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Improvements in social functioning reported by a birth cohort in mid-adult life: A person-centred analysis of GHQ-28 social dysfunction items using latent class analysis

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Abstract

The General Health Questionnaire is widely used to measure the health status of individuals. Most studies have focused on traditional score values for one or more dimensions of psychopathology. We introduce a new analysis model that is person-centred and uses a latent structure approach to group individuals by a discrete latent variable. Data were drawn from a midlife (age 53) follow up of a national birth cohort study ($n = 3035$). For both men and women, three groups (latent classes) were sufficient to summarise individuals' reports of recent changes in social functioning. The groups differed in the number and nature of the reported changes. Furthermore, they were shown to differ in terms of: (1) reported general health, (2) in mean scores on the conventional GHQ factors and (3) in several other variables external to the GHQ (happiness in job, ability to express feelings and self-confidence). Latent Class Analysis of positively worded GHQ items defined groups who differ in perceptions of recent positive changes in social functioning. These

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groups extend the value of individual health profiles afforded by the GHQ by using distinctions between categories in the first and second responses that are usually combined.

Keywords: Latent structure analysis; General health questionnaire; Positive outcomes; Social dysfunction; Positive functioning; Latent class analysis

1. Introduction

The 28 item version of the General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979) is the most widely used screening instrument for detecting minor psychiatric disorders in community samples. The GHQ offers a continuous measure of psychological distress or current mental health status that captures the probability of having a current disorder, and also predicts imminent onsets. The 28 item ''scaled'' version describes individual health status in terms of four dimensions of psychological morbidity and social functioning: (A) somatic symptoms, (B) anxiety/insomnia, (C) social dysfunction and (D) severe depression. These are rated on four point rating scales [1–2–3–4]. Traditional use of the GHQ often relies on sum scores (Werneke, Goldberg, Yalcin, & Ustun, 2000) using Likert [1–2–3–4], traditional/binary [0–0–1–1] or chronicity scoring ([0–0–1–1] for positive and [0–1–1–1] for negative items). All analyses to date have been from a variable-centred perspective, emphasising scaling and scoring, rather than classification, and do not consider or entertain any person centred analysis approach (Muthen & Muthen, 2000).

In its general mode of use, the GHQ-28 is not intended to measure positive attributes only the absence of distress (Lewis, 1992). Innovative approaches to coding positive responses to positively worded GHQ items (in the GHQ-30) have been suggested before and have been offered as a candidate model for scoring aspects of positive mental health as a continuum (Huppert & Whittington, 2003). Our interest here is in characterising a person-centred approach to GHQ28 item data using the 1–0–0–0 response coding to the positively worded GHQ28 items. We therefore make use of distinctions between responses in the first two categories of the four point Likert response scale that are usually combined.

We introduce a typological (latent structure) approach to analysis of responses to GHQ items. Our aim is to identify groups within the general population who report different subjective perceptions of *positive* change in social functioning. We view social functioning as a dimension of social well-being, and wish to identify groups who reported improvements in the recent past. According to Keyes (1998), as adults age they encounter tasks that force them to choose and adapt within a social environment, which is a major life change with distinct consequences for judging a life well-lived. Social well-being can therefore be conceptualized as the appraisal of ones circumstances and functioning in society (Keyes, 1998), or through personal evaluation of task performance. Epidemiological studies, that sample individuals from the general population, should therefore investigate patterns of social functioning, since this is likely to be a component of optimal mental health.

Furthermore, from a clinical perspective, a deterioration in social functioning is often a characteristic of impending common mental disorders such as depression or anxiety, or more severe illnesses such as bipolar disorder, schizophrenia or other psychoses (DSM-IV-TR; American Psychiatric Association, 2000). Consequently, a dynamic assessment of social functioning such