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SEX DIFFERENCES IN HEALTH AT AGES 11, 13 AND 15

ABSTRACT

This paper tests the hypothesis of an emerging or increasing female excess in general ill-health and physical symptoms, as well as psychological distress, during early to mid adolescence. Self-report data on general health (longstanding illness and health in the last 12 months), recent symptoms (classified as 'physical' and 'malaise') and depressive mood were obtained from a large, school-based cohort at ages 11, 13 and 15. Generally high levels of health problems at age 11 tended to increase with age, these increases being greater for females than males, not only in respect of depression and 'malaise' symptoms, but also limiting illness, 'poor' self-rated health, headaches, stomach problems and dizziness. The consequence, by age 15, is the emergence of a female excess in general ill-health and depressive mood, and a substantial strengthening of the small excess in both 'physical' and 'malaise' symptoms already apparent at 11 years. These findings are discussed in relation to explanations for the adult female excess in poorer health, and the emergence of a female excess of depression during adolescence.

INTRODUCTION

This paper describes sex differences in a variety of health measures at ages 11, 13 and 15. The aim is to test the hypothesis of an emerging or increasing female excess in general ill-health and physical symptoms in addition to psychological distress, during early to mid adolescence.

A few years ago, one of us (Sweeting, 1995) conducted a review of sex differences in health in children and adolescents (ages 7-15). The data, drawn from a variety of medical, psychiatric, psychological and sociological journals, as well as official publications, suggested that the overall picture is one of a gradual emergence of excess morbidity in females over this life stage. This is a pattern which has been frequently commented upon in respect of emotional disorders, particularly depression (e.g. Allgood-Merten, Lewinsohn & Hops, 1990; Petersen, Sarigiani & Kennedy, 1991; Cohen, Cohen, Kasen, Velez, Hartmark & Johnson, 1993; Lewinsohn, Hops, Roberts, Seeley & Andrews, 1993; Nolen-Hoeksema & Girgus, 1994; Casper, Belanoff & Offer, 1996; Angold, Costello & Worthman, 1998). However, the pattern of higher male rates replaced by higher female rates in early to mid adolescence could also be observed for overall levels of chronic illness and two of the three common childhood physical conditions examined (asthma and migraine/headaches, but not insulin-dependent diabetes mellitus where a slight male excess in incidence continued into adolescence). Possible reasons for the 'reversal of fortune' in respect of sex differences in health which (briefly) comprise both biological and social factors (Bird & Rieker, 1999), including pubertal bodily changes and different stresses, opportunities and expectations for males compared with females were extensively reviewed, and will not be repeated at length here.

During the course of the review it became apparent that few studies had set out with the principal aim of addressing the issue of change in the male-female distribution of ill-health in early to mid adolescence. Many had not sampled from an appropriate age range, while those which had tended to analyse their data separately by age or sex, but not both. The fact that this was a rather neglected area of research was surprising given that the identification of the life stage at which the adult excess in female morbidity (although probably not as clear-cut as often assumed – Macintyre,

Hunt & Sweeting, 1996) emerges, might provide important clues as to its causes. The review, therefore, highlighted the need for studies to chart sex differences in physical health as well as psychological well-being over this life stage (pre-, during and post puberty), and in particular for an examination of the possibility of age by sex interactions in health.

At the same time as (thus not cited in) this review, two papers were published which specifically examined the possibility of an age by sex interaction in respect of levels of physical, as well as psychological morbidity among adolescents. In one of them, a school-based study of 12, 13 and 14-year olds, pupils were asked about the experience of 'physical' (difficulty falling asleep, tired, no energy, sore muscles) and 'psychological' (anxious, worried, nervous, tense, desperate, irritable, lonely, depressed) symptoms in the past week. Significant effects were found for both sex and age (higher among females and older pupils), however the sex by age interactions in respect of both 'physical' and 'psychological' symptom scores were non-significant (Eiser, Havermans & Eiser, 1995). In the second study, a sample of around 900 13-year old Norwegian pupils were followed up annually until age 16. Girls were more likely to report physical health problems (such as headache, stomach problems or nausea, back or limb pain and colds), to be depressed, and to have poorer self-rated health. Most importantly, this study provided some evidence of a sex by age interaction since 'this gender difference seemed to increase with increasing age' (Klepp, Aas, Maeland. & Alasker, 1996, p.2032).

