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Factors predicting trust between GPs and OPs

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Abstract

Purpose: To study possible differences in trust between general practitioners (GPs) and occupational physicians (OPs) and the explanatory factors for trust. Insight into the factors predicting trust can improve programmes for stimulating the co-operation of GPs and OPs.

Theory: On the basis of theories of trust and of social identity theory we expected, (1) in both professions a higher level of knowledge-based trust than of identification-based trust, (2) a relationship between higher levels of identification-based trust and higher frequency of contact, (3) OPs to have a higher level of identification-based trust than GPs. We hypothesised (4) that OPs perceiving an equal status have higher levels of trust and (5) GPs perceiving a higher status have lower levels of trust.

Methods: A mail survey sent to 2297 doctors (1728 GPs and 569 OPs) of which we used 547 questionnaires.

Results: Hypotheses 1 and 2 were supported. Hypothesis 3 was not supported. Hypotheses 4 and 5 were supported for knowledge-based trust. On the basis of these findings it is possible that co-operation between the two groups is still in its early stages.

Conclusions: Programmes to improve the co-operation of GPs and OPs should focus on equalising status and stimulating contacts to build (identification-based) trust.

Keywords

co-operation, general practice, occupational health, social identity theory, social-psychological factors, status, trust

Introduction

In the Netherlands several projects have started or will start soon to improve the co-operation of general practitioners (GPs) and occupational physicians (OPs). OPs in the Netherlands mainly work in occupational health services. Their tasks are in brief: advising the employer and employee about fitness for work (in the first year of sick leave), advising on workplace adaptations and signalling occupational diseases. Insurance doctors, a different professional group and not belonging to the group of OPs, give advice on fitness for work and compensation after one year of sick leave. The co-operation problems between GPs and OPs (and probably also of insurance doctors, but these are not part of our study) have their historical roots in the Dutch policy to differentiate, in tasks and responsibilities, between doctors having tasks in the treatment and care of patients and doctors having tasks in the prevention of work related disorders and the supervision of sick leave.

Two studies have been published on these problems of co-operation [1, 2]. We studied the co-operation of GPs and OPs from a social-psychological point of view. We used the theory of categorisation (stereotyping) and intergroup processes [3–5]. In a Dutch study 13% of the GPs had the experience that information they gave to the OP was used for another purpose than it was intended for [1]. For GPs the relation with their patients is so important that they are reluctant to disclose information about the patient to OPs. Trust appears to be an important factor in the co-operation of GPs and OPs [Nauta & von Grumbkow, submitted], but how does trust start and how can trust be built? In this study we distinguish two types of trust and studied the difference between GPs and OPs and the factors explaining these types of trust.

Theoretical background

Trust: definition and dynamics

The importance of trust in organisations is widely studied [6–9]. Trust can be defined as *a state involving confident positive expectations about another's motives with respect to oneself in situations entailing risk* [10]. In the co-operation of GPs and OPs the risk might be that the OP discloses medical information to the employer or that the GP does not recognise a work related disease.

We found several types and dimensions of trust.

For our purpose we distinguished two types: trust in the competence of the work of the other (knowledge-based trust) and trust in the communication of the other (identification-based trust) [8]. The first overlaps more or less with 'competence' as one of Mishra's [11] four dimensions of trust, with 'conditional trust' [12], 'cognition-based trust' [6] or 'knowledge-based trust' [14]. The second overlaps more or less with unconditional trust [12] or affect-based trust [6].

As knowledge-based trust is grounded in the predictability of the task behaviour of the other, information about the work and the behaviour of the other discipline is necessary. Do GPs and OPs trust each other's work and diagnostic competence?

Identification-based trust is grounded in empathy with the other: understanding on a personal level the other party's desires, wants and intentions. Do GPs and OPs communicate openly, do they consider different perspectives when they interact, do they make clear what they expect from each other?

