

# ENHANCING ADHERENCE TO TREATMENT FOR CLIENTS WITH SERIOUS MENTAL ILLNESS

## Medications



depression-pills.jpg

## Appointments



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**Valerie Markley DNP, APRN, PMHCNS-BC**  
This speaker has no conflicts of interests to disclose.

# Objectives

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1. Summarize some of the major barriers and adherence enhancing interventions (AEIs) reported in the literature.
2. Evaluate the effectiveness of communication technology by an APRN for collaboration with clients between office visits for the purpose of improving adherence to treatment.
3. Capitalize on the power of the ongoing therapeutic relationship to increase adherence to treatment as a demonstration of evidence based practice.

# Impetus for Project

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- ▣ More than 50% of all clients with chronic illness from developed countries do not follow recommendations for treatment (Crowe, Wilson, Inder, 2011).
- ▣ Rate even higher for those with mental illnesses. Exacerbations occur even with adherence, but non-adherence increases the likelihood.
- ▣ **BASIC DEFINITION OF ADHERENCE:** The extent to which the client's behavior coincides with recommendations from the provider (Horne, 2006).
- ▣ **MORE COMPREHENSIVE VIEW OF ADHERENCE :** Adherence involves following prescribed treatment within the context of a collaborative model where the client is included as an active participant of his/her own care (Berk, et al., 2010).

# PICOT Question

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[www.google.com](http://www.google.com)

- ▣ In adults with serious mental illness, who are prescribed psychotropic medications, would communication with an APRN between office visits increase adherence to treatment (medications & appointments)?

# Consequences of Non-Adherence

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- ▣ **RISK OF DANGER TO SELF OR OTHERS**

Suicide rate for all 4 major disorder categories:  
10-15%

- ▣ **DECREASE IN QUALITY OF LIFE**

- ▣ **ECONOMIC BURDEN**

In US. alone estimated  
cost of depression=\$80  
Billion (Greenberg, et al., 2003).



(InvestorsEurope, 2011)

# Cost of Missed Appointments

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**Cost of non-adherence to treatment for clients with mental illness, i.e. selected examples:**

- 1. 360 million pounds per year for missed mental health appointments in a community psychiatric clinic in the National health Service (NHS) in England.** (Mitchell and Selmes, 2007)
- 2. By 2012 missed appointments cost 600 million pounds or \$980 million a year for a population one-fifth the size of the United States.** (Sims et al., 2012)

# A Few Comments from Literature Review

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General Adherence Rates

Psychotropic Adherence Rates

Validity & Reliability of Client Self Reporting

# Theoretical Framework

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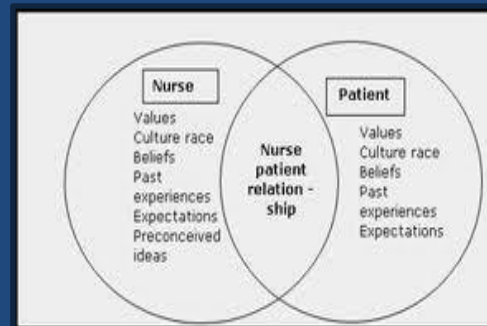
- ▣ **Hildegard Peplau: Theory of the Nurse-Client Relationship**
- ▣ **Ludwig von Bertalanffy: General System(s) Theory (GST)**



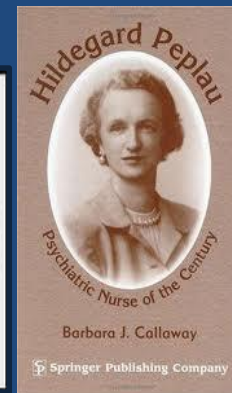
# Theoretical Framework

## Hildegard Peplau: Theory of the Nurse-Client Relationship

- ▣ Interaction phenomena that occur during the nurse-client relationship have qualitative impact on outcomes for clients (Peplau, 1991).
- ▣ Involve clients in the collaboration of their own treatment.