In order to examine these issues, this paper presents data on a variety of health measures (general health, recent 'physical' and 'malaise' symptoms and depressive mood) obtained from a large school-based cohort, surveyed at the ages of 11, 13 and 15 years. It has two main aims, the first being to describe changes in overall levels of self-reported health between the ages of 11 and 15. The second aim is to examine sex differences in each measure of self-reported health at each of these ages, in order to determine whether an excess of female *physical* as well as psychological morbidity emerges over this life stage. If there is evidence of an emerging female excess, a subsidiary aim is to assess whether it applies equally to each health measure considered.

METHODS

Sample

The data are taken from the *West of Scotland 11 to 16 Study: Teenage Health* (West & Sweeting, 1996a; Sweeting & West, 1998; West, Sweeting & Speed, 2001), a longitudinal school-based survey of health and health behaviours in a single school year cohort resident in the Central Clydeside Conurbation, a predominantly urban area centred around Glasgow city. They were recruited in 1994-5 during their final year of primary schooling (Scottish Primary 7, aged 11) and followed through the transition to secondary school until the final year of statutory education (Scottish Secondary 4, aged 15/16), with one intermediate contact (aged 13). Further details of the sampling scheme, which involved a number of steps to ensure representativeness at both the primary and secondary school stages, are available (Ecob, Sweeting, West & Mitchell, 1996).

The 11 year old sample consisted of 2,586 children (1,339 males and 1,247 females, mean age 11 years 3 months, S.D. 4.1 months), surveyed in 135 primary schools, representing a response rate of 93% of the issued sample. Two years later (age 13), 2,371 respondents (1,222 males and 1,149 females, mean age 13 years 3 months, S.D. 3.8 months), representing 92% of the baseline sample, were followed up in 43 secondary schools. Finally, a total of 2,196 (1,116 males and 1,080 females, mean age 15 years 5 months, S.D. 3.6 months), were included in the second (age 15) follow-up, representing 85% of the baseline sample. A comparison of the baseline sample with the 1991 Census Sample of Anonymised Records showed that the sample was representative of the population from which it was drawn in respect of sex and social class. As with other longitudinal studies (Shepherd, 1993), losses at each follow-up have been greater among those from more materially deprived areas, with lower academic achievement and more behavioural problems including (not surprisingly, given the school-based nature of the *11 to 16 Study*) truanting (Sweeting, West & Der, 2001). Probabilistic weights have been derived for each sweep, based on sampling, socio-demographic, health, behavioural and attitudinal characteristics. Since the results of analyses based on the weighted data differed

only marginally from those of the unweighted data, figures based on the latter are presented here.

Each survey, which took place in the school setting, typically under exam-type conditions, included self-completion questionnaires on health, self-esteem and self image, health-related behaviours and attitudes, family life, school, leisure activities, friends and projections for the future. Nurses helped with questionnaire completion if necessary, conducted a short interview and recorded physical measurements.

Measures

All the measures referred to here are self-report and identical at each age.

General health: Nurses asked two standard questions from the UK General Household Survey (e.g. ONS, 2000): firstly whether the respondent had any *longstanding illness, disability or infirmity*, and if so, whether it *limited their activities*; secondly, whether their *health over the last 12 months* had, on the whole, been good, fairly good or not good (collapsed into 'good' versus 'fairly' or 'not good', the latter described here as 'poor').

