| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (A) STUDIES WTH A CONTROL GROUP |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| Sokal et al, 2004 (USA)[12] | $\mathrm{N}=100$. Men and women with SCZ or S-AFF | $\mathrm{N}=3052$. Matched for age/race/gender (15:1 ratio). From NHIS national survey dataset | Diabetes (ascertained from patient interview) - lifetime prevalence | SMI: Obs = 10/97 (10.3\%) Control: Obs $=167 / 2861$ (5.8\%) | Unadjusted OR = 1.98 (0.99 to 3.96); <br> Adjusted OR $=1.98$ (0.95 to 4.10) <br> *Calculated RR $=1.77$ ( 0.96 to 3.23 ) |
| Osborn et al, 2006 (UK: England) [8] | $\mathrm{N}=74$. Men and women with SCZ , S-AFF or N-ACP | $\mathrm{N}=148$. Men and women | Diabetes (recorded in GP records) | $\begin{aligned} & \text { SMI: Obs }=7 / 74 \text { (9.6\%) } \\ & \text { Control: Obs }=4 / 148 \text { (2.7\%) } \end{aligned}$ | Unadjusted OR = 3.8 (1.1 to 13.3); <br> Adjusted $\mathrm{OR}^{a}=3.7$ (0.9 to 15.4); <br> Adjusted $\mathrm{OR}^{\mathrm{b}}=6.0$ (1.2 to 3.10) <br> *Calculated $\mathrm{RR}=3.50$ (1.06 to 11.58) |
|  |  |  | Hyperglycaemia (randomblood glucose $>11.0 \mathrm{mmol} / \mathrm{L}$ ) | SMI: Obs = $5 / 74$ (6.9\%) <br> Control: Obs = 6/148 (4.1\%) | Unadjusted OR = 1.7 ( 0.5 to 5.9 ); <br> Adjusted $\mathrm{OR}^{\mathrm{a}}=1.2$ (0.3 to 4.9); <br> Adjusted $\mathrm{OR}^{b}=1.1$ ( 0.2 to 5.4 ) |
|  |  |  | Mean random glucose levels ( $\mathrm{mmol} / \mathrm{L}$ ) | SM: Mean $=6.1 \mathrm{mmol} / \mathrm{L}(\mathrm{SD} 3.5)$ <br> Control: Mean $=5.3 \mathrm{mmol} / \mathrm{L}$ (SD 2.1) | $\begin{aligned} & \text { SMI > Controls: t-test:: F=-2.1, } p=.003 \\ & \text { *SMD }=0.302(0.02-0.583) \end{aligned}$ |
| McEvoy et al, 2005 (USA) [47] | $\mathrm{N}=689$. Men and women with chronic SCZ | Compared to randomly selected population from the NHANES III study matched for age/race/gender ( $\mathrm{N}=689$ ) | 1). Mean fasting glucose ( $\mathrm{mg} / \mathrm{dl}$ ) (no SD) <br> 2). Met the glucose criterion for metabolic syndrome (>110mg/dl) | Males:SM1 mean =97.7, Control mean=102.4 <br> Females: SMI mean=100.9 Control mean= 99.9 <br> Males: SMI 14.1\%, Controls $14.2 \%$ <br> Females SMI 21.7\% Controls 11.2\% | SMl<controls: t test $\mathrm{p}=0.034$ SMI=controls: $t$ test $p=0.793$ SMI=controls: chi sq p=0.964 SMl>controls: chi sq $p=0.008$ |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Ourkendall et al, 2004 <br> (USA) [14] | $\mathrm{N}=3022$. Men and women with SCZ Members of US health plans | $\mathrm{N}=12088$. Matched for age/gender (4:1 ratio). Randomly selected from same health databases | Diabetes diagnosis (ICD-9 Code 250) or prescriptions for oral antidiabetic medications or insulin | SMI: Prevalence $=91.7$ per 1000 Incidence $=7.0$ per 1000 person-years Control: Prevalence $=50.5$ per 1000 Incidence $=4.3$ per 1000 person-years | Prevalence: Unadjusted OR = 1.9 (1.6 to 2.2); <br> Adjusted $\mathrm{OR}^{\mathrm{d}}=2.1$ (1.8 to 2.4) <br> Incidence: Unadjusted RR = 1.6 (1.2 to 2.2); <br> Adjusted $\mathrm{RR}^{\mathrm{d}}=1.8$ (1.2 to 2.6) <br> *Calculated risk ratio $=1.82$ ( 1.58 to 2.08 ) |
| Enger et al, 2004 (USA) [8] | $\mathrm{N}=$ 1920. Men and women with SCZ Members of US health plan | $\mathrm{N}=9600$. Matched for age/gender (5:1 ratio). Identified from same health plan database | Diabetes diagnosis (ICD-9 Code 250) or at least one dispensing of anti-diabetic drug | SMI: Obs = 105 events <br> Rate $=3464$ per 100,000 person-years <br> Control: Obs = 201 events <br> Rate $=1380$ per 100,000 person-years | Adjusted rate ratio $=1.75$ (1.38 to 2.21) <br> *Calculated risk ratio $=2.00$ ( 1.62 to 2.46) |
| Kilbourne et al, 2004 (USA) [16] | $\mathrm{N}=4310$. Men and women with BPAD from National US Veterans cohort | $\mathrm{N}=3408760$. Men and women. From same Veterans cohort | Diabetes diagnosis (ICD-9) | SMI: Obs = $743 / 4310$ (17.2\%) <br> Control: Obs = 532926/3408760 (15.6\%) | None reported <br> *Calculated risk ratio $=1.10$ (1.03 to 1.18) |
| Inpatient Samples |  |  |  |  |  |
| Finney, 1989 (Sweden) [17] | Search of inpatient register (1969-1983) to identify conscripts ( $\mathrm{N}=621074$ ) with diabetes diagnosis and SCZ All males aged under 27 years | Members of same conscript cohort (National Enrolment Register 1969-1979) with diabetes diagnosis but no SCZ. All males aged under 27 years | Juvenile onset diabetes (ICD Code 250) | Diabetics with schizophrenia: Obs $=0 ;$ Exp $=4$ Diabetics without schizophrenia: Obs $=1154$ cases $($ Rate $=1.9$ per 1000) General population rates (1969-1983): For age 0-19 $=0.2$ per 1000 | None reported |
| Makikyro et al, 1998 (Finland) [18] | $\mathrm{N}=89$. Members of 1966 Birth Cohort with SCZ. Followed up 1982-1994. No gender information | $\mathrm{N}=10630$. Members of same Birth Cohort with no history of psychiatric disorder. Men and women | Diabetes mellitus (hospitaltreated cases): ICD-8 and ICD-9 | $\begin{aligned} & \text { SM: Obs = 0/89 (0\%) } \\ & \text { Control: Obs = 78/10630 (0.7\%). } \end{aligned}$ | None reported <br> *Calculated risk ratio $=0.75$ ( 0.05 to 12.04) |
| Ryan et al, 2003 (Finland) [19] | $\mathrm{N}=26$. Men and women with SCZ. First-episode and drug-naïve | $\mathrm{N}=26$. Men and women | Impaired glucose tolerance ( $>110 \mathrm{mg} / \mathrm{dll}$ and $<125 \mathrm{mg} / \mathrm{dl}$ ) Mean fasting blood glucose ( $\mathrm{mg} / \mathrm{dL}$ ) | $\begin{aligned} & \text { SM: 4/26 (15.4\%) } \\ & \text { Control: 0/26 (0\%) } \\ & \text { SM: Mean = } 95.8 \text { (SD 16.9) } \\ & \text { Control: } \text { Mean = } 88.2 \text { (SD 5.4) } \end{aligned}$ | None reported <br> *Calculated risk ratio $=9.00$ ( 0.51 to 159.15) <br> SMI > Controls (t-test, p<.03) <br> *SMD $=0.606$ ( 0.049 to 1.162) |
| Saari et al, 2005 <br> (Finland) [20] | $N=31$. Men and women with SCZ. Members of 1966 Birth Cohort followed up in 1997/1998 | $N=5455$. Men and women with no history of psychiatric treatment. From same 1966 Birth Cohort | Fasting blood glucose $\geq 110$ $\mathrm{mg} / \mathrm{dL}$ | $\begin{aligned} & \text { SMI: Obs = 0/31 (0\%) } \\ & \text { Control: Obs = 157/5455 (3\%) } \end{aligned}$ | None reported *Calculated risk ratio $=0.54$ ( 0.03 to 8.50 ) |
| Arranz et al, 2004 (Spain) [21] | Men and women with SCZ <br> Antipsychotic-free group: $\mathrm{N}=50$ <br> Antipsychotic-naive group: $\mathrm{N}=50$ (first psychotic episode) | $\mathrm{N}=50$. Men and women. Hospital staff with no history of SCZ or medication affecting glucose homeostasis | Mean fasting blood glucose ( $\mathrm{mmol} / \mathrm{L}$ ) | Antipsychotic-free: Mean $=4.47$ (SD 0.08) Antipsychotic-naïve: Mean $=4.33$ (SD 0.05) Control group: Mean $=4.22($ SD 0.08 $)$ | No significant differences-ANCOVA', p=. 21 *SMDs <br> Antipsychotic-free $=3.125$ (2.538 to 3.712) <br> Antipsychotic-naïve $=1.649$ ( 1.194 to 2.104) |