(Callaway, 2002)

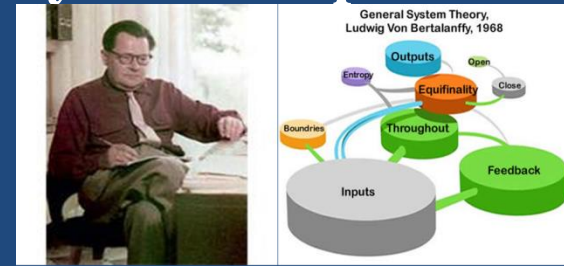


(Callaway, 2002)

# Theoretical Framework (Cont.)

## Ludwig von Bertalanffy: General System(s) Theory (GST)

- ▣ GST is an interdisciplinary practice that describes systems with interacting components, applicable to biology, cybernetics, and other fields
- ▣ Parts and the relationship of parts to each other within an open system
- ▣ Change in one part changes the whole
- ▣ EQUIFINALITY: Energy flow of an open system leading toward a steady state (Bertalanffy, 1968)
- ▣ **Making positive changes within the system has potential for improving client outcomes** (Bertalanffy, 1968).



Davidson, 1983

<http://www.goldendynamicsolutions.com/Copy%20of%20gettingstarted.htm>

# Study Requirements

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- ▣ **Institutional Review Board Approval from: Brandman University & Bloomington Meadows Hospital**
- ▣ **Signed Voluntary Consent (with option to withdraw at any point without repercussions to treatment and with no questions asked).**
- ▣ **Confidentiality: All data was be coded with names known only to investigator.**
- ▣ **Records kept by investigator only until study completed. Only congregate data presented to hospital.**



# Recruitment of Participants

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- ▣ **After agreeing with their APRN provider to consider participation, the APRN study investigator presents written and oral explanation to client and has consent form signed for those willing to participate with copies of forms given to clients.**
- ▣ **Risks/Benefits: Minimal risks of some time commitment for participation**
- ▣ **Possible benefits : Additional communication with an APRN, study investigator, between office visits with opportunity to clarify questions about medication and receive support for following treatment protocols.**
- ▣ **Management of risks: Confidentiality & absolute freedom to withdraw from study at any time without consequences or questions asked**
- ▣ **Client information and research data kept in secure file at home office of investigator. No client data regarding study included on clients' records.**
- ▣ **Cost/incentives: No cost to clients and no monetary incentives offered**

# Study Variables

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- ▣ Independent/predictor variable: Communication via phone/texting/email by APRN investigator with the client between office visits.
- ▣ First communication within week after appointment with provider when side effects might be an initial issue
  - (Communication focused on brief review of medication taking with questions about side effects & therapeutic response while conveying empathy, caring, & support for client)
- ▣ Second communication attempt at two week interval to check for onset of therapeutic effects
- ▣ Dependent (outcome) variables: Rate of adherence to psychiatric medication as prescribed & attendance for appointments
  - Adherence measured according to client self-report, noted in literature to be as valid & reliable as other more intrusive & expensive methods (Berk et al., 2009)
  - Clients asked to keep a daily log of psychotropic medications taken as prescribed. Considered as meeting goal of adherence when taking medication 75% of time

# Methods

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- Data were analyzed using Statistical Package for the Social Sciences version 21 (SPSS; IBM, Inc. Chicago, IL).
- Descriptive statistics, including frequencies and percentages were used to summarize the demographic characteristics of the sample.
- The primary outcome variables (i.e., adherence to medication, keeping the appointment with provider) were then analyzed using Chi-square tests

# Analysis Plan

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- ▣ Group I: Clients with whom successful communication occurred at least 75% of time
- ▣ Group II: Clients with whom successful communication occurred less than 75% of time
- ▣ Chi square tests were used to evaluate the differences between the two groups

# Sample Characteristics

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- ▣ Age: 38% < 41, 31% 41-50, 31% > 50
- ▣ Gender: 31% Male, 69% females
- ▣ Education: 15% HS/TS, 54% some college, 31% degree
- ▣ Race: 92% Caucasian, 8% Native American
- ▣ Health Insurance: 46% Employer, 31% Medicare, 8% HIP, 15% None



# Health Characteristics

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- ▣ Onset of illness  
39% child, 38% teen, 15% adult, 8% recent
- ▣ Diagnosis  
46% bipolar, 31% depression, 8% mood,  
15% anxiety
- ▣ Medications  
54% on 3, 31% on 2, 15% on 1
- ▣ All participants were new to the clinic and provider and had a history of inconsistent compliance.