Recent symptoms: The self-completion questionnaire presented a list of 11 symptoms, from which respondents indicated any they had suffered in the previous month. In this paper, seven (headaches, asthma or wheeze, sickness or stomach aches, fainting, aches, colds or flu and skin problems) are classified as '*physical*' and four (nervousness, sadness, irritability and difficulty sleeping) as '*malaise*'. (Such a distinction is necessarily somewhat arbitrary; not only might symptoms such as sleep problems result from pain or other physical disorders, but in addition those who are depressed or anxious might report more 'physical' symptoms – Macintyre et al, 1996).

Depression: The questionnaire also included a brief *depression scale* based on Kandel and Davies' (1982) Scale to Measure Depressive Mood. This asked how often each of 6 items (e.g. felt too tired to do things, felt unhappy, sad or depressed) had been experienced in the last month, using a 3-point scale (never, sometimes, most of the time), the index of depressive mood being based on the individual's average score. The authors suggest various cut-off scores to define different levels

of depression; the one adopted here to define 'caseness' identified 18% of their own adolescent school sample as 'highly depressed, or at risk for a diagnosis of major depressive illness' (1982, p.1207).

A potential criticism of our study is the use of self-report items, particularly those such as the UK's General Household Survey (limiting) longstanding illness item, with a sample in early to mid adolescence. However, each measure was tested in pilot and pre-pilot studies, following which it was concluded that they were understood by, and suitable for, children as young as age 11 (West & Sweeting, 1996a). The inclusion of the general health and longstanding illness items within the nurse-interviews, thus allowing the opportunity for additional explanation or interpretation, together with the availability of nurses and researchers to help with questionnaire completion if necessary, will have reduced the number of misunderstandings and inaccuracies

Analyses

All variables included in the analyses are dichotomous, and as such are presented as percentages with 95% confidence intervals (CIs). Confidence interval analysis was conducted via the CIA program based on Altman, Machin, Bryant & Gardner (2000). Logistic regression analyses, conducted via SPSS, were used to determine the relative odds (and associated 95% CIs) of a female excess in respect of each measure of poorer health at each age.

RESULTS

FIGURE 1 ABOUT HERE

Figure 1 shows the proportions of the total sample with poorer self-rated health, each symptom (ordered by prevalence at age 15) and depression 'caseness' at 11, 13 and 15 years. For a number of measures, rates remained at similar levels at each age (longstanding illness, limiting illness, stomach aches or sickness, colds or flu, and asthma or wheezy chest), and only one, the proportion reporting 'poor' health, exhibited any improvement with increasing age. All the rest showed marked increases with age. For example, among symptoms experienced over the past month, the proportions with headaches rose from half the sample at age 11 to three quarters at age 15, the prevalence of spots, rashes or other skin problems doubled,

and that of both aching limbs and dizziness increased by around a half between 11 and 15 years. Three of the 'malaise' symptoms showed steady increases with age, most marked being 'felt nervous, worried or anxious', which rose from 42% at age 11, to 51% at age 13 and 60% at 15 years. This pattern was mirrored in depression 'caseness', which tripled from 4% at 11 years to 12% at age 15. The fourth 'malaise' symptom, difficulty sleeping, dropped slightly between ages 11 (37%) and 13 (33%), rising at age 15 (41%).

TABLE 1 ABOUT HERE

Table 1 shows the health measures (% and 95% CI) by sex at each age. Among males, significant increases (indicated by non-overlapping 95% CIs) occurred in rates of headache and aches between 11 and 13 years, of nervousness and depression 'caseness' between 13 and 15, of colds or flu between 11 and 15, and of spots or skin problems at each age. However, there were falls in the male rates of 'poor' self-rated health and sleep problems between 11 and 13 years, of stomach problems between 13 and 15, and finally, of irritability between 11 and 15 years. Among females, in contrast, rates of headache, aches, dizziness, nervousness, irritability, sadness and depression 'caseness' increased at each age, stomach problems and spots or skin problems between 11 and 13, difficulty sleeping between 13 and 15, and longstanding and limiting illness between the ages of 11 and 15. The only fall was in the rate of 'poor' self-rated health between 11 and 13. Over three-quarters of this sample of 15 year old females reported headaches or stomach problems, around two-thirds nervousness or irritability, and half sadness or sleep problems in the past month, while almost a fifth reached depression 'caseness' levels.

