**[1] LIAO Y. Sharing Personal Health Information on Social Media: Balancing Self-presentation and Privacy[J]. SMSOCIETY'19: PROCEEDINGS OF THE 10TH INTERNATIONAL CONFERENCE ON SOCIAL MEDIA AND SOCIETY, 2019: 194-204.**

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# 背景

人们越来越愿意在社交媒体上分享个人健康信息

收益/隐私关注

**目前研究：**PHI分享与信息类型、受众类型、匿名程度、健康状况和共享感知价值之间的关系（有局限）

- 较多研究意愿，非实际行为
- 较多研究组织使用（电子健康档案），非点对点共享平台（个人决策）
- 狭义的PHI（癌症社区内共享的数据、健康人的数据、电子健康数据或健身追踪器收集的数据）。应该包括广泛的与健康有关的信息和经验

**本文：**

- 非单一社交媒体，非单一类型的个人健康数据
- **健康披露：**与特定健康状况(如糖尿病诊断、症状和治疗)相关的一次性信息披露
- **PHI共享：**包括任何与身体相关的数据，从身体测量到健身跟踪数据，以及与疾病、自我报告的心理健康、基因测试结果等相关的任何医疗信息（区别：健康披露可能是PHI共享的开始，而PHI共享超越了特定疾病或一次性披露）
- 定性、定量分析

**RQ1：人们参与在线健康相关的自我呈现的动机是什么？**

**RQ2：选择不同在线健康披露策略的人在自我污名化水平和其他个体特征方面是否存在差异，哪些差异？**

**RQ3：PHI共享在多大程度上受到人们在平台上的隐私态度和行为(例如使用隐私设置)的影响？**

# 方法（1）

**样本**：Amazon Mechanical Turk众包平台
正式调查：收集631份问卷，有效553份（排除时间少；答案形同或Z模式；开放式问题乱填）

**问卷三部分：**
1. 人口统计和背景
2. 针对具体疾病的健康披露决定（**如果从未患严重疾病，考虑最近迫使他们寻求医疗援助的疾病 N=553**）
3. PHI共享平台使用情况（**只针对使用在线社交平台分享PHI的受访者 N=347**）

**调查对象：**
- 性别：51.4%（女），47.7%（男）和0.7%（其他）
- 平均家庭收入：5万美元到59999美元之间
- 年龄：普遍较年轻，平均36岁，从18岁到79岁不等
- 教育程度：57.6%拥有学士学位及其以上
- 健康状况：81.4%表示他们的健康状况良好或非常好，只有18.7%的人认为他们的健康状况一般或较差
- **是否曾有过严重的健康问题**：共有86名(15.5%)受访者表示他们目前生病，74名(13.9%)受访者表示他们已经康复，大多数受访者(357名;66.9%)从未有过严重的健康状况
- **信息类型**：健康习惯和行为(如饮食、运动、吸烟) 被广泛分享(73%)，其次是情感体验和幸福(50%);种族/民族(50%);身体测量(48%);目前或过去的健康状况(45%);与疾病相关的症状(38%);治疗和药物治疗(35%);自我跟踪数据，如步数和睡眠时间(34%);联系方式(33%);性取向(32%);临床诊断和/或预后(28%);体检和检查结果(22%);还有其他信息

# 方法（2）

李克特5点/6点
单选题
0-100滑动条

| | |
|---|---|
| **Online Health Disclosure Strategies** | **1. Online Secrecy**<br>*Non-disclosure online:* 335, 64.6%<br>**2. Selective Disclosure**<br>*- Under pseudonym/screen name: 54, 10.5%*<br>*- Anonymously:51, 9.7%*<br>*- Only to close friends or family: 50, 9.5%*<br>**3. Indiscriminant Disclosure**<br>*Public online disclosure using real identity: 63, 13.0%* |
| **PHI Sharing Platform Types** | **1. General social media sites** (e.g., Facebook, Twitter, Instagram, Youtube): 176, 34.2 %<br>**2. Fitness-tracking platforms** (e.g., MyFitnessPal, Fitbit): 62, 12.1%<br>**3. Special subgroups created for health purposes on social media** (e.g., a Facebook sub-community for cancer patients, r/diabetes on Reddit): 53, 10.3%<br>**4. Health-specific social network sites** (e.g., PatientsLikeMe.com): 47; 9.1%<br>**5. Blogs**: 9, 2% |