# Medication Adherence

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	Adherent	Not Adherent
Group I Communicate	11 (100%)	0 (0%)
Group II Not Communicate	0 (0%)	2 (100%)

$$\chi^2 (1, N = 13) = 13.00, p < .001$$

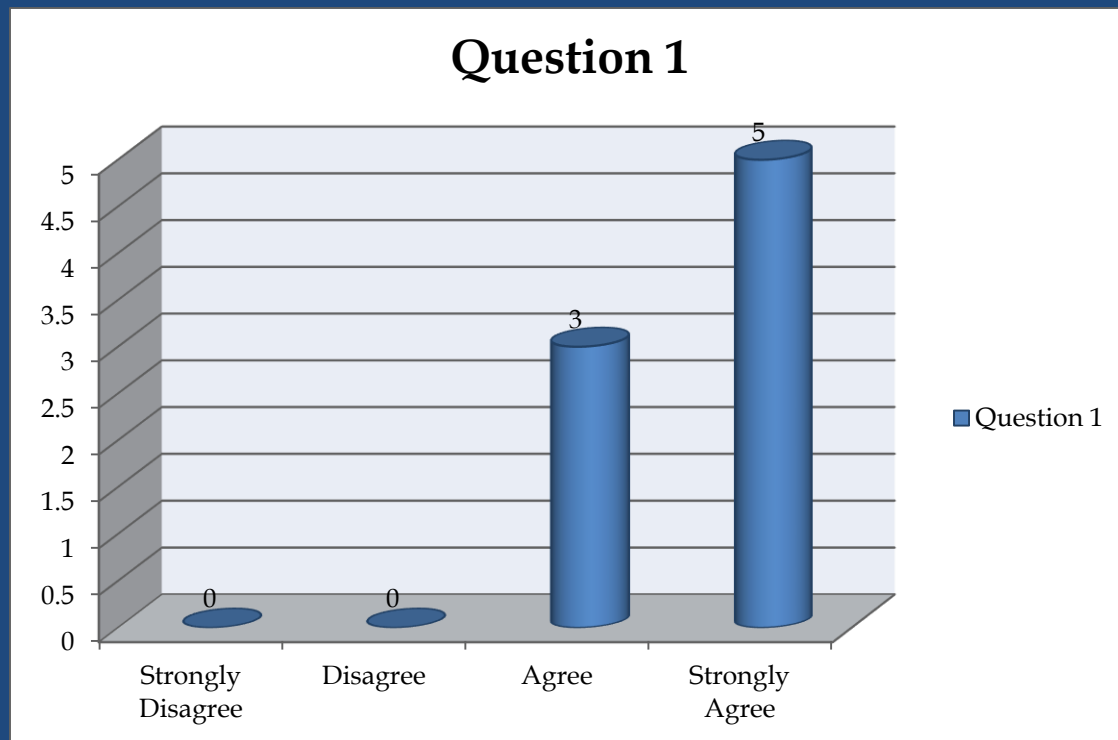
# Appointment Adherence

	Adherent	Not Adherent
Group I Communicate	11 (100%)	0 (0%)
Group II Not Communicate	0 (0%)	2 (100%)

