# REFERENCES


(1). Office of the Council of State. **National Health Security Act B.E. 2545** [Online]. 2549. Available from: http://www.krisdika.go.th/searchShowFile.jsp?path=%2Fexport%2Fnew_htdocs%2Fdata%2Flaw%2Flaw2%2F%25cb29%2F%25cb29-20-2545-a0001.pdf [2007, Jun 25]

(2). Srivanichakorn, S.; Athicmanon, S.; Chaluadej, B.; Surakijkosol, T.; and Sukpuadee, N. **Primary Care Service**. Nonthaburi: Health Care Reform Office, Ministry of Public Health, 2545.

(3). Ministry of Public Health. **The 10th National Health Development Plan**. [Online]. 2550. Available from: http://www.moph.go.th/other/inform/10/index.htm [2007, Jun 25]

(4). Roberge, D.; Beaulieu, M-D.; Haddad, S.; Lebea, R.; and Pineault R. Loyalty to the regular care provider: Patients' and physicians' views. **Fam Pract**. 18 (2001): 53-59.

(5). Bowers, M.R.; and Kiefe, C.I. Measuring health care quality: comparing and contrasting the medical and the marketing approaches. **Am J Med Qual**. 17 (2002): 136-144.

(6). Spahr, R.C.; and Hutchinson, R.L. The physician executive and patient satisfaction: Patient Care. **Physician Exec**. 29 (2003): 54-57.

(7). Jacoby, J.; and Chestnut R.W. **Brand loyalty: Measurement and management**. New York: John Wiley & Sons, 1978.

(8). Jacoby, J.; and Kyner, D.B. Brand loyalty vs. repeat purchasing behavior. **J Market Res**. 10 (1973): 1-9.

(9). Dick, A.S.; and Basu K. Customer loyalty: Toward an integrated conceptual framework. **J Acad Market Sci**. 22 (1994): 99-113.

(10). Oliver, R.L. Whence consumer loyalty? **J Market**. 63 (1999): 33-44.

(11). Blodgett, J.G; Hill, D.J.; and Tax S.S. The effects of distributive, procedural, and interactional justice on postcomplaint behavior. **J Retailing**. 73 (1997):185-210.

(12). Butcher, K.; Sparks, B.; and O'Callaghan F. Evaluative and relational influences on service loyalty. **Int J Serv Ind Manag**. 12 (2001): 310-327.

(13). Jones, T.; and Taylor, S.F. The conceptual domain of service loyalty: how many dimensions? **J Serv Market**. 21 (2007): 36-51.

(14). Dwyer, R.F; Schurr, P.H.; and Oh S. Developing buyer-seller relationships. **J Market**. 51 (1987): 11-27.

(15). Anderson, E.W.; Fornell, C.; and Rust R.T. Customer satisfaction, productivity, and profitability: differences between goods and services. **Market Sci**. 16 (1997): 129-145.

(16). Caruana, A. Service loyalty: the effects of service quality and the mediating role of customer satisfaction. **Eur J Market**. 36 (2002): 811-828.

(17). Bendapudi, N.; and Berry, L.L. Customers' motivations for maintaining relationships with service providers. **J Retailing**. 73 (1997): 15-37.

(18). Bove, L.L.; and Johnson, L.W. Customer relationships with service personnel: do we measure closeness, quality or strength? **J Bus Res**. 54 (2001): 189-197.

(19). Zeithaml, V.A.; Berry, L.L.; and Parasuraman A. The behavioral consequences of service quality. **J Market**. 60 (1996): 31-46.

(20). Bloemer, J.; de Ruyter, K.; and Wetzels, M. Linking perceived service quality and service loyalty: a multi-dimensional perspective. **Eur J Market**. 33 (1999): 1082-1106.

(21). Boulding, W.; Kalra, A.; Staelin, R.; and Zeithaml V.A. A dynamic process model of service quality: from expectations to behavioral intentions. **J Market Res**. 30 (1993): 7-70.

(22). Pudpong Tribubpha. **Relationships between perceived service quality and service loyalty**. Master's Thesis. Department of public relation, Faculty of communication arts, Chulalongkorn University; 2004.

(23). de Ruyter, K.; Wetzels, M.; and Bloemer, J. On the relationship between perceived service quality, service loyalty and switching costs. **Int J Serv Ind Manag**. 9 (1998): 436-453.

(24). Alden D.L.; DelaCruz, J.; and Viboonsanti, P. Influences on client loyalty to reproductive health-care clinics in the Philippines and Thailand. **Asia Pac Popu J**. 19 (2004): 9-24.

(25). Wang, H.L.; Hsiao, Y.C.; and Huang, J. **Service quality and loyalty in varying patient's knowledge and perceived switching costs: Lesson from Taiwan**. Proceedings of Asia Academy of Management: Professional Development Workshop. Hong Kong, Aug. 13, 2006. [Online]. Available from: http://www.baf.cuhk.edu.hk/asia-aom/PDW06/T2_Wang_Hsiao_Huang.pdf [2007, Jun 16]

(26). Gronroos, C. **Service management and marketing**. Massachusetts: Lexington Books, 1990.

(27). Parasuraman, A.; Zeithaml, V.A.; and Berry, L.L. A conceptual model of service quality and its implications for future research. **J Market**. 49 (1985): 41-50.

(28). Berry, L.L.; Zeithaml, V.A.; and Parasuraman A. Quality counts in services, too. **Bus Horiz**. 28 (1985): 44-52.

(29). Berry, L.L.; Parasuraman, A.; and Zeithaml, V.A. The service-quality puzzle. **Bus Horiz**. 31 (1988): 35-43.

(30). Cronin, J.J.; and Taylor, S.A. Measuring service quality: a reexamination and extension. **J market**. 56 (1992): 55-68.

(31). Cronin, J.J.; and Taylor, S.A. SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. **J Market**. 58 (1994): 125-131.

(32). Brow, T.J.; Churchill, G.A.; and Peter, J.P. Improving the measurement of service quality. **J Retailing**. 69 (1993): 127-139.

(33). Buttle F. SERVQUAL: Review, critique, research agenda. **Eur J Market**. 30 (1996): 8-32.

(34). van Dyke, T.P.; Prybutok, V.R.; and Kappelman, L.A. Cautions on the use of the SERVQUAL measure to assess the quality of information systems services. **Decis Sci J**. 30 (1999): 1-15.

(35). Donabedian, A. **An introduction to quality assurance in health care**. New York: Oxford University press, 2003.

(36). Rust, R.T.; and Oliver, R.L. **Service quality: Insights and managerial implications from the frontier**. In: Rust, R.T.; and Oliver, R.L.; editors. Service quality: New directions in theory and practice. Thousand Oaks, CA: Sage Publications, 1994.

(37). Brady, M.K.; and Cronin, J.J. Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. **J Market**. 65 (2001):34-49.

(38). Lehtinen, U.; and Lehtinen J.R. Two approaches to service quality dimensions. **Serv Indust J**. 11 (1991): 287-303.

(39). Carman, J.M. Patient perceptions of service quality: Combining the dimensions. **J Serv Market**. 14 (2000): 337-352.

(40). Patcharaporn Panyawuthikrai. **Development of perceived community pharmacy service quality scale (PCPSQ): Client perspective**. Doctoral Thesis. Department of Social Administrative Pharmacy, Graduate School, Chulalongkorn University, 2004.

(41). Oliver, R.L. A cognitive model of the antecedents and consequences of satisfaction decisions. **J Market Res**. 17 (1980): 460-469.

(42). Spreng, R.A.; and Mackoy, R. An empirical examination of a model of perceived service quality and satisfaction. **J Retailing**. 72 (1996): 201-214.

(43). Liljander, V.; and Strandvik, T. Emotions in service satisfaction. **Int J Serv Ind Manag**. 8 (1997): 148-169.

(44). Cronin, J.J.; Brady, M.K.; and Hult, G.T.M. Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. **J Retailing**. 76 (2000): 193-218.

(45). Bagozzi, R.P.; Gopinath, M.; and Nyer, P.U. The role of emotions in marketing. **J Acad Market Sci**. 27 (1999): 184-206.

(46). Yu, Y.T.; and Dean, A. The contribution of emotional satisfaction to consumer loyalty**. Int J Serv Ind Manag**. 12 (2001): 234-250.

(47). White, C.J. Towards an understanding of the relationship between mood, emotions, service quality and customer loyalty intentions. **Serv Indust J**. 26 (2006): 837-847.

(48). Persson, P.D.; and Huang, S.K. An empirical study of factors influencing patient loyalty: A community hospital case in Taiwan. Proceedings of ISQUA's London Conference, Oct. 22-25, 2006. [Online]. Abstract from: http://www.isqua.org.au/isquaPages/Conferences/London/AbstractsSlides/DISPLAYS/202%20-%20Persson.pdf [2007, Jul 1].

(49). Patterson, P.G. Demographic correlates of loyalty in a service context. **J Serv Market**. 21 (2007): 112-121.

(50). Hair, Jr. J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E.; and Tatham, R.L. **Multivariate Data Analysis** 6th ed. New Jersey: Prentice Hall, 2006.

(51). de Ruyter, K.; and Wetzels, M. On the complex nature of patient evaluations of general practice service. **J Econ Psychol**. 19 (1998): 565-590.

(52). Brown, S.W.; and Swartz, T.A. A gap analysis of professional service quality. **J Market**. 53 (1989): 92-98.

(53). Stevens, J.P., **Applied multivariate statistics for the social sciences**. 3rd ed. New Jersey: Lawrence Erlbaum, 1996.

(54). Srithamrongsawat, S.; and Torwatanakitkul, S. Implication of the Universal Coverage Scheme on health service delivery system in Thailand. **J Health Syst**. 1(2007): 47-62.

(55). Gabbott, M.; and Hogg, G. Competing for patients: Understanding consumer evaluation of primary care. **J Manag Med**. 8(1994): 12-18.

# APPENDICES

# APPENDIX A:
# QUESTIONNAIRE (ENGLISH)

# QUESTIONNAIRE

Topic: Factors Influencing Client loyalty to Primary Care Units in Muang District, Chonburi Province

As a service receiver of the primary care unit, you were asked to complete the questionnaire. All information will be kept confidential. The questionnaire consists of 4 parts, please complete all parts.

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**Part 1** General information

**Notice** Please answer these questions or check ✓ in ☐ that represent your information

1. Gender ☐ 1. Male ☐ 2. Female
2. Age.....Years Old
3. Highest Education Level
   - ☐1. Less than primary school ☐2. Primary school
   - ☐3. Secondary school ☐4. High school
   - ☐5. Undergraduate ☐6. Bachelor's degree
   - ☐7. Higher than Bachelor's degree
4. Occupation
   - ☐1. Unemployed ☐2. Farmer ☐3. Temporary employee
   - ☐4. Retired ☐5. Housewife
   - ☐6. Governmental or State enterprise officer ☐7. Business owner
   - ☐8. Student ☐9. Other (describe.....)
5. Total income.....Baht/month
6. Years of experience in this Community Health Center.....
7. Number of visits per year.....
8. Do you come to obtain service with chronic disease like diabetes or hypertension?
   - ☐ Yes ☐ No
9. Waiting time for obtaining service.....hour.....minutes
10. Source of health expenditure
    - ☐ Out of pocket ☐ CSMBC ☐ Social Security Scheme
    - ☐ Universal Health Coverage Scheme

      Health care provider indicated in the UC card.....
11. Total expenditure per visit (including travel cost).....Baht