Trust develops in professional relationships gradually from one stage to another [8]. In the stage of knowledge-based trust the relationship is business-like (written contracts and guidelines). As parties interact more frequently and positively, their interactions become more personal. The following quote [8, p 125] gives a more detailed description:

> ''As the parties become to learn more about each other, they may also begin to identify strongly with each others' needs, preferences and priorities and come to see them as their own. Identification leads to a search for more information, which creates a broader foundation for knowledge-based trust and more dimensions on which the parties may identify with each other. However, many productive relationships remain in the knowledge-based trust stage. Relationships at work, for example, are often knowledge-based trust relationships, and identification-based trust may not develop for several reasons: either the parties lack the time or energy to invest beyond the knowledge based trust level, or the parties may have no desire for closer relationship''.

Knowledge-based trust is apparently more basic than identification-based trust and so levels of knowledge-based trust will be higher than levels of identification-based trust.

Hypothesis 1: Regardless of profession the level of knowledge-based trust will be higher than the level of identification-based trust.

Differences in trust between OPs and GPs

We predict that the causes of possible differences in trust between OPs and GPs can be attributed to at least two factors: differences in frequency of contact and differences in status (relative position) between OPs and GPs.

Frequency of contacts

With respect to the dynamics of trust contact frequency could be an important factor. Trust, especially identification-based trust, builds during contacts: the 'trust building loop' [14]. Information available to the 'truster' from within the relationship itself is an important factor. When GPs and OPs have more (positively evaluated) contacts we expect trust to grow. So we hypothesise that GPs and OPs with no or with very few contacts will have lower trust and that frequency of contacts between the professionals can explain possible differences in trust.

Because of the numbers of GPs and OPs (there are far more GPs than OPs) OPs have more contacts with GPs than GPs have with OPs. Additionally, OPs have a stronger need for information from GPs than GPs have from OPs. These factors imply that there is more likelihood that trust can be built for OPs than for GPs.

Hypothesis 2: Higher frequencies of contacts will be related to higher levels of trust.

Hypothesis 3: OPs will have a higher level of trust in GPs than GPs will have in OPs.

Status (relative position)

Equal status is one of the prerequisite conditions under which inter-group contact promotes the development of more harmonious intergroup relations [15]. GPs and OPs can be seen as members of two different groups of unequal status. A Dutch study in which various medical professional groups (including both GPs and OPs) were asked about aspects of their

Table 1. GPs and OPs (reported by themselves) on responsibility and status

	GPs	OPs
Medical responsibility in own work	7.9	6.3
Status compared to other medical professions	6.0	3.1

Average scores on critical factors related to their work (scale 1–10) (source: Medische profielenboek [16]): ''how do you rate your medical responsibility in your own work?'' and ''how is your discipline rated compared to other medical professions?''

work shows some striking differences between GPs and OPs (see Table 1) [16].

According to social identity theory [4], members of one group compare themselves to members of another group with regard to the dimensions of professional knowledge, professional experience and power [3, 4]. A perceived higher or lower position on one of these dimensions can have negative effects on co-operation. The more people feel themselves unequal to people in the other group, the less they trust them. If there is a large difference in relative position, the groups may not understand each other very well because their social (occupational) identity differs. We think that social identity influences trust and that a more equal position will correlate with higher levels of trust.

Social identity theory states that people strive for higher positions. Members of a low status group use mechanisms to fulfil their desire for status improvement that are different from those of members of a high status group. The higher status group (GPs) will strive to maintain their position (which is the same as striving for a higher position). So, we hypothesise that OPs who feel equal to the members of the GP-group will have higher levels of trust in GP-members than OPs who feel inferior or superior to the GP-members. We also hypothesise that GPs who feel that their position is higher, will have a lower level of trust in OPs.

Hypothesis 4: For OPs equal status will be related to higher levels of trust and unequal status to lower levels of trust.

Hypothesis 5: For GPs higher status will be associated with lower levels of trust.

Methodology

Respondents

Respondents in this study were GPs and OPs in the South West of the Netherlands. Surveys were mailed to 2297 GPs and OPs (all addresses of GPs and OPs available to us in the region), completed at home and returned anonymously in a prepaid envelope. In total, 338 GPs and 209 OPs completed the survey. This is a response rate of 19.6% (GPs) and 36.7% (OPs). This gives a mean response rate of 24%.

