigorous research design/methodology; 3.1 data collection well carried out; 4.1 role of the researcher clearly described; 4.2 context clearly described; 4.3 reliable methods; 5.1 data analysis sufficiently rigorous; 5.2 'rich' data; 5.3 reliable analysis reliable; 6.1 Convincing findings; 6.2 Relevant findings; 6.3 Conclusions. ++ Minimal bias; +Bias unclear; – Risk of bias; nr Not reported; na Not applicable

Author/ Year	Study design	Approach		Design	Data	Trustworthiness			Analysis			Summary		
		1.1	1.2			2.1	3.1	4.1	4.2	4.3	5.1	5.2	5.3	6.1
Beers 2006	Qualitative +	++	++	++	+	+	+	+	++	++	+	++	++	++
Carroll 2002	Qualitative ++	++	++	++	++	++	++	++	++	++	++	++	++	++
Cock 2006	Qualitative –	++	+	++	–	+	+	+	–	++	–	++	++	+
Crone 2002	Qualitative +	++	++	+	++	++	++	+	++	+	–	++	++	–
Fox 2007	Qualitative –	+	–	–	–	–	–	nr	nr	nr	nr	–	++	–
Graham 2006	Qualitative +	++	++	++	++	+	+	++	++	+	+	++	++	++
Hardcastle 2002	Qualitative +	++	++	++	++	++	++	++	++	++	–	++	++	++
Joyce 2010	Qualitative –	++	+	+	++	–	–	–	++	–	+	+	+	+
Lord 1995	Qualitative –	++	++	+	–	–	++	–	–	–	–	+	+	+
Martin 1999	Qualitative +	++	+	++	++	++	+	+	++	+	+	+	++	++
Mills 2008	Qualitative +	++	++	+	++	++	+	+	++	++	–	++	++	++
Murphy 2010 (Moore 2011)	Qualitative +	++	+	++	++	+	+	+	++	++	–	++	++	++
Murphy 2010 (Moore 2013)	Qualitative +	++	++	++	++	+	++	+	++	++	–	++	++	++
Myron 2009	Qualitative –	++	+	–	nr	nr	–	nr	nr	–	nr	–	++	–
Schmidt 2008 +	Qualitative +	++	++	+	++	nr	+	+	++	+	+	++	++	++
Sharma 2012 +	Qualitative +	++	++	++	++	++	+	+	++	–	++	++	++	+

Author/ Year	Study design	Approach		Design	Data	Trustworthiness			Analysis			Summary		
		1.1	1.2			2.1	3.1	4.1	4.2	4.3	5.1	5.2	5.3	6.1
Shaw 2012 +	Qualitative +	++	++	++	+	+	++	+	++	++	++	++	++	++
Singh 1997	Qualitative –	++	–	+	+	–	+	–	+	–	–	–	+	–
Stathi 2004	Qualitative +	++	++	++	++	–	++	+	++	+	++	++	++	+
Taket 2006	Qualitative +	++	++	+	+	+	++	+	++	++	+	++	++	+
Taylor 1996	Qualitative –	++	++	++	–	+	–	–	–	–	–	–	+	+
Walsh 2012	Qualitative ungraded	++	++	++	nr	nr	nr	nr	nr	nr	nr	nr	++	nr
Ward 2012	Qualitative –	++	+	–	nr	–	–	–	–	+	–	nr	+	nr
Wiles 2008	Qualitative ++	++	++	++	++	nr	+	++	++	+	++	++	++	++
Wormold 2004	Qualitative +	++	++	++	++	nr	+	+	++	+	++	++	++	+
Wormold 2006	Qualitative +	++	++	++	++	nr	+	++	++	+	+	++	++	+

## Appendix D - Search Strategy

### MEDLINE (and MEDLINE in Process)

Two search concepts were used - a) exercise and b) referral and/or services. Where possible these two concepts were combined using adjacency proximity operators to enhance specificity. Thus, rather than combining two separate groups of terms within each concept at the end of the strategy with 'AND' operator; each search line combines a different term/group of terms from one concept with a different term (group of similar terms) from another concept on the same search line.

Given the broad nature of relevant subject headings, these were focused where appropriate.

The study terms were designed to find study designs (qualitative, process, mixed methods, case studies, cross-sectional surveys) or outcomes (i.e. views, barriers/facilitators, and determinants / predictors). Quantitative study design terms were combined using either the Boolean operator 'AND' or via adjacency with additional outcome-related terms, to increase the specificity of the search.

1	((exercise or physical activit*) adj3 (fit* or train* or activit* or program* or intervention*)) and (refer* or prescri* or subsid*).ti,ab.	4785
2	((exercise or physical activit*) adj3 (refer* or prescri* or subsid*).ti,ab.	2594
3	((dance or yoga or tai chi or pilates or gym or swim* or fit camp* or boot* camp* or Fit* club*) adj3 (refer* or prescri* or subsid*).ti,ab.	38
4	(sport*1 adj3 (refer* or prescri*).ti,ab.	128
5	((exercise or physical activit*) adj3 (service* or scheme* or supervis*).ti,ab.	1473
6	(Exercise/ or *exercise therapy/) and physicians practice patterns/	159
7	(Exercise/ or *exercise therapy/ or tai ji/ or dance therapy/ or dancing/ or yoga/ or exercise movement techniques/) and "referral and consultation"/	220
8	(*exercise/ or *exercise therapy/) and (referral or prescri* or subsid*).ti,ab.	2120
9	(*exercise/ or *exercise therapy/) and ((fit* or train* or activit* or program* or intervention*) adj5 (scheme* or service* or refer* or prescri* or subsid*).ti,ab.	960
10	"referral and consultation"/ and (exercise or physical activit*).ti,ab.	494
11	physicians practice patterns/ and (exercise or physical activit*).ti,ab.	516
12	or/1-11	8795
13	(qualitative or ethnograph* or thematic analysis or grounded theory or audio-recorded or transcribed or verbatim or ethnograph* or content analysis technique).ti,ab.	144574
14	("semi-structured" or semistructured or unstructured or informal or "in-depth" or indepth or "face-to-face" or structured or guide) adj3 (interview* or discussion* or questionnaire*).ti,ab.	53069
15	((field or case) adj (stud* or research)).ti,ab.	54178