TABLE 2 ABOUT HERE

Finally, Table 2 shows the relative odds of a female excess in respect of each health measure, at each age. At age 11 there was a significant male excess in longstanding illness, aches, asthma or wheeze, and irritability, compared with a female excess in headache, stomach problems, colds or flu, spots or skin problems, nervousness and sadness. For all but two measures, the female odds were higher at age 15 than they had been 4 years previously, this change being significant in respect of limiting illness, 'poor' self-rated health, headache, stomach problems,

dizziness, and all the 'malaise' symptoms as well as depression 'caseness'. The most extreme odds occurred in respect of stomach problems, sadness and depression 'caseness', each more than 2.5 times higher among 15 year old females than males. The only health measure with lower female odds at age 15 than at 11 was spots or skin problems.

DISCUSSION

The first aim of this paper was to describe changes in overall levels of self-reported health between the ages of 11 and 15. We have reported previously (Sweeting & West, 1998) on the high levels of health problems among this sample at the age of 11, challenging assumptions of good health and wellbeing at this age. At that stage, questionnaires (relating to the 11 year olds) were also completed by parents, who reported similar levels of (limiting) longstanding illness, but somewhat lower rates of conditions and symptoms than were reported by their children. Parent-child agreement was greatest for the presence of longstanding illness, certain salient conditions and skin problems, and lower for recent symptoms, particularly those categorised as malaise. One conclusion from this analysis was that parent-child discrepancies may reflect different definitions of illness or symptoms, however neither should necessarily be dismissed as 'wrong'. Over the next 4 years, rates of certain self-report health measures changed little. Interestingly, these tended to represent chronic conditions (longstanding illness, asthma or wheezing) or infections (such as colds), which might be expected to remain fairly stable over a relatively short time period. In contrast, and as would be expected in a sample entering puberty, the prevalence of skin problems increased markedly. Other significant increases (headaches, aches and psychological distress), resulted in considerable levels of self-reported physical and psychological morbidity by age 15. While, of course, these symptoms will not always correspond to diagnosable disorders, they do suggest a considerable degree of discomfort and distress during a life stage which has in the past been assumed to be fit and healthy, and as such medically uninteresting (Bennett, 1985).

The second aim was to examine sex differences in each measure of health at 11, 13 and 15. The results of this exercise support the hypothesis of an emerging or

increasing female excess in self-reported general ill-health and physical symptoms as well as psychological distress in early to mid adolescence. High levels of self-report morbidity at age 11 increased over the next 4 years, these increases being greater for females than males, thus substantially strengthening a small female excess already apparent at age 11. The effects can be summarised as follows. Between the ages of 11 and 15, only colds or flu and skin problems showed a reducing female excess, headaches, stomach problems, nervousness and sadness each showed a female excess which increased, while a female excess emerged in respect of limiting illness, 'poor' self-rated health, dizziness, irritability, sleep problems and depression. For none of the health measures considered did a male excess either increase or emerge, however those in respect of longstanding illness, aches, asthma and irritability all disappeared.

Given an emerging female excess, a further aim was to assess whether it applied equally to each health measure considered. The largest increases occurred in respect of limiting illness, 'poor' self-rated health, headaches, stomach problems and dizziness, in addition to all symptoms categorised as indicating 'malaise', and depression 'caseness'. Since increases in overall rates of several of the *physical* symptoms are as large as those in respect of malaise, it is interesting to speculate on why the focus of the research effort to date has been on attempts to explain sex differences in adolescent *psychological* well-being. Perhaps it arises because they are the province of different disciplines and research traditions; school-based surveys of self-esteem or depression are not uncommon in the psychological literature, so encouraging examination of changes in their male-female patterning across narrow age-bands. Collecting data in respect of a range of physical conditions or symptoms across the narrow age bands necessary to highlight the changes described here, is much less common.