TABLE 1: DIABEIES AND HYPERGLYCAEMA PAPERS (continued)
(B) STUDIES COMPARING PATIENTS WITH SM TO NORMATIVE DATA

| (B) STUDIES COMPARING PATIENTS WTH SM TO NORMATIVE DATA |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| Outpatient Samples |  |  |  |  |  |
| Lamberti et al, 2004 (USA) [22] | $\mathrm{N}=$ 196. Patients with SCZ . No gender information | Compared to general population rate for comparable age groups (data from Mokdad et al, 2001) | Diagnosis of diabetes (medical chart review) | SMI: Obs = 27/196 (13.8\%) General population rate: 7.3\% | None reported. <br> *Calculated risk ratio $=1.89$ |
| Dickerson et al, 2002 (USA) [23] | $\mathrm{N}=43$. All females, with SCZ or S-AFF | $\mathrm{N}=101$. Age-range matched females from Maryland Behavioural Risk Factor Survey (BFRS) 1999 dataset | Diabetes (ever) - self-reported in interview using BRFS tool | SMI: Obs = 6/43 (14\%) (Cl: 5 to 28\%) Controls: Obs = 8/101 (8\%) (Cl: 6 to10\%) | None reported *Calculated risk ratio $=1.90$ ( 0.70 to 5.16 ) |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Casadebaig et al, 1997 (France) [24] | N = 3470. Men and women with SCZ | Compared to INSEE-CREDES 1991 general population survey data. | Treatment for diabetes (ICD-9 Code 250) | SM: Males Obs =24; Females: $\mathrm{Obs}=30$ Controls: No prevalence estimates reported | Standardised Morbidity Ratio <br> Male SMR = 4.0 (Chi square $\mathrm{p}<.05$ ) <br> Female SMR = 2.0 (Chi square p<05). |
| Dixon et al, 2000 (USA) [25] | (i) Field Study (1994-96): $\mathrm{N}=719$. <br> Men and women with SCZ. (ii) <br> Medicaid Data (1991): $\mathrm{N}=6066$. Men and women with SCZ, S-AFF or SFD. <br> (iii) Medicare Data (1991): $\mathrm{N}=14182$. Men and women with SCZ, S-AFF or SFD | Compared to general population selfreported rates from National Health Interview Survey (NHIS 1994) - Adams \& Marano, 1995 | Field Study. Self-reported diabetes: lifetime and current. Medicaid/Medicare Data: Any diabetes-related claim | SMI: <br> (i) Field Study: Lifetime diabetes: 107/719 (14.9\%); Current diabetes: 78 cases (10.8\%); <br> (ii) Medicaid claims: 673/6066 (11.1\%). <br> Age 18-44 = 6.7\%; Age 45-64 = 18.8\% <br> (iii) Medicare: claims: $1766 / 14182$ (12.5\%). <br> Age 18-44 = 5.6\%; Age 45-64 = 14.9\% <br> Cited general population rates: <br> Age 18-44 = 1.2\%; Age 45-64 = 6.3\% | None reported <br> *Calculated risk ratio $=4.67$ (age 18-44 yrs) <br> *Calculated risk ratio $=2.36$ (age 45-64 yrs) |
| $\begin{aligned} & \text { Susce et al,2005 } \\ & \text { (USA) [46] } \end{aligned}$ | $\mathrm{N}=560$. Men and women with SCZ , S AFF, BPAD, DEP | Compared to Kentucky general population (percentages not raw data) | Diagnosis of diabetes (medical chart revien) | $\begin{aligned} & \text { SMI:Obs }=101 / 560(18 \%) \\ & \text { Controls }=7 \% \end{aligned}$ | Reported OR: 2.9 (95\%Cl=2.3to 3.6) <br> *Calculated risk ratio=2.57 |
| Inpatient Samples |  |  |  |  |  |
| Lilliker, 1980 (USA)[26] | $\mathrm{N}=1134$. Patients with SCZ discharged 1973-1978. No gender information | Compared to general population data from National Health Survey 1960/62 | Diabetic diet recorded in dietary records | SM: Obs = 38/1134 (3.3\%) <br> General population rate $=1.8 \%$ | None reported |
| Regenold et al, 2002 (USA) [27] | $\mathrm{N}=71$. Men and women with SCZ. Older Adults (age 50-74 yrs) | Compared to general population survey data for age, race and gender matched rates (NHANES III study) | Diagnosis of Diabetes Type 2 or prescription for insulin or oral hypoglycaemics (chart review) | SMI: Obs = 9/71 (13\%) General population rate $=15 \%$ ( matched controls ) | None reported *Calculated risk ratio $=0.84$ |
| Hung et al, 2005 (Taiwan) [28] | $\mathrm{N}=246$. Men and women with SCZ | Compared to general population rates based on data from Lu et al (1998). | Diagnosis of diabetes (on fasting plasma glucose > $126 \mathrm{mg} / \mathrm{dL}$ ) | SMI: Obs = 24/246 (9.8\%) <br> General population: Obs = 120/1534 (7.8\%) | None reported <br> *Calculated risk ratio $=1.25$ ( 0.822 to 1.893) |
| Regenold et al, 2002 (USA) [27] | $\mathrm{N}=20$. Men and women with S-AFF. Oder Adults (age 50-74 yrs) | Compared to general population survey data (age, race and gender matched rates - NHANES III study) | Diagnosis of Type 2 Diabetes or prescription of insulin or oral hypoglycaemics (chart review) | $\begin{aligned} & \text { SMI: Obs }=10 / 20(50 \%) \\ & \text { General population rate }=10 \% \text { (matched controls) } \end{aligned}$ | None reported *Calculated risk ratio $=5.0$ |
| Cohen et al, 2003 (Netherlands) [29] | $\mathrm{N}=93$. Men and women with SCZ or S-AFF | Compared to Dutch general population rates (Nivel, 1999 study) | Diabetes Mellitus Type 2 (nonfasting blood glucose $>11.0$ mmol $/ \mathrm{L}$ ) | SMI: Observed rate $=7.5 \%$ General population rate $=1.9 \%$ | $\begin{aligned} & \hline \mathrm{OR}=4.288(\mathrm{Cl} 1.979 \text { to } 9.289) \\ & \text { *Calculated risk ratio }=3.95 \end{aligned}$ |
| Lilliker, 1980 (USA)[26] | Study 1: $\mathrm{N}=$ 203. Men and women with BPAD. Study 2: $N=129$. Patients with BPAD discharged 1973-1978. No gender information. | Study 1: Compared to general population rates from National Health Survey 1960/62 (N=6692). Study 2: Compared to inpatients discharged 1973-1978 with 'other' diagnoses (including SCZ). | Study 1: Diagnosis of diabetes recorded in notes Study 2: Diabetic diet noted in dietary records | Study 1: Diagnosed cases (note review): <br> Bipolar: Obs = 20/203 (9.85\%) <br> Males $=4 / 79$ (5.06\%); Females $=16 / 124$ (12.9\%) <br> General population rate (expected) $=1.8 \%$ <br> Study 2: Based on dietary records: <br> Bipolar: Obs = 16/129 (12.4\%) <br> Other diagnoses: Obs = 121/4379 (2.8\%) | None reported *Calculated risk ratio $=5.47$ |
| Cassidy et al, 1999 (USA) [30] | N= 345. Men and women with BPAD | Compared with general population norms | Diagnosis of diabetes (from medical history review) - Type I or Type II | SNI (matched sample): Obs = 34/345 (9.9\%) <br> SMI (unmatched sample): Obs = 36/357 (10.1\%) <br> Expected rate (from US norms) $=3.5 \%$ | None reported <br> *Calculated risk ratio $=2.83$ |

