

Empathic Caring Consultation (ECC): Will It Be Able to Improve the Quality of Care at the Health Centers?

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The purpose of this study is to support the evidence that ECC is effective to improve the quality of care in health centers in Sleman District, DIY, where myalgia complaints and the use of analgesics were high. ECC involves active listening, expressions of empathy, and short version of deep muscle relaxation. Method used was controlled trial design in 4 health centers. Two health centers were randomly assigned to the experimental and the control groups. Surveys of analgesics prescribing and the quality of care perceived by patients were conducted before and after the ECC. Results showed that there was no effect of ECC on the use of analgesics. Patients' perception toward the quality of care in the experimental groups improved slightly. Health providers in the experimental groups showing more concern using nonverbal communication were perceived as more empathetic. They also referred more cases to the psychologists when needed.

Keywords: ECC, rational use of analgesic, quality of care

Tujuan penelitian ini adalah mendukung adanya bukti empiris bahwa *Empathic Caring Consultation (ECC)* sangkil untuk meningkatkan kualitas pelayanan di puskesmas di Kabupaten Sleman, DIY, di mana jumlah kasus mialgia dan penggunaan analgesika tinggi. ECC meliputi mendengarkan aktif, ungkapan empati, dan versi pendek relaksasi otot. Metode yang digunakan adalah desain percobaan terkendali di 4 puskesmas. Dua puskesmas secara undian dipilih menjadi kelompok eksperimen dan kelompok kontrol. Survei persepsi analgesika dilakukan secara retrospektif tiga bulan sebelum dan sesudah ECC. Survei kualitas pelayanan dilakukan sebelum dan sesudah ECC diterapkan. Hasil penelitian menunjukkan bahwa tidak ada dampak ECC pada penggunaan analgesika di empat puskesmas yang diteliti. Persepsi pasien terhadap kualitas pelayanan di kelompok eksperimen meningkat sedikit. Petugas kesehatan di kelompok eksperimen, yang memperlihatkan perhatiannya melalui ungkapan nonverbal, dianggap lebih berempati. Mereka juga merujuk pada psikolog bila dibutuhkan.

Kata kunci: ECC, penggunaan rasional analgetika, kualitas pelayanan

In Indonesia, a lot of people still do not have necessary health awareness. At 2010, only a small part of Indonesian citizens owned necessary health insurance. On the other hand, many people still possess irrational belief in cures. One of this was the cultural-social-psychological phenomenon of "Muhammad Ponari", a child with his perceived miraculous black stone that is believed to have a magic curing for many different illnesses exposed by the mass media, is one example of the complexity of health seeking behaviour of people in Indonesia (Ilmie, 2009). People seem to be irrational in expecting cures of their miseries from a child and his black stone. Another

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inference is that many people are not covered by modern medicine and health services provided by the government in health centres'. The services in health centres' are supposed to be covered by public health insurance system, yet there are not too many people who are covered by the system. Meanwhile, Ponari's stone seems to be their last hope. While most people in developed countries have the access to good quality of health care and services, people in developing countries like Indonesia are still struggling in the availability of good quality of health care and services that supposed to be their rights.

One of human miseries is pain whether it is related to any illness experienced by the patients or other cause such as psychological pain reflected in the patients' bodies. Besides cultural "cures", behavioural medicine offers psychological intervention possibilities. Whatever

may cause the pain; it is possible to be alleviated by changing behaviour of the patients because there is an interaction between cognition, emotion, and sensation to affect pain sensation according to gate-control theory of pain. This theory was proposed by Ronald Melzack and Patrick Wall (see Sternberg, 1997). According to this theory, the central nervous system is serving "as a physiological gating mechanism" (Sternberg, 1997, p. 465). Certain cognition and emotion may widen or narrow the gate to raising or lowering the sensation of pain. Relating peacefully with other people may create positive cognition and emotion and may lower the sensation of pain. Using gate-control theory, it is hypothesized that opening self to others by showing compassionate love may narrow the gate and raising the pain threshold and decreasing the sensation of pain. Showing behavioural expressions of compassionate love and empathy while communicating with others will have double impacts on others and back to self.

