

Supplementary Box 1: Full search details**EMBASE**

'health'/exp OR 'health status'/exp OR 'mental health'/exp OR 'mental disease'/exp OR 'physical disease'/exp
 ((Mental* OR psychological*) NEAR/2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR 'well being' OR stress* OR distress OR disease*)):ti,ab
 (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*):ti,ab
 ((physical*) NEAR/3 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness)):ti,ab
 ((cardiac OR cardiovascular OR heart) NEAR/3 (health OR disorder* or disease*)):ti,ab
 ('health study' OR 'health studies'):ti,ab
 #1 OR #2 OR #3 OR #4 OR #5 OR #6
 ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) NEAR/3 (traveller* OR gypsy OR gypsies)):ti,ab
 #7 AND #8

Medline (OVID)

exp Health/ OR exp Health Status/ OR exp Mental Disorders/ OR exp Chronic Disease/ OR exp Health Behavior/
 ((Mental* OR psychological*) adj2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR well being OR stress* OR distress OR disease*)):ti,ab.
 (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*).ti,ab.
 ((physical*) adj3 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness)):ti,ab.
 ((cardiac OR cardiovascular OR heart) adj3 (health OR disorder* or disease*)):ti,ab.
 (health study OR health studies).ti,ab.
 or/1-6
 ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) adj3 (traveller* OR gypsy OR gypsies)):ti,ab.
 7 AND 8

Web of Science

TS = (((((Mental* OR psychological*) NEAR/2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR "well being" OR stress* OR distress OR disease*)) OR (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*) OR ((physical*) NEAR/3 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness)) OR ((cardiac OR cardiovascular OR heart) NEAR/3 (health OR disorder* or disease*)) OR ("health study" OR "health studies"))) AND ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) NEAR/3 (traveller* OR gypsy OR gypsies)))

GoogleScholar

"Irish travellers|traveller" "mental health|fitness|status|distress" "physical fitness|health|status|illness"

CINAHL

(MH "Mental Health") OR (MH "Mental Health Services+") OR (MH "Health Status+") OR (MH "Physical Fitness+") OR (MH "Psychological Well-Being")
 TI ((Mental* OR psychological*) N2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR "well being" OR stress* OR distress OR disease*)) OR AB

((Mental* OR psychological*) N2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR "well being" OR stress* OR distress OR disease*))
 TI (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*) OR AB (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*)
 TI ((physical*) N2 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness)) OR AB ((physical*) N2 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness))
 TI ((cardiac OR cardiovascular OR heart) N3 (health OR disorder* or disease*)) OR AB ((cardiac OR cardiovascular OR heart) N3 (health OR disorder* or disease*))
 TI ("health study" OR "health studies") OR AB ("health study" OR "health studies")
 S1 OR S2 OR S3 OR S4 OR S5 OR S6
 TI ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) N3 (traveller* OR gypsy OR gypsies)) OR AB ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) N3 (traveller* OR gypsy OR gypsies))
 S7 AND S8

SCOPUS

TITLE-ABS-KEY (((Mental* OR psychological*) W/2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR "well being" OR stress* OR distress OR disease*)) OR (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*) OR ((physical*) W/3 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness)) OR ((cardiac OR cardiovascular OR heart) W/3 (health OR disorder* or disease*)) OR ("health study" OR "health studies")) AND ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) W/3 (traveller* OR gypsy OR gypsies))

PsycINFO

DE "Mental Health" OR DE "Health" OR DE "Health Literacy" OR DE "Health Status" OR DE "Physical Health" OR DE "Health Attitudes" OR DE "Health Behavior" OR DE "Health Risk Behavior" OR DE "Mental Disorders" OR DE "Chronic Mental Illness"
 TI ((Mental* OR psychological*) N2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR "well being" OR stress* OR distress OR disease*)) OR AB ((Mental* OR psychological*) N2 (condition OR factor* OR health OR fit OR fitness OR help OR state* OR status OR well-being OR "well being" OR stress* OR distress OR disease*))
 TI (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*) OR AB (depression OR depressed OR addiction* OR anxiety OR anxious OR delirium OR psychosis OR schizophreni*)
 TI ((physical*) N2 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness)) OR AB ((physical*) N2 (health* OR fit OR fitness OR well-being OR wellbeing OR status OR ill OR illness))
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 S1 OR S2 OR S3 OR S4 OR S5 OR S6
 TI ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) N3 (traveller* OR gypsy OR gypsies)) OR AB ((Irish OR Ireland OR Dublin OR limerick OR Waterford OR Galway OR Dublin OR cork) N3 (traveller* OR gypsy OR gypsies))
 S7 AND S8