Table 1. Distribution of Respondents by Online Health Disclosure Strategies and PHI Sharing Platform Types

| 变量 | 数量 | 备注/题项 |
|---|---|---|
| 自我污名<br>慢性疾病病耻感量表(SSCI-8) | 7 | 因为我的疾病，有些人似乎对我感到不舒服。<br>因为我的病，有些人躲着我。<br>因为我的病，我感到被排除在事情之外。<br>因为我的病，人们对我很不友善。<br>因为我的病，我感到很尴尬。<br>因为我身体的局限性，我感到很尴尬。<br>有些人表现得好像我有这个病是我的错一样。<br>~~因为我的病，人们避免看我。~~ |
| 社会支持 | 12 | 3个维度：情感、信息和有形 |
| 一般隐私关注 | 11 | |
| 数字隐私素养 | 8 | 高强度密码.. |
| 负面在线经历 | 10 | FB账户入侵/网上有人持续的接触 |
| 在线PHI披露策略 | | |
| 对在线PHI披露的态度 | 13 | 分享有益/将来可能会后悔分享 |
| PHI共享的感知成本 | 2 | 数据敏感性/数据安全泄露问题 |
| 平台自我保护行为 | 11 | 隐私设置/举报/取关 |
| 平台使用满足感 | 6 | 从6个方面：一般用户满意度、获得情感支持、获得信息支持、获得一般建议、网站上的社会联系以及对网站的信任 |
| PHI共享的广度 | | 分享的信息类型 |
| 控制变量 | | 人口统计相关、对互联网技能的感知、社交媒体的使用、分享PHI的平台使用频率，以及在线分享的信息类型 |

# 方法(3)——数据分析

**RQ1：人们参与在线健康相关的自我呈现的动机是什么？**

Q1 健康披露:“你在网上分享应对该疾病的经历的主要动机是什么？

Q2 PHI共享:“您在本网站/平台上分享健康信息的主要动机是什么？

多次结构编码和主题分析，对2个开放式问题的回答进行了分类和解释

1. 仔细阅读所有开放式回复后，提出一套**初步的编码**，描述动机
2. 使用初步编码规则分析随机选择的50个回复，**不断更新迭代编码规则**
3. 对编码数据进行了**主题分析**，并将其总结为主题，这些主题解释了健康共享行为动机的基本方面

**RQ2：选择不同在线健康披露策略的人在自我污名化水平和其他个体特征方面是否存在差异，哪些差异？**

多元logistic regression

因变量：3种在线健康披露策略

不披露；选择性披露；不加区分披露

自变量：背景因素、互联网和隐私相关因素以及健康披露态度

**RQ3：PHI共享在多大程度上受到人们在平台上的隐私态度和行为(例如使用隐私设置)的影响？**

一般线性回归模型

自变量：背景因素、互联网和隐私相关因素以及特定于平台的因素。

因变量：PHI共享的广度/信息类型（范围：1-16 ）

# 结果(1)

**RQ1：人们参与在线健康相关的自我呈现的动机是什么?**

**1. 促进社会支持**

- 寻求和提供社会支持经常交织在一起
- 情感支持的最多（希望我/他不是一个人；披露的同时受益于“发泄”、“宣泄”和“情绪缓解”）
- 信息支持很关键，特别是当人们寻求与诊断、治疗或药物有关的建议时
- 少数人表示，物质奖励会刺激分享

