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| **Study characteristics and extracted data for studies investigating physical activity behavior**  |
| **Study****Author**  | **Title** | **Journal** | **country/city** | **Design** | **sample size** | **sampling/recruitment** | **Age of participants** | **socio economic status** | **Physical activity behavior component studied** | **Determinants** | **How determinants were measured** |
| Afolabi, et al. (1) | Activity pattern, energy intake and obesity among Nigerian urban market women. | Int J Food Sci Nutr  | Nigeria/Abeokuta | Cross sectional survey | 232 women | Three markets in each local government area (LGA) in Abeokuta were randomly selected. The respondents were selected using a systematic sampling method in order to cover both market women selling on permanentand temporary stalls. Total number of permanent and temporary stalls in the market were counted, and a sampling interval calculated and applied to select participants. | 19 to 65 years(87% below 50)  | Not specified  | Activity pattern of market women | * About 72% of a total average of 16 h spent on daily activities spent on market activities which are predominantly sedentary (majority of women found seated chatting or eating).
* Very minimal domestic engaging activities (sweeping, dish washing and preparing meals) - meaning majority depend on street foods all week through, even at home
* Minimal time for leisure activities
 | Structured questionnaire (recall of activities for 3 days) and on-spot observations |
| Muzigaba, et al. (2) | The perceived role and influencers of physical activity among pregnant women from low socioeconomic status communities in South Africa | J Phys Act Health | Cape Town / South Africa  | Qualitative exploratory  | 34 women | Participants in study were pregnant women attending antenatal services at the Maternal and Obstetric Unit (MOU) at Vanguard Community Health Centre, located in the Western Cape Province of South Africa. The center serves 8 different communities. The researchers visited the MOU on five different days over a period of two months for data collection. On the day of data collection, all pregnant women present in the MOU were stratified by race and each stratum was subjected to simple random sampling. Stratification was performed to ensure that pregnant women from all racial groups were adequately represented in the sample. | 25.6 years (SD ± 5.2) | Low socio-economic status  | views and experiences of physical activity during pregnancy | * Physical activityconsidered important for mother and baby health

**Barriers*** Tiredness
* Lack of supportive environment
* Fear of hurting oneself and baby - most women believed it was dangerous to do physical activity when pregnant
* Lack of time
* Family obligations
* Not knowing which and how much physical activity is safe to do (don’t know recommendations of physical activity during pregnancy)
* Pregnancy related discomforts - large body size
* Unavailability of physical activity-based facilities at community level
* Neighbourhood safety concerns
* Financial constraints - general perception that physical activity requires access to gymnasium
* Family members advise to have sufficient rest (avoiding physical activity)
* No physical activity education during antenatal visits
* Self efficacy