Supplementary Table 1: Study Characteristics

No	Author(s) and Title	Study Aims & Objectives	Research Design	Living Arrangements	Location of participants	Inclusion/Exclusion Criteria	Data Collection Method
1	<u>All Ireland Traveller Health Study (AITHS)</u>	<ul style="list-style-type: none"> -To record the number of Travellers on the island of Ireland -To record fertility rate and deaths in one year -To follow a birth cohort for 1 year -To document health status and determine factors affecting the health status of Travellers and their access to health services -To document attitudes/perceptions of Travellers to health services 	Census and quantitative study	Documented in some studies/reports	Island of Ireland North and South	Travellers from island of Ireland	Survey-census section, health status section, health status for children, health services utilisation for adults.

1.a	Abdalla et al, 2020. ‘Disparities in fatal and non-fatal injuries between Irish travellers and the Irish general population are similar to those of other indigenous minorities: a cross-sectional population-based comparative study’	To assess disparities in fatal and non-fatal injury between travellers and the general population in Ireland	Comparative study based on cross-sectional population-based data.	Not stated	ROI	<u>Inclusion:</u> -Irish Travellers who participated in the AITHS -Aged 15 years or older.	<i>Traveller data:</i> -from the AITHS -from the General Register Office -CSO -PHNs working with traveller families. <i>General population data:</i> - from the CSO 2008 report 2006 census and the Survey of Lifestyle, Attitude and Nutrition (SLAN) 2002.
1.b	(i) Kelleher et al, 2012 Sociodemographic, environmental, lifestyle and psychosocial factors predict self-rated health in Irish Travellers, a minority nomadic population (ii) Whelan et al, 2010. Socio-demographic, health status, psycho-social and lifestyle predictors of self-rated health in the All-Ireland Traveller Health Study (abstract)	Aim: to assess the predictive ability of socio-demographic, environmental, lifestyle and psychosocial factors to self-rated health.	Census survey of Traveller families in Ireland, North and South (AITHS)	75% (n=1547) live in house/apartment 25% (n=515) live in caravan/trailer/chalet	ROI/Northern Ireland	<u>Inclusion:</u> Self-identified Travellers in the Republic and Northern Ireland	Health Status survey: subjective questions around lifestyle, culture, social experiences/supports, health behaviour and self-reported health status.

1.c	<p>(i) Mc Gorrian et al, 2010</p> <p>Adverse cardiovascular risk profile in a disadvantaged minority community consistent with the thrifty phenotype hypothesis. Findings from the All-Ireland Traveller Health Study (Abstract)</p> <p>(ii) McGorrian et al, 2012</p> <p>Cardiovascular disease and risk factors in an indigenous minority population. The All-Ireland Traveller Health Study.</p>	<p>Aim: To examine CVD epidemiology and CVD risk factors in Irish Travellers and associations with social disadvantage.</p>	<p>Observational study</p>	<p>Not stated</p>	<p>A random sample (20%) of participants in the AITHS</p>	<p><u>Inclusion:</u></p> <p>All self-identified Traveller families on the island of Ireland were invited to participate.</p>	<p>AITHS: health survey via an oral-visual data collection instrument</p>
2	<p><u>Cullinane et al, 2020</u></p> <p>‘Phenotypic Variability in Leukoencehalopathy with Brain Calcifications and Cysts: Case reports of siblings from an Irish Traveller Family with a Homozygous SNORD118 Mutation’</p>	<p>To describe a case report of an Irish traveller with a leukoencehalopathy and an inherited mutation in the SNORD118 gene.</p>	<p>Case report</p>	<p>Not stated</p>	<p>Not stated</p>	<p><u>Inclusion:</u></p> <p>32 year old female Irish Traveller with leukoencehalopathy.</p>	<p>Clinical examination, family history, medical history including birth history, medications, histopathology investigations, genetic studies.</p>

3	<u>Flynn et al, 1989</u> Type II Hyperprolinaemia in a pedigree of Irish travellers (nomads)	Aim: not stated but to investigate Type II hyperprolinaemia in Irish Travellers	Descriptive study	Not stated	Not stated	Inclusion: not clearly stated but family of the 'proband' and close relatives	Testing of urine by two-dimensional paper chromatography, those showing prolinuria had blood samples taken in plain tubes and their serum or plasma proline concentrations were determined on a Locarte amino acid analyser. In many cases no urine was collected but a blood sample was.
4	<u>Hodgins et al, 2006</u> '... it's all the same no matter how much fruit or vegetables or fresh air we get'. Traveller women's perceptions of illness causation and health inequalities	Aim: to explore health, ill-health and health inequalities in Traveller women	Qualitative study	Not stated	Not stated	Inclusion: not explicitly stated but appears to be Traveller women accessing pre-existing community projects or adult education initiatives	-response to a vignette in focus groups
5	<u>Keohane et al, 2020.</u> Microbiome and health implications for ethnic minorities after enforced lifestyle changes.	Aim: to investigate whether recent lifestyle changes are associated with differences in the microbiome and risk factors for chronic disease.	Cross-sectional study.	Within 30km radius of Cork city at one of five locations. Varied from permanent encampment, h alt ing sites	Cork	Inclusion: None of the participants had taken antibiotics within 1 month and none were taking laxatives, corticosteroids, anti-inflammatories or anticoagulants	- Fecal microbiota of Irish Travellers were collected and compared with that of the settled background population in the same geographic locality and with that from individuals in other