16	Focus groups/ or Qualitative research/ or Interviews as topic/ or Interview, Psychological/ or ((focus or discussion) adj group*1).ti,ab.	81389
17	(Questionnaires/ or interviews as topic/ or interview, psychological/) and (experience* or predictor* or determinant* or barrier* or facilitator* or enabler* or factor* associat* or perception* or perceive* or attitude* or view*1 or viewpoint* or standpoint* or encounter* or experience* or story or stories or narrative*1 or theme*1 or opinion* or concerns or motivat* or need*1).ti,ab.	156089
18	(cross-sectional studies/ or cross-sectional survey.ti,ab. or correlation study.ti,ab.) and (predictor* or determinant* or barrier* or facilitator* or enabler* or factor* associat* or perception* or perceive* or attitude* or view*1 or viewpoint* or standpoint* or encounter* or experience* or story or stories or narrative*1 or theme*1 or opinion* or concerns or motivat* or need*).ti,ab.	65349
19	process evaluation/ or process evaluation.ti,ab.	1108
20	mixed method*1.ti,ab.	2746
21	((assoc* factor*1 or predictor* or determinant* or barrier* or facilitator* or enabler*) adj3 (interview* or survey* or questionnaire* or study)).ti,ab.	5282
22	*motivation/	18043
23	((perception* or perceive* or attitude* or view*1 or viewpoint* or standpoint* or encounter* or experience* or story or stories or narrative*1 or description* or theme* or opinion* or need*1 or concerns or motivat*) adj3 (interview* or survey* or questionnaire* or study or explor* or evaluate or investigate* or analys* or collect*)).ti,ab.	92238
24	(themes adj3 (identif* or analy* or review or explor* or investigat*)).ti,ab.	6252
25	"attitude of health personnel"/ or *attitude to health/	120880
26	exp emotions/	156523
27	consumer satisfaction/	16988
28	personal satisfaction/	10035
29	exp professional-patient relations/	114559
30	exp interprofessional relations/	52050
31	"Health Services Needs and Demand"/	39506
32	or/13-31	900306
33	32 and 12	1464
34	Limit 33 to to yr="1995 - 2013	1380

## Appendix E: Modified Checklist for Correlation or Cross-sectional studies

Quality Appraisal of Correlation Studies or Cross-sectional Surveys			
++ = good, + = mixed, - = poor, nr = not reported, na = not applicable			
Cells are colour-coded to demonstrate the relationship with the summary questions below.			
Study identification (include full citation details)			
Study design:		Cross-sectional	
Evaluation criteria		Quality ++ + - nr na	Guidance topic: Assessed by:
<b>Section 1: Population</b>			
Population	1.1 Is the source population or source area well described?		
	1.2 Is the eligible population or area representative of the source population or area?		
	1.3 Do the selected participants or areas represent the eligible population or area?		
<b>Section 2: Method of selection of exposure (or comparison) group</b>			
Exposure (& Comparison)	2.1 [CS] Selection of exposure (and comparison) group. How was selection bias minimised?	na	
	2.2 [CS] Was the selection of explanatory variables based on sound theoretical basis?	na	
	2.3 [CS] Was the contamination acceptably low?	na	
	2.4 How well were likely confounding factors identified and controlled?	na	
	2.5 [XSS] Were rigorous processes used to develop the questions (e.g. were the questions piloted / validated?)		
	2.6 Is the setting applicable to the UK?		
<b>Section 3: Outcomes</b>			
Outcomes	3.1 Were the outcome measures and procedures reliable?		
	3.2 Were the outcome measurement complete?		
	3.3 Were all important outcomes assessed?		

Time	<b>3.4 CS:</b> Was there a similar follow-up time in exposure & comparison groups?	na	
	<b>3.5 CS:</b> Was follow-up time meaningful?	na	
Results	<b>Section 4: Analyses</b>		
	<b>4.1 CS:</b> Was the study sufficiently powered to detect an effect if one exists?	na	
	<b>4.2 CS:</b> Were multiple explanatory variables considered in the analyses?	na	
	<b>4.3</b> Were the analytical methods appropriate?		
	<b>4.4</b> Was the precision of association given or calculable? Is association meaningful?		
Summary	<b>Section 5: Summary</b>		
	<b>5.1</b> Are the study results internally valid (i.e unbiased)?		
	<b>5.2</b> Are the results generalisable to the source population (i.e externally valid)?		