**Part 2** Perceived service quality

**Notice** Please indicate ✓ that represent your opinion about service you received where 9 = strongly agree to 1 = strongly disagree

| Items | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Can't Evaluate |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Diagnostic room in the Health Center is privacy. | | | | | | | | | | |
| 2. The Health Center has enough facilities. | | | | | | | | | | |
| 3. The Health Center is clean. | | | | | | | | | | |
| 4. The Health Center has enough diagnostic equipment. | | | | | | | | | | |
| 5. The Health Center has enough curative equipment. | | | | | | | | | | |
| 6. The Health Center has enough medicine and medicinal supplies. | | | | | | | | | | |
| 7. Types of health personnel at the Health Center are suitable. | | | | | | | | | | |
| 8. The Health Center has enough doctors. | | | | | | | | | | |
| 9. The Health Center has enough health personnel. | | | | | | | | | | |
| 10. Operating hour of the Health Center is appropriate. | | | | | | | | | | |
| 11. Operating hour of the doctor at the Health Center is appropriate. | | | | | | | | | | |
| 12. Method of obtaining care is easy. | | | | | | | | | | |
| 13. The doctor is friendly. | | | | | | | | | | |
| 14. The health personnel is friendly | | | | | | | | | | |
| 15. The doctor is willing to provide service. | | | | | | | | | | |

| Perceived Service Quality | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Can't Evaluate |
|---|---|---|---|---|---|---|---|---|---|---|
| 16. The health personnel are willing to provide service. | | | | | | | | | | |
| 17. The doctor pays attention to your health problem | | | | | | | | | | |
| 18. The health personnel pay attention to your health problem | | | | | | | | | | |
| 19. The doctor provides service politely. | | | | | | | | | | |
| 20. The health personnel provide service politely. | | | | | | | | | | |
| 21. The doctor provides service actively. | | | | | | | | | | |
| 22. The health personnel provide service actively. | | | | | | | | | | |
| 23. The doctor has tried best to solve your health problem. | | | | | | | | | | |
| 24. The health personnel have tried best to solve your health problem. | | | | | | | | | | |
| 25. The doctor can solve your health problem. | | | | | | | | | | |
| 26. The health personnel can solve your health problem. | | | | | | | | | | |
| 27. The doctor provides service expertly. | | | | | | | | | | |
| 28. The health personnel provide service expertly. | | | | | | | | | | |
| 29. The doctor has informed you thoroughly of what you should know. | | | | | | | | | | |

| Perceived Service Quality | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Can't Evaluate |
|---|---|---|---|---|---|---|---|---|---|---|
| 30. The health personnel have informed you thoroughly of what you should know. | | | | | | | | | | |
| 31. Your disease or sickness is better after obtaining service. | | | | | | | | | | |
| 32. Your health status is better after obtaining service. | | | | | | | | | | |
| 33. Your mind is better after obtaining service. | | | | | | | | | | |
| 34. Knowledge about your disease or sickness is better after obtaining service. | | | | | | | | | | |
| 35. Knowledge about preventive and promotive care is better after obtaining service. | | | | | | | | | | |
| 36. You can change bad health habits after obtaining service | | | | | | | | | | |
| 37. Your preventive and promotive care is better after obtaining service | | | | | | | | | | |

**Part 2** Satisfaction Emotions

**Notice** Please indicate ✓ that represent your opinion about your emotions developed from services you received, where 9 = strongly agree to 1 = strongly disagree

| Items | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Obtaining service here makes you feel happy. | | | | | | | | | |
| 2. Obtaining service here makes you feel hopeful. | | | | | | | | | |
| 3. Obtaining service here makes you feel surprised. | | | | | | | | | |
| 4. Obtaining service here makes you feel angry. | | | | | | | | | |
| 5. Obtaining service here makes you feel depressed. | | | | | | | | | |
| 6. Sometimes service provider makes you feel guilty. | | | | | | | | | |
| 7. Obtaining service here makes you feel humiliated. | | | | | | | | | |

**Part 3** Loyalty

**Notice** Please indicate ✓ that represent your opinion where 9 = strongly agree to 1 = strongly disagree

| Items | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Will come to this Health Center in the next ill. | | | | | | | | | |
| 2. Consider this Health Center your first choice to seek health care. | | | | | | | | | |
| 3. Don't want to obtain service from this Health Center if can choose. | | | | | | | | | |
| 4. Have only positive things to tell other people about this Health Center. | | | | | | | | | |
| 5. Recommend this Health Center to other people who seeking for health service. | | | | | | | | | |
| 6. Encourage friend and relatives to obtain service from this Health Center | | | | | | | | | |
| 7. Switch to other health care providers if you are charged for services. | | | | | | | | | |
| 8. Continue to obtain service from this Health Center although charge more expensive than other. | | | | | | | | | |
| 9. Complain to other people if you are dissatisfied with the service. | | | | | | | | | |
| 10. Complain to related office if you are dissatisfied with the service. | | | | | | | | | |
| 11. Switch to other health care provider if you are dissatisfied with the service. | | | | | | | | | |

**APPENDIX B:**
**QUESTIONNIARE (THAI)**

**แบบสอบถามเพื่อการวิจัย**
**เรื่องปัจจัยที่มีผลต่อความภักดีของผู้ใช้บริการสุขภาพต่อหน่วยบริการปฐมภูมิ**
**ในอำเภอเมือง จังหวัดชลบุรี**

ผู้วิจัยขอความร่วมมือจากท่านซึ่งเป็นผู้ใช้บริการสุขภาพจากหน่วยบริการปฐมภูมิ ในการตอบแบบสอบถาม โดยข้อมูลและความคิดเห็นต่างๆ ที่ท่านตอบ ผู้วิจัยจะเก็บไว้เป็นความลับสูงสุด โดยนำเสนอข้อมูลในภาพรวมเท่านั้น และจะ**ไม่มีผลกระทบใดๆ ต่อท่านหรือการใช้บริการของท่าน** รวมทั้ง**ไม่มีผลกระทบต่อหน่วยบริการปฐมภูมิ**ที่ท่านมาใช้บริการ แบบสอบถามมี 4 ตอน กรุณาตอบคำถามทุกข้อ

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**ตอนที่ 1** ข้อมูลทั่วไป

**คำชี้แจง** กรุณาทำเครื่องหมาย ✓ ลงในช่อง ☐ ที่ต้องการ หรือเติมข้อความในที่ว่างที่กำหนด

1. เพศ ☐ 1. ชาย ☐ 2. หญิง

2. อายุ.....ปี

3. ระดับการศึกษาสูงสุด

☐ 1.ไม่ได้เรียนหนังสือ/ ไม่จบการศึกษาภาคบังคับประถมศึกษา ☐ 2.ประถมศึกษา

☐ 3.มัธยมต้น ☐ 4.มัธยมปลาย /ปวช. หรือเทียบเท่า

☐ 5.ปวส. /อนุปริญญา หรือเทียบเท่า ☐ 6.ปริญญาตรี ☐ 7.สูงกว่าปริญญาตรี

4. อาชีพ

☐ 1.ไม่ได้ประกอบอาชีพ ☐ 2.เกษตรกร ☐ 3.รับจ้าง/ลูกจ้าง

☐ 4.เกษียณอายุ ☐ 5.แม่บ้าน/พ่อบ้าน ☐6.ข้าราชการ/พนักงานรัฐวิสาหกิจ

☐ 7.ค้าขาย/เจ้าของกิจการ ☐ 8.นักเรียน/นักศึกษา ☐9. อื่นๆ (โปรดระบุ.....)

5. รายได้โดยเฉลี่ย.....บาทต่อเดือน

6. ท่านมารับบริการที่นี่มาเป็นเวลา.....ปี

7. ความถี่ที่ท่านมารับบริการที่นี่โดยเฉลี่ยปีละ.....ครั้ง

8. ท่านมารับบริการเนื่องจากโรคเรื้อรัง เช่น เบาหวาน ความดันโลหิตสูง ใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

9. เวลาที่ใช้ในการรอรับบริการประมาณ.....ชั่วโมง.....นาที

10. สิทธิในการรักษาพยาบาล

☐ ไม่ใช้ ☐ สวัสดิการข้าราชการ ☐ ประกันสังคม

☐ บัตรทอง สถานบริการลำดับแรกที่ระบุในบัตรทอง .....

11. การมารับบริการครั้งนี้ท่านต้องเสียค่าใช้จ่ายทั้งหมด (รวมค่าเดินทาง อาหาร).....บาท

**ตอนที่** 2 ความคิดเห็นที่มีต่อคุณภาพการให้บริการ

**คำชี้แจง** กรุณาทำเครื่องหมาย ✓ ในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุด

9 หมายถึง เห็นด้วยมากที่สุด

1 หมายถึง ไม่เห็นด้วยมากที่สุด

| ประเด็นข้อคำถาม | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | ประเมินไม่ได้ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีห้องตรวจมิดชิดเป็นสัดส่วน | | | | | | | | | | |
| 2. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีสิ่งอำนวยความสะดวก เช่น บริเวณที่พักรอ ห้องน้ำ อย่างเพียงพอ | | | | | | | | | | |
| 3. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการสะอาดเป็นระเบียบ | | | | | | | | | | |
| 4. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีเครื่องมือ อุปกรณ์ในการตรวจวินิจฉัยเพียงพอ | | | | | | | | | | |
| 5. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีเครื่องมือ อุปกรณ์ในการรักษาเพียงพอ | | | | | | | | | | |
| 6. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมียาและเวชภัณฑ์เพียงพอ | | | | | | | | | | |
| 7. ประเภทเจ้าหน้าที่สาธารณสุขที่ให้บริการที่ศูนย์สุขภาพชุมชนมีความเหมาะสม | | | | | | | | | | |
| 8. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีจำนวนแพทย์เพียงพอ | | | | | | | | | | |
| 9. ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีจำนวนเจ้าหน้าที่สาธารณสุขอื่นๆ เพียงพอ | | | | | | | | | | |
| 10. ช่วงเวลาการให้บริการของศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีความเหมาะสม | | | | | | | | | | |

| ประเด็นข้อคำถาม | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | ประเมินไม่ได้ |
|---|---|---|---|---|---|---|---|---|---|---|
| 11. ระยะเวลาการให้บริการของแพทย์ที่ศูนย์สุขภาพชุมชนที่ท่านใช้บริการมีความเหมาะสม | | | | | | | | | | |
| 12. ขั้นตอนการรับบริการไม่ยุ่งยาก | | | | | | | | | | |
| 13. แพทย์ที่ให้บริการมีความเป็นมิตร | | | | | | | | | | |
| 14. เจ้าหน้าที่สาธารณสุขที่ให้บริการมีความเป็นมิตร | | | | | | | | | | |
| 15. แพทย์เต็มใจให้บริการ | | | | | | | | | | |
| 16. เจ้าหน้าที่สาธารณสุขเต็มใจให้บริการ | | | | | | | | | | |
| 17. แพทย์ให้ความสำคัญกับปัญหาสุขภาพของท่าน | | | | | | | | | | |
| 18. เจ้าหน้าที่สาธารณสุขให้ความสำคัญกับปัญหาสุขภาพของท่าน | | | | | | | | | | |
| 19. แพทย์ให้บริการด้วยความสุภาพ | | | | | | | | | | |
| 20. เจ้าหน้าที่สาธารณสุขให้บริการด้วยความสุภาพ | | | | | | | | | | |
| 21. แพทย์ให้บริการด้วยความกระตือรือร้น | | | | | | | | | | |
| 22. เจ้าหน้าที่สาธารณสุขให้บริการด้วยความกระตือรือร้น | | | | | | | | | | |
| 23. แพทย์ได้พยายามแก้ปัญหาสุขภาพของท่านอย่างเต็มที่ | | | | | | | | | | |
| 24. เจ้าหน้าที่สาธารณสุขได้พยายามแก้ปัญหาสุขภาพของท่านอย่างเต็มที่ | | | | | | | | | | |
| 25. แพทย์มีความรู้ความสามารถในการแก้ปัญหาสุขภาพของท่านได้ | | | | | | | | | | |

| ประเด็นข้อคำถาม | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | ประเมินไม่ได้ |
|---|---|---|---|---|---|---|---|---|---|---|
| 26. เจ้าหน้าที่สาธารณสุขมีความรู้ความสามารถในการแก้ปัญหาสุขภาพของท่านได้ | | | | | | | | | | |
| 27. แพทย์ให้บริการด้วยความชำนาญ | | | | | | | | | | |
| 28. เจ้าหน้าที่สาธารณสุขให้บริการด้วยความชำนาญ | | | | | | | | | | |
| 29. แพทย์ได้แจ้งสิ่งที่ท่านควรต้องรู้อย่างครบถ้วน | | | | | | | | | | |
| 30. เจ้าหน้าที่สาธารณสุขได้แจ้งสิ่งที่ท่านควรต้องรู้อย่างครบถ้วน | | | | | | | | | | |
| 31. โรคหรือความเจ็บป่วยของท่านมีอาการดีขึ้นหลังมารับบริการ | | | | | | | | | | |
| 32. สุขภาพโดยรวมของท่านดีขึ้นหลังมารับบริการ | | | | | | | | | | |
| 33. จิตใจของท่านดีขึ้นหลังมารับบริการ | | | | | | | | | | |
| 34. การรับบริการที่นี่ทำให้ท่านมีความรู้เกี่ยวกับโรคหรือความเจ็บป่วยของท่านดีขึ้น | | | | | | | | | | |
| 35. การรับบริการที่นี่ทำให้ท่านมีความรู้เกี่ยวกับการป้องกันโรคและส่งเสริมสุขภาพดีขึ้น | | | | | | | | | | |
| 36. การรับบริการที่นี่ช่วยทำให้ท่านสามารถเปลี่ยนแปลงพฤติกรรมที่มีผลเสียต่อสุขภาพ | | | | | | | | | | |
| 37. การรับบริการที่นี่ทำให้ท่านสามารถป้องกันโรคและส่งเสริมสุขภาพดีขึ้น | | | | | | | | | | |

