Validation of a measure and development of a model of general practitioner frequency of and attitudes towards collaboration with community pharmacists in Germany

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**Background** While collaborative working relationships between CPs and GPs have been investigated in the US and Australia, to date there has been limited research exploring GP/CP-collaboration in Germany. No validated measure and model of pharmacist-physician collaboration existed for primary care in Germany.

**Purpose** To validate the frequency of inter-professional collaboration instrument (FICI) and attitudes towards collaboration instrument (ATCI) from the GP’s perspective in the context of primary care in Germany and to develop an explanatory model which illustrate factors influencing the scope, the nature and extent of collaboration.

**Method** A survey containing the ATCI-GP and the FICI-GP was translated into German and administered to a sample of 1438 GPs in Mecklenburg-Western Pomerania. Cronbach’s alpha coefficient and principal components analysis (PCA) were used to assess the internal consistency and the structure of the instruments. Structural equation modelling (SEM) was used to determine how demographic variables and attitudes to collaboration influence collaborative behaviour.

**Findings** Five hundred and sixteen questionnaires were completed and returned for a response rate of 35.9%. PCA revealed the ATCI-GP, consisted of 1 factor (Cronbach’s alpha: 0.936) and suggested for FICI-GP a two factor solution. The 2 factors for GPs were interpreted as ?Basic communication? and ?Collaboration? (58.6% variance explained, Cronbach’s alpha: 0.738 & 0.820). The model demonstrated adequate fit (?2/df = 1.338, CFI = 0.972, RMSEA = 0.040). The significant demographic predictors of collaboration for GPs were the distance between the pharmacy-GPs practice, type of practice, number of different CPs with interactions, specialty and years worked in general practice.

**Conclusion** The results of the study provide evidence for the validity of the FICI-GP and ATCI-GP in measuring attitudes towards and frequency of collaboration between German GPs and CPs. A model of collaboration in which behaviour and extent of collaboration is directly influenced by individual and context characteristics is supported.