Two methodological issues should be acknowledged when evaluating the results. The first is that large numbers of possible comparisons means that some spurious differences may arise by chance, and in addition, that large sample sizes can result in statistically significant results which may not be clinically relevant. However, many of the changes, both overall, and in the male-female patterning, were considerable. For example, the reported male rate of headache rose between the ages of 11 and

15 from 48% to 63%, the equivalent female rates being 58% and 81%, and while the rate of depression 'caseness' in males doubled (4% to 7%) between these ages, it more than quadrupled in females (4% to 18%). Differences of this magnitude are not of simply statistical significance.

A further methodological issue is the representativeness of the cohort and the generalisability of the results to the UK population. The social class composition of the baseline sample was not significantly different from that of the Central Clydeside Conurbation (CCC - the population from which it was drawn), and although subsequent losses were greater among those from areas of greater material deprivation, analyses with weighted data demonstrate that this does not alter the results reported here. The CCC is situated in the West of Scotland, an area with a notoriously poor health record compared with the rest of the UK (Whitehead, 1987). A comparison of a range of health measures obtained in the CCC in 1987/8 with those from other UK datasets concluded that the health of Central Clydesiders was generally poorer, however the extent of the disadvantage varied across different life stages and dimensions of health, 'and was not as marked as some stereotypes of the West of Scotland would suggest' (West, Ford, Hunt, Macintyre & Ecob, 1994, p.101). Among young people, levels of psychological distress were higher, but rates of chronic illness and disability were similar to those of the UK. Although it is therefore possible that overall rates of some of the measures of poor health in the '11 to 16' cohort may have been somewhat higher than those in the UK as a whole, there is no reason to believe that this would impact on the patterning of differences between males and females in early to mid adolescence.

Given that a female excess in certain physical symptoms in addition to psychological distress does emerge in adolescence, the question then arises as to why this should be. Sex differences in health among adults have been explained in terms of the different roles, stresses, expectations, reporting behaviours, lifestyles and health practices, as well as biology, of males and females (e.g. Nathanson, 1975; Verbrugge, 1985; Verbrugge & Wingard, 1987; Miles, 1991, Mirowsky & Ross, 1995). The emergence of a female excess of depression during adolescence has been accounted for in similar terms, the suggestion being that females may be challenged by the expectations of the traditional female role in combination with

more recent increases in educational expectations (West & Sweeting, submitted), while at the same time adopting a less instrumental coping style (Gove & Herb, 1974; Allgood-Merten et al, 1990; Petersen et al, 1991; Nolen-Hoeksema & Girgus, 1994; Cyranowski, Frank, Young & Shear, 2000). In addition, there is the role of puberty. For males this brings physical and maturational changes which are generally regarded as positive (Hamburg, 1974; Eme, 1979; Simmons, Blyth, Van Cleave & Bush, 1979; Cohen et al, 1993; Kraemer, 2000), but for females menstruation associated, for many, with both physical and psychological symptoms (Eme, 1979, p.587), as well as a gain in fat, and dissatisfaction with body image (Rierdan & Koff, 1997, Williams & Currie, 2000; Steinberg & Morris, 2001).

Similar processes might go some way towards explaining any emergence of a female excess in physical morbidity; however, just as sex differences in health vary depending on the health measure in question, so will the range of factors which determine those differences. Thus, at the most general level, psychological factors are recognised as having an association with physical morbidity among both adults and adolescents (Zealley, 1983; Cadman, Boyle, Szatmari & Offord, 1986; Mechanic & Hansell, 1987; Weinman, 1987; Lewinsohn, Seeley, Hibbard, Rohde & Sack, 1996; Cohen, Pine, Must, Kasen & Brook, 1998), while muscular tension is associated with pain (Weisenberg, 1977), headache (Martin, Nathan, Milech & van Keppel, 1989) and hyperventilation (Garsen & Rijken, 1986). This would suggest that one possible reason for the relative increase in certain health measures, such as headaches, dizziness and 'poor' self-rated health, among females, is that they are associated with psychological distress. Another factor is menarche itself, associated with abdominal discomfort as well as implicated in the aetiology of adolescent headaches and migraine (Dalsgaard-Nielsen, Engberg-Pedersen & Holm, 1970; Deubner, 1977).