**ตอนที่** 3 ความรู้สึกที่มีต่อการรับบริการ

**คำชี้แจง** กรุณาทำเครื่องหมาย ✓ ในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุด

9 หมายถึง เห็นด้วยมากที่สุด

1 หมายถึง ไม่เห็นด้วยมากที่สุด

| ประเด็นข้อคำถาม | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|
| 1. การมารับบริการที่นี่ทำให้ท่านรู้สึกมีความสุข | | | | | | | | | |
| 2. การมารับบริการที่นี่ทำให้ท่านรู้สึกมีความหวัง | | | | | | | | | |
| 3. การให้บริการที่นี่ทำให้ท่านรู้สึกดีเกินคาดคิด | | | | | | | | | |
| 4. การมารับบริการที่นี่ทำให้ท่านรู้สึกหงุดหงิด อารมณ์เสีย | | | | | | | | | |
| 5. การมารับบริการที่นี่ทำให้ท่านรู้สึกหดหู่ | | | | | | | | | |
| 6. มีบางครั้งเจ้าหน้าที่ดุท่านจนทำให้ท่านรู้สึกว่าทำตัวไม่เหมาะสม | | | | | | | | | |
| 7. การให้บริการที่นี่ทำให้ท่านรู้สึกเสื่อมเสียศักดิ์ศรี | | | | | | | | | |

**ตอนที่** 4 ความภักดีต่อบริการ

**คำชี้แจง** กรุณาทำเครื่องหมาย ✓ ในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุด

9 หมายถึง เห็นด้วยมากที่สุด

1 หมายถึง ไม่เห็นด้วยมากที่สุด

| ประเด็นข้อคำถาม | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|
| 1. หากท่านเจ็บป่วยในครั้งหน้าท่านตั้งใจจะมาใช้บริการที่นี่อีก | | | | | | | | | |
| 2. ท่านเลือกที่นี่เป็นอันดับแรกในการรับบริการหากเจ็บป่วย | | | | | | | | | |
| 3. หากเลือกได้ท่านจะไม่มาใช้บริการที่นี่อีก | | | | | | | | | |
| 4. ท่านมีแต่สิ่งดีๆ ที่จะพูดกับคนอื่นเกี่ยวกับการให้บริการของที่นี่ | | | | | | | | | |
| 5. ท่านจะแนะนำคนอื่นให้มาใช้บริการที่นี่ | | | | | | | | | |
| 6. ท่านจะสนับสนุนให้เพื่อนและคนในครอบครัวมาใช้บริการที่นี่ | | | | | | | | | |
| 7. ท่านจะเปลี่ยนไปใช้บริการที่อื่นหากถูกเรียกเก็บค่าบริการเพิ่มเติม | | | | | | | | | |
| 8. ท่านจะยังคงเลือกใช้บริการที่นี่แม้ว่าจะเสียค่าบริการมากกว่าที่อื่น | | | | | | | | | |
| 9. ท่านจะบอกต่อให้ผู้อื่นทราบหากท่านไม่พอใจการให้บริการของที่นี่ | | | | | | | | | |
| 10. ท่านจะร้องเรียนหน่วยงานที่เกี่ยวข้องหากท่านไม่พอใจการให้บริการที่นี่ | | | | | | | | | |
| 11. ท่านจะเปลี่ยนไปใช้บริการที่อื่นหากไม่พอใจการให้บริการของที่นี่ | | | | | | | | | |

# APPENDIX C:
# RELIABILITY OF THE QUESTIONNARE

# Reliability

## Part 1 Perceived service quality

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 30 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .975 | 37 |

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| matQA1 | 288.33 | 1664.437 | .588 | .974 |
| matQA2 | 288.60 | 1645.766 | .660 | .974 |
| matQA3 | 288.33 | 1665.471 | .618 | .974 |
| matQA4 | 288.80 | 1608.303 | .805 | .974 |
| matQA5 | 288.67 | 1614.989 | .812 | .974 |
| matQA6 | 288.33 | 1645.471 | .741 | .974 |
| hmQA7 | 288.00 | 1644.345 | .782 | .974 |
| hmQA8 | 289.17 | 1642.489 | .433 | .977 |
| hmQA9 | 288.07 | 1664.133 | .742 | .974 |
| operQA10 | 287.90 | 1675.955 | .761 | .974 |
| operQA11 | 288.53 | 1643.154 | .665 | .974 |
| operQA12 | 287.77 | 1689.702 | .672 | .974 |
| atdQA13 | 287.57 | 1704.461 | .659 | .975 |
| atdQA14 | 288.10 | 1621.541 | .726 | .974 |
| atdQA15 | 287.50 | 1704.259 | .625 | .975 |
| atdQA16 | 287.80 | 1655.545 | .715 | .974 |
| atdQA17 | 287.67 | 1672.851 | .927 | .974 |
| atdQA18 | 287.87 | 1641.982 | .905 | .973 |
| bhvQA19 | 287.77 | 1658.116 | .792 | .974 |
| bhvQA20 | 288.23 | 1596.530 | .906 | .973 |
| bhvQA21 | 288.30 | 1600.010 | .885 | .973 |
| bhvQA22 | 288.23 | 1623.702 | .807 | .974 |
| bhvQA23 | 287.77 | 1685.495 | .760 | .974 |
| bhvQA24 | 288.17 | 1642.144 | .689 | .974 |
| exptQA25 | 288.00 | 1658.690 | .750 | .974 |
| exptQA26 | 288.37 | 1597.964 | .902 | .973 |
| exptQA27 | 287.73 | 1690.271 | .761 | .974 |
| exptQA28 | 288.07 | 1638.961 | .812 | .974 |
| exptQA29 | 287.67 | 1694.161 | .510 | .975 |
| exptQA30 | 288.37 | 1583.275 | .909 | .973 |
| hchgQA31 | 288.27 | 1661.099 | .542 | .975 |
| hchgQA32 | 288.10 | 1671.128 | .798 | .974 |
| hchgQA33 | 288.07 | 1654.961 | .896 | .974 |
| kchgQA34 | 288.07 | 1645.237 | .874 | .973 |
| kchgQA35 | 288.20 | 1659.545 | .546 | .975 |
| bchgQA36 | 288.47 | 1647.223 | .596 | .975 |
| bchgQA37 | 287.97 | 1641.137 | .804 | .974 |

## Part 2 Satisfaction emotions

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 30 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .812 | 7 |

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| happyS1 | 45.93 | 80.271 | .573 | .789 |
| hopeS2 | 46.00 | 80.138 | .601 | .786 |
| surpriseS3 | 46.17 | 82.557 | .525 | .796 |
| angry | 46.80 | 65.407 | .669 | .764 |
| depress | 46.67 | 65.195 | .711 | .755 |
| guilty | 46.63 | 59.551 | .738 | .750 |
| humiliate | 45.60 | 87.559 | .172 | .848 |

## Part 3 Loyalty

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 30 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 30 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .860 | 11 |

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| UintL1 | 74.93 | 217.375 | .538 | .853 |
| UintL2 | 75.10 | 211.334 | .522 | .852 |
| reUintL3 | 74.77 | 225.564 | .192 | .869 |
| pwmL4 | 74.97 | 203.344 | .707 | .842 |
| pwmL5 | 75.17 | 185.385 | .864 | .826 |
| pwmL6 | 75.20 | 184.648 | .859 | .825 |
| rePriceL7 | 75.63 | 197.344 | .533 | .850 |
| priceL8 | 76.03 | 187.689 | .616 | .844 |
| reComL9 | 75.43 | 194.392 | .591 | .845 |
| recomL10 | 76.13 | 195.844 | .415 | .865 |
| reComL11 | 76.63 | 189.689 | .508 | .855 |

# APPENDIX D:
# LOGISTIC REGRESSION ANALYSIS OUTPUT

# Logistic Regression

**Case Processing Summary**

| Unweighted Cases[a] | | N | Percent |
|---|---|---|---|
| Selected Cases | Included in Analysis | 350 | 100.0 |
| | Missing Cases | 0 | .0 |
| | Total | 350 | 100.0 |
| Unselected Cases | | 0 | .0 |
| Total | | 350 | 100.0 |

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

| Original Value | Internal Value |
|---|---|
| Disloyalty | 0 |
| Loyalty | 1 |

**Categorical Variables Codings**

| | | Frequency | Paramete (1) |
|---|---|---|---|
| Type of disease | non chronic | 214 | 1.000 |
| | chronic | 136 | .000 |
| PrimE | higher | 112 | 1.000 |
| | primary school | 238 | .000 |

## Block 0: Beginning Block

**Iteration History[a,b,c]**

| Iteration | | -2 Log likelihood | Coefficients Constant |
|---|---|---|---|
| Step 0 | 1 | 456.251 | -.571 |
| | 2 | 456.230 | -.588 |
| | 3 | 456.230 | -.588 |

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 456.230

c. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

**Classification Table[a,b]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Status | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 0 | Status | Disloyalty | 225 | 0 | 100.0 |
| | | Loyalty | 125 | 0 | .0 |
| | Overall Percentage | | | | 64.3 |

a. Constant is included in the model.

b. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 0 | Constant | -.588 | .112 | 27.763 | 1 | .000 | .556 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 0 | Variables | Material | 9.651 | 1 | .002 |
| | | Human | 10.301 | 1 | .001 |
| | | Operation | 12.758 | 1 | .000 |
| | | Attitude | 20.478 | 1 | .000 |
| | | Behavior | 17.365 | 1 | .000 |
| | | Expertise | 17.593 | 1 | .000 |
| | | Hchange | 13.998 | 1 | .000 |
| | | Kchange | 12.881 | 1 | .000 |
| | | Bchange | 7.800 | 1 | .005 |
| | | PositiveE | 15.565 | 1 | .000 |
| | | NegativeE | 18.853 | 1 | .000 |
| | | time | 1.582 | 1 | .209 |
| | | cost | .355 | 1 | .551 |
| | | age | 1.607 | 1 | .205 |
| | | PrimE(1) | .000 | 1 | 1.000 |
| | | income | .059 | 1 | .809 |
| | | chronic(1) | 3.721 | 1 | .054 |

a. Residual Chi-Squares are not computed because of redundancies.