TABLE 1: DIABEIES AND HYPERGLYCAEMA PAPERS (Continued)

| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inpatient samples (continued) |  |  |  |  |  |
| Regenold et al, 2002 (USA) [27] | $\mathrm{N}=53$. Men and women with BPAD. Oder Adults (age 50-74 yrs) | Compared to general population survey data (age, race and gender matched rates - NHANES III study) | Diagnosis of Type 2 Diabetes or prescription of insulin or oral hypoglycaemics (chart review) | $\begin{aligned} & \text { SMI: Obs }=14 / 53(26 \%) \\ & \text { General population rate }=13 \% \text { (matched cases) } \end{aligned}$ | None reported *Calculated risk ratio $=2.03$ |
| Regenold et al, 2002 (USA) [27] | $\mathrm{N}=144$. Men and women with $\mathrm{SCZ}, \mathrm{S}$ AFF or BPAD. Older Adults (age 50-74 years) | Compared to general population survey data (NHANES III study) | Diagnosis of Type 2 Diabetes or prescription for insulin or oral hypoglycaemics (chart review) | $\begin{aligned} & \text { SMI: Obs }=33 / 144(22.9 \%) \\ & \text { General population rate }=14 \% \end{aligned}$ | None reported |
| Cohen et al, 2003 (Netherlands) [29] | $\mathrm{N}=93$. Men and women with SCZ or S-AFF | Compared to general population rates by age group (Hoorn, 1995 study) | Hyperglycaemia (non-fasting blood glucose $>7.8$ and < 11.0 $\mathrm{mmol} / \mathrm{L}$ ) | SM: Obs = 11/93 (11.83\%) <br> Age 20-49 = 15.2\%; Age 50-59 = 13.0\% <br> General population rates: <br> Age $20-49=5.7 \%$; Age $50-59=6.3 \%$ | $\begin{aligned} & \text { Age 20-49 years: } \\ & \mathrm{OR}=2.959 \text { (Cl } 1.230 \text { to } 7.119 \text { ) } \\ & \text { Age } 50-59 \text { years } \\ & \mathrm{OR}=2.220 \text { (Cl } 0.0644 \text { to } 7.650 \text { ) } \\ & \hline \end{aligned}$ |
| Long Stay Samples |  |  |  |  |  |
| Mukherjee et al, 1996 (Italy) [31] | N= 95. Men and women with SCZ | Compared to general population data from 2 studies - Verriollo et al (1985) and Bruno et al (1992) | Diagnosis of diabetes - record of OGTT fasting plasma glucose > $140 \mathrm{mg} / \mathrm{dL}$ on $\geq 2$ occasions | SMI: Obs = 15/95 (15.8\%) (CI 12.1\% to 19.5\%) General population rates: $1985 \text { data }=3.2 \% ; 1992 \text { data }=2.1 \%$ | None reported <br> *Calculated risk ratio $=4.93$ |
| Subramaniam et al, 2003 (Singapore) [32] | $\mathrm{N}=$ 194. Men and women with SCZ | Compared to prevalence rates for general population (National Health Survey Singapore 1998) | Prevalence of diabetes (via OGTT using W-OO criteria) | SMI: Obs = 31/194 (16\%) General population rate $=9 \%$ | None reported *Calculated risk ratio $=1.77$ |
|  |  |  | Impaired glucose tolerance (via OGTT using W-OO criteria) | SM: Obs = 60/194 (30.9\%) <br> General population rate $=15 \%$ | None reported |
| (C) STUDIES COMPARING PATIENTS WMTH SM TO PATIENTS WTH OTHER DIAGNOSES |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| Chafetz et al, 2005 (USA) [33] | $\mathrm{N}=271$. Men, women and transgender with SCZ or S-AFF | $\mathrm{N}=510$. Men and women with 'other' diagnoses (including BPAD) | Diabetes (ascertained from nursing notes) | SCZ/S-AFF group: Obs = 20/271 (7.4\%) <br> 'Other diagnoses' group: Obs = 16/510 (3.1\%) | None reported <br> *Calculated risk ratio $=2.35$ (1.239 to 4.464) |
| Outpatient Samples |  |  |  |  |  |
| Gierz \& Jeste, 1993 (USA) [34] | $\mathrm{N}=30$. Men and women with $\mathrm{SCZ}-$ predominantly male. Ederly veterans: mean age 67.6 yrs (SD 6.5) | $N=26$. Men and women with DEP from same clinic. Elderly veterans: mean age 66.5 yrs (SD 4.5). Aso cite population rates for age >65 years (Schick, 1986). | Diabetes mellitus (ascertained from chart review, computerised profiles, prescription records) | SCZ group: Prevalence rate $=16.7 \%$ DEP group: Prevalence rate $=15.4 \%$ Cited population norms: Rate $=8.3 \%$ | None reported *Calculated risk ratio $=2.01$ |
| Lamberti et al, 2004 (USA) [22] | $\mathrm{N}=$ 196. Patients with SCZ . No gender information | $\mathrm{N}=240$. Patients with other psychiatric diagnoses (including S-AFF, BPAD, DEP and other psychotic disorders) | Diagnosis of diabetes (medical chart review) | Schizophrenia group: Obs = 27/196 (13.8\%) 'Other diagnoses' group: Obs = 35/240 (14.6\%) | None reported |
| Inpatient Samples |  |  |  |  |  |
| Kessing et al, 2004 (Denmark)[35] | $\mathrm{N}=6706$. Men and women with BPAD. Excluded patients with an existing diagnosis of diabetes | (a) $N=108525$ patients with osteoarthritis. Men and women <br> (b) $\mathrm{N}=29035$ patients with DEP. Men and women | Diagnosis of diabetes during study period: ICD-8 (Codes 249.00-250.09) or ICD-10 (Codes DE10.O-DE11.9) | Bipolar: Obs = 101/6706 (1.51\%) <br> Osteoarthritis: Obs = 1980/108525 (1.82\%) <br> $D E P:$ Obs $=358 / 29035$ (1.23\%) | None reported <br> *Calculated risk ratio $=1.22$ ( 0.981 to 1.521) <br> - compared to Depression <br> *Calculated risk ratio $=0.83$ ( 0.677 to 1.007) <br> - compared to Osteoarthritis |
| Long Stay Samples |  |  |  |  |  |
| Steinert et al, 1996 (Germany) [36] | $\mathrm{N}=90$. Men and women with SCZ or S-AFF | $\mathrm{N}=90$. Men and women with DEP. | Diabetes mellitus (unclear how ascertained from notes) | SMI: Males: Obs = 3/43 (7\%) <br> Females: Obs = 8/47 (17\%) <br> Non-SMI: Males: Obs = $2 / 43$ (4.7\%) <br> Females: Obs = 3/47 (6.4\%) | None reported *Calculated risk ratio $=2.2(0.796$ to 6.076$)$ |

 days, diabetes, anti-angina medications, anti-hypertensive medication; ${ }^{\dagger}$ Controlling for age, $B M 1$, sex and family history of diabetes; * If odds ratios or risk ratios are not reported in papers, risk ratios have been calculated wherever possible.
 Tolerance Test. Obs=observations