**2. 通过提高认识使污名正常**

- 当人们与有污名的疾病斗争，认为分享PHI是提高公众意识的手段（eg:焦虑症/厌食症）

**3. 自查自省**

- 促进自我跟踪（使用健身平台的人，如减肥）

**4. 印象管理**

- 健康的人，创造积极形象（eg:炫耀）
- 身体不太健康的人分享经历给家人和朋友，同时避免面对面的“尴尬”（eg:前列腺）

# 结果(2)

**RQ2：选择不同披露策略的人在自我污名和其他个体特征是否存在差异，哪些差异?**

| Online Health Disclosure Strategies [a] | Selective Disclosure | Indiscriminant Disclosure |
|---|---|---|
| | Parameter Estimates:Beta (Odds Ratio) | |
| *Background factors* | | |
| Income | -.12 (.89)* | -.04 (.96) |
| Age | -.01 (.99) | -.02 (.98) |
| Social support offline | .11 (1.11) | -.12 (.89) |
| Severe condition (Never) | _[b] | _[b] |
| Severe condition (Current) | 1.09 (2.96)* | 2.12 (8.32)*** |
| Severe condition (Past) | 1.76 (5.82)*** | 1.67 (5.32)** |
| Condition knowledge | .04 (1.04)*** | .03 (1.03)* |
| Self-stigma | .57 (1.77)*** | .36 (1.43)* |
| *General privacy factors* | | |
| General Privacy concerns | -.24 (.79) | .16 (1.17) |
| Negative online experience | .19 (1.21)* | .34 (1.40)*** |
| Digital privacy literacy | -.06 (.94)** | -.07 (.93)** |
| *Health disclosure attitudes* | | |
| Health disclosure intention | .14 (1.15)*** | .20 (1.22)*** |
| Disclosure w/o real identity | .08 (1.08) | -.55 (.58)** |
| Disclosure w/ real identity | .10 (1.10) | .46 (1.59)** |

Model fit: $\chi^2 = 269.96$, df=26, p<0.001

Nagelkerke Pseudo-$R^2$=.58

*p<.05, **p<.01, ***p<.001

Note: a. The reference category is: Online secrecy.

b. This parameter set to zero because it is the reference level

**Table 2: Multinomial regression model explaining people's choice of online health disclosure strategies**

结果：3类策略中，在线保密做参照，不披露VS披露(选择性披露、不加区分披露)之间存在统计学上显著的差异。

**披露：**

- 往往患有严重疾病(目前或过去)
- 对疾病/健康状况有更高的了解
- **与疾病相关的自我污名更高**
  - ANCOVA协方差分析比较了不同披露策略的自我污名水平，发现显著差异，F(2,527)=23.50, p< 0.0001
  - 两两比较调整后的均值显示，选择性披露者的自我污名最高(M=3.41, SD=.12)，其次是不加选择地披露者(M=3.12，SD=.15)，而不披露的自我污名最低(M=2.51, SD=.07)。
- 更多的负面在线经历
- 更低的数字隐私素养

# 结果(3)

**RQ3：PHI共享在多大程度上受到隐私态度和行为的影响?**

| Breadth of Personal Health Information Sharing | Model 1 | Model 2[a] |
|---|---|---|
| *Background factors* | | |
| Severe condition(Never) | _[b] | _[b] |
| Severe condition(Current) | 2.07*** | 1.92*** |
| Severe condition (Past) | 1.10* | .95* |
| Condition-specific self-stigma | .01 | .02 |
| *General privacy factors* | | |
| Digital privacy literacy | .07*** | -.03 |
| Negative online experiences | .23*** | .23*** |
| Privacy concerns | -.13 | -.11 |
| *Site-specific factors* | | |
| Self-protection behaviors | -.31* | -.31* |
| Data sensitivity | .04*** | .03*** |
| Data security concerns | -.02* | -.01* |
| Gratification | .04** | -.03 |
| *Interaction term* | | |
| Digital Privacy literacy x Gratification | – | .02* |
| Adjusted R-square | .24 | .27 |

*p<.05, **p<.01, ***p<.001

Note: a. Model 2 included the interaction term
b. This parameter is set to zero because it is the reference level

**Table 3. Regression models predicting PHI sharing. Values represent standardized beta coefficients.**

模型1：解释24%，p<.001。

- 与未患严重疾病的人相比，患重病的人（现在/过去）分享更多PHI
- 素养/负面经历/敏感性/满足与PHI共享的广度呈正相关
- 保护行为/数据安全担忧与PHI共享的广度呈负相关

模型2（素养*满足）：解释27%，p<.001。
交互项在统计上显著，但2个单项不显著。表明，满足对PHI共享的影响取决于素养水平，且被素养减轻（模型1满足正向影响）