## Block 1: Method = Forward Stepwise (Likelihood Ratio)

**Iteration History[a,b,c,d]**

| Iteration | | -2 Log likelihood | Coefficients | | | |
|---|---|---|---|---|---|---|
| | | | Constant | Attitude | NegativeE | Operation |
| Step 1 | 1 | 433.980 | -5.020 | .529 | | |
| | 2 | 431.291 | -7.129 | .770 | | |
| | 3 | 431.208 | -7.584 | .821 | | |
| | 4 | 431.208 | -7.601 | .823 | | |
| | 5 | 431.208 | -7.601 | .823 | | |
| Step 2 | 1 | 425.173 | -3.483 | .395 | -.175 | |
| | 2 | 421.597 | -5.202 | .603 | -.232 | |
| | 3 | 421.491 | -5.624 | .653 | -.240 | |
| | 4 | 421.491 | -5.642 | .655 | -.240 | |
| | 5 | 421.491 | -5.642 | .655 | -.240 | |
| Step 3 | 1 | 420.074 | -3.560 | .278 | -.187 | .149 |
| | 2 | 416.041 | -5.441 | .478 | -.244 | .179 |
| | 3 | 415.901 | -5.946 | .533 | -.253 | .183 |
| | 4 | 415.901 | -5.971 | .536 | -.253 | .184 |
| | 5 | 415.901 | -5.971 | .536 | -.253 | .184 |

a. Method: Forward Stepwise (Likelihood Ratio)

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 456.230

d. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Omnibus Tests of Model Coefficients**

| | | Chi-square | df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 25.021 | 1 | .000 |
| | Block | 25.021 | 1 | .000 |
| | Model | 25.021 | 1 | .000 |
| Step 2 | Step | 9.717 | 1 | .002 |
| | Block | 34.739 | 2 | .000 |
| | Model | 34.739 | 2 | .000 |
| Step 3 | Step | 5.590 | 1 | .018 |
| | Block | 40.328 | 3 | .000 |
| | Model | 40.328 | 3 | .000 |

**Model Summary**

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 431.208[a] | .069 | .095 |
| 2 | 421.491[a] | .094 | .130 |
| 3 | 415.901[a] | .109 | .149 |

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Hosmer and Lemeshow Test**

| Step | Chi-square | df | Sig. |
|---|---|---|---|
| 1 | 3.174 | 5 | .673 |
| 2 | 6.239 | 7 | .512 |
| 3 | 3.510 | 8 | .898 |

**Contingency Table for Hosmer and Lemeshow Test**

| | | Status = Disloyalty | | Status = Loyalty | | |
|---|---|---|---|---|---|---|
| | | Observed | Expected | Observed | Expected | Total |
| Step 1 | 1 | 33 | 32.794 | 3 | 3.206 | 36 |
| | 2 | 18 | 19.086 | 6 | 4.914 | 24 |
| | 3 | 23 | 24.019 | 10 | 8.981 | 33 |
| | 4 | 26 | 24.818 | 11 | 12.182 | 37 |
| | 5 | 33 | 30.681 | 17 | 19.319 | 50 |
| | 6 | 6 | 8.729 | 9 | 6.271 | 15 |
| | 7 | 86 | 84.872 | 69 | 70.128 | 155 |
| Step 2 | 1 | 33 | 32.205 | 2 | 2.795 | 35 |
| | 2 | 30 | 28.940 | 5 | 6.060 | 35 |
| | 3 | 24 | 26.278 | 11 | 8.722 | 35 |
| | 4 | 24 | 25.827 | 14 | 12.173 | 38 |
| | 5 | 21 | 22.317 | 15 | 13.683 | 36 |
| | 6 | 20 | 19.538 | 14 | 14.462 | 34 |
| | 7 | 20 | 18.995 | 15 | 16.005 | 35 |
| | 8 | 7 | 4.103 | 1 | 3.897 | 8 |
| | 9 | 46 | 46.798 | 48 | 47.202 | 94 |
| Step 3 | 1 | 34 | 32.533 | 1 | 2.467 | 35 |
| | 2 | 27 | 29.275 | 8 | 5.725 | 35 |
| | 3 | 26 | 26.291 | 9 | 8.709 | 35 |
| | 4 | 24 | 24.961 | 12 | 11.039 | 36 |
| | 5 | 22 | 21.969 | 12 | 12.031 | 34 |
| | 6 | 21 | 20.906 | 14 | 14.094 | 35 |
| | 7 | 19 | 19.562 | 16 | 15.438 | 35 |
| | 8 | 20 | 17.840 | 15 | 17.160 | 35 |
| | 9 | 17 | 15.013 | 15 | 16.987 | 32 |
| | 10 | 15 | 16.650 | 23 | 21.350 | 38 |

**Classification Table[a]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Status | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 1 | Status | Disloyalty | 225 | 0 | 100.0 |
| | | Loyalty | 125 | 0 | .0 |
| | Overall Percentage | | | | 64.3 |
| Step 2 | Status | Disloyalty | 179 | 46 | 79.6 |
| | | Loyalty | 77 | 48 | 38.4 |
| | Overall Percentage | | | | 64.9 |
| Step 3 | Status | Disloyalty | 187 | 38 | 83.1 |
| | | Loyalty | 82 | 43 | 34.4 |
| | Overall Percentage | | | | 65.7 |

a. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) | 95.0% C.I.for EXP(B) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower | Upper |
| Step 1[a] | Attitude | .823 | .196 | 17.692 | 1 | .000 | 2.278 | 1.552 | 3.343 |
| | Constant | -7.601 | 1.691 | 20.191 | 1 | .000 | .001 | | |
| Step 2[b] | Attitude | .655 | .199 | 10.786 | 1 | .001 | 1.924 | 1.302 | 2.844 |
| | NegativeE | -.240 | .082 | 8.560 | 1 | .003 | .786 | .669 | .924 |
| | Constant | -5.642 | 1.767 | 10.191 | 1 | .001 | .004 | | |
| Step 3[c] | Operation | .184 | .080 | 5.308 | 1 | .021 | 1.201 | 1.028 | 1.404 |
| | Attitude | .536 | .209 | 6.564 | 1 | .010 | 1.708 | 1.134 | 2.574 |
| | NegativeE | -.253 | .082 | 9.443 | 1 | .002 | .777 | .661 | .912 |
| | Constant | -5.971 | 1.809 | 10.891 | 1 | .001 | .003 | | |

a. Variable(s) entered on step 1: Attitude.

b. Variable(s) entered on step 2: NegativeE.

c. Variable(s) entered on step 3: Operation.

**Correlation Matrix**

| | | Constant | Attitude | Constant | Attitude | NegativeE | Operation |
|---|---|---|---|---|---|---|---|
| Step 1 | Constant | 1.000 | -.998 | | | | |
| | Attitude | -.998 | 1.000 | | | | |
| Step 2 | Constant | | | 1.000 | -.994 | -.326 | |
| | Attitude | | | -.994 | 1.000 | .241 | |
| | NegativeE | | | -.326 | .241 | 1.000 | |
| Step 3 | Constant | | | 1.000 | -.940 | -.306 | -.095 |
| | Operation | | | -.095 | -.232 | -.075 | 1.000 |
| | Attitude | | | -.940 | 1.000 | .242 | -.232 |
| | NegativeE | | | -.306 | .242 | 1.000 | -.075 |

**Model if Term Removed**

| Variable | | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|---|---|---|---|---|---|
| Step 1 | Attitude | -228.115 | 25.021 | 1 | .000 |
| Step 2 | Attitude | -217.460 | 13.430 | 1 | .000 |
| | NegativeE | -215.604 | 9.717 | 1 | .002 |
| Step 3 | Operation | -210.745 | 5.590 | 1 | .018 |
| | Attitude | -211.720 | 7.538 | 1 | .006 |
| | NegativeE | -213.329 | 10.756 | 1 | .001 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 1 | Variables | Material | 1.055 | 1 | .304 |
| | | Human | 2.808 | 1 | .094 |
| | | Operation | 4.427 | 1 | .035 |
| | | Behavior | .869 | 1 | .351 |
| | | Expertise | 1.689 | 1 | .194 |
| | | Hchange | 2.696 | 1 | .101 |
| | | Kchange | 1.274 | 1 | .259 |
| | | Bchange | .709 | 1 | .400 |
| | | PositiveE | 1.930 | 1 | .165 |
| | | NegativeE | 9.058 | 1 | .003 |
| | | time | .783 | 1 | .376 |
| | | cost | .665 | 1 | .415 |
| | | age | .085 | 1 | .770 |
| | | PrimE(1) | .075 | 1 | .784 |
| | | income | .006 | 1 | .937 |
| | | chronic(1) | .869 | 1 | .351 |
| Step 2 | Variables | Material | .702 | 1 | .402 |
| | | Human | 3.592 | 1 | .058 |
| | | Operation | 5.434 | 1 | .020 |
| | | Behavior | .390 | 1 | .532 |
| | | Expertise | 1.603 | 1 | .206 |
| | | Hchange | 1.676 | 1 | .195 |
| | | Kchange | 1.169 | 1 | .280 |
| | | Bchange | .930 | 1 | .335 |
| | | PositiveE | .881 | 1 | .348 |
| | | time | .895 | 1 | .344 |
| | | cost | .655 | 1 | .418 |
| | | age | .004 | 1 | .950 |
| | | PrimE(1) | .001 | 1 | .972 |
| | | income | .012 | 1 | .913 |
| | | chronic(1) | .949 | 1 | .330 |
| Step 3 | Variables | Material | .216 | 1 | .642 |
| | | Human | .321 | 1 | .571 |
| | | Behavior | .062 | 1 | .803 |
| | | Expertise | 1.280 | 1 | .258 |
| | | Hchange | .757 | 1 | .384 |
| | | Kchange | .639 | 1 | .424 |
| | | Bchange | .679 | 1 | .410 |
| | | PositiveE | .183 | 1 | .668 |
| | | time | 3.173 | 1 | .075 |
| | | cost | .663 | 1 | .415 |
| | | age | .065 | 1 | .799 |
| | | PrimE(1) | .150 | 1 | .699 |
| | | income | .099 | 1 | .753 |
| | | chronic(1) | 2.645 | 1 | .104 |

a. Residual Chi-Squares are not computed because of redundancies.

# Logistic Regression

**Case Processing Summary**

| Unweighted Cases[a] | | N | Percent |
|---|---|---|---|
| Selected Cases | Included in Analysis | 350 | 100.0 |
| | Missing Cases | 0 | .0 |
| | Total | 350 | 100.0 |
| Unselected Cases | | 0 | .0 |
| Total | | 350 | 100.0 |

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

| Original Value | Internal Value |
|---|---|
| Disloyalty | 0 |
| loyalty | 1 |

**Categorical Variables Codings**

| | | Frequency | Paramete (1) |
|---|---|---|---|
| Type of disease | non chronic | 214 | 1.000 |
| | chronic | 136 | .000 |
| PrimE | higher | 112 | 1.000 |
| | primary school | 238 | .000 |

# Block 0: Beginning Block

**Iteration History[a,b,c]**

| Iteration | | -2 Log likelihood | Coefficients Constant |
|---|---|---|---|
| Step 0 | 1 | 201.629 | 1.714 |
| | 2 | 181.353 | 2.342 |
| | 3 | 180.132 | 2.545 |
| | 4 | 180.123 | 2.565 |
| | 5 | 180.123 | 2.565 |

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 180.123

c. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Classification Table[a,b]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Utilization | | Percentage Correct |
| | | | Disloyalty | loyalty | |
| Step 0 | Utilization | Disloyalty | 0 | 25 | .0 |
| | | loyalty | 0 | 325 | 100.0 |
| | Overall Percentage | | | | 92.9 |

a. Constant is included in the model.

b. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 0 | Constant | 2.565 | .208 | 152.726 | 1 | .000 | 13.000 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 0 | Variables | Material | 38.545 | 1 | .000 |
| | | Human | 35.986 | 1 | .000 |
| | | Operation | 29.752 | 1 | .000 |
| | | Attitude | 64.957 | 1 | .000 |
| | | Behavior | 67.961 | 1 | .000 |
| | | Expertise | 54.472 | 1 | .000 |
| | | Hchange | 40.534 | 1 | .000 |
| | | Kchange | 45.452 | 1 | .000 |
| | | Bchange | 24.537 | 1 | .000 |
| | | PositiveE | 89.579 | 1 | .000 |
| | | NegativeE | 19.106 | 1 | .000 |
| | | time | .119 | 1 | .731 |
| | | cost | .002 | 1 | .968 |
| | | age | 1.785 | 1 | .181 |
| | | PrimE(1) | .198 | 1 | .656 |
| | | income | .094 | 1 | .759 |
| | | chronic(1) | 1.336 | 1 | .248 |

a. Residual Chi-Squares are not computed because of redundancies.