In order to have an idea about the sample's representativeness we compared the characteristics of our sample with those of the sample of Buijs et al. [1] who also sent a questionnaire to GPs and OPs. The characteristics of our respondents strongly resemble the respondents of Buijs et al. in respect of age (GPs below 40 years Buijs: 29%, our study: 20%; OPs below 40 years Buijs: 47%, our study: 43%); sex (male GPs Buijs 75%; our study 77%, male OPs Buijs 75%, our study 77%) and type of employment GPs (single practice Buijs: 49%, our study 49%).

Eighty-two percent of the GPs worked more than 32 hours a week vs 71% of the OPs; 59% of the GPs said they worked more than 42 hours a week. Buijs et al. do not give information about the working hours. We conclude that there is a strong resemblance in characteristics of our sample and the sample of Buijs et al. We do not know if our sample is representative in respect of opinions.

Measurements

The survey contained statements on relative position and trust. The relative position scale consisted of two items (for instance ''To function adequately as a GP/an OP you need knowledge in more areas compared to OPs/GPs''). The trust scale consisted of six items, three on knowledge-based trust (for instance ''I trust the way OPs/GPs make somatic diagnoses'') and three on identification-based trust (for instance ''OPs/GPs are always open to me'').

Reliability analyses were conducted for scales with multiple items. Cronbach's alpha was 0.80 for relative position, 0.84 for knowledge-based trust and 0.78 for identification-based trust. These alpha's are acceptable.

We asked for the number of contacts with the other discipline (by telephone or letter) in the last three months.

We used the statistical program SPSS 10.0. An alpha level of 0.05 was used for all statistical tests.

Results

Hypothesis 1: Regardless of profession the level of knowledge-based trust will be higher than the level of identification-based trust.

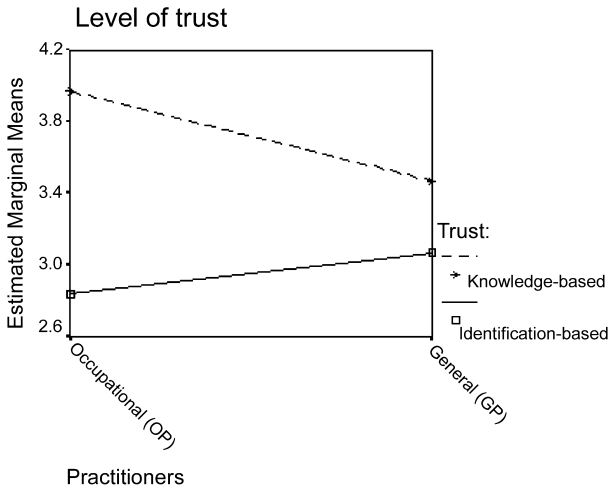

Figure 1. Level of knowledge-based and identification-based trust for OPs and GPs (see Table 2).

We used a Manova with both types of trust as dependent variables and the type of practitioners (GPs and OPs) as independent variables and sex, age and number of weekly working hours as co-variates (see Figure 1 and Table 2). By using sex, age and number of weekly working hours as co-variates we prevented spurious elements from entering the picture. The variables included in the MANOVA, whether dependent or independent factors, were linearly related.

We can see that the level of knowledge-based trust is higher than the level of identification-based trust. The difference between both levels is significant ($F(1.524) = 21.51$; $p < 0.001$). Hypothesis 1 is supported.

Hypothesis 2: Higher frequencies of contacts will be related to higher levels of trust.

We used a MANOVA with both types of trust as dependent variables; the profession (GPs and OPs) and the frequency of contacts (few versus many) as independent variables; and with sex, age and number of weekly working hours as co-variates (see Table 3). The variables included in the MANOVA whether dependent or independent factors were linearly related.

There is no difference between knowledge-based trust for different levels of contact ($F(1.496) = 0.11$; ns), but there is a significant difference between identification-based trust for different levels of contact frequency ($F(1.496) = 8.67$; $p < 0.003$). Hypothesis 2 is supported only for identification-based trust.

Hypothesis 3: OPs will have a higher level of trust in GPs than GPs have in OPs.

