



Editorial comment

A glimpse into a neglected population – Emerging adults

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In this issue of the *Scandinavian Journal of Pain* Rana Qadeer and co workers [1] have extrapolated information from a national data base in Canada [2] that is derived from structured interviews as opposed to more standard questionnaire data. This article addresses some interesting questions about pain and physical/mental health in a segment of the Canadian population. The major findings are that “emerging adults” have a prevalence of chronic pain, psychiatric diagnoses, and chronic disease states almost to the same degree as revealed by surveys from the whole adult population. The young are commonly thought to be relatively healthy as opposed to an older population but this does not seem the case in this cross-sectional survey. The interactions of chronic disease, mental health, including substance abuse and pain are reviewed with some surprising and some not so surprising conclusions. The statistics make interpretation in simple terms for a non-statistician a bit difficult but the data are important, not only for those interested in pain but also for all healthcare providers.

1. Emerging adults in transition from child to adult: 15 and 30 years of age

The identification of this age group, initially ages 18–25 [3] but subsequently extended and in this article ages 15–30, was based on the sociological phenomenon of the changing culture of “youth” in the western world under the last half century. Previously, and still in some cultures, children assumed adult duties and responsibilities at a much earlier age than they do now, but in the western world, increased affluence and the demands of longer formal education have postponed the transition from childhood to adulthood. This new group, emerging adults, often lack the financial and family responsibilities of older adults but face other challenges in the transition from childhood to adulthood.

2. Care gaps: emerging adults often lost in the health care system

What is important about this report? The first point raised by Qadeer et al. is that many in this age group can be rather lost in the healthcare system and there are barriers to adequate care [4,5]. The group bridges the pediatric–adult medicine dichotomy and there is a tendency for the lower segment, i.e. ages 18–25, of the emerging adult group, to be viewed as neither pediatric nor adult. Standard follow-up of health problems is often neglected. Changing behaviors, especially risk-taking [6], make them vulnerable and the change from the standard childhood vaccination routine and the treatment of childhood diseases to the treatment of the results of trauma or drug experimentation is often how the healthcare system views this age group. A factor behind this and not well appreciated is that brain maturation continues until age 20 or more, longer in males than in females [7]. This is associated with what is called immature behavior where thrill seeking and lack of appreciating the consequences of risk taking make this age group vulnerable.

3. Chronic pain and chronic health conditions in emerging adults

Qadeer et al. have focused on chronic pain, chronic health conditions (CHC) (other than psychiatric) and psychiatric health in emerging adults to give a demographic profile to compare with data we have from the “adult” population that usually includes all from either age 18 or age 20 throughout the full span of life. What can we learn about this group in particular? One of the aspects is that the predictors for reporting CHC, i.e. female gender, low income, low education, and comorbid psychiatric diagnoses, in emerging adults are the same as for the report of chronic pain in the whole adult population [8–10]. Qadeer et al. did not look at the pain group for predictors in the same manner as adult studies on the demography of chronic pain but incidentally came up with the same correlations.

It is not surprising that having a CHC, having a psychiatric disorder, or having an alcohol/drug problem all independently increase the odds of having pain. This is not new territory but dissecting the relationships and interactions of the variables does reveal some surprises – see below.

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4. Disruptive pain preventing activity

Although pain is a focus, it is restricted to “pain preventing activity” which may not be the same as “chronic pain” in many demographic studies. Here, 11.0% of the total population report “pain preventing activity”. This is a rather low prevalence as compared to statistics from general population surveys world-wide which vary from 11% to 64% [11–13] but given the fact that the prevalence of chronic pain increases with age in all studies, this low figure is not too surprising. It is a criticism of the information from the Statistics Canada survey that it did not include some standard measure of pain such as an NRS or VAS that could be correlated with other demographic studies.

5. The healthy youths – not so healthy in 4 of 10 emerging adults

A very high proportion of emerging adults, 41%, report having a CHC although the full range of options in the survey is not available. This is surprisingly high but prevalence by diagnosis was not possible due to limits imposed for ethical reasons on the data available made this impossible but would make interesting reading. Although the impression is that teenagers and young adults are generally quite healthy, this data indicates that this is not the case.

There are some standout statistical conclusions worth noting and emphasizing here. One is that the presence of “an alcohol or drug disorder”, excluding cannabis, is associated with an increased risk for the probability of having “pain preventing activities” in those without a CHC but, at least statistically, with a diminished risk for the same in subjects reporting a CHC. The authors hypothesize that this is due to a beneficial effect of alcohol or drugs other than cannabis in some way. Why alcohol and other drugs should reduce pain as they suggest in one cohort and not the other is difficult to understand. The protective effect may be only statistical and not clinically significant but there is a marked difference between the two cohorts that is probably not just a Type 1 error. This information needs to be explored further with population studies since it is not intuitively obvious that there should be a difference.

6. Cannabis not helpful for pain and more risky in emerging adults

Even more surprising is the fact that cannabis did not seem to influence the presence of “pain inhibiting activity” in either group. If “alcohol and other drugs” seem to have a moderating effect on the presence of “pain inhibiting activity”, why not cannabis that is being widely proposed as an analgesic useful for the treatment of many chronic pain disorders [14–16]? This is an important finding that supports the lack of controlled studies in chronic pain where most evidence is anecdotal [17,18]. There are unpublished reports where no efficacy has been shown as well [19]. With the increasing public support for legalization of cannabis for the treatment of chronic pain in the developed world, the information from Qadeer et al. needs to be added to the evidence base.

7. Be aware of high risk of suicide behavior in emerging adults

Although the prevalence of “Suicidal Behavior” in the population with “Chronic Health Conditions” and the total population seems high at 9.1% and 5.3% respectively, this is consistent with data from other studies [20]. Data is scarce and various definitions make interpretation difficult but the prevalence of suicide and suicide behavior are high in younger individuals.

8. Healthy immigrants in Canada

A side note is the evidence for the “healthy immigrant” phenomenon that seems to be alive and well in Canada. This is a topic much discussed in the literature and here we have support from another country that indicates better general health in the immigrant population as compared to Canadian-born subjects [21,22].

9. Importance of delayed central nervous system maturation in emerging adults

To return to what is not stated about this population but is important, especially with regard to chronic pain and substance abuse, is the fact that central nervous system (CNS) maturation is a gradual process that usually continues past the age of 20, especially in males [7]. This is thought to be associated with impulsive behavior as a part of the maturing process [23]. There is very strong support for the CNS priming by pain and stress in infants and young children that predisposes them to chronic pain and psychological problems as adults. It is proposed that the increased plasticity in infants and children makes them vulnerable [24]. Could this also be the case for “emerging adults” or is it that we are seeing the effects in this group of earlier problems? This point needs further exploration.

There is also evidence that “emerging adults” are more susceptible to CNS changes that become permanent with the use of cannabis in all its forms. Sequelae such as schizophrenia and psychosis, addiction, and other behavioral disorders are associated with even brief exposure to cannabis in “emerging adults” as evidence for CNS vulnerability which may be related to CNS immaturity [25]. The original articles on “emerging adults” as a cultural phenomenon also discuss the changes in this group that, for good or bad, have long term effects on their social and family lives. Since chronic “pain inhibiting activity” by definition and chronic disease impair socializing and school/university attendance, what are the lasting effects of these problems in later adulthood?

This article by Qadeer et al. highlights some health problems in a segment of the population and this indicates the need further study in this group. Better medical supervision and routine evaluation could reduce chronic pain and illness later in life in this population [5 or 26].

Conflict of interest

The author declares no conflict of interest.

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