## Block 1: Method = Forward Stepwise (Likelihood Ratio)

**Iteration History[a,b,c,d]**

| Iteration | | -2 Log likelihood | Coefficients | | |
|---|---|---|---|---|---|
| | | | Constant | PositiveE | Human |
| Step 1 | 1 | 169.069 | -1.369 | .392 | |
| | 2 | 128.367 | -2.951 | .700 | |
| | 3 | 119.713 | -4.225 | .936 | |
| | 4 | 118.777 | -4.841 | 1.049 | |
| | 5 | 118.758 | -4.946 | 1.068 | |
| | 6 | 118.757 | -4.948 | 1.068 | |
| | 7 | 118.757 | -4.948 | 1.068 | |
| Step 2 | 1 | 167.533 | -1.513 | .351 | .067 |
| | 2 | 125.416 | -3.262 | .609 | .147 |
| | 3 | 115.726 | -4.764 | .801 | .233 |
| | 4 | 114.483 | -5.572 | .898 | .284 |
| | 5 | 114.448 | -5.738 | .917 | .295 |
| | 6 | 114.448 | -5.743 | .918 | .295 |
| | 7 | 114.448 | -5.743 | .918 | .295 |

a. Method: Forward Stepwise (Likelihood Ratio)

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 180.123

d. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

**Omnibus Tests of Model Coefficients**

| | | Chi-square | df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 61.366 | 1 | .000 |
| | Block | 61.366 | 1 | .000 |
| | Model | 61.366 | 1 | .000 |
| Step 2 | Step | 4.310 | 1 | .038 |
| | Block | 65.675 | 2 | .000 |
| | Model | 65.675 | 2 | .000 |

**Model Summary**

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 118.757[a] | .161 | .400 |
| 2 | 114.448[a] | .171 | .425 |

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

**Hosmer and Lemeshow Test**

| Step | Chi-square | df | Sig. |
|---|---|---|---|
| 1 | 8.126 | 6 | .229 |
| 2 | 6.265 | 8 | .618 |

**Contingency Table for Hosmer and Lemeshow Test**

| | | Utilization = Disloyalty | | Utilization = loyalty | | |
|---|---|---|---|---|---|---|
| | | Observed | Expected | Observed | Expected | Total |
| Step 1 | 1 | 17 | 16.232 | 25 | 25.768 | 42 |
| | 2 | 2 | 3.550 | 36 | 34.450 | 38 |
| | 3 | 1 | 1.591 | 36 | 35.409 | 37 |
| | 4 | 2 | 1.334 | 48 | 48.666 | 50 |
| | 5 | 3 | .870 | 43 | 45.130 | 46 |
| | 6 | 0 | .476 | 36 | 35.524 | 36 |
| | 7 | 0 | .013 | 1 | .987 | 1 |
| | 8 | 0 | .933 | 100 | 99.067 | 100 |
| Step 2 | 1 | 17 | 15.383 | 18 | 19.617 | 35 |
| | 2 | 2 | 4.147 | 34 | 31.853 | 36 |
| | 3 | 2 | 1.850 | 33 | 33.150 | 35 |
| | 4 | 1 | 1.125 | 35 | 34.875 | 36 |
| | 5 | 1 | .805 | 37 | 37.195 | 38 |
| | 6 | 2 | .582 | 35 | 36.418 | 37 |
| | 7 | 0 | .382 | 31 | 30.618 | 31 |
| | 8 | 0 | .343 | 38 | 37.657 | 38 |
| | 9 | 0 | .137 | 20 | 19.863 | 20 |
| | 10 | 0 | .248 | 44 | 43.752 | 44 |

**Classification Table[a]**

| | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Utilization | | Percentage |
| | Observed | | Disloyalty | loyalty | Correct |
| Step 1 | Utilization | Disloyalty | 7 | 18 | 28.0 |
| | | loyalty | 2 | 323 | 99.4 |
| | Overall Percentage | | | | 94.3 |
| Step 2 | Utilization | Disloyalty | 7 | 18 | 28.0 |
| | | loyalty | 3 | 322 | 99.1 |
| | Overall Percentage | | | | 94.0 |

a. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) | 95.0% C.I.for EXP(B) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower | Upper |
| Step 1[a] | PositiveE | 1.068 | .171 | 38.991 | 1 | .000 | 2.910 | 2.081 | 4.069 |
| | Constant | -4.948 | 1.131 | 19.159 | 1 | .000 | .007 | | |
| Step 2[b] | Human | .295 | .141 | 4.381 | 1 | .036 | 1.343 | 1.019 | 1.771 |
| | PositiveE | .918 | .184 | 24.999 | 1 | .000 | 2.504 | 1.747 | 3.589 |
| | Constant | -5.743 | 1.259 | 20.796 | 1 | .000 | .003 | | |

a. Variable(s) entered on step 1: PositiveE.

b. Variable(s) entered on step 2: Human.

**Correlation Matrix**

| | | Constant | PositiveE | Human |
|---|---|---|---|---|
| Step 1 | Constant | 1.000 | -.975 | |
| | PositiveE | -.975 | 1.000 | |
| Step 2 | Constant | 1.000 | -.764 | -.367 |
| | Human | -.367 | -.287 | 1.000 |
| | PositiveE | -.764 | 1.000 | -.287 |

**Model if Term Removed**

| Variable | | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|---|---|---|---|---|---|
| Step 1 | PositiveE | -90.062 | 61.366 | 1 | .000 |
| Step 2 | Human | -59.379 | 4.310 | 1 | .038 |
| | PositiveE | -74.498 | 34.549 | 1 | .000 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 1 | Variables | Material | 3.476 | 1 | .062 |
| | | Human | 4.620 | 1 | .032 |
| | | Operation | 4.312 | 1 | .038 |
| | | Attitude | 2.833 | 1 | .092 |
| | | Behavior | 4.182 | 1 | .041 |
| | | Expertise | 2.183 | 1 | .140 |
| | | Hchange | 2.381 | 1 | .123 |
| | | Kchange | 1.371 | 1 | .242 |
| | | Bchange | .250 | 1 | .617 |
| | | NegativeE | 1.965 | 1 | .161 |
| | | time | .239 | 1 | .625 |
| | | cost | .002 | 1 | .965 |
| | | age | .270 | 1 | .604 |
| | | PrimE(1) | .006 | 1 | .937 |
| | | income | .611 | 1 | .434 |
| | | chronic(1) | .564 | 1 | .453 |
| Step 2 | Variables | Material | 1.376 | 1 | .241 |
| | | Operation | 1.227 | 1 | .268 |
| | | Attitude | 1.753 | 1 | .186 |
| | | Behavior | 2.357 | 1 | .125 |
| | | Expertise | 1.158 | 1 | .282 |
| | | Hchange | 1.911 | 1 | .167 |
| | | Kchange | .472 | 1 | .492 |
| | | Bchange | .074 | 1 | .786 |
| | | NegativeE | 2.873 | 1 | .090 |
| | | time | .642 | 1 | .423 |
| | | cost | .049 | 1 | .824 |
| | | age | .439 | 1 | .507 |
| | | PrimE(1) | .016 | 1 | .900 |
| | | income | .487 | 1 | .485 |
| | | chronic(1) | .801 | 1 | .371 |

a. Residual Chi-Squares are not computed because of redundancies.

# Logistic Regression

**Case Processing Summary**

| Unweighted Cases[a] | | N | Percent |
|---|---|---|---|
| Selected Cases | Included in Analysis | 350 | 100.0 |
| | Missing Cases | 0 | .0 |
| | Total | 350 | 100.0 |
| Unselected Cases | | 0 | .0 |
| Total | | 350 | 100.0 |

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

| Original Value | Internal Value |
|---|---|
| Disloyalty | 0 |
| Loyalty | 1 |

**Categorical Variables Codings**

| | | Frequency | Paramete (1) |
|---|---|---|---|
| Type of disease | non chronic | 214 | 1.000 |
| | chronic | 136 | .000 |
| PrimE | higher | 112 | 1.000 |
| | primary school | 238 | .000 |

# Block 0: Beginning Block

**Iteration History[a,b,c]**

| Iteration | | -2 Log likelihood | Coefficients Constant |
|---|---|---|---|
| Step 0 | 1 | 205.690 | 1.703 |
| | 2 | 186.310 | 2.315 |
| | 3 | 185.217 | 2.506 |
| | 4 | 185.210 | 2.523 |
| | 5 | 185.210 | 2.523 |

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 185.210

c. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

**Classification Table[a,b]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Word | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 0 | Word | Disloyalty | 0 | 26 | .0 |
| | | Loyalty | 0 | 324 | 100.0 |
| | Overall Percentage | | | | 92.6 |

a. Constant is included in the model.

b. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 0 | Constant | 2.523 | .204 | 153.166 | 1 | .000 | 12.462 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 0 | Variables | Material | 22.011 | 1 | .000 |
| | | Human | 20.613 | 1 | .000 |
| | | Operation | 23.452 | 1 | .000 |
| | | Attitude | 54.597 | 1 | .000 |
| | | Behavior | 57.066 | 1 | .000 |
| | | Expertise | 38.213 | 1 | .000 |
| | | Hchange | 24.255 | 1 | .000 |
| | | Kchange | 23.933 | 1 | .000 |
| | | Bchange | 10.180 | 1 | .001 |
| | | PositiveE | 52.961 | 1 | .000 |
| | | NegativeE | 3.981 | 1 | .046 |
| | | time | 8.686 | 1 | .003 |
| | | cost | .516 | 1 | .472 |
| | | age | .027 | 1 | .869 |
| | | PrimE(1) | .539 | 1 | .463 |
| | | income | .989 | 1 | .320 |
| | | chronic(1) | .629 | 1 | .428 |

a. Residual Chi-Squares are not computed because of redundancies.

## Block 1: Method = Forward Stepwise (Likelihood Ratio)

**Iteration History[a,b,c,d]**

| Iteration | | -2 Log likelihood | Coefficients | | | |
|---|---|---|---|---|---|---|
| | | | Constant | Behavior | PositiveE | time |
| Step 1 | 1 | 184.108 | -1.457 | .383 | | |
| | 2 | 151.672 | -3.100 | .675 | | |
| | 3 | 146.854 | -4.147 | .853 | | |
| | 4 | 146.615 | -4.453 | .904 | | |
| | 5 | 146.614 | -4.474 | .908 | | |
| | 6 | 146.614 | -4.474 | .908 | | |
| Step 2 | 1 | 180.610 | -1.684 | .247 | .171 | |
| | 2 | 146.011 | -3.463 | .421 | .315 | |
| | 3 | 140.401 | -4.614 | .531 | .404 | |
| | 4 | 140.073 | -4.979 | .567 | .432 | |
| | 5 | 140.071 | -5.008 | .570 | .434 | |
| | 6 | 140.071 | -5.008 | .570 | .434 | |
| Step 3 | 1 | 177.332 | -1.504 | .248 | .171 | -.003 |
| | 2 | 141.129 | -2.985 | .417 | .307 | -.005 |
| | 3 | 135.018 | -3.929 | .523 | .392 | -.006 |
| | 4 | 134.633 | -4.246 | .560 | .419 | -.007 |
| | 5 | 134.631 | -4.275 | .564 | .422 | -.007 |
| | 6 | 134.631 | -4.275 | .564 | .422 | -.007 |

a. Method: Forward Stepwise (Likelihood Ratio)

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 185.210

d. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

**Omnibus Tests of Model Coefficients**

| | | Chi-square | df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 38.596 | 1 | .000 |
| | Block | 38.596 | 1 | .000 |
| | Model | 38.596 | 1 | .000 |
| Step 2 | Step | 6.543 | 1 | .011 |
| | Block | 45.139 | 2 | .000 |
| | Model | 45.139 | 2 | .000 |
| Step 3 | Step | 5.440 | 1 | .020 |
| | Block | 50.580 | 3 | .000 |
| | Model | 50.580 | 3 | .000 |

**Model Summary**

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 146.614[a] | .104 | .254 |
| 2 | 140.071[a] | .121 | .294 |
| 3 | 134.631[a] | .135 | .327 |

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

**Hosmer and Lemeshow Test**

| Step | Chi-square | df | Sig. |
|---|---|---|---|
| 1 | 6.118 | 5 | .295 |
| 2 | 10.128 | 7 | .181 |
| 3 | 6.278 | 8 | .616 |