## APPENDIX F – Studies excluded from the review

		Reason for exclusion
1.	Anon. 2008. Case study. <i>Insulin</i> , 3, (4) 241-242	Review of drugs for use in diabetes
2.	Active Lifestyles Coordinator 2012, <i>East Hampshire Exercise Referral Scheme Annual Report. April 2010 - March 2011</i> , East Hampshire District Council, Alton	Does not include views or attitudes of those involved
3.	Adsett, J., Hickey, A., Nagle, A., & Mudge, A. 2013. Implementing a community-based model of exercise training following cardiac, pulmonary, and heart failure rehabilitation. <i>Journal of Cardiopulmonary Rehabilitation &amp; Prevention</i> , 33, (4) 239-243	Referral from hospital rehabilitation programme. Compares rehab with post-rehab
4.	Allen, M., Mann, K., Putnam, W., Richard, J., Carr, C., Pottle, K., & Sargeant, J. 2000. Prescribing exercise for cardiac patients: knowledge, practices, and needs of family physicians and specialists. <i>Journal of Cardiopulmonary Rehabilitation</i> , 20, (6) 333-339	Cardiac rehabilitation programme
5.	Anon 2008. Motivation to exercise--where does it come from? <i>Research Review (International Council on Active Aging)</i> , 8, (40) 2	Paper not available from any UK source
6.	Attalin, V., Romain, A.J., & Avignon, A. 2012. Physical-activity prescription for obesity management in primary care: attitudes and practices of GPs in a southern French city. <i>Diabetes &amp; Metabolism</i> , 38, (3) 243-24	Prescription is advice not referral
7.	Bahooshy, S. & Grainger, C. 2013, <i>Impact evaluation of the health and wellbeing outcomes, and cost saving analysis of participants with co-morbidities who successfully changed their behaviour after completing an exercise referral scheme in Wakefield District</i> . Wakefield District Council, Wakefield. – Comorbidities that are out of scope	Combines data from ERS and Lifestyle Weight Management Programme. Also includes comorbidities that are out of scope. Not possible to disaggregate data
8.	Baltsezak, S. & Dilliway, G. 2011. The effects of tai chi class on subjective exercise experiences: a preliminary study in community sports centre settings. <i>British Journal of Sports Medicine</i> , 45, (4) 336	Evaluating intervention or predictors. Referred to team updating HTA Review
9.	Best, C., van, W., Dennis, J., Smith, M., Donaghy, M., Fraser, H., Dinan-Young, S., & Mead, G. 2012. A survey of community exercise programmes for stroke survivors in Scotland. <i>Health &amp;</i>	Relates to service. Does not include views or attitudes of those involved

	<i>Social Care in the Community</i> , 20, (4) 400-411	
10.	Bélanger, L.J., Plotnikoff, R.C., Clark, A., & Courneya, K.S. 2012. A survey of physical activity programming and counseling preferences in young-adult cancer survivors. <i>Cancer Nursing</i> , 35, (1) 48-54	Preferences of cancer survivors who may be sedentary. Not specific to exercise referral
11.	Bock, B.C., Albrecht, A.E., Traficante, R.M., Clark, M.M., Pinto, B.M., Tilkemeier, P., & Marcus, B.H. 1997. Predictors of exercise adherence following participation in a cardiac rehabilitation program. <i>International Journal of Behavioral Medicine</i> , 4, (1) 60-75	Cardiac rehabilitation programme
12.	Bredahl, T.V.G., Puggaard, L., & Roessler, K.K. 2008. Exercise on Prescription. Effect of attendance on participants' psychological factors in a Danish version of Exercise on Prescription: a study protocol. <i>BMC Health Services Research</i> , 8, 139	Evaluating intervention or predictors. Referred to team updating HTA Review
13.	Browne, D. 1997. Exercise by prescription. <i>Journal of Royal Society of Health</i> , 117, (1) 52-55	General discussion paper
14.	Castro, M.S., Silva, N.L., Monteiro, W., Palma, A., & Resende, H.G. 2010. Practitioners' reasons for remaining in physical exercise programs offered by the Social Service of Commerce -- Brazil. <i>Revista Motricidade</i> , 6, (4) 23-33	Portuguese language paper
15.	Chinn, D.J.W. 2006. Factors associated with non-participation in a physical activity promotion trial. <i>Public Health</i> , vol 120, no 4, April 2006, p 309-319	Not ERS - barriers/facilitators to exercise uptake in general
16.	Clark, A.M., Mundy, C., Catto, S., & MacIntyre, P.D. 2011. Participation in Community-Based Exercise Maintenance Programs After Completion of Hospital-Based Cardiac Rehabilitation A mixed methods study. <i>Journal of Cardiopulmonary Rehabilitation and Prevention</i> , 31, (1) 42-46	Referral from hospital rehabilitation programme. Compares rehab with post-rehab
17.	Clarke, P. & Eves, F. 1997. Applying the Transtheoretical Model to the Study of Exercise on Prescription. <i>Journal of Health Psychology</i> , 2, (2) 195-207	Measures barriers to exercise before participation or involvement in the ERS
18.	Cock, D., Adams, I.C., Ibbetson, A.B., & Baugh, P. 2006. REFERQUAL: a pilot study of a new service quality assessment instrument in the GP exercise referral scheme setting. <i>BMC Health Services Research</i> , 6	Evaluation of a service quality tool
19.	Cohen, P. 1996. Prescribing exercise. <i>Practice Nurse</i> , 12, (2) 93-94	General discussion paper