In the health care setting, pain such as in myalgia case is usually treated by the use of analgesics, a group of medicines that are used to lessen pain. These drugs work as to block the pain signals that go to the brain or to interrupt the brain's interpretation of the signals without producing anaesthesia or loss of consciousness. There are two kinds of analgesics, narcotics and non-narcotics. The popular non-narcotic analgesics are aspirin and acetaminophen or a popular name of paracetamol. These drugs are included in the non-steroidal anti-inflammatory drugs (NSAIDS). They can be bought over the counter without prescription. These drugs are inexpensive, yet the over use of them might risk of liver damage. Another analgesic is ibuprofen that may blunt cardio-protective effect of aspirin for cardiovascular patients. The narcotic type of analgesics must be prescribed by the physician (see Pascucci, 2002; Ross, Holcomb, & Jamison, 2009; Tristani & Fudin, 2009).

Pascucci (2002), Ross, Holcomb, & Jamison (2009), Tristani & Fudin (2009) have warned that the overuse of analgesics may have severe side effects such as bleeding in the digestive system and liver damage. The use of ibuprofen may also blunt the effect of aspirin in cardiovascular cases. INRUD and WHO have not yet been so concerned about the rational use of analgesics as the indicator of the rationality. It has never been studied extensively (Qing & Yongpei, 2008).

One method, to improve the quality of care as part of behavioural medicine that has been applied in health settings in developed countries, is called CARE (Companion-Assisted Reactive Empathizer). CARE is an approach in which health service personnel apply in

their services to their patients. Different experiments have been tried out to gather empirical data that empathy is a core skill to be mastered in patients' care (see Beach, Rosner, Cooper, Duggan, & Shatzer, 2007; Bergeson & Dean, 2006; Day & Smith, 2007). Patient-centered approach seems to improve health care among the providers as their empathetic expressions are perceived positively by their patients. This approach even though might be applied in practice in Indonesia. It has rarely been well documented.

Specifically for the providers, it was also hypothesized that showing behavioural expressions of compassionate love in their empathetic attitude combined with more rational use of medicine may improve the quality of health care for the patients. For more than a decade there were efforts to improve the rational use of medicine in developing countries since irrational prescribing reduces the quality of health care, may cause problems of immunity, and leads to resources waste. The WHO Drug Action Program (WHO/DAP) on Essential Drugs and the International Network for the Rational Use of Drugs (INRUD) have been collaborating to promote rational use of medicine (Laing, Hogerzeil, & Ross-Degnan, 2001). The collaboration between WHO/DAP and INRUD has been successful to improve the use of medicine specifically the use of antibiotic, injection, and polypharmacy in public health care settings.

One managerial intervention is the use of feedback. Monitoring Training and Planning (MTP) in drug use has been reported by INRUD News (see Qing & Yongpei, 2008). MTP has been implemented in Sleman District Health Office since 2004 (personal communication with Head of Sleman District Health Office, 19 February 2009). Feedback of the use of medicine is part of MTP that will improve the quality of care in the health centers. Since there are new medical doctors in health centers in Sleman District, they have not been well informed of the MTP and at times they prescribe medicines beyond the treatment guidelines (personal communication with Head of Sleman District Health Office, 19 February 2009).

MTP has been adopted in China (Qing & Yongpei, 2008) in simple diarrheal case. Although MTP was useful in promoting rational use of medicine in public health services, yet the report concludes that due to the demand of other usage of medicines, it was a challenge of the health providers for not being tempted to comply with the pharmaceutical industry and community demands to use more medicines other than oral rehydration therapy only.

In this study, the expression of empathy when using the Empathic Caring Consultation/ECC by the providers was hypothesized to improve the quality of care in

health centres'. It was expected also that patients will learn how to empathize when they encounter others who are in pain. ECC is part of behavioural medicine. It is an applied behavioural approach in health and medical settings. Patient-centered approach using ECC, which involved active listening, expression of compassionate love verbally and nonverbally, and short version of deep muscle relaxation, had been developed by Prawitasari-Hadiyono, Tana, & Sunartono (2004).