**Contingency Table for Hosmer and Lemeshow Test**

| | | Word = Disloyalty | | Word = Loyalty | | |
|---|---|---|---|---|---|---|
| | | Observed | Expected | Observed | Expected | Total |
| Step 1 | 1 | 14 | 12.502 | 21 | 22.498 | 35 |
| | 2 | 2 | 4.198 | 33 | 30.802 | 35 |
| | 3 | 1 | 2.250 | 35 | 33.750 | 36 |
| | 4 | 1 | 1.388 | 30 | 29.612 | 31 |
| | 5 | 1 | 1.707 | 50 | 49.293 | 51 |
| | 6 | 0 | .281 | 10 | 9.719 | 10 |
| | 7 | 7 | 3.674 | 145 | 148.326 | 152 |
| Step 2 | 1 | 16 | 13.494 | 19 | 21.506 | 35 |
| | 2 | 1 | 3.932 | 34 | 31.068 | 35 |
| | 3 | 0 | 2.080 | 33 | 30.920 | 33 |
| | 4 | 2 | 1.589 | 34 | 34.411 | 36 |
| | 5 | 1 | 1.152 | 34 | 33.848 | 35 |
| | 6 | 2 | .936 | 32 | 33.064 | 34 |
| | 7 | 0 | .852 | 35 | 34.148 | 35 |
| | 8 | 1 | .666 | 32 | 32.334 | 33 |
| | 9 | 3 | 1.298 | 71 | 72.702 | 74 |
| Step 3 | 1 | 14 | 14.119 | 21 | 20.881 | 35 |
| | 2 | 4 | 3.548 | 31 | 31.452 | 35 |
| | 3 | 2 | 2.015 | 33 | 32.985 | 35 |
| | 4 | 0 | 1.561 | 35 | 33.439 | 35 |
| | 5 | 2 | 1.300 | 34 | 34.700 | 36 |
| | 6 | 2 | 1.042 | 33 | 33.958 | 35 |
| | 7 | 2 | .834 | 33 | 34.166 | 35 |
| | 8 | 0 | .687 | 36 | 35.313 | 36 |
| | 9 | 0 | .514 | 35 | 34.486 | 35 |
| | 10 | 0 | .381 | 33 | 32.619 | 33 |

**Classification Table[a]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Word | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 1 | Word | Disloyalty | 2 | 24 | 7.7 |
| | | Loyalty | 3 | 321 | 99.1 |
| | Overall Percentage | | | | 92.3 |
| Step 2 | Word | Disloyalty | 4 | 22 | 15.4 |
| | | Loyalty | 2 | 322 | 99.4 |
| | Overall Percentage | | | | 93.1 |
| Step 3 | Word | Disloyalty | 6 | 20 | 23.1 |
| | | Loyalty | 4 | 320 | 98.8 |
| | Overall Percentage | | | | 93.1 |

a. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) | 95.0% C.I.for EXP(B) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower | Upper |
| Step 1[a] | Behavior | .908 | .158 | 33.225 | 1 | .000 | 2.479 | 1.821 | 3.376 |
| | Constant | -4.474 | 1.162 | 14.817 | 1 | .000 | .011 | | |
| Step 2[b] | Behavior | .570 | .199 | 8.227 | 1 | .004 | 1.768 | 1.198 | 2.610 |
| | PositiveE | .434 | .164 | 6.988 | 1 | .008 | 1.543 | 1.119 | 2.129 |
| | Constant | -5.008 | 1.210 | 17.125 | 1 | .000 | .007 | | |
| Step 3[c] | Behavior | .564 | .204 | 7.644 | 1 | .006 | 1.757 | 1.178 | 2.621 |
| | PositiveE | .422 | .166 | 6.432 | 1 | .011 | 1.525 | 1.101 | 2.112 |
| | time | -.007 | .003 | 5.466 | 1 | .019 | .993 | .987 | .999 |
| | Constant | -4.275 | 1.274 | 11.255 | 1 | .001 | .014 | | |

a. Variable(s) entered on step 1: Behavior.

b. Variable(s) entered on step 2: PositiveE.

c. Variable(s) entered on step 3: time.

**Correlation Matrix**

| | | Constant | Behavior | Constant | Behavior | PositiveE | time |
|---|---|---|---|---|---|---|---|
| Step 1 | Constant | 1.000 | -.981 | | | | |
| | Behavior | -.981 | 1.000 | | | | |
| Step 2 | Constant | | | 1.000 | -.654 | -.201 | |
| | Behavior | | | -.654 | 1.000 | -.593 | |
| | PositiveE | | | -.201 | -.593 | 1.000 | |
| Step 3 | Constant | | | 1.000 | -.645 | -.186 | -.175 |
| | Behavior | | | -.645 | 1.000 | -.593 | -.038 |
| | PositiveE | | | -.186 | -.593 | 1.000 | -.010 |
| | time | | | -.175 | -.038 | -.010 | 1.000 |

**Model if Term Removed**

| Variable | | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|---|---|---|---|---|---|
| Step 1 | Behavior | -92.605 | 38.596 | 1 | .000 |
| Step 2 | Behavior | -74.298 | 8.524 | 1 | .004 |
| | PositiveE | -73.307 | 6.543 | 1 | .011 |
| Step 3 | Behavior | -71.326 | 8.021 | 1 | .005 |
| | PositiveE | -70.264 | 5.897 | 1 | .015 |
| | time | -70.036 | 5.440 | 1 | .020 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 1 | Variables | Material | 2.290 | 1 | .130 |
| | | Human | 2.360 | 1 | .124 |
| | | Operation | 4.566 | 1 | .033 |
| | | Attitude | 1.870 | 1 | .171 |
| | | Expertise | .055 | 1 | .814 |
| | | Hchange | .273 | 1 | .601 |
| | | Kchange | .072 | 1 | .788 |
| | | Bchange | .284 | 1 | .594 |
| | | PositiveE | 7.451 | 1 | .006 |
| | | NegativeE | .764 | 1 | .382 |
| | | time | 6.436 | 1 | .011 |
| | | cost | .693 | 1 | .405 |
| | | age | 1.945 | 1 | .163 |
| | | PrimE(1) | .037 | 1 | .847 |
| | | income | 1.385 | 1 | .239 |
| | | chronic(1) | 3.428 | 1 | .064 |
| Step 2 | Variables | Material | .384 | 1 | .536 |
| | | Human | .515 | 1 | .473 |
| | | Operation | 2.340 | 1 | .126 |
| | | Attitude | .428 | 1 | .513 |
| | | Expertise | .213 | 1 | .644 |
| | | Hchange | .003 | 1 | .958 |
| | | Kchange | .661 | 1 | .416 |
| | | Bchange | 1.524 | 1 | .217 |
| | | NegativeE | 2.020 | 1 | .155 |
| | | time | 5.745 | 1 | .017 |
| | | cost | .567 | 1 | .451 |
| | | age | 2.260 | 1 | .133 |
| | | PrimE(1) | .022 | 1 | .883 |
| | | income | 1.127 | 1 | .288 |
| | | chronic(1) | 3.063 | 1 | .080 |
| Step 3 | Variables | Material | .456 | 1 | .500 |
| | | Human | .065 | 1 | .798 |
| | | Operation | .750 | 1 | .386 |
| | | Attitude | .962 | 1 | .327 |
| | | Expertise | .005 | 1 | .943 |
| | | Hchange | .123 | 1 | .726 |
| | | Kchange | .307 | 1 | .580 |
| | | Bchange | .937 | 1 | .333 |
| | | NegativeE | 2.520 | 1 | .112 |
| | | cost | .138 | 1 | .711 |
| | | age | .494 | 1 | .482 |
| | | PrimE(1) | .767 | 1 | .381 |
| | | income | .314 | 1 | .575 |
| | | chronic(1) | .084 | 1 | .772 |

a. Residual Chi-Squares are not computed because of redundancies.

# Logistic Regression

**Case Processing Summary**

| Unweighted Cases[a] | | N | Percent |
|---|---|---|---|
| Selected Cases | Included in Analysis | 350 | 100.0 |
| | Missing Cases | 0 | .0 |
| | Total | 350 | 100.0 |
| Unselected Cases | | 0 | .0 |
| Total | | 350 | 100.0 |

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

| Original Value | Internal Value |
|---|---|
| Disloyalty | 0 |
| Loyalty | 1 |

**Categorical Variables Codings**

| | | Frequency | Paramete (1) |
|---|---|---|---|
| Type of disease | non chronic | 214 | 1.000 |
| | chronic | 136 | .000 |
| PrimE | higher | 112 | 1.000 |
| | primary school | 238 | .000 |

# Block 0: Beginning Block

**Iteration History[a,b,c]**

| Iteration | | -2 Log likelihood | Coefficients Constant |
|---|---|---|---|
| Step 0 | 1 | 483.819 | .126 |
| | 2 | 483.819 | .126 |

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 483.819

c. Estimation terminated at iteration number 2 because parameter estimates changed by less than .001.

**Classification Table[a,b]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Price | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 0 | Price | Disloyalty | 0 | 164 | .0 |
| | | Loyalty | 0 | 186 | 100.0 |
| | Overall Percentage | | | | 53.1 |

a. Constant is included in the model.

b. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 0 | Constant | .126 | .107 | 1.381 | 1 | .240 | 1.134 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 0 | Variables | Material | 10.278 | 1 | .001 |
| | | Human | 11.455 | 1 | .001 |
| | | Operation | 22.794 | 1 | .000 |
| | | Attitude | 25.345 | 1 | .000 |
| | | Behavior | 23.968 | 1 | .000 |
| | | Expertise | 18.132 | 1 | .000 |
| | | Hchange | 13.148 | 1 | .000 |
| | | Kchange | 15.025 | 1 | .000 |
| | | Bchange | 6.070 | 1 | .014 |
| | | PositiveE | 16.867 | 1 | .000 |
| | | NegativeE | 19.086 | 1 | .000 |
| | | time | .037 | 1 | .847 |
| | | cost | .063 | 1 | .802 |
| | | age | .014 | 1 | .906 |
| | | PrimE(1) | .122 | 1 | .727 |
| | | income | .018 | 1 | .895 |
| | | chronic(1) | .670 | 1 | .413 |

a. Residual Chi-Squares are not computed because of redundancies.

## Block 1: Method = Forward Stepwise (Likelihood Ratio)

**Iteration History[a,b,c,d]**

| Iteration | | -2 Log likelihood | Coefficients | | | |
|---|---|---|---|---|---|---|
| | | | Constant | Attitude | Operation | NegativeE |
| Step 1 | 1 | 457.151 | -5.029 | .613 | | |
| | 2 | 456.684 | -5.857 | .709 | | |
| | 3 | 456.683 | -5.904 | .715 | | |
| | 4 | 456.683 | -5.904 | .715 | | |
| Step 2 | 1 | 447.084 | -5.282 | .457 | .213 | |
| | 2 | 446.351 | -6.318 | .561 | .233 | |
| | 3 | 446.348 | -6.395 | .569 | .234 | |
| | 4 | 446.348 | -6.395 | .569 | .234 | |
| Step 3 | 1 | 437.663 | -3.644 | .301 | .230 | -.189 |
| | 2 | 436.642 | -4.625 | .400 | .255 | -.212 |
| | 3 | 436.636 | -4.713 | .409 | .257 | -.213 |
| | 4 | 436.636 | -4.713 | .409 | .257 | -.213 |

a. Method: Forward Stepwise (Likelihood Ratio)

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 483.819

d. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

**Omnibus Tests of Model Coefficients**

| | | Chi-square | df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 27.136 | 1 | .000 |
| | Block | 27.136 | 1 | .000 |
| | Model | 27.136 | 1 | .000 |
| Step 2 | Step | 10.335 | 1 | .001 |
| | Block | 37.472 | 2 | .000 |
| | Model | 37.472 | 2 | .000 |
| Step 3 | Step | 9.711 | 1 | .002 |
| | Block | 47.183 | 3 | .000 |
| | Model | 47.183 | 3 | .000 |

**Model Summary**

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 456.683[a] | .075 | .100 |
| 2 | 446.348[a] | .102 | .136 |
| 3 | 436.636[a] | .126 | .168 |

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

**Hosmer and Lemeshow Test**

| Step | Chi-square | df | Sig. |
|---|---|---|---|
| 1 | 5.307 | 5 | .380 |
| 2 | 5.225 | 8 | .733 |
| 3 | 3.204 | 8 | .921 |