20.	Conn, V.S., Hafdahl, A.R., Moore, S.M., Nielsen, P.J., & Brown, L.M. 2009. Meta-analysis of interventions to increase physical activity among cardiac subjects. <i>International Journal of Cardiology</i> , 133, (3) 307-320	Evaluating intervention or predictors. Referred to team updating HTA Review
21.	Connaughton, A.V., Weiler, R.M., & Connaughton, D.P. 2001. Graduating medical students' exercise prescription competence as perceived by deans and directors of medical education in the United States: implications for Healthy People 2010. <i>Public Health Reports</i> , 116, (3) 226-234	Prescription is advice/counselling not referral
22.	Craike, M.J.L. 2011. An exploratory study of the factors that influence physical activity for prostate cancer survivors. <i>Supportive Care in Cancer</i> , 19, (7) 1019-1028	General views on physical activity promotion; not ERS
23.	Cranen, K., Groothuis-Oudshoorn, C.G.M., Vollenbroek-Hutten, M.M.R., & Ijzerman, M.J. 2012. Towards patient-centered telemedicine design: Estimating patients' preferences of telemedicine exercise services using a conjoint experiment. <i>Value in Health</i> , Conference, (var.pagings) A44	Telemedicine counselling, not ERS
24.	Crone, D., Grant, T., & Johnston, L. 2004. Maintaining quality in exercise referral schemes : a case study of professional practice. <i>Primary Health Care Research and Development 2004</i> ; 5 (2): 96-103 (April 2004) (2) 96-103	Case study. Does not include views of those involved
25.	Crone, D., Johnston, L.H., Gidlow, C., Henley, C., & James, D.V.B. 2008. Uptake and participation in physical activity referral schemes in the UK: an investigation of patients referred with mental health problems. <i>Issues in Mental Health Nursing</i> , 29, (10) 1088-1097	Correlation study that does not include views or attitudes of those involved
26.	Croteau, K., Schofield, G., & McLean, G. 2006. Physical activity advice in the primary care setting: Results of a population study in New Zealand. <i>Australian and New Zealand journal of public health</i> , 30, (3) 262-267	Prescription is advice/counselling not referral
27.	Damush, T.M., Stump, T.E., Saporito, A., & Clark, D.O. 2001. Predictors of older primary care patients' participation in a submaximal exercise test and a supervised, low-impact exercise class. <i>Preventive Medicine</i> , 33, (5) 485-494	Correlation study that does not include participant/provider views or attitudes
28.	Daniels, K.M., Arena, R., Lavie, C.J., & Forman, D.E. 2012. Cardiac Rehabilitation for Women across the Lifespan. <i>American Journal of Medicine</i> , 125, (9) 937	Cardiac rehabilitation programme
29.	Dauenhauer, J.A., Podgorski, C.A., & Karuza, J. 2006. Prescribing exercise for older adults: A needs assessment comparing	Prescription is written advice, not referral

	primary care physicians, nurse practitioners, and physician assistants. <i>Gerontology &amp; Geriatrics Education</i> , 26, (3) 81-99	
30.	Denney-Wilson, E., Fanaian, M., Wan, Q., Vagholkar, S., Schutze, H., & Mark, M. 2010. Lifestyle risk factors in general practice - routine assessment and management. <i>Australian Family Physician</i> , 39, (12) 950-953	Correlation study that does not include views or attitudes of those involved
31.	Dexter, D. 2013. Exercise prescription and practice in patients with type 2 diabetes. <i>European Journal of General Practice</i> , 19, (1) 37	Paper not available from any UK source
32.	Dillman, C., Shields, C., Fowles, J., Perry, A., Murphy, R., & Dunbar, P. 2010. Including physical activity and exercise in diabetes management: diabetes educators' perceptions of their own abilities and the abilities of their patients. <i>Canadian Journal of Diabetes</i> , 34, (3) 218-226	General views about physical activity/exercise in diabetes management.
33.	Dinan, S., Lenihan, P., & Tenn, T. 2006. Is the promotion of physical activity in vulnerable older people feasible and effective in general practice? <i>British Journal of General Practice</i> , 56, (531) 791-793	Evaluating intervention or predictors. Referred to team updating HTA Review
34.	Ding, P.N.T. 2011. Is the national activity for health' (NAH) scheme in the UK the practical solution for exercise rehabilitation after cancer? <i>International Journal of Cancer</i> , 128, (Suppl 1) 43-44	Conference abstract with no data on views or attitudes of those involved
35.	Donnelly, C., Lowe-Strong, A., Rankin, J., Campbell, A., Allen, J., & Gracey, J. 2009. The role of exercise in cancer rehabilitation across the UK: A survey of physiotherapists in Oncology and Palliative Care. <i>Supportive Care in Cancer</i> , 17, (7) 1027	Rehabilitation, not exercise referral
36.	Dugdill, L., Graham, R.C., & McNair, F. 2005. Exercise referral: the public health panacea for physical activity promotion? A critical perspective of exercise referral schemes; their development and evaluation. <i>Ergonomics</i> , 48, (11-14) 1390-1410	Correlation study that does not include views or attitudes of those involved
37.	Edmunds, J., Ntoumanis, N., & Duda, J.L. 2007. Adherence and well-being in overweight and obese patients referred to an exercise on prescription scheme: A self-determination theory perspective. <i>Psychology of Sport &amp; Exercise</i> , 8, (5) 722-740	Survey with no views or attitudinal data
38.	Eley, D.S. & Eley, R.M. 2009. How do rural GPs manage their inactive and overweight patients?--A pilot study of rural GPs in Queensland. <i>Australian Family Physician</i> , 38, (9) 747-748	General strategies, not ERS
39.	Fanaian, M., Laws, R.A., Passey, M., McKenzie, S., Wan, Q.,	PA is part of a lifestyle