The results of previous study were inconclusive (Prawitasari-Hadiyono, Tana, & Sunartono, 2004). One health center reduced and the other one increased the use of analgesics, but improved in the consultation time. Why the condition was like that was unknown due to the lack of a follow up study. The current study was intended to improve the design by adding the feedback of the use of ECC, and the referral system. Some other studies show that this approach was effective in health services. Karren, Hafen, Smith, and Frandsen (2009) have documented the positive effects of altruism in health. It is also necessary to impart information and improve communication between providers and patients as partners in health care settings (Karren et al.; Ogden, 2000; Salmon, 2000). A study by Miyagi (1993) found the positive power of compassion among doctors by telling the truth to dying patients. Williams (2002) also found that good communication in human interaction will lessen the facial expressions of pain.

Usually psychological studies relied heavily on the subjects' self-report regarding the subject matters of the study. Recently, however, the advancement of neuroscience studies found objective measures of the brain activities while the subjects engage in specific tasks. One study done by Decety and Jackson (2006) found that functional model of empathy has positive affect in social-cognitive interaction in human relations. This study shows that there is social neuroscience evidence that the model is effective in changing people's perception toward one another. This result provides objective evidence that empathy is needed in improving human relation, and thus ECC might improve the quality of care in health centres'.

Rational use of medicine has been promoted by the INRUD, which was inaugurated in Yogyakarta in 1990, in which the first author is an active member since the beginning to 2004 (Qing & Yongpei, 2008). The current study is an effort to improve the quality of care to individual patients even though the unit of analysis might be the health center. By training the health providers' skills in using ECC, it was expected that they will be more sensitive in diagnosing the patients' complaints, make referral to psychologists as needed, and improve

the quality of care perceived by the patients. Appropriate diagnosis for chronic pain and reduced use of analgesics will become the indicators of improved individual patient care and patients' perception toward empathy expression of the health providers.

Method

Subjects of this study were patients coming to four health centres' in May-September 2009 in Sleman Districts and all health providers in two health centres' that randomly had been assigned as the experimental groups. The unit analysis of this study was the health center.

Independent variables in this study were the quality of care in health services: ECC practiced by health providers, monitoring feedback of the practice, and the referral system. Dependent variables in this study were the perception of empathy expression of the health providers (through verbal and non-verbal communication) and the use of analgesics. Both (independent and dependent) variables were measured using unstandardized interview.

Research procedure started with communicating the intention of the proposed study to Head of Sleman District Office early in February 2009. A preliminary proposal was written by the first author and discussed with this person on 19 February 2009. An approval was agreed upon and the following week, the personnel of the Pharmacy Department of the office informed about four health centres' that would become the sites of the study. It was decided that the health centres' involved in this study were *Puskesmas* G 2; N 2; S and T 1.

Using control trial experimental design, those four *puskesmas* (pusat kesehatan masyarakat = health center) were randomly assigned as experimental (health center/HC G also labeled as experimental group 1 & HC T as experimental group 2) and control groups (HC N also labeled as control group 1 & S as control group 2). Four graduate students majoring in clinical psychology on professional psychology master's program did the baseline studies on health services of all personnel in those four health centres'. During baseline studies, those graduate students were measuring patients' satisfactions and observing the practice of general services, dental services, and women-child health service units. The baselines studies were conducted at May-July 2009. The similar processes were repeated for the post observation and monitoring of the ECC practice in August-September 2009. No monitoring feedback was given to the control groups.

Training workshops for the experimental groups were held at the end of July 2009. All health providers in the

experimental groups were trained in ECC: active listening and short version of deep muscle relaxation technique. Short refreshing speech by a medical doctor was also given to all prescribers in the experimental groups. During the one day training workshops, each graduate student facilitated the discussions with specific health providers in the health center. One student discussed with medical doctors and practicing nurses in developing the referral system. One student discussed with dental health services providers on the anxiety management. One student discussed with the midwives on the referral system to psychological services for patients in need. All health providers in the experimental health center sites agreed to apply as to what had been trained during the workshops. The group commitment usually became the reminder of the good practice in providing quality of care for the patients.