**Facilitators*** Membership to community-based exercise groups
* Initiating physical activity education and sessions during antenatal visits
 | Focus group discussions with topic guide developed from theoretical framework of theory of planned Behaviour |
| Hattingh, et al. (3) | Assessment of the physical activity, body mass index and energy intake of HIV-uninfected and HIV-infected women in Mangaung, Free State province | South African Family Practice | Free State, South Africa  | Cross sectional study  | 488 women  | Plots in two informal settlements and two formal settlements counted and numbered. A proportionate number of respondents were then randomly selected from these plots | 25 - 44 years  | Mixed  | Assessing physical activity levels  | * Mass media; most time spent on radio and TV viewing
* Cheap public transport (buses and taxes); less walking
 | One on One interview using questionnaire  |
| Phillips, et al. (4) | Perceptions of diet, physical activity, and obesity-related health among black daughter-mother pairs in Soweto, South Africa | BMC Public Health | South Africa, Johannesburg | Qualitative | 32 (daughters and mothers)  | Participants were sampled from ongoing Birth to Twenty Plus (Bt20) longitudinal study. Young adult female members of the birth cohort and their mothers were purposefully sampled. | Daughters (24 yearsMothers (53 years) |  Not specified | Perception of physical activity & behavior | * Behavior; majority of daughters were not exercising at the time while mothers were relatively active
* Motivation to exercise; feel better and maintain healthy body weights - don't want to grow fat
* knowledge of benefits of PA but for personal reasons and barriers not exercising; daughters
* Preference for sedentary activities
* Not enjoying PA
* Lack of time
* Lack of money
* lack of access to sports teams - social support
* Feeling tired
* Exposure to nutrition/healthy information at school (primary and secondary) and social networks
* Understanding relation of physical activity and health outcomes
* Adverse health experiences either to you or a loved one - more cautious/motivation to have a healthy lifestyle
* Mindset; always being in head that you need to live healthy - exercise
* Family -relatives discourage others to do some physical activities because they don’t like those activities themselves or positive (encourage daughters to participate in household chores)
* Health concerns; only start to exercise once a person gets a health issue (prompted by healthy issues) \_ treatment mechanism
* Positive experience - for example those who exercise, and they blood pressure normalises, are motivated to continue with the exercise
* Perception that females should stop participating in sports & related activities post high school
* Household chores seen as physical activity
 | Individual in-depth semi structured questionnaires |
| Stern, et al. (5) | An exploration into the determinants of noncommunicable diseases among rural-to-urban migrants in peri urban South Africa | Prev Chronic Dis | South Africa, Cape Town | Qualitative study | 55 (45 women and 10 men) | Purposive sampling, from ongoing community programs | Not reported  | Urban poor | Physical activity beliefs | * Physical activity perceived as a disadvantage - walking and physical labor represent hardships (low social status)
* Sedentary work environment
* safety concerns (violence against women)- constrains outdoor activities
* No concern with weight gain (elevated status of obesity tempting)- symbolic of success while weight loss means problems thus no incentive to do physical activities
* information shared at health clubs (group meetings) - create awareness within people and encourage them to do PA
* Family members not positive to change (don’t want to give up perceived good life)
* Social Cohesion & networks - peer education (creates an understanding of need to change)
* Cheaper motorised transport options; public transport - taxi (thus walking is a choice)
* Community group membership- e.g. healthy clubs - provide social & emotional support and act as role models to help overcome practical constraints
 | In-depth interviewsParticipatory reflectionAction and reflection groups |
| Adeniyi, et al. (6) | Postpartum exercise among Nigerian women: Issues relating to exercise performance and self-efficacy  | ISRN Obstetrics and Gynecology  | Nigeria/Ibadan  | Descriptive cross-sectional study  | 228  | Purposive sampling, recruitment was through postnatal clinics of the University College Hospital, Ibadan and Adeoyo Maternity Teaching Hospital, Yemetu, Ibadan. Attending postpartum women were purposively recruited | 15 to 50 years  | Mixed sample  | Exercise profile and self efficacy | * About two-third (61.0%) of the participants were not aware that they could undertake physical exercise to enhance postpartum health
* 89 % of the women did not belong to any exercise support group (social support)
* **Self efficacy**
* Being in an exercise programme (high exercise self efficacy)
* Age; young women (30 years and below more self efficacy compared to older ones)
* work hours per week - insufficient time among those with high work hours
* Monthly income
* Number of pregnancies; high self efficacy among those with less than 3 children
* Employment status; high self efficacy among those who were not employed compared to those in paid employment
* Perception that exercise will negatively impact on breast milk production and breast feeding
* Women with new babies - lack of assistance with child care & insufficient time (reported barrier)
* Lack of motivation/fatigue (those participated in exercise, brisk walking was the main activity) - preferred because of its simplicity and fear of perceived risks associated with more demanding exercises
 | A self-developed questionnaire assessed the socio-demographic and exercise profile andthe Exercise Self-Efficacy Scale |
| Gradidge, et al. (7)  | Patterns, levels and correlates of self-reported physical activity in urban black Soweto women.  | BMC Public Health  | South Africa/Johannesburg  | Cross sectional study  | 977  | The participants were caregivers from the Birth to Twenty cohort study (Bt20), which began in 1990 when 3273 participants were enrolled to investigate the health and development of children  | Mean age 41.0 ± 7.84 years  | Mixed | Patterns of physical activitySocio economic correlates of physical activity | * 67% regarded as active; domain contributing to physical activity (walking for travel), limited leisure time based physical activity
* Ownership of motor vehicle - reduced physical activity levels (less time walking for travel) but relatively higher leisure time related physical activity
 | Global Physical Activity Questionnaire (GPAQ)  |
| Watson, et al. (8) | Just because you're pregnant, doesn't mean you're sick!" A qualitative study of beliefs regarding physical activity in black South African women | BMC Pregnancy Childbirth | Soweto/South Africa  | Qualitative  | 13 participants  | Pregnant (29–33 weeks gestation) participants were recruited from the MRC/Wits Developmental Pathways for Health Research Unit (DPHRU), based at Chris Hani Baragwaneth Hospital (CHBH),Soweto, South Africa.Women were purposively recruited from a public antenatal hospital  | 19 to 41 years  | Low and middle social economic class | Beliefs regarding physical activity duringpregnancy | * Health benefits (cleanses skin through sweating & relaxes the body) but don't translate in behavior,
* Definition of PA; mainly activity of daily living including occupational and household tasks
* Perceived PA benefits; prepare body for labour, reduce labor time and prepare the baby as well

**barriers** * pregnancy related discomforts; psychological factors - fear of miscarriage & physical factors such as fatigue and increased stomach size, tiredness, morning sickness and interrupted sleep
* Lack of time; need to prioritise family needs
* Lack of money; gym is expensive
* Physical activity related education; lack of information provided by healthcare professionals about physical activity during pregnancy.