	Davies, G.P., Lyle, D., & Harris, M.F. 2010. Health improvement and prevention study (HIPS) - evaluation of an intervention to prevent vascular disease in general practice. <i>BMC Family Practice</i> , 11, 57	change programme. Unclear if participants were referred to exercise programmes
40.	Feldman, S. & Feldman, S. 2008. The referral dance: improving the interface between primary care practitioners and specialists caring for people with dementia. <i>American Journal of Alzheimer's Disease &amp; Other Dementias</i> , 23, (6) 513-515	Relates to referral for specialist dementia care
41.	Ferrante, J.M., Piasecki, A.K., Ohman-Strickland, P.A., & Crabtree, B.F. 2009. Family physicians' practices and attitudes regarding care of extremely obese patients. <i>Obesity (19307381)</i> , 17, (9) 1710-1716	Weight management not exercise referral
42.	Fielder, H., Shorney, S., & Wright, D. 1995. Lessons from a pilot study on prescribing exercise. <i>Health Education Journal</i> , 54, (4) 445-452	Contains data on barriers to study implementation only
43.	Gidlow, C., Johnston, L.H., Crone, D., Morris, C., Smith, A., Foster, C., & James, D.V.B. 2007. Socio-demographic patterning of referral, uptake and attendance in Physical Activity Referral Schemes. <i>Journal of Public Health</i> , 29, (2) 107-113	Patterns of behaviour rather than views and attitudinal data
44.	Gilinsky, A., Hughes, A., & McInnes, R. 2012. More Active Mums in Stirling (MAMMiS): a physical activity intervention for postnatal women. Study protocol for a randomized controlled trial. <i>Trials</i> , 13, 112	Evaluating intervention or predictors. Referred to team updating HTA Review
45.	Gine-Garriga, M., Martin, C., Martin, C., Puig-Ribera, A., Anton, J.J., Guiu, A., Cascos, A., & Ramos, R. 2009. Referral from primary care to a physical activity programme: establishing long-term adherence? A randomized controlled trial. Rationale and study design. <i>BMC Public Health</i> , 9, 31	Evaluating intervention or predictors. Referred to team updating HTA Review
46.	Goodrich, D.E., Buis, L.R., Janney, A.W., Ditty, M.D., Krause, C.W., Zheng, K., Sen, A., Strecher, V.J., Hess, M.L., Piette, J.D., & Richardson, C.R. 2011. Integrating an internet-mediated walking program into family medicine clinical practice: a pilot feasibility study. <i>BMC Medical Informatics &amp; Decision Making</i> , 11, 47	Home-based, unsupervised walking programme that is 'internet mediated'. Views provided relate to intervention development
47.	Gornall, A., Levesque, L., & Sigal, R.J. 2008. A pilot study of physical activity education delivery in Diabetes Education Centres in Ontario. <i>Canadian Journal of Diabetes</i> , 32, (2) 123-13	Prescription is written advice not referral
48.	Gould, M.M., Thorogood, M., Illfe, S., & Morris, J.N. 1995. Promoting physical activity in primary care: measuring the	Physical activity provision in general – not ERS

	knowledge gap. <i>Health Education Journal</i> , 54, 304-311	
49.	Gribben, B., Goodyear-Smith, F., Grobbelaar, M., O'Neill, D., & Walker, S. 2000. The early experience of general practitioners using Green Prescription. <i>New Zealand Medical Journal</i> , 113, (1117) 372-373	Prescription is written advice not referral
50.	Halliwell, E. 2005. Running for your life. <i>Mental Health Today</i>	General discussion of possible benefits of ERS for mental health
51.	Hammond, J.M., Brodie, D.A., & Bundred, P.E. 1997. Exercise on prescription: guidelines for health professionals. <i>Health Promotion International</i> , 12, (1) 33-41	General review. Discusses barriers identified via a non-systematic literature review
52.	Haynes, F.A. 2011. Exercise referral schemes - Cystic fibrosis patients' experience. <i>Journal of Cystic Fibrosis</i> , 10, (Suppl 1) S65	No extractable data on views/attitudes
53.	Healey, W., Blaire, B., Nelson, J., & Huber, G. 2012. Physical Therapists' Health Promotion Activities for Older Adults. <i>Journal of Geriatric Physical Therapy</i> , 35, (1) 35-48	General health promotion
54.	Helmink, J.H.M., Meis, J.J.M., de Weerd, I., Visser, F.N., de Vries, N.K., & Kremers, S.P.J. 2010. Development and implementation of a lifestyle intervention to promote physical activity and healthy diet in the Dutch general practice setting: The BeweegKuur programme. <i>International Journal of Behavioral Nutrition and Physical Activity</i> , 7, 49	Describes intervention. Referred to team updating HTA Review
55.	Hudson, J., Oliver, E. J., Thomas, L., Higgs, F., Horton, C., & Quaek, E. 2012, <i>Functional and psychological changes during a community based 32 week postural stability training programme: Recommendations for future practice</i> , Aberystwyth University, Aberystwyth.	Purpose of programme is postural stability training to prevent falls in older people.
56.	Hurst, G., Davey, R., Clark-Carter, D., & Grogan, S. 2010. An Outcome & Process Evaluation of A Financial Incentive Scheme Aimed at Encouraging Participation in Physical Activity in Sandwell in the West Midlands Region of the Uk. <i>International Journal of Behavioral Medicine</i> , 17, (Suppl 1) 159	Not possible to extract relevant data
57.	Hutchison, A.J., Johnston, L.H., & Breckon, J.D. 2013. A grounded theory of successful long-term physical activity behaviour change. <i>Qualitative Research in Sport, Exercise &amp; Health</i> , 5, (1) 109-126	Paper unavailable
58.	Iversen, M.D., Eaton, H.M., & Daltroy, L.H. 2004. How rheumatologists and patients with rheumatoid arthritis discuss	No primary care assessment/ referral