即使满足增加，素养高的受访者也没有分享更多的PHI

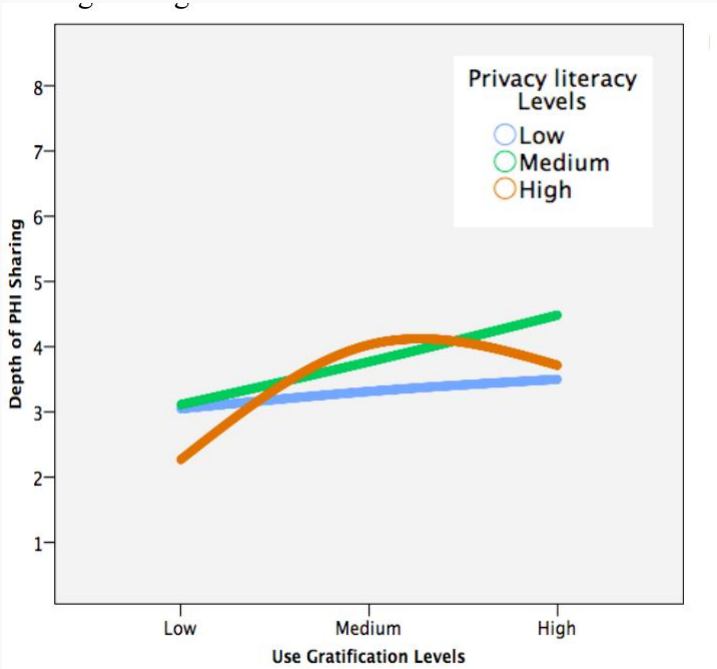


**Figure 1. The interaction effect of Digital Privacy Literacy x User Gratification on the breadth of PHI**

# 讨论

**主要发现：**

1. 自我污名可能会迫使人们通过披露寻求信息和情感支持，不同于之前研究
2. 自我污名增加了选择性披露和真实披露的机会，但潜在的决策机制可能是不同的
   - 选择选择性披露的人，通过匿名/假名方式减少风险，可能会加入一个专门针对健康的社交网络，寻找一个由同行患者组成的社区
   - 选择真实披露信息的人，可能希望从现有的社交网络中寻求认可，而不是回避
3. 披露的参与者数字隐私素养较低，但负面在线经验更高

**建议服务提供商：**

- 通过激励提高用户在平台上的参与
- 考虑提高用户在如何使用其健康数据方面的透明度和控制感

**局限：**样本局限（美国样本，大多白人；大多年轻人）

未来考虑招募其他边缘人群，如老年人

**[2] ZHU M, WU C, HUANG S, et al. Privacy paradox in mHealth applications: An integrated elaboration likelihood model incorporating privacy calculus and privacy fatigue[J]. TELEMATICS AND INFORMATICS, 2021,61.**

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# 背景

mHealth：手机、平板和其他无线设备等移动设备支持的医疗和公共卫生服务（WHO定义）
（17-22年报告，mHealth在中国已拥有超过7100万月活跃用户）

mHealth依赖用户个人数据和信息->被盗->存在**隐私悖论**privacy paradox（隐私关注和披露行为并存）->隐私及悖论可能会影响mHealth发展（理解隐私悖论很重要）