				or social housing. NB 87% of participants were nomadic in childhood but their living conditions had since changed.			industrialised and non-industrialised countries. -Dietary habits were assessed via questionnaire -Body composition was assessed by DXA. -Well-being was assessed by the WHO-5 Well-Being Index -Personal, medical and family history was recorded
6	<u>Mac Gabhann, 2011</u> Voices Unheard. A study of Irish travellers in Prison.	Aim: to explore issues faced by Irish Travellers in prison	Mixed methods study	England/Wales	Prisons in England/Wales	<u>Inclusion-</u> -Irish travellers in prison -prison staff in prisons in England and Wales. <u>Exclusion</u> -Young Offenders Institution	1.Survey of Irish Travellers across the prison estate and a response form for prison staff involving prison officials and 2.A series of focus groups and semi-structured interviews with Irish travellers in seven prisons.
7	<u>McCormick et al, 2001</u> Chronic inflammatory bowel disease and the 'over-clean'	Aim: to estimate the prevalence of inflammatory bowel disease in the traveller population.	Survey	N/A	Study was conducted in 11/26 counties in Ireland where 25/30	<u>Inclusion:</u> all gastroenterologists or surgeons working in the public health service in Ireland for at	Collected the number of members of the travelling community ever seen with inflammatory bowel disease and type of disease

	environment: Rarity in the Irish 'Traveller' community.				gastroenterologists were based	least three years at time of study, identified from the Irish Society of Gastroenterology.	seen (Crohn's and Ulcerative colitis).
8	<u>Murphy 2016</u> Travelling through homelessness: A study of Traveller Homelessness in County Offaly	Aim: To explore the experience of homelessness for Travellers in Co. Offaly and to describe how Travellers are accounted for within the definitions of homelessness used at a County level	Qualitative interview-based study	Current living conditions of participants varied but all had experienced homelessness in the previous year	Travellers residing in Co. Offaly	Inclusion: Member of the Travelling Community, living in County Offaly, or have been living in County Offaly before a movement to emergency/temporary accommodation outside of the country, have experienced homelessness within the previous 12 months, be aged over 18 years	'Life history interviews' were conducted with participants.
9	<u>Nolan et al, 2017</u> Respiratory Health in an Irish Traveller Community	Aim: to assess respiratory health in Irish Travellers	Observational study	N/S	Travellers residing in West Dublin	Inclusion: Irish Travellers > 18 years	Subjective and objective data collected: BMI, smoking history, respiratory symptoms, GP diagnosis of asthma and spirometry measures were taken

10	<p><u>O'Toole et al, 2015</u></p> <p>Tuberculosis incidence in the Irish Traveller population in Ireland from 2002 to 2013</p>	To examine data regarding TB notifications in Ireland from 2002 to 2013.	Descriptive epidemiological study	N/S	N/S	<p><u>Inclusion:</u></p> <p>-all cases of TB reported by the National TB Surveillance System and CID,</p> <p>-cases reported in the Census of 2002, 2006 and 2011 and</p> <p>-cases reported by the AITHS.</p>	<p>Data were collected from National TB Surveillance System and Computerised Infections Disease Reporting system by the Health Surveillance Centre.</p> <p>Crude incidence rates (CIR) were calculated from the CSO and the AITHS data.</p> <p>5 year cumulative CIR values were calculated for 2009-2013.</p> <p>Average incidence rates for 2002-2013 were calculated for each age group using CSO data.</p>
11. a	<p><u>(i)Slattery et al, 2011</u></p> <p>The point prevalence of diabetes, pre-diabetes and metabolic syndrome in Irish travellers</p> <p>Abstracts</p>	Aim for all: to evaluate CVD risk factors and the point prevalence of diabetes, pre-diabetes and metabolic syndrome in the Irish Traveller population.	Observational pilot study- abstract only	N/S	Travellers living along 'western seaboard' recruited from Galway and Western Traveller movements	Inclusion: Travellers (>18 years)	The following outcomes were evaluated; glucose levels, lipid profiles, oral glucose tolerance tests, blood pressure, weight, height and waist circumference.
11. b	<p><u>(ii) Slattery et al, 2011</u></p> <p>The prevalence of diabetes, pre-diabetes and metabolic syndrome in Irish Travellers</p>						