Finally, given that the 'direction and magnitude of sex differences in health vary according to the particular symptom or condition in question, and according to the phase of the life cycle' (Macintyre et al, 1996, p.621), one possibility is that these differences are actually largest and most consistent in mid adolescence. Few studies present data on this issue, but an analysis of GHQ (psychological) 'caseness' among young people found the female:male ratios were 1.7 at age 15,

and 1.9 at 16, falling to 1.2 at both 18 and 21 years (West & Sweeting, 1996b). In relation to this issue, an interesting study suggests that gender differences in adult depression can be accounted for by gender differences in adolescent-, rather than adult-onset depression (Kessler, McGonagle, Swartz, Blazer & Nelson, 1993). Follow-up of the '11 to 16' cohort at age 18, and possibly beyond, will allow for a further investigation of the possibility that sex differences in respect of both physical and psychological morbidity reduce or become less consistent after mid-adolescence.

The aim of this paper was to describe sex differences in health in early-mid adolescence. Additional issues for exploration include the degree of stability in reported ill-health and the relationship between different measures or aspects of health over time, and the possibility that these also vary between males and females. We have briefly discussed factors which may account, at least in part, for the 'reversal in fortune' in respect of physical morbidity. Analyses of the role which a range of psycho-social and behavioural variables have in explaining (statistically) the emerging or increasing female excess in general health and physical symptoms in this cohort will form the subject of another paper. However, qualitative as well as quantitative studies may be required to most usefully explore the ways in which influences on the health of children and young people differ and change according to sex and age.

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Figure 1: Self-rated health, symptoms and depression (%) at ages 11, 13 and 15