TABLE 2: HYPERTENSION PAPERS

| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (A) STUDIES WITH A CONTROL GROUP |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| Sokal et al, 2004 (USA)[12] | $\begin{aligned} & N=97 \text {. Men and women with SCZ } \\ & \text { or S-AFF } \end{aligned}$ | $\mathrm{N}=2861$. Matched for age, race and gender ( $15: 1$ ratio). Randomly selected from national survey datasets | Lifetime prevalence of hypertension-self-reported in face to face interview | SM: Obs = 24/97 (24.7\%) <br> Control: Obs $=673 / 2861$ (23.6\%) | $\begin{aligned} & \text { Unadjusted } O R=1.09(0.67 \text { to } 1.77) \\ & \text { Adjusted } \mathrm{OR}^{a}=1.04(0.62 \text { to } 1.74) \\ & \text { Adjusted } \mathrm{OR}^{p}=1.05(0.64 \text { to } 1.71) \\ & \text { *Calculated risk ratio }=1.05 \text { ( } 0.74 \text { to } 1.50 \text { ) } \\ & \hline \end{aligned}$ |
| Osborn et al, 2006 (UK: England)[13]c | $\mathrm{N}=74$. Men and women with SCZ , S-AFF or N-ACP | $\mathrm{N}=148$. Men and women | Prevalence of hypertension (Systolic $B P>160$ or Diastolic BP > 95 mmHg ) | $\begin{aligned} & \hline \text { SMI Obs }=9 / 74(12.2 \%) \\ & \text { Control: Obs = 19/148 (12.8\%) } \end{aligned}$ | Unadjusted OR $=0.9$ (0.4 to 2.2) <br> Adjusted OR $=0.7$ ( 0.3 to 1.8 ) <br> Adjusted $\mathrm{OR}^{\mathrm{e}}=0.5$ (0.4 to 2.2) <br> *Calculated risk ratio $=0.95$ ( 0.45 to 1.99 ) |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Curkendall et al, 2004 <br> (USA) [14] | $\mathrm{N}=$ 3022. Men and women with SCZ | $\mathrm{N}=12088$. Men and women. Age and sex matched (4:1 ratio). Randomly selected from health databases | Prevalence of hypertension (ICD-9 Code 401 to 405) | SMI: Obs = 414/3022 (13.7\%) <br> Control: Obs = 2019/12088 (16.7\%) | No OR reported *Calculated risk ratio $=0.82$ ( 0.74 to 0.90 ) |
| McEvoy et al, 2005 (USA) [47] | $\mathrm{N}=687$. Men and women with chronic SCZ | Compared to population from NHANES III study matched for age/race/gender ( $\mathrm{n}=687$ ) | 1) Met metabolic syndrome blood pressure criteria <br> 2).Mean systolic BP ( mmHg ) No SD <br> 3). Mean diastolic $\mathrm{BP}(\mathrm{mmHg})$ No SD | Male: SMI: 47.2\% of 508; controls: $31.1 \%$ Female: $46.9 \%$ of 179; controls: $26.8 \%$ Male: SMI: 124 mmHg ; Control= $=123.4$ Female: SMI: 122 mmHg ; Control $=119$ Male; SMI: 79 mmH ; Control $=77$ Female; SM1: 80 mmHg ; Control: 73 | No OR Reported; *calculated risk ratio for males and females combined $=1.57$ (1.37-1.81) <br> $\mathrm{SM}=$ controls $T$ test: $\mathrm{p}=0.295$ <br> SMI=controls T test: $\mathrm{p}=0.063$ <br> SMI>controls T test: $p=0.000$ <br> SMI>controls T test: $p=0.000$ |
| Kilbourne et al, 2004 (USA)[16] | $\mathrm{N}=4310$. Men and women with BPAD or cyclothymia. US Veterans. | $\mathrm{N}=3408760$. National Veterans cohort. Demographically similar to patient group | Prevalence of hypertension (ICD-9 - codes not specified) | SMI: Obs $=1500 / 4310(34.8 \%)$ Control: Obs $=1256034 / 3408760(36.8 \%)$ | No OR reported *Calculated risk ratio $=0.94$ ( 0.91 to 0.98 ) |
| Inpatient Samples |  |  |  |  |  |
| Saari et al, 2005 <br> (Finland) [20]f | $\mathrm{N}=31$. Men and women with SCZ. All in early 30's (1966 Birth Cohort) | $\mathrm{N}=5455$. Men and women from same birth cohort. | Prevalence of hypertension ( $\mathrm{BP} \geq$ $130 / 85 \mathrm{mmHg}$ ) | SMI: Obs = 15/31 (48\%) <br> Control: Obs = 2209/5455 (40\%) | No OR reported *Calculated risk ratio $=1.19$ ( 0.83 to 1.72) |
| (B) STUDIES COMPARING PATIENTS WTH SM TO NORMATIVE DATA |  |  |  |  |  |
| Outpatient Samples |  |  |  |  |  |
| Dickerson et al, 2002 (USA)[23] | $\mathrm{N}=43$. Females with SCZ or SAFF. Age 40-70 years. | $\mathrm{N}=101$. Age-matched females from Maryland Behavioural Risk Factor Survey (BRRS) 1999 dataset | Prevalence of hypertension - selfreported in interview (using BFRS) | $\begin{aligned} & \hline \text { SMI: Obs }=16 / 43 \text { (37\%) (CI: } 7 \%-53 \%) \\ & \text { General population rate }=28 \%(\mathrm{Cl}: 24 \%-31 \%) \end{aligned}$ | No OR reported *Calculated risk ratio $=1.33$ |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| $\text { Casadebaig et al, } 1997$ (France)[24] | $\mathrm{N}=3470$. Men and women with SCZ | Men and women from INSEECREDES 1991 survey dataset (representative sample of French general population) | Prevalence of hypertensive disease (ICD-9 Codes 401-405) | SMI Males: Obs = 51 cases <br> SMI Females: Obs $=33$ cases Comparison group rates not reported | Standardised Morbidity Ratios (no CI reported): Male SMR = 2.0; Female SMR = 0.5 |
| Cohn et al, 2004 (Canada) [37]f | $\begin{aligned} & \mathrm{N}=240 \text {. Men and women with SCZ } \\ & \text { or S-AFF } \end{aligned}$ | General population rates from Canadian Heart Health Survey (1986-1990) | Prevalence of hypertension (BP $\geq$ $135 / 85 \mathrm{~mm} \mathrm{Hg}$ or current treatment with antihypertensive medication) | Presented as graphs - exact values not given in table or text. | No OR reported |
| $\begin{aligned} & \text { Susce et al,2005 } \\ & \text { (USA) [46] } \end{aligned}$ | $\mathrm{N}=560$. Men and women with SCZ , <br> S-AFF, BPAD, DEP | Compared to Kentucky general population prevalence; no raw data | Prevalence of hypertension from medical charts | $\begin{aligned} & \text { SMI: obs 151/560=27\% } \\ & \text { Control =30\% } \end{aligned}$ | $\begin{aligned} & \mathrm{OR}=0.86,95 \% \mathrm{Cl}=0.71 \text { to } 1.03 \text { ) } \\ & \text { *Calculated risk ratio=0.9 } \end{aligned}$ |


| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inpatient Samples |  |  |  |  |  |
| Yates \& Wallace, 1987 <br> (USA) [38]c | $\mathrm{N}=50$. Men and women with BPAD. Study excluded non-white patients | Expected rates derived from general population data for age- and genderspecific controls (NHANES II Survey data 1971-75). | Prevalence of hypertension-defined as: (1) Patient history or physician diagnosis of hypertension; (2) Use of antihypertensive medication; (3) mean $\mathrm{BP}>160 / 95 \mathrm{mmHg}$ <br> Aso report mean systolic and diastolic BP (with 95\% CI) | $\begin{aligned} & \text { Obs = 14/50 (28\%); Exp =5.6 (11.2\%) } \\ & \text { Males: Obs = 7/25 (28\%); Exp = 3.0 (12\%) } \\ & \text { Females: Obs }=7 / 25(28 \%) ; \text { Exp }=2.6 \\ & (10.4 \%) \\ & \\ & \text { Mean SBP }=128.7(124.1-132.33) \\ & \text { Males }=123.7(117.3-130.00) \\ & \text { Females }=133.8(127.8-139.0) \\ & \text { Mean DBP }=81.0(77.9-84.1) \\ & \text { Males }=79.5(75.4-83.6) \\ & \text { Females }=82.5(77.6-87.4) \end{aligned}$ | None reported *Calculated risk ratio $=2.5$ |
| Long Stay Samples |  |  |  |  |  |
| Steinert et al, 1996 (Germany)[36]c | $\mathrm{N}=90$. Men and women with SCZ <br> or S-AFF. Age range 41-90 years | Data from German DHP Studie (1988) - Men and women, aged 4070 years. | Mean systolic and diastolic blood pressure (with SD) | SMI: Male $=126.8$ (11.3)/79.3 (7.1) <br> Female $=127.2$ (15.4)/78.2 (5.9) <br> General population data: <br> Male $=139.2$ (19.5)/85.4 (11.9) <br> Female $=136.0$ (15.8)/82.0 (11.2) | None reported |
| (C) STUDIES COMPARING PATIENTS WMTH SM TO PATIENTS WUTH OTHER DIAGNOSES |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| Chafetz et al, 2005 (USA) [33] | $\begin{aligned} & N=271 \text {. Men and women with SCZ } \\ & \text { or S-AFF } \end{aligned}$ | $\mathrm{N}=510$. Men and women. Patients with other psychiatric diagnoses | Prevalence of hypertension (derived from nurse records) | SM1: Obs = 39/271(14.4\%) <br> Other diagnoses: Obs = 56/510 (11.0\%) | No OR reported *Calculated risk ratio $=1.31$ ( 0.90 to 1.92 ) |
| Outpatient Samples |  |  |  |  |  |
| Gierz \& Jeste, 1993 (USA)[34] | $\mathrm{N}=30$. Ederly men and women with SCZ. From US Veterans clinic: mean age 67.6 yrs (SD 6.5) | $\mathrm{N}=26$. Ederly men and women with DEP from same clinic: mean age $=66.5 \mathrm{yrs}($ SD 4.5 $)$ | Prevalence of hypertension (derived from chart/records review) | SMI: Observed rate $=26.7 \%$ <br> DEP: Observed rate $=46.2 \%$ <br> General population rate: Over 65 years $=$ $37.9 \%$ | No OR reported <br> *Calculated risk ratio $=0.58$ (vs Depression) <br> *Calculated risk ratio $=0.70$ (vs gen popn) |
| Long Stay Samples |  |  |  |  |  |
| Steinert et al, 1996 (Germany) [36]c | $\mathrm{N}=90$. Men and women with SCZ <br> or S-AFF. Age range $=41-90$ years | $\mathrm{N}=90$. Men and women with DEP. <br> Age range 39-88 years | Prevalence of hypertension definition unclear. Also report mean systolic and diastolic blood pressure (with SD) | SMI: Males - Obs = 3/43 (7\%) <br> Females - Obs $=5 / 47$ (10.6\%) <br> DEP: Males - Obs $=2 / 43$ (4.7\%) <br> Females - Obs $=2 / 47$ (4.3\%) <br> Mean SBP/DBP <br> SMI: Male = 126.8 (11.3)/79.3 (7.1) <br> Female $=127.2$ (15.4)/78.2 (5.9) <br> DEP: Male $=123.2(15.3) / 76.7$ (8.5) <br> Female $=124.6$ (15.9)/78.0 (9.3) | None reported. <br> *Calculated risk ratio $=2.00$ ( 0.62 to 6.41 ) |

 or risk ratios are not reported in papers, risk ratios have been calculated wherever possible