$$\chi^2 (1, N = 13) = 13.00, p < .001$$

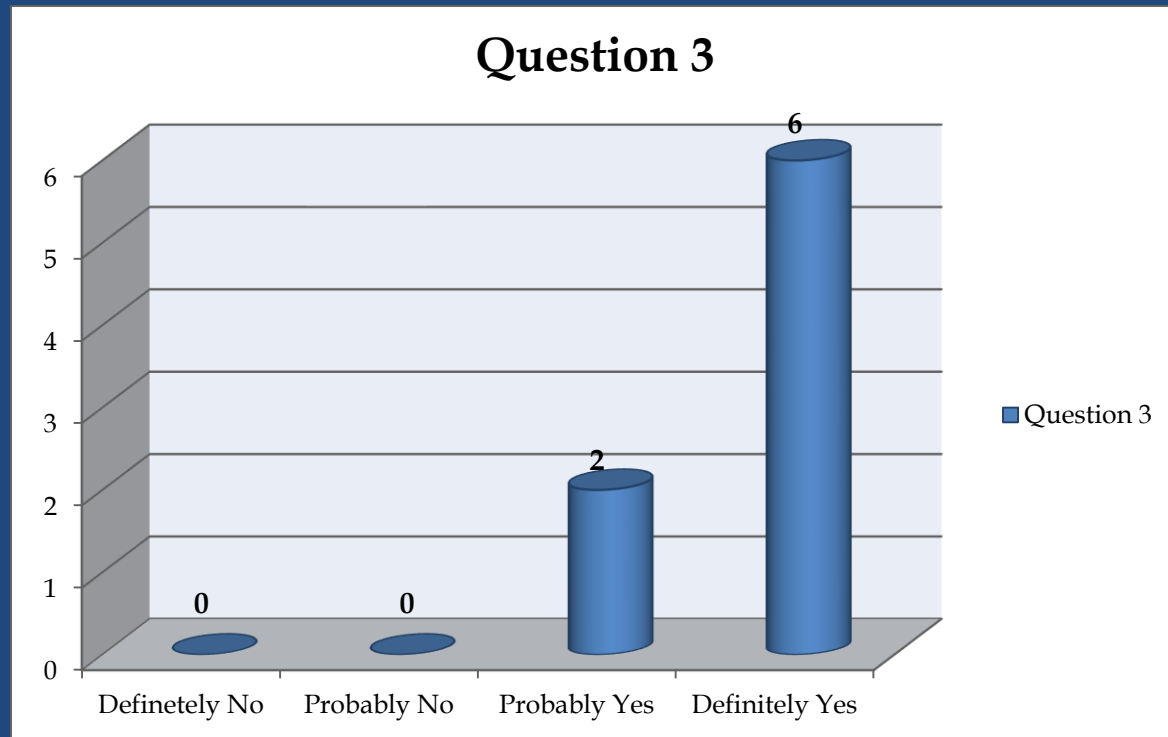
# Satisfaction Survey

Question 1:  
After participating in  
this study, I clearly  
understand the purpose  
for taking each of my  
medications.



# Satisfaction Survey

Question 3:  
Would you recommend  
this communication  
program to your friends  
and family?

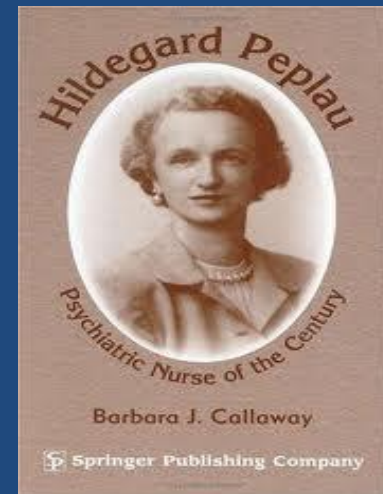


# Observation

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Final take home—

Back to our roots with Dr. Peplau and the power of the nurse-client relationship to make a difference in the lives of those we serve and potentially even save money. If you are interested in your clients' success in treatment, let them know it. Connecting with them between visits is an additional way to do that.



(Callaway, 2002)

# Study Limitations

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## Limitations:

1. Small sample size and limited variation among participants
2. Study location-a private-for-profit facility
3. Study investigator-an APRN but not the actual provider

# Recommendations

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## Recommendations for Further Study and Dissemination:

1. Repeat with larger sample size over a longer period of time (follow-up with participants for a six month to one year period.)
2. Recruit actual providers (PMHNPs and psychiatrists) to provide the intervention.
3. Conduct cost analysis of financial impact from reduction in missed appointments.
4. Use evidence from studies to bargain support from management for time to connect with clients between office visits.
5. Share results from present study at conferences and submit for publication.



# Conclusion

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**Results of this study provide support for evidence based practice in the effort to enhance adherence to psychiatric treatment for out-patient clients with serious mental illness.**

# References

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# Presenter's Information

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[www.cdc.gov](http://www.cdc.gov)

“They always say time changes things, but you  
actually have to change them yourself.”

— Andy Warhol, *The Philosophy of Andy Warhol*

# THANK YOU!

## Medications



depression-pills.jpg

## Appointments



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Thank you so much for your time, your input, & your commitment to increasing adherence to treatment for clients with serious mental illness!