	exercise and the influence of discussions on exercise prescriptions. <i>Arthritis &amp; Rheumatism-Arthritis Care &amp; Research</i> , 51, (1) 63-72	
59.	Jackson, C., Bell, F., Smith, R.A., & Dixey, R. 1998. Do adherers and non-adherers to a GP exercise referral scheme differ in their long-term physical activity levels? <i>Journal of Sports Sciences</i> , 16, (1) 84	Correlation study looking at adherence patterns - no views/attitudes data
60.	Jilcott, S.B., Vu, M.B., Morgan, J., & Keyserling, T.C. 2012. Promoting use of nutrition and physical activity community resources among women in a family planning clinic setting. <i>Women &amp; Health</i> , 52, (1) 55-70	No referral. Participants recruited from a family planning clinic waiting room
61.	Johnston, L.H., Warwick, J., De Ste Croix, M., Crone, D., & Sidford, A. 2005. The nature of all 'inappropriate referrals' made to a countywide physical activity referral scheme: implications for practice. <i>Health Education Journal, London</i> , 64, 1, 58-69	Evaluates the effectiveness of a central referral mechanism and looks at why inappropriate referrals may be made
62.	Jolly, K., Duda, J.L., Daley, A., Eves, F.F., Mutrie, N., Ntoumanis, N., Rouse, P.C., Lodhia, R., & Williams, G.C. 2009. Evaluation of a standard provision versus an autonomy promotive exercise referral programme: rationale and study design. <i>BMC Public Health</i> , 9	Evaluating intervention or predictors. Referred to team updating HTA Review
63.	Jones, F., Harris, P., & Waller, H. 1998. Expectations of an exercise prescription scheme: An exploratory study using repertory grids. <i>British Journal of Health Psychology</i> , 3, (3) 277-289	No extractable data on views/attitudes
64.	Jones, F., Harris, P., Waller, H., & Coggins, A. 2005. Adherence to an Exercise Prescription Scheme: The Role of Expectations, Self-Efficacy, Stage of Change and Psychological Well-Being. <i>British Journal of Health Psychology</i> , 10, (3) 359-378	Correlation study that does not include views or attitudes of those involved
65.	Jones, L.W., Courneya, K.S., Fairey, A.S., & Mackey, J.R. 2005. Does the theory of planned behavior mediate the effects of an oncologist's recommendation to exercise in newly diagnosed breast cancer survivors? Results from a randomized controlled trial. <i>Health Psychology</i> , 24, (2) 189-197	Evaluating intervention or predictors. Referred to team updating HTA Review
66.	Kolt, G.S., Schofield, G.M., Kerse, N., Garrett, N., Schluter, P.J., Ashton, T., & Patel, A. 2009. The healthy steps study: a randomized controlled trial of a pedometer-based green prescription for older adults. Trial protocol. <i>BMC Public Health</i> , 9, 404	Evaluating intervention or predictors. Referred to team updating HTA Review

67.	Leijon, M.E., Bendtsen, P., Stahle, A., Ekberg, K., Festin, K., & Nilsen, P. 2010. Factors associated with patients self-reported adherence to prescribed physical activity in routine primary health care. <i>BMC Family Practice</i> , 11, 38	Correlation study that does not include views or attitudes of those involved
68.	Leijon, M.E., Faskunger, J., Bendtsen, P., Festin, K., & Nilsen, P. 2011. Who is not adhering to physical activity referrals, and why? <i>Scandinavian Journal of Primary Health Care</i> , .29, (4)	Correlation study that does not include views or attitudes of those involved
69.	Little, A. & Lewis, K. 2006. Influences on long-term exercise adherence in older patients with cardiac disease... including commentary by Ingle L. <i>International Journal of Therapy &amp; Rehabilitation</i> , 13, (12) 543-550	Cardiac rehabilitation programme
70.	Loprinzi, P.D., Cardinal, B.J., Si, Q., Bennett, J.A., & Winters-Stone, K.M. 2012. Theory-based predictors of follow-up exercise behavior after a supervised exercise intervention in older breast cancer survivors. <i>Supportive Care in Cancer</i> , 20, (10) 2511-2521	No referral, participants recruited from registries
71.	Martin, P.D., Rhode, P.C., Howe, J.T., & Brantley, P.J. 2003. Primary care weight management counseling: physician and patient perspectives. <i>Journal of the Louisiana State Medical Society</i> , 155, (1) 52-56	Paper unavailable
72.	McKenna, J. & Vernon, M. 2004. How general practitioners promote 'lifestyle' physical activity. <i>Patient Education &amp; Counseling</i> , 54, (1) 101-106	General physical activity promotion, not ERS
73.	Mackinnon, L. T., Ritchie, C. B., Hooper, S. L., & Abernethy, P. J. 2003, "Exercise prescription throughout the lifespan," <i>In Mackinnon, L.T. (ed.), Exercise management: concepts and professional practice, Champaign, Ill., Human Kinetics, c2003, p.189-221;337-341, United States.</i>	Textbook with general information. No primary data.
74.	McNair, F.M. 2006. <i>An analysis of patients referred to a Primary care exercise referral scheme; attendance, completion, 12 month adherence and the experiences of overweight participants.</i> Liverpool John Moores.	Views data relates to a subset of people attending a lifestyle weight management intervention (within a wider ERS) offered only to people needing to lose weight.
75.	Melillo, K.D., Houde, S.C., Williamson, E., & Futrell, M. 2000. Perceptions of nurse practitioners regarding their role in physical activity and exercise prescription for older adults. <i>Clinical Excellence for Nurse Practitioners</i> , 4, (2) 108-116	Paper unavailable