**Contingency Table for Hosmer and Lemeshow Test**

| | | Price = Disloyalty | | Price = Loyalty | | |
|---|---|---|---|---|---|---|
| | | Observed | Expected | Observed | Expected | Total |
| Step 1 | 1 | 30 | 28.640 | 6 | 7.360 | 36 |
| | 2 | 14 | 14.869 | 10 | 9.131 | 24 |
| | 3 | 13 | 17.823 | 20 | 15.177 | 33 |
| | 4 | 20 | 17.802 | 17 | 19.198 | 37 |
| | 5 | 23 | 21.372 | 27 | 28.628 | 50 |
| | 6 | 4 | 5.996 | 11 | 9.004 | 15 |
| | 7 | 60 | 57.498 | 95 | 97.502 | 155 |
| Step 2 | 1 | 29 | 29.176 | 7 | 6.824 | 36 |
| | 2 | 22 | 23.831 | 15 | 13.169 | 37 |
| | 3 | 19 | 19.210 | 16 | 15.790 | 35 |
| | 4 | 17 | 16.793 | 18 | 18.207 | 35 |
| | 5 | 14 | 15.604 | 21 | 19.396 | 35 |
| | 6 | 19 | 13.507 | 14 | 19.493 | 33 |
| | 7 | 14 | 13.744 | 23 | 23.256 | 37 |
| | 8 | 9 | 9.808 | 20 | 19.192 | 29 |
| | 9 | 5 | 4.153 | 8 | 8.847 | 13 |
| | 10 | 16 | 18.174 | 44 | 41.826 | 60 |
| Step 3 | 1 | 28 | 29.302 | 7 | 5.698 | 35 |
| | 2 | 22 | 23.608 | 13 | 11.392 | 35 |
| | 3 | 22 | 20.225 | 13 | 14.775 | 35 |
| | 4 | 20 | 17.785 | 15 | 17.215 | 35 |
| | 5 | 16 | 15.937 | 19 | 19.063 | 35 |
| | 6 | 12 | 14.741 | 24 | 21.259 | 36 |
| | 7 | 15 | 12.821 | 20 | 22.179 | 35 |
| | 8 | 12 | 11.466 | 24 | 24.534 | 36 |
| | 9 | 8 | 8.385 | 22 | 21.615 | 30 |
| | 10 | 9 | 9.730 | 29 | 28.270 | 38 |

**Classification Table[a]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Price | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 1 | Price | Disloyalty | 57 | 107 | 34.8 |
| | | Loyalty | 36 | 150 | 80.6 |
| | Overall Percentage | | | | 59.1 |
| Step 2 | Price | Disloyalty | 72 | 92 | 43.9 |
| | | Loyalty | 39 | 147 | 79.0 |
| | Overall Percentage | | | | 62.6 |
| Step 3 | Price | Disloyalty | 84 | 80 | 51.2 |
| | | Loyalty | 42 | 144 | 77.4 |
| | Overall Percentage | | | | 65.1 |

a. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) | 95.0% C.I.for EXP(B) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower | Upper |
| Step 1[a] | Attitude | .715 | .154 | 21.674 | 1 | .000 | 2.044 | 1.513 | 2.761 |
| | Constant | -5.904 | 1.309 | 20.352 | 1 | .000 | .003 | | |
| Step 2[b] | Operation | .234 | .074 | 9.943 | 1 | .002 | 1.264 | 1.093 | 1.462 |
| | Attitude | .569 | .163 | 12.203 | 1 | .000 | 1.766 | 1.284 | 2.431 |
| | Constant | -6.395 | 1.358 | 22.194 | 1 | .000 | .002 | | |
| Step 3[c] | Operation | .257 | .076 | 11.487 | 1 | .001 | 1.293 | 1.114 | 1.499 |
| | Attitude | .409 | .171 | 5.743 | 1 | .017 | 1.506 | 1.077 | 2.104 |
| | NegativeE | -.213 | .070 | 9.300 | 1 | .002 | .808 | .705 | .927 |
| | Constant | -4.713 | 1.452 | 10.535 | 1 | .001 | .009 | | |

a. Variable(s) entered on step 1: Attitude.

b. Variable(s) entered on step 2: Operation.

c. Variable(s) entered on step 3: NegativeE.

**Correlation Matrix**

| | | Constant | Attitude | Constant | Operation | Attitude | NegativeE |
|---|---|---|---|---|---|---|---|
| Step 1 | Constant | 1.000 | -.996 | | | | |
| | Attitude | -.996 | 1.000 | | | | |
| Step 2 | Constant | | | 1.000 | -.145 | -.917 | |
| | Operation | | | -.145 | 1.000 | -.254 | |
| | Attitude | | | -.917 | -.254 | 1.000 | |
| Step 3 | Constant | | | 1.000 | -.093 | -.922 | -.339 |
| | Operation | | | -.093 | 1.000 | -.279 | -.114 |
| | Attitude | | | -.922 | -.279 | 1.000 | .273 |
| | NegativeE | | | -.339 | -.114 | .273 | 1.000 |

**Model if Term Removed**

| Variable | | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|---|---|---|---|---|---|
| Step 1 | Attitude | -241.910 | 27.136 | 1 | .000 |
| Step 2 | Operation | -228.341 | 10.335 | 1 | .001 |
| | Attitude | -230.190 | 14.032 | 1 | .000 |
| Step 3 | Operation | -224.327 | 12.018 | 1 | .001 |
| | Attitude | -221.401 | 6.165 | 1 | .013 |
| | NegativeE | -223.174 | 9.711 | 1 | .002 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 1 | Variables | Material | .705 | 1 | .401 |
| | | Human | 2.672 | 1 | .102 |
| | | Operation | 10.351 | 1 | .001 |
| | | Behavior | 2.038 | 1 | .153 |
| | | Expertise | .594 | 1 | .441 |
| | | Hchange | 1.345 | 1 | .246 |
| | | Kchange | 1.186 | 1 | .276 |
| | | Bchange | .037 | 1 | .848 |
| | | PositiveE | 1.193 | 1 | .275 |
| | | NegativeE | 8.010 | 1 | .005 |
| | | time | .031 | 1 | .859 |
| | | cost | .178 | 1 | .673 |
| | | age | .820 | 1 | .365 |
| | | PrimE(1) | .003 | 1 | .958 |
| | | income | .199 | 1 | .656 |
| | | chronic(1) | .065 | 1 | .800 |
| Step 2 | Variables | Material | .077 | 1 | .782 |
| | | Human | .162 | 1 | .687 |
| | | Behavior | .764 | 1 | .382 |
| | | Expertise | .261 | 1 | .610 |
| | | Hchange | .345 | 1 | .557 |
| | | Kchange | .406 | 1 | .524 |
| | | Bchange | .005 | 1 | .942 |
| | | PositiveE | .150 | 1 | .698 |
| | | NegativeE | 9.749 | 1 | .002 |
| | | time | .799 | 1 | .371 |
| | | cost | .239 | 1 | .625 |
| | | age | .245 | 1 | .621 |
| | | PrimE(1) | .279 | 1 | .597 |
| | | income | .471 | 1 | .492 |
| | | chronic(1) | .334 | 1 | .563 |
| Step 3 | Variables | Material | .000 | 1 | .989 |
| | | Human | .133 | 1 | .716 |
| | | Behavior | .265 | 1 | .607 |
| | | Expertise | .194 | 1 | .660 |
| | | Hchange | .033 | 1 | .855 |
| | | Kchange | .363 | 1 | .547 |
| | | Bchange | .002 | 1 | .965 |
| | | PositiveE | .016 | 1 | .898 |
| | | time | 1.030 | 1 | .310 |
| | | cost | .246 | 1 | .620 |
| | | age | .755 | 1 | .385 |
| | | PrimE(1) | .701 | 1 | .402 |
| | | income | .559 | 1 | .455 |
| | | chronic(1) | .399 | 1 | .527 |

a. Residual Chi-Squares are not computed because of redundancies.

# Logistic Regression

**Case Processing Summary**

| Unweighted Cases[a] | | N | Percent |
|---|---|---|---|
| Selected Cases | Included in Analysis | 350 | 100.0 |
| | Missing Cases | 0 | .0 |
| | Total | 350 | 100.0 |
| Unselected Cases | | 0 | .0 |
| Total | | 350 | 100.0 |

a. If weight is in effect, see classification table for the total number of cases.

**Dependent Variable Encoding**

| Original Value | Internal Value |
|---|---|
| Disloyalty | 0 |
| Loyalty | 1 |

**Categorical Variables Codings**

| | | Frequency | Paramete (1) |
|---|---|---|---|
| Type of disease | non chronic | 214 | 1.000 |
| | chronic | 136 | .000 |
| PrimE | higher | 112 | 1.000 |
| | primary school | 238 | .000 |

# Block 0: Beginning Block

**Iteration History[a,b,c]**

| Iteration | | -2 Log likelihood | Coefficients Constant |
|---|---|---|---|
| Step 0 | 1 | 476.205 | .320 |
| | 2 | 476.204 | .323 |
| | 3 | 476.204 | .323 |

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 476.204

c. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

**Classification Table[a,b]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Complain | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 0 | Complain | Disloyalty | 0 | 147 | .0 |
| | | Loyalty | 0 | 203 | 100.0 |
| | Overall Percentage | | | | 58.0 |

a. Constant is included in the model.

b. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 0 | Constant | .323 | .108 | 8.883 | 1 | .003 | 1.381 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 0 | Variables | Material | 12.639 | 1 | .000 |
| | | Human | 16.533 | 1 | .000 |
| | | Operation | 22.325 | 1 | .000 |
| | | Attitude | 21.586 | 1 | .000 |
| | | Behavior | 30.018 | 1 | .000 |
| | | Expertise | 24.598 | 1 | .000 |
| | | Hchange | 11.685 | 1 | .001 |
| | | Kchange | 14.268 | 1 | .000 |
| | | Bchange | 7.526 | 1 | .006 |
| | | PositiveE | 30.407 | 1 | .000 |
| | | NegativeE | 15.713 | 1 | .000 |
| | | time | .691 | 1 | .406 |
| | | cost | .249 | 1 | .618 |
| | | age | 7.087 | 1 | .008 |
| | | PrimE(1) | .207 | 1 | .649 |
| | | income | 2.630 | 1 | .105 |
| | | chronic(1) | 5.056 | 1 | .025 |

a. Residual Chi-Squares are not computed because of redundancies.

## Block 1: Method = Forward Stepwise (Likelihood Ratio)

**Iteration History[a,b,c,d]**

| Iteration | | -2 Log likelihood | Coefficients | | | | |
|---|---|---|---|---|---|---|---|
| | | | Constant | PositiveE | Operation | NegativeE | chronic(1) |
| Step 1 | 1 | 444.798 | -3.123 | .438 | | | |
| | 2 | 444.291 | -3.647 | .505 | | | |
| | 3 | 444.290 | -3.670 | .508 | | | |
| | 4 | 444.290 | -3.670 | .508 | | | |
| Step 2 | 1 | 437.292 | -3.740 | .342 | .188 | | |
| | 2 | 436.693 | -4.339 | .403 | .205 | | |
| | 3 | 436.691 | -4.369 | .406 | .205 | | |
| | 4 | 436.691 | -4.369 | .406 | .205 | | |
| Step 3 | 1 | 431.160 | -2.864 | .261 | .202 | -.150 | |
| | 2 | 430.305 | -3.437 | .320 | .225 | -.169 | |
| | 3 | 430.303 | -3.473 | .324 | .227 | -.170 | |
| | 4 | 430.303 | -3.473 | .324 | .227 | -.170 | |
| Step 4 | 1 | 425.925 | -2.524 | .225 | .235 | -.147 | -.493 |
| | 2 | 424.898 | -3.035 | .272 | .271 | -.168 | -.579 |
| | 3 | 424.895 | -3.068 | .275 | .273 | -.170 | -.583 |
| | 4 | 424.895 | -3.069 | .275 | .273 | -.170 | -.583 |

a. Method: Forward Stepwise (Likelihood Ratio)

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 476.204

d. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

**Omnibus Tests of Model Coefficients**

| | | Chi-square | df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 31.914 | 1 | .000 |
| | Block | 31.914 | 1 | .000 |
| | Model | 31.914 | 1 | .000 |
| Step 2 | Step | 7.599 | 1 | .006 |
| | Block | 39.513 | 2 | .000 |
| | Model | 39.513 | 2 | .000 |
| Step 3 | Step | 6.388 | 1 | .011 |
| | Block | 45.901 | 3 | .000 |
| | Model | 45.901 | 3 | .000 |
| Step 4 | Step | 5.408 | 1 | .020 |
| | Block | 51.309 | 4 | .000 |
| | Model | 51.309 | 4 | .000 |