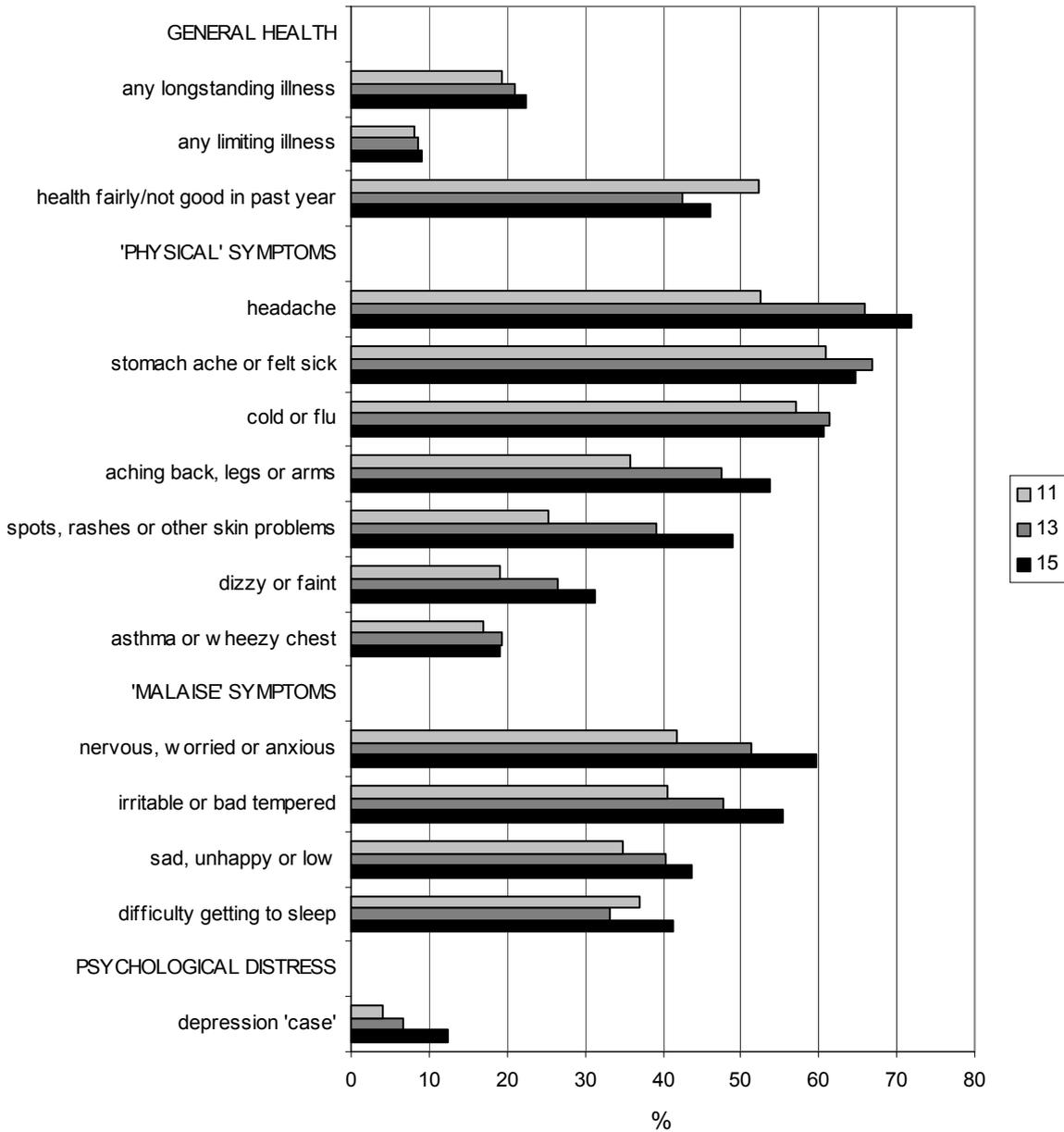


Table 1: Self-rated health, symptoms and depression – percentages (and 95% confidence intervals) by sex at ages 11,13 and 15.

	MALES			FEMALES		
	age 11	age 13	age 15	age 11	age 13	age 15
General health						
any longstanding illness	20.9 (18.8-23.2)	22.1 (19.8-24.5)	22.3 (19.9-24.8)	17.6 (15.6-19.8)	19.7 (17.5-22.1)	22.6 (20.2-25.3)
any limiting illness	9.0 (7.6-10.6)	8.8 (7.3-10.5)	7.7 (6.3-9.5)	6.9 (5.6-8.5)	8.5 (7.0-10.3)	10.4 (8.7-12.4)
health fairly/not good in past year	52.3 (49.6-55.0)	39.3 (36.6-42.1)	41.4 (38.5-44.4)	52.5 (49.7-55.2)	45.7 (42.9-48.6)	50.7 (47.7-53.7)
'Physical' symptoms						
headache	47.7 (45.1-50.4)	61.6 (58.9-64.3)	63.4 (60.5-66.2)	57.7 (55.0-60.4)	70.4 (67.7-73.0)	80.6 (78.1-82.8)
stomach ache or felt sick	56.4 (53.7-59.1)	59.3 (56.5-62.0)	52.4 (49.5-55.3)	65.8 (63.1-68.3)	75.1 (72.5-77.5)	77.7 (75.1-80.1)
cold or flu	51.8 (49.2-54.5)	57.0 (54.2-59.7)	58.3 (55.3-61.1)	62.7 (60.0-65.4)	66.0 (63.2-68.7)	63.2 (60.3-66.0)
aching back, legs or arms	38.9 (36.3-41.5)	49.2 (46.4-52.0)	53.6 (50.7-56.5)	32.8 (30.3-35.5)	45.8 (42.9-48.7)	53.9 (51.0-56.9)
spots, rashes or other skin problems	20.5 (18.4-22.7)	32.4 (29.8-35.1)	46.9 (44.0-49.9)	30.7 (28.2-33.3)	46.4 (43.5-49.3)	50.9 (47.9-53.9)
dizzy or faint	20.7 (18.6-23.0)	24.4 (22.0-26.9)	25.9 (23.5-28.6)	17.7 (15.6-19.9)	28.7 (26.2-31.4)	36.8 (33.9-39.7)
asthma or wheezy chest	18.6 (16.6-20.8)	21.6 (19.4-24.0)	18.9 (16.7-21.3)	15.1 (13.3-17.2)	17.1 (15.1-19.4)	19.3 (17.1-21.8)
'Malaise' symptoms						
nervous, worried or anxious	38.6 (36.0-41.3)	42.7 (39.9-45.5)	49.6 (46.7-52.6)	44.9 (42.2-47.7)	60.5 (57.7-63.3)	69.8 (67.0-72.5)
irritable or bad tempered	43.3 (40.7-46.0)	43.9 (41.2-46.7)	48.7 (45.8-51.6)	37.6 (34.9-40.3)	51.8 (48.9-54.7)	62.2 (59.3-65.1)
sad, unhappy or low	32.9 (30.4-35.4)	32.0 (29.4-34.6)	32.1 (29.5-34.9)	36.9 (34.2-39.6)	49.1 (46.2-52.0)	55.7 (52.7-58.7)
difficulty getting to sleep	38.4 (35.8-41.1)	31.7 (29.1-34.4)	35.2 (32.5-38.1)	35.7 (33.0-38.4)	34.5 (31.8-37.3)	47.7 (44.8-50.7)
Depression						
Depression 'case'	3.6 (2.7-4.7)	4.6 (3.6-5.9)	7.5 (6.1-9.1)	4.4 (3.4-5.7)	9.1 (7.6-10.9)	17.7 (15.6-20.1)