Facilitators* Influential role players - family friends & healthcare workers - give vague, conflicting often discouraging advise about PA in pregnancy - received information vague and unspecific
* Cultural Beliefs - give vague, conflicting often discouraging advise about PA in pregnancy (pregnant women have got to rest and sleep a lot, being somehow active hurts the baby
* Some occupational, household ad recreational tasks are perceived to be vigorous and thus unsafe - no scientific explanation for unsafeness but rather based advise of social network
* Social network; negative advice that physical activity is unsafe for pregnant women
* Low self efficacy; physical activity difficulties due to pregnancy associated physical changes - baby is heavy thus makes them tired

**Laziness** * Social support; information got from community groups would be trusted and prompts them to translate it in to activities, vital for experience sharing & Opportunity to participate in group exercise activities
* subjective norm; health workers not giving info, so women turn to social networks who in most cases encourage reduction in PA during pregnancy
* Wrong perception about walking; walking is for dogs not humans though majority of study participants mentioned walking as their favorite PA
* Routine domestic chores; like cleaning, gardening are not regarded as PA
 | Semi-structured interviews using guide developed following theory of plannedtheoretical model |
| Kiawi, et al. (9) | Knowledge, attitudes, and behavior relating to diabetes and its main risk  factors among urban residents in Cameroon: A qualitative survey | Ethnicity & Disease, | Cameroon; Yaoundé ´, Bamenda, Douala, Garoua | Exploratory and descriptive Qualitative  | 62 individuals,27 women, 35 men  | Participants were purposely recruited from communities covered by the sampled health districtsand selected through a cascade procedure. To avoid an over- or under-sampling of some subpopulations and to capture a broad cross-section of people from each community, participants were selected to achieve a mix of sexes, age groups, educational levels, and socioeconomic positions. | 15 to 50 years  | Mixed | Knowledge, attitudes and behaviors relatingto risk factors of diabetes (PA)  | * Obesity seen as a positive sign of good living & health while small bodied associated with poverty and ill health (HIV)- thus likely a disincentive for PA
* Motivation to lose weight - to look beautiful and smart in clothes rather than for healthy issues
* Physical activity good for health - cleanses the body of bad fluids through sweating
* Awareness (perceived severity - knowledge linking PA to NCD is low)
* Knowledge not translated in to behavior - majority of participants were physically inactive due to some barriers
* Lack of time
* Poor infrastructure - pavements for pedestrians, play grounds, parks, roads that are safe for cyclists
* Financial difficulties
* Negative cultural beliefs associated with less strenuous PA like walking; sign of poverty, demeaning (disapproval by friends) and leisure time walking is associated with idleness
* Observation of others doing PA during their leisure time especially on weekends - many people are taking on the behavior
* Cheap Transportation - motorbikes and taxis
* Routine domestic chores; like cleaning, gardening are not regarded as PA
 | Face to face in-depth interviews with semi - structured interview guide  |
| Walter and du Rosa (10) | Socio-cultural barriers to physical activity among black isixhosa speaking professional women in the nelson Mandelametropolitan municipality | South African Journal for Research in Sport, Physical Education and Recreation | South Africa, Nelson Mandelametropolitan municipality | Qualitative study | 47 women |  | 18 to 45 years | Professional women | socio-cultural barriers to physical activity  | * Lack of social support; family discouragement from exercise (grew up without exercising), older family members say African women are supposed to be fat
* Weight gain prestige & association of weight loss with HIV
* Exercise not part of black culture, grew up not exercising, culturally women stay at home
* Gender stereotyping; traditionally role of women grows up doing domestic work and usually not allowed to go out play
* Dress code, not acceptable for black women to wear revealing sport attire such as tights or running shorts.
* Exercising perceived to be a way of pretending to be young
* Treatment mechanism; only exercise when one wants to lose weight
* Community disapproval of exercise; negative talk about those seen exercising
 | In-depth qualitative interviews with semi-structured interview guide  |

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