TABLE 3: DYSUPIDEMA PAPERS

| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (A) STUDIES WMTH A CONTROL GROUP |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| Osborn et al, 2006 (UK: England) [13]c | $\mathrm{N}=74$. Men and women with SCZ, S-AFF or N-ACP | $\mathrm{N}=148$. Men and women | Prevalence of raised total cholesterol (> $5.1 \mathrm{mmol} / \mathrm{L}$ ) | $\begin{aligned} & \hline \text { SMI: Obs = 41/74 (56.2\%) } \\ & \text { Control: Obs }=73 / 148 \text { (49.3\%) } \end{aligned}$ | Unadjusted $\mathrm{OR}=1.3$ (0.7 to 2.5) <br> Adjusted OR=1.4 (0.8 to 2.5 $)^{\text {b }}$ <br> Adjusted OR $=1.9$ ( 0.9 to 3.9$)^{\text {c }}$ |
|  |  |  | Prevalence of low HDL cholesterol ( $<1.0 \mathrm{mmol} / \mathrm{L}$ ) | SMI: Obs $=12 / 74$ (16.7\%) | Unadjusted OR=4.0 (1.5 to 10.7) |
|  |  |  |  | Control: Obs = $7 / 148$ (4.8\%) | Adjusted OR $=3.9$ ( 1.4 to 10.8) ${ }^{\text {b }}$ <br> Adjusted OR=2.2 (0.7 to 7.6) ${ }^{\text {c }}$ |
|  |  |  | Prevalence of high total/HDL cholesterol ratio | SMI: Obs $=43 / 74$ (59.7\%) | Unadjusted OR=1.8 (1.0 to 3.2). |
|  |  |  |  | Control: Obs = 66/148 (44.9\%) | Adjusted OR $=1.7(0.9 \text { to } 3.0)^{\text {b }}$ <br> Adjusted OR=1.3(0.7 to 2.6) c |
|  |  |  | Mean total cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | $\begin{aligned} & \text { SMI: Mean = } 5.41 \text { (SD 1.3) } \\ & \text { Control: Mean =5.3 (SD 1.3) } \end{aligned}$ | *Standardised mean diff $=0.08$ (-0.20 to 0.36) |
|  |  |  | Mean HDL cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | $\begin{aligned} & \text { SMI: } \text { Mean }=1.4 \text { (SD 0.45) } \\ & \text { Control: } \text { Mean }=1.6 \text { (SD 0.48) } \end{aligned}$ | *Standardised mean diff $=-.42$ (-0.71 to -0.14) |
|  |  |  | Mean LDL cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | SMI: Mean $=2.98$ (SD 1.05) <br> Control: Mean $=2.98$ (1.12) | *Standardised mean diff $=0(-0.30$ to 0.30$)$ |
|  |  |  | Mean triglycerides ( $\mathrm{mmol} / \mathrm{L}$ ) | SMI: Mean $=2.5$ (SD 1.7) <br> Control: Mean = 1.8 (SD 1.5) | *Standardised mean diff $=0.47(0.16$ to 0.73$)$ |
|  |  |  | Mean tota//HDL cholesterol ratio | SMI: Mean $=4.3$ (SD 1.5) <br> Control: Mean = 3.7 (SD 1.3) | *Standardised mean diff $=0.44$ (0.15 to 0.72) |
| McEvoy et al, 2005 (USA) [47] | $\mathrm{N}=687$. Men and women with chronic SCZ | Compared to population from NHANES III study matched for age/race/gender ( $\mathrm{n}=687$ ) | Met metabolic syndrome criteria for HDL cholesterol (mg/dl) | Males; SMI 48.9\% Control 31.9\% Females SMI 63.3\% Controls 36.3\% | SMI>Controls Chi Sq P=0.000 <br> SMIl>controls Chi Sq P=0.001 |
|  |  |  | Met metabolic syndrome triglyceride ( $\mathrm{mg} / \mathrm{dll}$ ) criteria | Males: $\mathrm{SM}=50.7 \%$ Contols $=32.1 \%$ <br> Females; SMI=42.3\% Controls=19.6\% | SMIl>controls Chi Sq P=0.000 <br> SMIl>controls Chi Sq P=0.000 |
|  |  |  | Mean HDL cholesterol (mg/dl) [fasting] | Males: $\mathrm{SM} 1=42.3 \mathrm{mg} / \mathrm{dl}$; Controls $=47.2$ (No SD) Females: $S M 1=47.7$; Controls: 55.2 (No SD) | SM1<controls $T$ test $\mathrm{P}=0.000$ <br> $\mathrm{SM} /<$ controls T test $\mathrm{P}=0.000$ |
|  |  |  | Mean triglycerides ( $\mathrm{mg} / \mathrm{dll}$ ) [fasting] | Males: $\mathrm{SM} 1=194.7$ Conrtols=143.6 (No SD) <br> Females: $\mathrm{SM} 1=173.8$, Controls=118.9 (No SD) | SMI>controls $T$ test $\mathrm{P}=0.000$ <br> SMI $>$ controls $T$ test $\mathrm{P}=0.000$ |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Curkendall et al, 2004 (USA)[14] | $\mathrm{N}=3022$. Men and women with SCZ | $\mathrm{N}=12,088$. Age and sex matched to patients (4:1 ratio). Randomly selected from health databases | Prevalence of disorders of lipid metabolism (ICD-9 Code 272) or claims for antilipemic medication | SMI: Rate = 5.4\% Control: Rate $=6.3 \%$ | No OR reported <br> *calculated risk ratio $0.86(0.73,1.01)$ |
| Kilbourne et al, 2004 (USA)[16] | $\mathrm{N}=4310$. Men and women with BPAD. US Veterans. | $N=3408760$. National Veterans cohort. Demographically similar to patient group. | Prevalence of hyperlipidemia (ICD9 , codes not specified) | SMI: Obs = 973/4310(22.6\%) Control: No lipid data presented | No OR reported |


| Inpatient Samples |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| Saari et al, 2005 (Finland) [20]d | $\mathrm{N}=31$. Men and women with SCZ. All in early 30's (1966 Birth Cohort followed up 1997/98) | $N=5455$. Men and women from same birth cohort without history of psychiatric treatment | Prevalence of low HDL cholesterol ( $<40 \mathrm{mg} / \mathrm{dL}$ in men; < $50 \mathrm{mg} / \mathrm{dll}$ in women) | SMI: Obs = 5/31(16\%) Control: Obs = 588/5455 (11\%) | No OR reported *calculated risk ratio $1.50(0.66,3.39)$ |
| Saari et al, 2004 (Finland) [39] | $\mathrm{N}=31$. Men and women with SCZ. All age 31 (1966 birth cohort followed up in 1997). | $N=5498$. Men and women from same birth cohort without history of psychiatric treatment | Mean total cholesterol ( $\mathrm{mg} / \mathrm{dL}$ ) | SMI: Mean $=214.1 \mathrm{mg} / \mathrm{dL}($ SD 33.6$)$ Control: Mean $=196.4 \mathrm{mg} / \mathrm{dL}($ SD 39.0 $)$ | ANOVA: : SMI > Controls ( $p=.039$ ) *Standardised mean difference $=0.46$ (0.10 to 0.81 ) |
|  |  |  | Mean HDL cholesterol (mg/dL) | SMI: Mean HDL = $55.9 \mathrm{mg} / \mathrm{dL}$ (no SD) Control: Mean HDL $=60.5 \mathrm{mg} / \mathrm{dL}$ (no SD) | ANOVAe: SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) |
|  |  |  | Mean LDL cholesterol (mg/dL) | SMI: Mean = $131.5 \mathrm{mg} / \mathrm{dL}($ SD 30.5 $)$ Control: $\mathrm{Mean}=116.3 \mathrm{mg} / \mathrm{dL}$ (no SD) | ANOVAe: SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) |
|  |  |  | Mean fasting triglycerides (mg/dL) | $\begin{aligned} & \text { SMI: } \text { Mean = } 134.9 \text { (no SD) } \\ & \text { Control: } \text { Mean = } 104.3 \text { (no SD) } \end{aligned}$ | ANOVA: SMI > Controls ( $\mathrm{p}=.028$ ) |
| Ryan et al, 2003 (UK/Ere) [19] | $\mathrm{N}=26$. Men and women with SCZ. All first-episode and drug-naïve. Mean age 33.6 years | $\mathrm{N}=26$. Men and women. Mean age 34.4 years. Matched for age, exercise, diet, smoking, alcohol intake and anthropometric measures. | Mean fasting total cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | SMI: Mean $=4.02 \mathrm{mmol} / \mathrm{L}($ SD 0.78$)$ Control: Mean $=4.57 \mathrm{mmol} / \mathrm{L}($ SD 0.81) | T-test: SM1 < Controls ( $\mathrm{p}<.02$ ) <br> *Standardised mean difference $=-0.69$ <br> (-1.25 to -01.3) |
|  |  |  | Mean HDL cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | SMI: Mean $=1.20 \mathrm{mmol} / \mathrm{L}(S D 0.44)$ Control: Mean $=1.25 \mathrm{mmol} / \mathrm{L}(S D 0.25)$ | T-test: SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) *Standardised mean difference $=-0.14$ (-0.68 to 0.40) |
|  |  |  | Mean fasting LDL cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | SMI: Mean $=2.39 \mathrm{mmol} / \mathrm{L}(S D 0.84)$ Control: Mean $=2.91 \mathrm{mmol} / \mathrm{L}(S D 0.69)$ | T-test: SMl < Controls ( $\mathrm{p}<.02$ ) <br> *Standardised mean difference $=-0.68$ <br> (-1.24 to -0.12 ) |
|  |  |  | Mean fasting triglycerides ( $\mathrm{nmol} / \mathrm{L}$ ) | SMI: Mean $=0.99 \mathrm{mmol} / \mathrm{L}($ SD 0.43$)$ Control: Mean $=0.92 \mathrm{mmol} / \mathrm{L}($ SD 0.30$)$ | T-test: SMI = Controls ( $\mathrm{N} / \mathrm{sig}$ ) |
| Scottish Schizophrenia Research Group, 2000 (UK: Scotland) [40] | $\mathrm{N}=30$. Men and women with SCZ or SFD. First episode, drug-naïve. Mean age 28 years (males)/33 years (females) | $\mathrm{N}=30$. Matched for gender and age, smoking and dietary status. Mean age 30 years | Mean serum cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | SMI: Mean $=4.63 \mathrm{mmol} / \mathrm{L}($ SD 0.80 $)$ Control: Mean $=4.98 \mathrm{mmol} / \mathrm{L}(S D 0.91)$ | SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) <br> *Standardised mean difference $=-0.41$ <br> (-0.92 to 0.10) - note: 73\% sample smoked |
|  |  |  | Mean serum lipid peroxide levels (umol/L) | SMI: Mean $=0.50$ umol/L (SD 0.16) Control: Mean $=0.54$ umol/L (SD 0.23) | SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) <br> (Note: 73\% sample smoked) |