In Table 2 and Figure 1 we see that OPs have a higher level of knowledge-based trust in GPs than vice versa ($F(1.524) = 36.01$; $p < 0.001$), while GPs have a higher level of identification-based trust in OPs than vice versa ($F(1.524) = 5.81$; $p < 0.02$). Hypothesis 3 is supported only for knowledge-based trust.

Hypothesis 4: For OPs (lower status) equal status will be related to higher levels of trust and unequal status to lower levels of trust.

Hypothesis 5: For GPs higher status will be associated with lower levels of trust.

We used a MANOVA with both types of trust as dependent variables and the profession (GPs and OPs) and the relative position (lower, equal or higher) as independent variables and sex, age and number of weekly working hours as co-variates (see Table 3 and Table 4). We can conclude from Table 4 that only the main effects and the interaction effects for knowledge-based trust are significant. There are no significant effects for identification-based trust. This means that hypotheses 4 and 5 are not supported for identification-based trust.

Table 2. MANOVA of OPs and GPs for two types of trust (dependent variables) and sex, age and number of working hours (co-variates)

Source	Dependent	df	Mean square	F	Significance (2-sided)
Age (co-variate)	Knowledge-based trust Identification-based trust	1	0.387 2.612	0.588 3.074	0.444 0.080
Working hours (co-variate)	Knowledge-based trust Identification-based trust	1	3.873E-02 1.083	0.059 1.274	0.808 0.259
Sex (co-variate)	Knowledge-based trust Identification-based trust	1	3.075E-02 1.081	0.047 1.272	0.829 0.260
Profession	Knowledge-based trust Identification-based trust	1	23.685 4.940	36.012 5.813	0.000 0.016
Error	Knowledge-based trust Identification-based trust	524 524	0.658 0.850		

Table 3. MANOVA of OPs versus GPs and few contacts versus many contacts (independent variables) for two types of trust (dependent variables) and sex, age and number of working hours as co-variates

Source	Dependent	df	Mean square	F	Significance (2-sided)
Age (co-variate)	Knowledge-based trust Identification-based trust	1 1	0.2119 1.190	0.330 1.409	0.566 0.236
Working hours (co-variate)	Knowledge-based trust Identification-based trust	1 1	2.387E-02 0.484	0.036 0.574	0.850 0.449
Sex (co-variate)	Knowledge-based trust Identification-based trust	1 1	9.820E-02 1.242	0.015 1.471	0.903 0.226
Profession	Knowledge-based trust Identification-based trust	1 1	8.600 4.920	12.96 6	0.000 0.016
Contact-frequency	Knowledge-based trust Identification-based trust	1 1	7.517E-02 7.311	0.113 8.660	0.737 0.003
Interaction	Knowledge-based trust Identification-based trust	1 1	0.122 3.893E-02	0.185 0.046	0.668 0.830
Error	Knowledge-based trust Identification-based trust	496 496	0.663 0.844		

Status (relative position) has a significant effect on knowledge-based trust ($F(2.509) = 6.56$; $p < 0.002$). Because not only the main effect but also the interaction effect is significant ($F(2.509) = 3.08$; $p < 0.05$) we also need to look at the simple effects represented in Figure 2.

OPs (low status group) who feel equal to GPs (high status group) have more trust. On the other hand, GPs (high status group) who perceive themselves in the higher position, have the lowest levels of (knowledge-based) trust. This means that hypotheses 4 and 5 are supported for knowledge-based trust.

Discussion

Despite the low response % to our questionnaire the data are useful because of the large sample and because the characteristics of our sample strongly resemble the characteristics of a representative Dutch sample of GPs and OPs by Buijs et al. [1]. Their response percentages were 42% for the GPs and 61% for the OPs. Furthermore our questions were explanatory: our study is focussed on testing differences in levels of trust and on testing the relationship between frequency of contacts and trust. However,

Table 4. MANOVA of OPs versus GPs and lower, equal and higher status (independent variables) and sex, age and number of working hours as co-variates

