

Personality and adherence to medication treatment

Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien vid Göteborgs universitet kommer att offentligens försvaras i Hörsal Arvid Carlsson, Academicum, Medicinaregatan 3, Göteborg, fredagen den 16 september 2011, kl 13.00

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Avhandlingen baseras på följande delarbeten:

- I. Personality, adherence, asthma control and health-related quality of life in young adult asthmatics.
Malin Axelsson, Maria Emilsson, Eva Brink, Jesper Lundgren, Kjell Torén, Jan Lötval.
Respiratory Medicine, 2009;103(7):1033-40.
- II. The influence of personality traits on reported adherence to medication in individuals with chronic disease: an epidemiological study in west Sweden.
Malin Axelsson, Eva Brink, Jesper Lundgren, Jan Lötval.
PlosOne, 2011;6(3):e18241.
- III. Motivational foci and medication tactics directed towards a functional asthma day: A qualitative study of adherence behaviour in young adults with asthma.
Malin Axelsson, Jan Lötval, Jesper Lundgren, Eva Brink. Submitted.
- IV. Self-efficacy and adherence as mediating factors between personality traits and health-related quality of life.
Malin Axelsson, Jan Lötval, Christina Cliffordson, Jesper Lundgren, Eva Brink. Submitted.



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Abstract: Striving for improved adherence to medication treatment is of vital concern, as low adherence is a major obstacle in treating many prevalent chronic diseases. Several factors have been identified that seem to influence adherence behaviour, but limited research exists on the significance of personality for adherence to medication treatment. According to the Five-Factor Model (FFM), personality can be described in terms of five broad personality traits: Neuroticism, Extraversion, and Openness to experience, Agreeableness, and Conscientiousness. Reports on health-related quality of life (HRQL), asthma control and self-efficacy may also be influenced by personality. Therefore, the overall aim of the present research project was to explore the significance of personality traits in relation to adherence to medication treatment and asthma control, health-related quality of life and self-efficacy.

Methods: In Study I (n=268) and III (n=18), the participants consisted of young adults with asthma, who were selected from an epidemiological study. In Study II (n=749) and IV (n=786), the participants were adults with various chronic diseases, who were selected at random from two municipalities in western Sweden. In Study I, II and IV, data were collected through questionnaires and statistically analysed. Two different personality questionnaires were used, one measuring the FFM personality traits and one measuring health-relevant facets based on the FFM: Negative Affectivity, Hedonic Capacity, Alexithymia, Antagonism and Impulsivity. In Study III, data were collected through interviews and analysed according to Grounded Theory methodology.

Results: Study I showed that Impulsivity was negatively associated with adherence to asthma medication, as were Antagonism and Alexithymia in men. Negative Affectivity and Impulsivity were negatively associated with asthma control. Negative Affectivity, Impulsivity, Hedonic Capacity, Alexithymia and asthma control predicted mental HRQL. Asthma control and physical activity predicted physical HRQL. Study II showed a negative association between Neuroticism and medication adherence, while both Agreeableness and Conscientiousness were positively related to adherence. In Study III, the theoretical model that emerged illustrated that adherence to asthma medication was motivated by three foci, promotive, preventive and permissive, giving rise to different medication tactics, all directed towards a desired outcome in terms of *a functional asthma day*. In Study IV, Neuroticism had a direct effect on both physical and mental HRQL. Self-efficacy functioned as a mediator between Extraversion and Conscientiousness on mental HRQL. Openness to experience had an indirect effect on both physical and mental HRQL through self-efficacy. Adherence mediated the effect of both Agreeableness and Conscientiousness on mental HRQL.

Conclusion: The thesis shows that personality is of significance in relation to adherence to medication treatment and health outcomes. Therefore individual differences are important to take into consideration when planning interventions, but also when educating and supporting patients with their disease management, because no single strategy fits everyone.

Keywords: Five-factor model, personality traits, medication adherence, chronic disease

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