11.c	<p>and the impact of lifestyle modification (abstract)</p> <p>(iii) Slattery, Brennan, Canny, Sweeney, Ward, O' Shea and Dunne</p> <p>Cardiovascular health in the Irish Traveller community</p> <p>(iv) Slattery et al, 2011</p> <p>The prevalence of diabetes, Pre-diabetes and the Metabolic Syndrome in Irish Travellers</p> <p>Tan et al, 2009</p>						
11.d	<p>Traveller Health: Prevalence of Diabetes, Pre-Diabetes and the Metabolic Syndrome (abstract)</p>						

Supplementary Table 2: Details of Study Participants

No	Author	Number of Participants	Age (Mean + SD)	Biological Sex
1	<u>AITHS</u>	4,141 adults interviewed	5-14 years: 26% 15-24 years: 21% 25-39 years: 21% 40-64 years: 13% 65 years+: 3%	Males: 1,817 (43.9%), Females: 2,324 (56.1%)
1a	<u>Abdalla et al, 2013</u>	Non-fatal injury data in Travellers: n = 1663 Travellers	Aged 15 years +	Males: 702 (42%), Females: 961 (58%)
1b	<u>Whelan et al, 2010 (abstract)</u> <u>Kelleher et al 2012</u>	n= 2065	<30 years: 48% (n=945) 30-44: 28.6% (n=563) 45-64: 18.4% (n=362) >65: 5.1% (n=100)	Males: 898 (43.5%), Females: 1166 (56.5%)
1c	<u>(i) McGorrian et al, 2010 (abstract)</u> <u>(ii) McGorrian et al, 2012</u>	2023 Age, sex and CVD data was available on 1878 of the total sample of 2023 Comparator population: 10,364	18-29: 41.8% (n=784) 30-34: 31.6% (n=594) 45-59: 18% (n=338) 60-74: 7.5% (n=140) >75: 1.2% (n=22)	Males: 601 (32%), Females: 1277 (68%)

2	<u>Cullinane, Lynch and Marnane, 2020</u>	1	32 years	Female
3	<u>Flynn et al 2020</u>	*Whole sample: 312 Urine from 280, blood from 147. Adult sample with Type II hyperprolinaemia: 7	*Not stated for whole sample, but among 7 adults with Type II hyperprolinaemia the mean age was 27.9 years	*Not stated for whole sample, but among 7 adults with Type II hyperprolinaemia, 4 females (57.1%) and 3 (42.9%) males.
4	<u>Hodgkins et al, 2006</u>	41	15-19: 15% 20-29: 51% 30-39: 20% >40: 14%	All female
5	<u>Keohane et al, 2020</u>	118	39 (+/- 13 years sd)	Males: 53 (44.9%), Females: 65 (55.1%)
6	<u>Mac Gabhann, 2011</u>	453 (0.6% of prison population). Of this, 296 survey forms were completed. 57 travellers participated in the focus groups/interviews	Age range of IT prisoners: 20-30: 39.5% 30-40: 29.5% 40-50: 17.1% 15-20:8.5% 50-60:4.3% 60-70:1.1%	Male = 93.6%, female = 6.4% 1 female prison was visited out of 7 in total.

7	<u>McCormick and Manning, 2001</u>	25	N/S	N/S
8	<u>Murphy, 2016</u>	14	N/S	N/S
9	<u>Nolan et al, 2017</u>	35	Mean age 44 years (18-69)	Males: 16 (45.7%); Females: 19 (54.3%)
10	<u>O' Toole et al, 2015</u>	2060	Travellers: majority of cases were in 0-34 yrs age group (mean of 26 years, median of 24 years) General population: majority of cases were in the 25 to > 65 years age group (mean of 43 years, median of 38 years) Irish-born: majority of cases in 55 to >65 years age group (mean of 49 years, median of 49 years)	N/S

11a-e	<u>Slattery et al. 2011</u> 5 reports: Tan et al, 2009, Slattery et al 2010, 2011	354 travellers were screened in the largest study <i>(Tan et al, n=47; Slattery 2010, n=187; Slattery 2011, n=285; Slattery 2011, n=353)</i>	Mean age 37 ± 11 (SD)	Males: 127 (35.9%); Females: 227 (64.1%)
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N/S: not stated