| (B) STUDIES COMPARING PATENTS WTH SM TO NORMATIVE DATA |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD | Main results |
| Cohn et al, 2004 (Canada) [37]d | $\mathrm{N}=240$. Men and women with SCZ or S-AFF | General population rates from anadian Heart Health Survey (1986-1990) | Mean total cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | Means presented as graphs - exact values not given in table or text | T-tests: SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) for males and females |
|  |  |  | Mean HDL cholesterol ( $\mathrm{mmol} / \mathrm{L}$ ) | Means presented as graphs - exact values not given in table or text | T-tests: SMI < Controls for males ( $\mathrm{p}>.001$ ) and females ( $\mathrm{p}=002$ ) |
|  |  |  | Mean triglycerides ( $\mathrm{mmol} / \mathrm{L}$ ) | Exact means/SDs not specified in text or a table. Means presented as graphs (with error bars) | T-tests: SMI > Controls for males ( $\mathrm{p}=.001$ ) and females ( $p=.009$ ) |
| Long Stay Samples |  |  |  |  |  |
| Steinert et al, 1996 (Germany)[36] | $\begin{aligned} & N=90 . \text { Men and women with SCZ or } \\ & \text { S-AFF. Age range }=41-90 \end{aligned}$ | General population survey data (DHP Study 1988) | Mean total cholesterol ( $\mathrm{mg} / \mathrm{dL}$ ) | SMI: Males: Mean = 205.1 mg/dL (SD 37.0) <br> Females: Mean $=201.7 \mathrm{mg} / \mathrm{dLL}$ (SD 44.2) <br> General population: <br> Males: Mean $=242.9 \mathrm{mg} / \mathrm{dL}$ (SD 45.0) <br> Females: Mean $=250.7 \mathrm{mg} / \mathrm{dL}$ (SD 45.1) | SMI < Controls for males and females (ps <.001) |
| (C) STUDIES COMPARING PATIENTS WTH SM TO PATIENTS WUTH OTHER DIAGNOSES |  |  |  |  |  |
| Inpatient Samples |  |  |  |  |  |
| Yates \& Wallace, 1987 (USA) [21] | $\mathrm{N}=50$. Men and women with BPAD. <br> Excluded non-white patients | $\mathrm{N}=50$. Men and women with DEP, matched for gender and age | Mean fasting cholesterol ( $\mathrm{mg} / \mathrm{dL}$ ). Normal range cited as 130-315 $\mathrm{mg} / \mathrm{dL}$ | SMI: Mean $=184.5 \mathrm{mg} / \mathrm{dL}$ (Cl: 173.0 to 196.0) <br> Males: Mean $=180.4$ (CI 164.2 to 196.6) <br> Females: Mean = 189.0 (Cl 171.6 to 206.4) <br> DEP: Mean $=204.3 \mathrm{mg} / \mathrm{dL}$ (No Cl's reported) <br> Males: Mean = 198.2; Females: Mean $=210.4$ | None reported |
| Long Stay Samples |  |  |  |  |  |
| Steinert et al, 1996 (Germany)[36] | $\mathrm{N}=90$. Men and women with SCZ or SAFF. Mean age 62.6 years (range 41-90) | $N=90$. Men and women with DEP. Mean age 62.3 years (range 39-88). | Mean total cholesterol ( $\mathrm{mg} / \mathrm{dL}$ ) <br> Mean triglycerides ( $\mathrm{mg} / \mathrm{dL}$ ) | SMI: Males: Mean = 205.1 mg/dL (SD 37.0) <br> Females: Mean $=201.7 \mathrm{mg} / \mathrm{dL}$ (SD 44.2) <br> DEP: Males: Mean $=219.7 \mathrm{mg} / \mathrm{dL}$ (SD 50.6) <br> Females: Mean $=223.5 \mathrm{mg} / \mathrm{dL}$ (SD 42.9) <br> SMI: Males: Mean = $128.9 \mathrm{mg} / \mathrm{dL}$ (SD 72.6) <br> Females: Mean $=137.2 \mathrm{mg} / \mathrm{dLL}$ (SD 70.9) <br> DEP: Males: Mean $=158.0 \mathrm{mg} / \mathrm{dL}$ (SD 77.8) <br> Females: Mean $=136.8 \mathrm{mg} / \mathrm{dL}$ (SD 69.5) | None reported None reported |
| Source of sample unclear |  |  |  |  |  |
| Roccatagliata et al, 1980 (Italy)[41] | $\mathrm{N}=60$. Men and women with SCZ. | $\mathrm{N}=60$. Men and women with neurological or other psychiatric disorders. Matched for age and sex. | Mean total cholesterol (mg/dL) | $\begin{aligned} & \text { SMI: } \text { Mean = } 188.2 \mathrm{mg} / \mathrm{dL}(\text { (SD 45.4) } \\ & \text { Other diagnosis: } \text { Mean = } 219.0 \mathrm{mg} / \mathrm{dL}(\text { SD 31.8) } \end{aligned}$ | T-test: SCZ < Controls (p = .005) |
|  |  |  | Mean total lipid (mg/dL) | $\begin{aligned} & \text { SMI: } \text { Mean }=821.5 \mathrm{mg} / \mathrm{dL}(\text { SD } 539.9) \\ & \text { Other diagnosis: } \text { Mean }=840.1 \mathrm{mg} / \mathrm{dL}(\text { (SD 157.7 }) \end{aligned}$ | T-test: SCZ = Controls ( n /sig) |
|  |  |  | Mean triglycerides (mg/di) | SMI: Mean $=173.3 \mathrm{mg} / \mathrm{dL}$ (SD 306.7) <br> Other diagnosis: Mean $=131.2 \mathrm{mg} / \mathrm{dL}$ (SD 45.4) | T-test: SCZ = Controls ( n /sig) |