<http://brandman.edu/nursing>

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# APPENDIX

## Data Collection Forms

#### INFORMED CONSENT

##### Increasing Support for Mental Health Protocol

Informational Letter for Participants (and those considering participation) in Nursing Research Study

Focus of Study: Increasing Support for Mental Health Protocol

Principal Investigator:

Name: Valerie N. Markley, MSN, PMHCNS-BC

Institution: Brandman University

Investigator's contact information:

Phone: (812) 552-7164

E-mail: [markley@indiana.edu](mailto:markley@indiana.edu)

#### Background:

You are being invited to participate in a nursing research study. Before you decide whether or not to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and ask the investigator if there is anything that is not clear or if you need more information.

I am an advanced practice nurse and am currently a doctor of nursing practice (DNP) student at Brandman University School of Nursing in Irvine, California. This research is part of my capstone requirement for graduation. Having many years of experience working in mental health, I am very interested in improving client adherence to treatment. My study involves communication between an advanced practice nurse (the investigator) and client between office visits by telephone, texting, or email (according to client preference). The communication is to focus on a brief review of medication taking and any questions you might have about issues of medication effects and therapeutic response. The first communication will take place within the week after appointment with provider. The second communication attempt will be made at the two week period to check for the onset of therapeutic effects. Further communication will be attempted every two weeks until the next office visit and to remind you of your appointment time. Participants will be asked to keep a daily record of medications taken. This plan offers the benefit of between office communication with an advanced practice nurse with the opportunity for you to ask questions regarding medications and receive encouragement to stay on track with treatment protocol.

#### INFORMED CONSENT

##### Increasing Support for Mental Health Protocol

There are minimal risks involved with participation in this study. Participation is completely voluntary with the option of withdrawing at any point without questions asked. There will be no treatment repercussions for any client who declines or withdraws from the study. The contribution of some additional time for the communication and for the keeping of medication records (which are regularly advised anyway) is a possible consideration in making the decision to participate.

The identities of participants and their records for this study will be kept confidential. A statistical consultant, if needed, will only have access to records and data that have been coded by the investigator without any names available. Client information and research data will be kept in a secure file at the home office of the investigator. No client data regarding the study will be included on clients' records. Participant data will be kept confidential except in cases where the investigator is legally obligated to report specific incidents such as abuse or suicide risk.

#### Voluntary Participation:

Your participation in this study is completely voluntary. It is up to you alone to decide whether or not to take part in the study. If you decide to take part in the study, you will be asked to sign a consent form. You will still be free to withdraw from the study at any time without giving a reason. This will not affect your relationship with your provider or the Meadows Hospital.

#### Costs:

There are no costs or monetary compensation for participants in this study.

#### Consent:

By signing this consent form, I confirm that I have read and understood the information and have had the opportunity to ask questions. I understand that my participation is voluntary and confidential and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this nursing study.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Thank you very much for your consideration of this request!

With best wishes,



VNM



Date\_\_\_\_\_

#### Client Demographics

Participant

Age

Gender

Education

Race

Diagnosis

Occupation

Marital Status

Family/Friends in support of treatment (yes/no)

Onset of illness

Insurance

Money for meds

Communication

Med Adherence

Appointments

List Medications

Next appointment?

Contact Info (phone/email?)

Best time to contact

VNM

Medication Log

Date	Medication	Daily Dose	Response	Side Effects	Comments

Satisfaction Survey for My Participation in Study:  
Enhancing Adherence to Psychiatric Treatment

Please mark the following three questions:

1. After participating in this study, I clearly understand the purpose for taking each of my medications.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly agree

2. Using any number from 0 to 10, where 0 is the worst possible communication with your healthcare provider and 10 is the best possible, what number would you use to rate the communication you had with your healthcare provider in this study?

\_\_\_\_\_

3. Would you recommend this communication program to your friends and family?

- ☐ Definitely no
- ☐ Probably no
- ☐ Probably yes
- ☐ Definitely yes

Any other comments?

Adapted from the Hospital Care Quality Information from the Consumer Perspective, HCAHPS survey:  
<http://www.hcahpsonline.org/home.aspx>