76.	Miller, J. 2009. Quality Zone: yoga for emotional wellbeing in diabetes and other long-term conditions. <i>Journal of Diabetes Nursing</i> , 13, (3) 96	Yoga for physical activity to improve mood. No demographic data on population.
77.	Mills, K.M., Stewart, A.L., Sepsis, P.G., & King, A.C. 1997. Consideration of older adults' preferences for format of physical activity. <i>Journal of Aging &amp; Physical Activity</i> , 5, (1) 50-58	General physical activity, not exercise referral
78.	Miner, J.T. 2011. <i>Enabling exercise prescription: Developing a comprehensive intervention strategy for exercise counseling and prescription in Family Medicine</i>	Prescription is advice/counselling not referral
79.	Morgan, O. 2005. Approaches to increase physical activity: reviewing the evidence for exercise-referral schemes. <i>Public Health</i> , 119, (5) 361-370	Evaluating intervention or predictors. Referred to team updating HTA Review
80.	Munro J. 1997, "A randomised controlled trial of exercise in over-65 year olds: experience from the first year.," <i>In Proceedings of the 4th International Conference on Physical Activity, Agency and Sports</i> , Huber G, ed., Hamburg: Health Promotion Publications, pp. 264-267.	Paper unavailable
81.	Passey, M., Fanaian, M., Lyle, D., & Harris, M.F. 2010. Assessment and management of lifestyle risk factors in rural and urban general practices in Australia. <i>Australian Journal of Primary Health</i> , 16, (1) 81-86	Mentions referral but it is unclear whether this is to exercise schemes
82.	Patel, A., Schofield, G.M., Kolt, G.S., & Keogh, J.W. 2011. General practitioners' views and experiences of counselling for physical activity through the New Zealand Green Prescription program. <i>BMC Family Practice</i> , 12, 119	Prescription is advice/counselling not referral
83.	Patel, A., Kolt, G., Keogh, J., & Schofield, G. 2012. The Green Prescription and older adults: what do general practitioners see as barriers? <i>Journal of Primary Health Care</i> , 4, (4) 320-327	Prescription is advice/counselling not referral
84.	Patel, A., Schofield, G.M., Kolt, G.S., & Keogh, J.W. 2013. Perceived barriers, benefits, and motives for physical activity: two primary-care physical activity prescription programs. <i>Journal of Aging &amp; Physical Activity</i> , 21, (1) 85-99	Prescription is advice/counselling not referral
85.	Paterson, S., Moore, S., & Woodall, J. 2007. Exercise referral and offender management in relation to mental health: an example from HMP Everthorpe. <i>Journal of Mental Health, Training, Education and Practice</i> , 2, (3) 23-24	General discussion paper

86.	Penfold, J. 2012. Benefits of an activity referral scheme to tackle obesity. <i>Primary Health Care</i> , 22, (3) 6-7	General discussion paper
87.	Penn, L., Dombrowski, S.U., Sniehotta, F.F., & White, M. 2013. Participants' perspectives on making and maintaining behavioural changes in a lifestyle intervention for type 2 diabetes prevention: a qualitative study using the theory domain framework. <i>BMJ Open</i> , 3, (6)	Lifestyle management programme not ERS
88.	Persson, G., Ovhed, I., & Hansson, E.E. 2010. Simplified routines in prescribing physical activity can increase the amount of prescriptions by doctors, more than economic incentives only: an observational intervention study. <i>BMC Research Notes</i> , 3, 304	Evaluating intervention or predictors. Referred to team updating HTA Review
89.	Ready E., Norman, M., Metge, C., Kehler, S., Bernosky, M., & Duhamel, T. 2012. Health care providers promoting physical activity in primary care: Disconnect between knowledge, attitudes and practice. <i>Journal of Science and Medicine in Sport</i> , Conference, (var.pagings) December	Evaluating intervention or predictors. Referred to team updating HTA Review
90.	Roessler, K.K. 2011. "A corrective emotional experience-Or just a bit of exercise? The relevance of interpersonal learning in exercise on prescription": Erratum. <i>Scandinavian Journal of Psychology</i> , 52, (6)	Non-relevant erratum to included paper
91.	Rome, A., Persson, U., Ekdahl, C., & Gard, G. 2010. Willingness to pay for health improvements of physical activity on prescription. <i>Scandinavian Journal of Public Health</i> , 38, (2) 151-159	Correlation study that does not include views or attitudes of those involved
92.	Rouse, P.C. 2011. <i>Motivational and social psychological processes related to mental well-being during physical activity behaviour change</i> . PhD University of Birmingham	No data relevant to the research questions.
93.	Rouse, P.C., Ntoumanis, N., Duda, J.L., Jolly, K., & Williams, G.C. 2011. In the beginning: role of autonomy support on the motivation, mental health and intentions of participants entering an exercise referral scheme. <i>Psychology &amp; Health</i> , 26, (6) 729-749	No data relevant to the research questions.
94.	Shepich, J., Slowiak, J.M., & Keniston, A. 2007. Do subsidization and monitoring enhance adherence to prescribed exercise? <i>American Journal of Health Promotion</i> , 22, (1) 2-5	Evaluating intervention or predictors. Referred to team updating HTA Review
95.	Smith, C., Hale, L., Olson.K., Baxter, D., & Schneiders, A. 2012. How do health care providers perceive exercise as an	Advice and support for chronic condition from