Prescribing surveys were conducted by assistant pharmacists in each health center three months in retrospect before and three months after the interventions at the end of July 2009. All four health centres' were surveyed on the use of analgesics. Each month 30 subscriptions were collected randomly in those four health centres' and the percentage of the analgesics use was counted. Data analysis mostly used time series design. Prescribing data of the use of analgesics were analyzed three months before and after the interventions. Observation data on verbal and nonverbal communications of the health providers in all health centres' were also presented in time series graphs. Data on the use of antibiotic, injection, and polipharmacy were also presented from December 2008 to August 2009, based on percentage of the drug usage from those 30 subscriptions each month in every health center using time series graphs.

Results

Although there were four graduate students studying different units in health centres', focus of this article was on the use of analgesics, and referral system to psychologist. They written their own research results separately except for one student, whose data on referral system in the general practice unit were presented in this article. Findings of this study were not as impressive as expected when the indicator of success of the intervention was rational use of analgesics. When the indicator of perceived improved of services by the patients, however, ECC was effective. Specifically the nonverbal communication was improved in the experimental groups as perceived by the patients and according to the observations made by the students.

Appendix A and B reflect the use of analgesics in four health centres' in the study. Appendix A indicate that the use of analgesics remain the same all over the time when the interventions were conducted in two health centres' as the experimental groups. Almost all patients complaining about myalgia were given analgesics of all types, but paracetamol was used mostly at health center N. Antalgin was supposed to be banned, yet health centres' T and G used more of this type of analgesics in the study time. Ibuprofen was also used at health center G. Health center S used Na Diklofenak mostly in June to September 2009 (see Appendix B). There was no clue of whatsoever why this happens.

Appendix C and D presented the indicators of rational use of drugs, that is the use of antibiotic, injection, and polipharmacy. Those medicines remained low as the results of the management intervention (the use of MTP) by the district health office of Sleman since 2004 (see Appendix C). The use of antibiotic remain less than 30 % in three health centres', but increasing in health center G in June and August 2009. In health center N there was an increase of polypharmacy in July 2009. The average is supposed to be less than four, but in this month this center used four types of drugs. Appendix D presented the increase use of more than three types of drugs. This seemed to be due to the increase cases of diarrhea.

When the indicator of success of the intervention was based on the patients' perception toward the health providers, then there seemed to be improvement after they learned how to use ECC (see Appendix E-G). Specifically on the nonverbal communication, health providers in the experimental groups improved substantially whereas in the control group the perception remained the same since the health providers have practiced the nonverbal communication from previous study (see Prawitasari-Hadiyono, Tana, & Sunartono, 2004). Referral to psychologists also increased, especially from health center G. These findings suggest there are positive results of ECC in the experimental health centers.

Discussion

Study in health services is not simple. There are so many factors affecting the conditions. To name a few, those factors include many different actors in the centres', the management, the physical condition, and drug used. The physicians, nurses, midwives, pharmacists in health centres' are the main actors whose behaviour will affect their services toward the patients. The more perceived empathy expression through verbal and nonverbal communications they show, the more satisfying

the patients will be (see Beach et al., 2007). Management of the health services is also an important factor affecting the condition. Usually management intervention affects substantially the health services in health centres', specifically the rational use of drugs (see Prawitasari, 2001). Physical condition is also another factor affecting patients' satisfaction toward the services. The more modern and the cleaner the health centres', the more satisfied the patients would be (see Prawitasari & Savitri, 1999).

The use of drugs is also another factor affecting the health services. Thus far, Sleman District Health Office has been reducing the irrational use of antibiotic, injection, and polypharmacy in each health center. The data in this study has shown this trend. Yet, the use of analgesics is still high. Almost all myalgia cases were treated by the use of acetaminophen, ibuprofen, and even antalgin that is not in the treatment guideline. It seemed that the refreshing speech on the use of analgesics in pain cases during the intervention was not enough in improving the awareness of the prescribers of the rational use of them. It might be considered in the future study to design carefully the session of the rational use of analgesics if this is deemed to be important in the rational use of drugs movement.