TABLE 4: METABOUC SYNDROME PAPERS

| Source | Patient sample description | Comparison group description | Outcome measures | Prevalence estimates | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (A) STUDIES WMTH A CONTROL GROUP |  |  |  |  |  |
| Inpatient Samples |  |  |  |  |  |
| Saari et al, 2005 (Finland) [20] | $\mathrm{N}=31$. Men and women with SCZ. All in early 30's (from North Finland 1966 Birth Cohort followed up 1997/98). | $\mathrm{N}=5455$. Men and women from same 1966 birth cohort with no history of psychiatric treatment. | Prevalence of metabolic syndrome defined as the presence of 3 or more of 5 NCEP ATP III criteria ${ }^{\text {a }}$ | $\begin{aligned} & \text { SMI: Obs }=6 / 31 \text { cases }(19.4 \%) \\ & \text { Control: Obs }=326 / 5455 \text { cases ( } 6 \% \text { ) } \end{aligned}$ | Adjusted OR=3.7 (Cl: 1.5 to 9.0) ${ }^{\text {b }}$ <br> *Calculated risk ratio $=3.24$ <br> (1.57 to 6.69) |
| McEvoy et al, 2005 (USA) [47] | $\mathrm{N}=687$. Men and women with chronic SCZ | Compared to population from NHANES III study matched for age/race/gender ( $\mathrm{n}=687$ ) | Prevalence of metabolic syndromedefined as the presence of 3 or more of 5 NCEP ATP III criteria ${ }^{\text {a }}$ | Male SMI: 183/508 (36.0\%) Controls: 19.7\% Female SMI: $92 / 178$ (51.6\%) Controls: $25.1 \%$ | No OR reported. <br> *calculated risk ratios: <br> Male: 1.83 (1.42-2.36) <br> Female: 2.02 (1.40-2.96) |
| (B) STUDIES COMPARING PATIENTS WTTH SM TO NORMATIVE DATA |  |  |  |  |  |
| Outpatient Samples |  |  |  |  |  |
| Heiskanen et al, 2003 (Finland) [42] | $\mathrm{N}=35$. Men and women with SCZ or S-AFF | Finnish general population data from Vanhala et al (1997) and Laaksonen et al (2002) studies | Prevalence of metabolic syndrome defined as the presence of 3 or more of 5 NCEP ATP III criteria ${ }^{\text {a }}$ | SMI: Obs = $13 / 35$ cases (37\%) <br> Males $=9 / 19(47 \%) ;$ Females $=4 / 16(25 \%)$ <br> General population rates: <br> Males $=11-17 \%$; Females $=6-20 \%$ | None reported <br> *Calculated risk ratio $=3.38$ (males) <br> *Calculated risk ratio $=2.00$ (females) |
| Basu et al, 2004 (USA) [43] | N = 33. Men and women with S-AFF | Data from US epidemiological study ( $\mathrm{N}=8814$ ) - Ford et al 2002 | Prevalence of metabolic syndrome defined as the presence of 3 or more of 5 NCEP ATP III criteria ${ }^{a}$ | SMI: Obs = $14 / 33$ cases (42.4\%) <br> Males $=7 / 14(50.0 \%) ;$ Females $=7 / 19(36.8 \%)$ <br> General population rate $=23.7 \%$ | None reported <br> *Calculated risk ratio $=1.79$ |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Cohn et al, 2004 (Canada) [37] | $\mathrm{N}=240$. Men and women with SCZ or S-AFF | Data from US epidemiological study ( $N=8814$ ) - Ford et al 2002 | Prevalence of metabolic syndromedefined as the presence of 3 or more of 5 NCEP ATP III criteria ${ }^{a}$ and/or current treatment with anti-hypertensive or antidiabetic medication | SMI rates: <br> Males $=42.6 \%$ Females $=48.5 \%$ <br> General population rates: <br> Males $=24 \%$ Females $=23 \%$ | None reported <br> *Calculated risk ratio $=1.77$ (males) <br> *Calculated risk ratio $=2.11$ (females) |


 in papers, risk ratios have been calculated wherever possible.

Abbreviations: SCZ = Schizophrenia; S-AFF = Schizoaffective Disorder; BPAD = Bipolar Affective Disorder.

TABLE 5: PRAMNGHAMRISK SCORE PAPERS

| Source | Patient sample description | Comparison group description | Outcome measure | Prevalence estimates or Mean/SD or Median/IQR | Main results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (A) STUDIES WMTH A CONIROL GROUP |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| Osborn et al, 2006 (UK: England)[13] | $\mathrm{N}=74$. Men and women with SCZ , S-AFF or N-ACP | $\mathrm{N}=148$. Men and women. | Prevalence of raised Framingham Risk Score for CHD (higher than expected for individual's age and gender) Median absolute 10-year Framingham Risk Score (\%) for CHD, with interquartile range Mean Framingham Risk Score excess for CHD | SMI: Obs = 37 cases (51.4\%) <br> Control: Obs = 55 cases (37.4\%) <br> SMI: Median = 5\% ; IQR = 2-12\% <br> Control: Median $=4 \%$ IQR $=2-9 \%$ <br> SMI: Mean = 1.99 (SD 7.0) <br> Control: Mean = 0.69 (SD 4.6) | Unadjusted OR=1.7 (1.0 to 3.1) <br> Adjusted OR=1.7 (0.9 to 3.0) ${ }^{\text {a }}$ <br> Adjusted OR=1.3(0.7 to 2.7$)^{\text {b }}$ <br> Mann-Whitney test: SMI > Controls ( $p=.049$ ) <br> T-test: SMI = Controls ( $\mathrm{n} / \mathrm{sig}$ ) <br> *Standardised mean difference $=0.219$ <br> (-0.0441 to 0.516) |
| Inpatient Samples |  |  |  |  |  |
| $\begin{aligned} & \text { Luty et al, } 2002 \\ & \text { (UK: Scotland) [44] } \end{aligned}$ | $\mathrm{N}=21$. Men and women with SCZ or SFD. Mean age 31 years. First episode of illness; neuroleptic naïve | $\mathrm{N}=25$. Men and women. Mean age 30 years. Matched for gender, age, smoking and dietary status | Mean (10-year) Framingham Risk Score (\%) for Heart Disease ${ }^{\text {c }}$ | SMI (9 matched pairs): Mean score $=6 \%$ (SD 5) Control ( 9 matched pairs): Mean score $=4 \%($ SD 5$)$ General population data: Mean score $=2 \%(S D 3)$. | T-tests: SMI=Controls ( $\mathrm{n} / \mathrm{sig}$ ); SM1>gen popn ( $\mathrm{p}=.008$ ); Controls>gen popn ( $\mathrm{p}=.02$ ) <br> *Standardised mean differences: <br> SMI vs matched controls $=0.4(-0.186$ to 0.986$)$ <br> SMI vs general population $=0.97$ |
| (B) STUDIES COMPARING PATIENTS WTH SM TO NORMATIVE DATA |  |  |  |  |  |
| Community Samples |  |  |  |  |  |
| McCreadie, 2003 (UK: Scotland) [45] | $\mathrm{N}=102$. Men and women with SCZ | Compared with general population norms (Scottish Health Survey, 1998) | Mean (10-year) Framingham Risk Score (\%) for CHD ${ }^{\text {c }}$ | ```SM: Males: Mean score = 10.5%(SD 8) Females: Mean score = 7%(SD 6) General population norms Males: Mean score = 6.4%(SD 6) Females: Mean score=4.1%(SD 4)``` | T-tests: Males: SMI>gen popn ( $\mathrm{p}=.001$ ); <br> Females: $\mathrm{SM}=$ =gen popn ( $\mathrm{p}=.06$ ) <br> *Standardised mean differences: <br> $=0.58$ (males); $=0.568$ (females) |
| Outpatient and Inpatient Samples |  |  |  |  |  |
| Cohn et al, 2004 (Canada) [37] | $\mathrm{N}=240$. Men and women with SCZ or S-AFF | $\mathrm{N}=7020$. Men and women, randomly selected from Canadian Heart Health Survey dataset (1986-1990). Matched for age and gender distribution. | Mean (10-year) Framingham Risk Score (\%) for myocardial infarction | ```SMI: Males: Mean score = 8.9% (no SD) Females: Mean score = 2.6% (no SD) General population: Males: Mean score = 6.3% (no SD) Females: Mean score = 2.0% (no SD)``` | T-tests: Males: SMI > General population (p <.O01); Females: SMI = Controls (n/sig) |

Notes: a Adjusted for age and gender. ${ }^{\text {b }}$ Adjusted for age, gender and unemployment. ${ }^{c}$ Also report Framingham Risk Score for Stroke. *Standardised mean differences have been calculated where possible.
Abbreviations: SCZ = Schizophrenia; S-AFF = Schizoaffective Disorder; N-ACP = Non-Affective Chronic Psychotic Illness; SFD = Schizophreniform Disorder