Table 2: Relative odds (and 95% confidence intervals) of a female excess of poorer self-rated health, increased symptoms and depression at ages 11,13 and 15.

	age 11	age 13	age15
General health			
any longstanding illness	0.81 (0.66-0.98)	0.86 (0.71-1.05)	1.02 (0.83-1.25)
any limiting illness	0.75 (0.56-1.01)	0.96 (0.72-1.28)	1.39 (1.03-1.87)
health fairly/not good in past year	1.01 (0.86-1.18)	1.30 (1.10-1.53)	1.45 (1.23-1.72)
'Physical' symptoms			
headache	1.49 (1.28-1.75)	1.48 (1.25-1.76)	2.40 (1.97-2.91)
stomach ache or felt sick	1.48 (1.26-1.74)	2.07 (1.74-2.47)	3.16 (2.63-3.81)
cold or flu	1.56 (1.34-1.83)	1.47 (1.24-1.73)	1.23 (1.04-1.46)
aching back, legs or arms	0.77 (0.65-0.90)	0.87 (0.74-1.02)	1.01 (0.86-1.20)
spots, rashes or other skin problems	1.72 (1.44-2.06)	1.80 (1.53-2.13)	1.17 (0.99-1.39)
dizzy or faint	0.82 (0.67-1.00)	1.25 (1.04-1.50)	1.66 (1.38-1.99)
asthma or wheezy chest	0.78 (0.63-0.96)	0.75 (0.61-0.92)	1.03 (0.83-1.28)
'Malaise' symptoms			
nervous, worried or anxious	1.30 (1.11-1.52)	2.06 (1.75-2.43)	2.35 (1.97-2.80)
irritable or bad tempered	0.79 (0.67-0.92)	1.37 (1.17-1.61)	1.74 (1.46-2.06)
sad, unhappy or low	1.19 (1.01-1.40)	2.05 (1.74-2.43)	2.66 (2.23-3.16)
difficulty getting to sleep	0.89 (0.76-1.04)	1.13 (0.96-1.35)	1.68 (1.41-1.99)
Depression			
Depression 'case'	1.23 (0.83-1.83)	2.09 (1.49-2.92)	2.67 (2.04-3.51)