One weakness of the use of randomized controlled trial design is that the study may not be able to equalize the condition of the health centres'. The study may just accept as they are without any effort to start in the same condition, like the case of the control groups that they were in the process of accreditation of international health services. They have started to use the quality of care as required by the standard of practice in health services.

One very interesting finding was that health providers were perceived as empathetic when they showed more nonverbal communications than verbal communications. Too many comments would not be necessary during the examination. As far as the health providers smile contextually and nod or shake their heads according to the presenting complaints, then the patients will be pleased. This behaviour will save the energy of the health providers for not speaking that much, specifically when there are very many patients coming to the health centres'. To improve the design of the study it might be good for concentrating on the skills of using nonverbal communications and slight usage of verbal communications.

ECC was effective in improving the quality of care as perceived by the patients, but it has not affected the rational use of analgesics. This might be due to the less concentration on the subject during the intervention. Also without monitoring feedback of the practice and management requirement similar to the rational use of

antibiotic, injection, and polypharmacy, it may not affect the practice of the overuse of analgesics. The training workshop was held for one day in the health centres' after all patients were treated. This may also affected the health providers as they wanted to return home quickly for their own private practice.

Conclusion and Recommendation

The ECC has been introduced previously (see Prawitasari-Hadiyono, Tana, & Sunartono, 2004), yet the result was inconclusive. No follow up study had been done ever since. This study was a renewal of the previous study, yet the result was not either conclusive. More thorough studies and extensive observations have to be conducted if the effort of marketing the ECC as to lessen the use of analgesics may become the indicator of success.

Training workshops will be much better if it is to be held outside the health centres' that all health providers will focus more on the issue being raised during the workshop. It will also be better if half health providers attend the workshop in a full one day and the other half in another day that they may not abandon their patients. It is also recommended that baseline observations is to be done thoroughly in two weeks as to the quality of care of the health providers using exit patients interview as well as waiting time and their nonverbal communication. The later will be taught extensively since nonverbal communication is the core value that the patients perceived as the empathy expression of the health providers improved in this study.

Larger scale of the study is to be proposed to see the clear effect of ECC on the use of analgesics. Prescribing survey might be more objective if it is done by independent surveyor than rely on the collection made by each health centre's assistant pharmacist. In this larger scale study, the focus will not be only myalgia cases, but chronic illness cases have to be included such as hypertension, rheumatoid, arthritis, diabetic and other internal medicine cases. The prescribing samples to be collected will not only 30 on myalgia cases only, but random collection of 100 prescriptions on all cases in one month.

Methodologically, the use of in-depth understanding of the phenomenon must be explored using qualitative approach such as in-depth interview of the health providers, the management, and the policy makers in the District Health Office, observation of the documents, on site observation of the quality of practice of the health providers, and Focus Group Discussion (FGD) of the policy makers in the global world like INRUD and WHO. Maybe pair comparisons to see the impact of

ECC is feasible to be conducted for not only four health centers, but the whole district or maybe the whole Daerah Istimewa Yogyakarta (DIY) as the study sites.

Limitations of the Research

One of the main limitations of this study is the nonexistence of standardized measurements, neither for independent nor for dependent variables. This was due to the shortage of standardized instruments to measure those variables. Short yet standardized and valid instrument or procedure such as M2M (*Metode 2 Menit* = the two minute method), was still not available for our variables. The M2M technique has already been widely used to recognize mental health problems (in accordance with DSM) in the primary health care (Hidayat, Ingkiriwang, Andri, Asawi, Widya, & Susanto, 2010).

Experts in psychometrics, especially test developers should not procrastinate in developing it. Single item measurement is one of the most promising approach in dealing with this issue. Such instruments were already created to measure certain psychological constructs, like *job satisfaction* (Wanous, Reichers, & Hudy, 1997), *pain* (Bernard, Walsh, & Mills, 2005), and *length of sleep* (Kelly, 2009). The pursuit of the availability of such instruments in measuring patient perception and satisfaction should be encouraged seriously.

Acknowledgement

This study was made possible due to a professor grant from the Faculty of Psychology, UGM, to the first author and also collaboration with Sleman District Health Office. Thank you.

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(Appendix follows)