Source	Dependent	df	Mean square	F	Significance (2-sided)
Age (co-variate)	Knowledge-based trust Identification-based trust	1 1	0.549 3.067	0.865 3.668	0.353 0.056
Working hours (co-variate)	Knowledge-based trust Identification-based trust	1 1	0.344 2.534	0.542 3.030	0.462 0.082
Sex (co-variate)	Knowledge-based trust Identification-based trust	1 1	6.663E-03 0.537	0.010 0.642	0.918 0.424
Profession (co-variate)	Knowledge-based trust Identification-based trust	1 1	2.115 3.489	3.333 4.172	0.068 0.042
Status	Knowledge-based trust Identification-based trust	1 1	4.165 0.633	6.562 0.757	0.002 0.470
Interaction	Knowledge-based trust Identification-based trust	1 1	1.954 2.174	3.078 2.600	0.047 0.075
Error	Knowledge-based trust Identification-based trust	509 509	0.635 0.836		

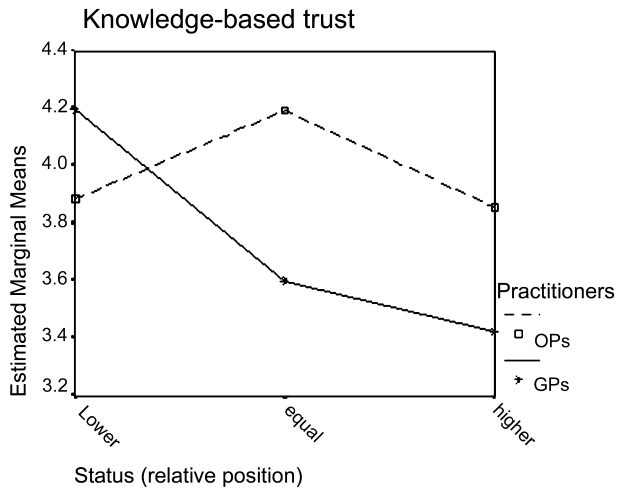

Figure 2. Level of knowledge-based trust for OPs and GPs and for different levels of relative position (see Table 4).

because of the low response percent and because our sample population only lived in the South West of the Netherlands we cannot draw firm conclusions as to the sample's representativeness for the Netherlands.

A second point we want to stress, is the possibility of selection bias and of response bias. It is possible that selection has occurred on for instance urban/rural basis. The response population may differ from the total questionnaire population as a result of the comparatively small response. Response bias may also have occurred: respondents reactions can be distorted by embarrassment about the sensitive subject of comparing their own position with the position of their colleagues or by a tendency to be evasive where self-criticism is involved when their own position is perceived to be lower.

Taking into account the above mentioned points we conclude that hypothesis 1 is supported: there is more knowledge-based trust than identification-based trust. We conclude that trust on a work-level is higher than on a personal level. Based on the partial support of hypothesis 2 we conclude that more contacts will indeed lead to more identification-based trust, but not to more knowledge-based trust. This is especially the case for OPs (hypothesis 3).

The status positions are more related to knowledge-based trust than to identification-based trust. This is a surprising and interesting outcome, because it could mean that identification-based trust between the professional groups is indeed at a very early stage. This outcome is independent of sex, age and number of weekly working hours, because we used these variables as co-variates in our analysis.

The partial support of hypotheses 4 and 5 can be explained by social identity theory. Members of the lower status group (OPs) who perceive their status as equal to GPs, have more (knowledge-based) trust in GPs. For members of the higher status group (GPs) there is a negative relation between the perception of their status and trust: higher status correlates with lower (knowledge-based) trust.

It is possible that GPs have less knowledge about occupational health than OPs have about general practice, which can influence knowledge-based trust. We have not investigated this but we know by experience that this is the case.

To enhance trust a similar strategy for OPs and GPs is needed: both have to learn that their position is more equal than they may think. It might help if they became aware of the dysfunctional effect of a perception that their occupational group holds the higher position.

If indeed identification-based trust is low because of the early stage of the relationship, it is possible that it may increase. Time will tell if this is indeed the case. Part of this study will be repeated as an evaluation of projects to improve co-operation.

Acknowledgement

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