**Model Summary**

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 444.290[a] | .087 | .117 |
| 2 | 436.691[a] | .107 | .144 |
| 3 | 430.303[a] | .123 | .165 |
| 4 | 424.895[a] | .136 | .183 |

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

**Hosmer and Lemeshow Test**

| Step | Chi-square | df | Sig. |
|---|---|---|---|
| 1 | 1.502 | 6 | .959 |
| 2 | 4.836 | 8 | .775 |
| 3 | 4.052 | 8 | .852 |
| 4 | 11.402 | 8 | .180 |

**Contingency Table for Hosmer and Lemeshow Test**

| | | Complain = Disloyalty | | Complain = Loyalty | | |
|---|---|---|---|---|---|---|
| | | Observed | Expected | Observed | Expected | Total |
| Step 1 | 1 | 30 | 30.949 | 12 | 11.051 | 42 |
| | 2 | 22 | 21.109 | 16 | 16.891 | 38 |
| | 3 | 17 | 17.010 | 20 | 19.990 | 37 |
| | 4 | 22 | 20.188 | 28 | 29.812 | 50 |
| | 5 | 18 | 16.755 | 28 | 29.245 | 46 |
| | 6 | 10 | 11.708 | 26 | 24.292 | 36 |
| | 7 | 0 | .322 | 1 | .678 | 1 |
| | 8 | 28 | 28.959 | 72 | 71.041 | 100 |
| Step 2 | 1 | 29 | 27.382 | 6 | 7.618 | 35 |
| | 2 | 18 | 21.521 | 18 | 14.479 | 36 |
| | 3 | 16 | 17.808 | 20 | 18.192 | 36 |
| | 4 | 16 | 15.919 | 20 | 20.081 | 36 |
| | 5 | 16 | 14.013 | 20 | 21.987 | 36 |
| | 6 | 16 | 12.507 | 19 | 22.493 | 35 |
| | 7 | 11 | 11.011 | 23 | 22.989 | 34 |
| | 8 | 9 | 10.114 | 26 | 24.886 | 35 |
| | 9 | 4 | 5.270 | 16 | 14.730 | 20 |
| | 10 | 12 | 11.455 | 35 | 35.545 | 47 |
| Step 3 | 1 | 29 | 27.776 | 6 | 7.224 | 35 |
| | 2 | 21 | 20.991 | 13 | 13.009 | 34 |
| | 3 | 16 | 18.551 | 20 | 17.449 | 36 |
| | 4 | 16 | 16.492 | 20 | 19.508 | 36 |
| | 5 | 12 | 14.435 | 24 | 21.565 | 36 |
| | 6 | 16 | 12.875 | 20 | 23.125 | 36 |
| | 7 | 12 | 11.163 | 23 | 23.837 | 35 |
| | 8 | 8 | 9.450 | 26 | 24.550 | 34 |
| | 9 | 7 | 7.411 | 24 | 23.589 | 31 |
| | 10 | 10 | 7.857 | 27 | 29.143 | 37 |
| Step 4 | 1 | 30 | 28.099 | 5 | 6.901 | 35 |
| | 2 | 19 | 21.769 | 16 | 13.231 | 35 |
| | 3 | 18 | 18.979 | 18 | 17.021 | 36 |
| | 4 | 17 | 16.864 | 19 | 19.136 | 36 |
| | 5 | 17 | 14.434 | 18 | 20.566 | 35 |
| | 6 | 15 | 12.536 | 20 | 22.464 | 35 |
| | 7 | 7 | 10.985 | 28 | 24.015 | 35 |
| | 8 | 4 | 7.534 | 24 | 20.466 | 28 |
| | 9 | 8 | 8.528 | 27 | 26.472 | 35 |
| | 10 | 12 | 7.271 | 28 | 32.729 | 40 |

**Classification Table[a]**

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Complain | | Percentage Correct |
| | | | Disloyalty | Loyalty | |
| Step 1 | Complain | Disloyalty | 52 | 95 | 35.4 |
| | | Loyalty | 28 | 175 | 86.2 |
| | Overall Percentage | | | | 64.9 |
| Step 2 | Complain | Disloyalty | 53 | 94 | 36.1 |
| | | Loyalty | 30 | 173 | 85.2 |
| | Overall Percentage | | | | 64.6 |
| Step 3 | Complain | Disloyalty | 62 | 85 | 42.2 |
| | | Loyalty | 32 | 171 | 84.2 |
| | Overall Percentage | | | | 66.6 |
| Step 4 | Complain | Disloyalty | 66 | 81 | 44.9 |
| | | Loyalty | 36 | 167 | 82.3 |
| | Overall Percentage | | | | 66.6 |

a. The cut value is .500

**Variables in the Equation**

| | | B | S.E. | Wald | df | Sig. | Exp(B) | 95.0% C.I.for EXP(B) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower | Upper |
| Step 1[a] | PositiveE | .508 | .099 | 26.072 | 1 | .000 | 1.661 | 1.367 | 2.018 |
| | Constant | -3.670 | .795 | 21.316 | 1 | .000 | .025 | | |
| Step 2[b] | Operation | .205 | .075 | 7.456 | 1 | .006 | 1.228 | 1.060 | 1.423 |
| | PositiveE | .406 | .105 | 14.844 | 1 | .000 | 1.501 | 1.221 | 1.845 |
| | Constant | -4.369 | .849 | 26.452 | 1 | .000 | .013 | | |
| Step 3[c] | Operation | .227 | .076 | 8.827 | 1 | .003 | 1.254 | 1.080 | 1.456 |
| | PositiveE | .324 | .110 | 8.660 | 1 | .003 | 1.383 | 1.114 | 1.716 |
| | NegativeE | -.170 | .068 | 6.302 | 1 | .012 | .843 | .738 | .963 |
| | Constant | -3.473 | .918 | 14.308 | 1 | .000 | .031 | | |
| Step 4[d] | Operation | .273 | .080 | 11.731 | 1 | .001 | 1.314 | 1.124 | 1.537 |
| | PositiveE | .275 | .110 | 6.219 | 1 | .013 | 1.317 | 1.061 | 1.635 |
| | NegativeE | -.170 | .068 | 6.156 | 1 | .013 | .844 | .738 | .965 |
| | chronic(1) | -.583 | .253 | 5.294 | 1 | .021 | .558 | .340 | .917 |
| | Constant | -3.069 | .927 | 10.968 | 1 | .001 | .046 | | |

a. Variable(s) entered on step 1: PositiveE.

b. Variable(s) entered on step 2: Operation.

c. Variable(s) entered on step 3: NegativeE.

d. Variable(s) entered on step 4: chronic.

**Correlation Matrix**

| | | Constant | Positive E | Operation | NegativeE | Constant | Operation | Positive E | Negative E | chronic (1) |
|---|---|---|---|---|---|---|---|---|---|---|
| Step 1 | Constant | 1.000 | -.990 | | | | | | | |
| | PositiveE | -.990 | 1.000 | | | | | | | |
| Step 2 | Constant | 1.000 | -.778 | -.337 | | | | | | |
| | Operation | -.337 | -.316 | 1.000 | | | | | | |
| | PositiveE | -.778 | 1.000 | -.316 | | | | | | |
| Step 3 | Constant | 1.000 | -.797 | -.273 | -.356 | | | | | |
| | Operation | -.273 | -.328 | 1.000 | -.125 | | | | | |
| | PositiveE | -.797 | 1.000 | -.328 | .271 | | | | | |
| | NegativeE | -.356 | .271 | -.125 | 1.000 | | | | | |
| Step 4 | Constant | | | | | 1.000 | -.228 | -.798 | -.358 | -.158 |
| | Operation | | | | | -.228 | 1.000 | -.351 | -.125 | -.277 |
| | PositiveE | | | | | -.798 | -.351 | 1.000 | .276 | .166 |
| | NegativeE | | | | | -.358 | -.125 | .276 | 1.000 | .012 |
| | chronic(1) | | | | | -.158 | -.277 | .166 | .012 | 1.000 |

**Model if Term Removed**

| Variable | | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|---|---|---|---|---|---|
| Step 1 | PositiveE | -238.102 | 31.914 | 1 | .000 |
| Step 2 | Operation | -222.145 | 7.599 | 1 | .006 |
| | PositiveE | -226.824 | 16.956 | 1 | .000 |
| Step 3 | Operation | -219.665 | 9.026 | 1 | .003 |
| | PositiveE | -219.838 | 9.373 | 1 | .002 |
| | NegativeE | -218.346 | 6.388 | 1 | .011 |
| Step 4 | Operation | -218.500 | 12.105 | 1 | .001 |
| | PositiveE | -215.780 | 6.666 | 1 | .010 |
| | NegativeE | -215.574 | 6.252 | 1 | .012 |
| | chronic | -215.152 | 5.408 | 1 | .020 |

**Variables not in the Equation[a]**

| | | | Score | df | Sig. |
|---|---|---|---|---|---|
| Step 1 | Variables | Material | .544 | 1 | .461 |
| | | Human | 3.850 | 1 | .050 |
| | | Operation | 7.652 | 1 | .006 |
| | | Attitude | 1.761 | 1 | .184 |
| | | Behavior | 6.785 | 1 | .009 |
| | | Expertise | 3.046 | 1 | .081 |
| | | Hchange | .023 | 1 | .880 |
| | | Kchange | .206 | 1 | .650 |
| | | Bchange | .000 | 1 | .995 |
| | | NegativeE | 5.017 | 1 | .025 |
| | | time | .587 | 1 | .443 |
| | | cost | .822 | 1 | .365 |
| | | age | 3.139 | 1 | .076 |
| | | PrimE(1) | .024 | 1 | .878 |
| | | income | 2.551 | 1 | .110 |
| | | chronic(1) | 2.596 | 1 | .107 |
| Step 2 | Variables | Material | .120 | 1 | .729 |
| | | Human | .153 | 1 | .696 |
| | | Attitude | .894 | 1 | .344 |
| | | Behavior | 4.550 | 1 | .033 |
| | | Expertise | 2.351 | 1 | .125 |
| | | Hchange | .038 | 1 | .845 |
| | | Kchange | .021 | 1 | .884 |
| | | Bchange | .018 | 1 | .893 |
| | | NegativeE | 6.490 | 1 | .011 |
| | | time | 2.875 | 1 | .090 |
| | | cost | .851 | 1 | .356 |
| | | age | 4.939 | 1 | .026 |
| | | PrimE(1) | .107 | 1 | .744 |
| | | income | 1.939 | 1 | .164 |
| | | chronic(1) | 5.485 | 1 | .019 |
| Step 3 | Variables | Material | .021 | 1 | .885 |
| | | Human | .212 | 1 | .645 |
| | | Attitude | .218 | 1 | .640 |
| | | Behavior | 2.871 | 1 | .090 |
| | | Expertise | 1.873 | 1 | .171 |
| | | Hchange | .230 | 1 | .632 |
| | | Kchange | .013 | 1 | .909 |
| | | Bchange | .001 | 1 | .980 |
| | | time | 3.121 | 1 | .077 |
| | | cost | .799 | 1 | .371 |
| | | age | 3.717 | 1 | .054 |
| | | PrimE(1) | .396 | 1 | .529 |
| | | income | 1.710 | 1 | .191 |
| | | chronic(1) | 5.353 | 1 | .021 |
| Step 4 | Variables | Material | .023 | 1 | .880 |
| | | Human | .199 | 1 | .656 |
| | | Attitude | .001 | 1 | .973 |
| | | Behavior | 1.590 | 1 | .207 |
| | | Expertise | .798 | 1 | .372 |
| | | Hchange | .290 | 1 | .590 |
| | | Kchange | .027 | 1 | .869 |
| | | Bchange | .084 | 1 | .772 |
| | | time | .077 | 1 | .781 |
| | | cost | 1.697 | 1 | .193 |
| | | age | .725 | 1 | .395 |
| | | PrimE(1) | .000 | 1 | .994 |
| | | income | .677 | 1 | .411 |

a. Residual Chi-Squares are not computed because of redundancies.

# BIOGRAPHY

| | |
|---|---|
| **Name:** | Miss Raweewan Chuaybamroong |
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