	intervention for multiple sclerosis-related fatigue? (#23). <i>Multiple Sclerosis</i> , 18, (5) S35	physiotherapist
96.	Smith, P.A., Gould, M.M., See Tai, S., & Iliffe, S. 1996. Exercise as therapy? Results from group interviews with general practice teams involved in an inner-London 'prescription for exercise' scheme. <i>Health Education Journal</i> , 55, (4) 439-446	No data relevant to review questions
97.	Smith,P.A. Iliffe,S. Gould.M.M. Tai,S.S. 1996. Prescription for exercise in primary care: is it worth it? <i>British Journal of Health Care Management</i> , 2, (6)	No data relevant to review questions
98.	Smy, J. 2004. Get Fit in the Green Gym. <i>Nursing Times</i> , 100, (41) 26-27	General discussion paper
99.	Sowden, H.L. 2009. <i>Is access to, and use of, Exercise Referral Schemes equitable?</i> PhD University College London	Retrospective analysis of routinely collected data on access to services. No view/attitudinal data
100.	Sowden, S.L., Breeze, E., Barber, J., & Raine, R. 2008. Do general practices provide equitable access to physical activity interventions? <i>British Journal of General Practice</i> , 58, (555) e1-e8	Correlation study that does not include views or attitudes of those involved
101.	Sowden, S.L. & Raine, R. 2008. Running along parallel lines: how political reality impedes the evaluation of public health interventions. A case study of exercise referral schemes in England. <i>Journal of Epidemiology &amp; Community Health</i> , 62, (9) 835-841	Discussion paper on history of ERS programme
102.	Stagg, C. 2006. Exercise referral for diabetes. <i>Independent Nurse</i> , 46	General discussion paper
103.	Stagg, C. 2006. Diabetics enjoy benefits of exercise. <i>General Practitioner</i> 52-53	General discussion paper
104.	Stenman, E., Leijon, M.E., Calling, S., Bergmark, C., Arvidsson, D., Gerdtham, U.G., Sundquist, K., & Ekesho, R. 2012. Study protocol: a multi-professional team intervention of physical activity referrals in primary care patients with cardiovascular risk factors--the Dalby lifestyle intervention cohort (DALICO) study. <i>BMC Health Services Research</i> , 12, 173	Evaluating intervention or predictors. Referred to team updating HTA Review
105.	Strachan, G., Wright, G.D., & Hancock, E. 2007. An evaluation of a community health intervention programme aimed at improving health and wellbeing. <i>Health Education Journal</i> , 66, (3) 277-285	Not all referrers are healthcare professionals and not possible to extract data specific to ERS

106.	Strong, S. 2009. Visible support. <i>Mental Health Today</i> , 12-13	General discussion paper
107.	Swinburn, B.A., Walter, L.G., Arroll, B., Tilyard, M.W., & Russell, D.G. 1997. Green prescriptions: attitudes and perceptions of general practitioners towards prescribing exercise. <i>British Journal of General Practice</i> , 47, (422) 567-569	Written prescription for exercise not ERS
108.	Swinburn, B. & McLennan, J. 1998. The green prescription: a novel way of increasing uptake of physical activity. <i>New Zealand Public Health Report</i> , 5, (4) 25-26	Written prescription for exercise not ERS
109.	Symons, L.M.L. 1998. The benefits of an 'exercise on prescription programme' for overweight patients. <i>Journal of Sports Sciences</i> , 16, (1) 24-25	Participants were volunteers in an exercise programme
110.	Thurston, M. & Green, K. 2004. Adherence to exercise in later life: how can exercise on prescription programmes be made more effective? <i>Health Promotion International</i> , 19, (3) 379-38	General discussion paper
111.	Tobi, P., Estacio, E.V., Yu, G., Renton, A., & Foster, N. 2012. Who stays, who drops out? Biosocial predictors of longer-term adherence in participants attending an exercise referral scheme in the UK. <i>BMC Public Health</i> , 12, 347	Evaluating intervention or predictors. Referred to team updating HTA Review
112.	Tobin, V.J. 2003. <i>Facilitating exercise behaviour change: a self-determination theory and motivational interviewing perspective</i> . Kinesiology Publications, University of Oregon	Unavailable from any UK source
113.	Trinh, L., Wilson, R., Williams, H.M., Sum, A.J., & Naylor, P.J. 2012. Physicians promoting physical activity using pedometers and community partnerships: a real world trial. <i>British Journal of Sports Medicine</i> , 46, (4) 284-290	Provision of pedometer not ERS
114.	Truman, C. & Raine, P. 2002. Experience and meaning of user involvement: some exploration from a community mental health project. <i>Health &amp; Social Care in the Community</i> , 10, (3) 136-143	Insufficient information on the client journey. Focus of paper is involvement of service users in service provision
115.	University of Bath & Countryside & Community Research Institute 2011, <i>Mentro Allan/Venture Out: Lived experiences of physical activity in outdoor environments: Final Report to Sports Wales</i> , University of Bath, Bath.	No requirement for primary care assessment and referral
116.	Walsh, J.M., Swangard, D.M., Davis, T., & McPhee, S.J. 1999. Exercise counseling by primary care physicians in the era of managed care. <i>American Journal of Preventive Medicine</i> , 16, (4) 307-313	Prescription is advice or counselling only

117.	Ward, M., Phillips, C., & Farr, A. 2010. Heartlinks: a real world approach to effective Exercise Referral: reducing coronary heart disease risk and improving health through a negotiated exercise programme. <i>International Journal of Health Promotion and Education</i> , 48, (1) 20-27	Evaluating intervention or predictors. Referred to team updating HTA Review
118.	Wilbur, J., Chandler, P., & Miller, A.M. 2001. Measuring adherence to a women's walking program... including commentary by Davis GC, Aaronson LS, and Mayo K with author response. <i>Western Journal of Nursing Research</i> , 23, (1) 8-32	Not exercise referral.
119.	Woodard, C.M., & Berry, M.J. 2001. Enhancing adherence to prescribed exercise: structured behavioral interventions in clinical exercise programs. <i>Journal of Cardiopulmonary Rehabilitation</i> , 21, (4) 201-209	General review that does not differentiate between rehab and exercise