以往研究：悖论可能前因有跟风、情绪、个体认知特征、风险-收益计算…
目前已涵盖电子商务、社交媒体、OHC，但mHealth研究很少

RQ1: mHealth中是否存在隐私悖论？
RQ2: 如果存在，这种现象是如何产生的？

# 模型和理论

**多维发展理论：**社会学理论，主要解释了个人对隐私和隐私侵犯的看法。个人隐私关注的概念可以被描述为形象管理、环境影响和人际互动的结果。

**人际互动维度**侧重于个人与他人之间的关系，包括**信息管理**（个体如何管理他/她的个人信息）、**交互管理**（个体如何管理他/她与他人的互动）。

隐私计算

隐私疲劳

ELM

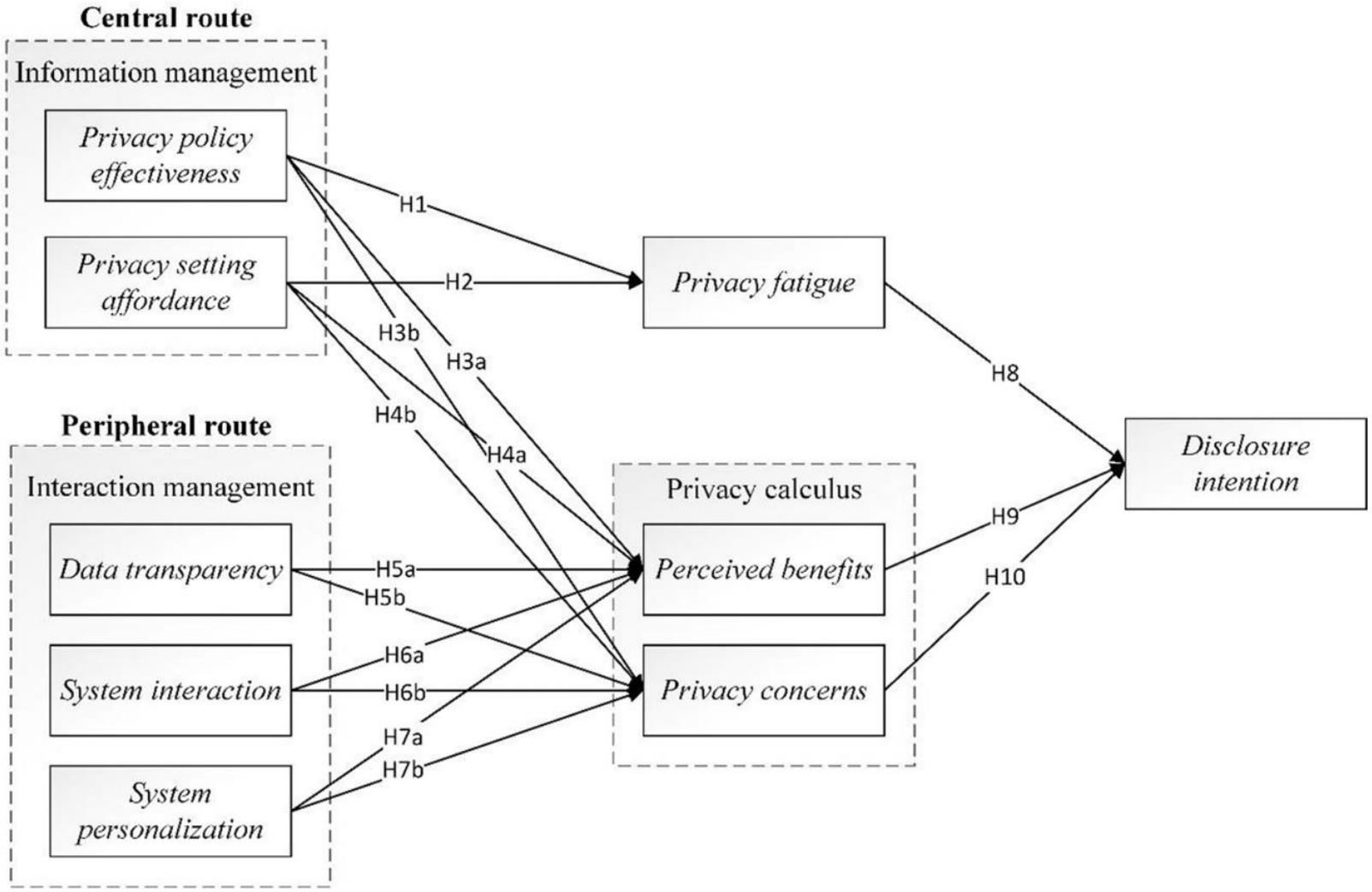


**Fig. 1.** Research model.

# 模型和假设（1）

**中心路径：**

H1 隐私政策有效性对隐私疲劳有负向影响

H2 隐私设置可及性对隐私疲劳有负向影响

H3a 隐私政策有效性对感知收益有正向影响

H3b 隐私政策有效性对隐私关注有负向影响

H4a 隐私设置可及性对感知收益有正向影响

H4b 隐私设置可及性对隐私关注有负向影响

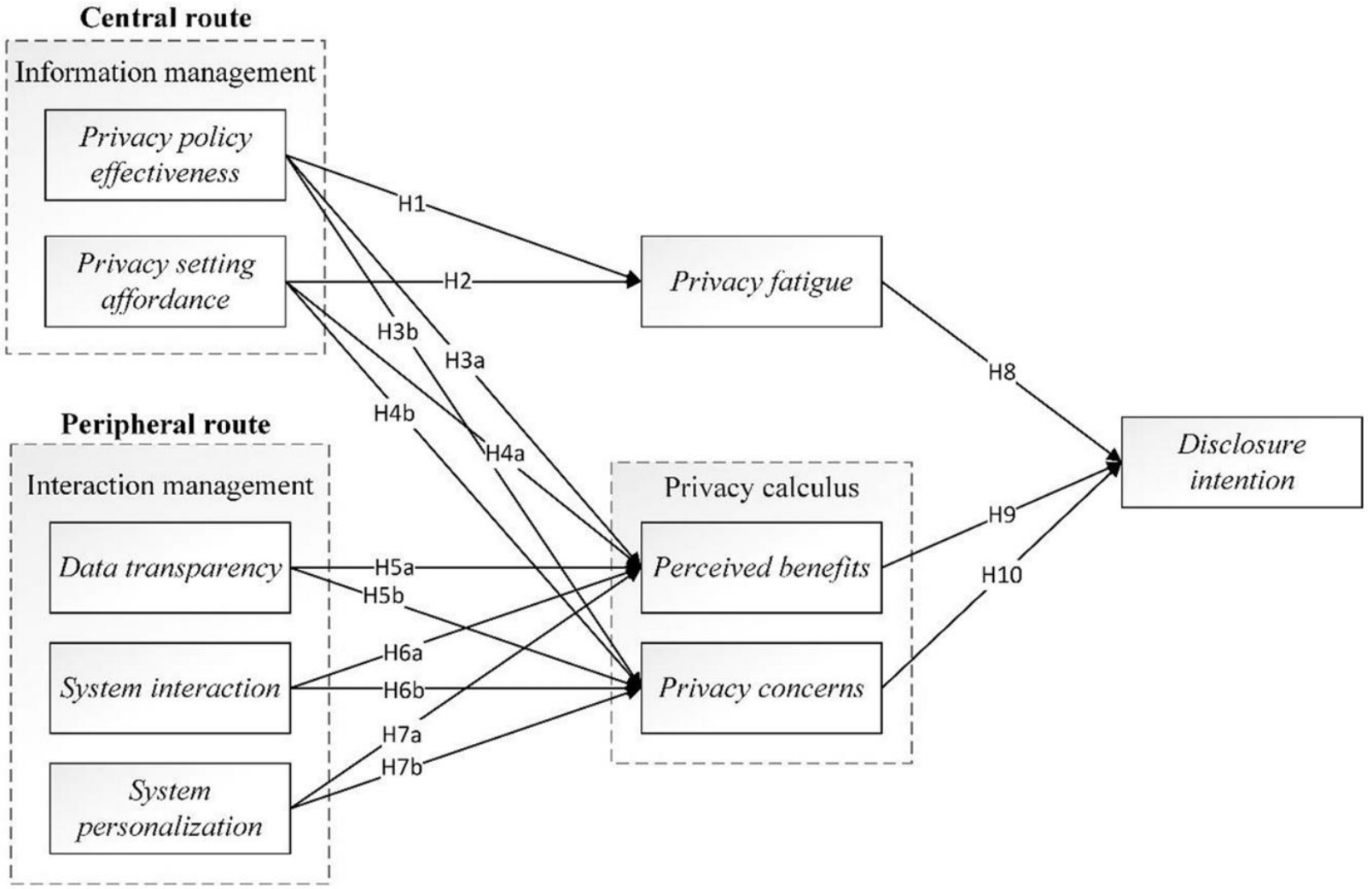


**Fig. 1.** Research model.

# 模型和假设（2）

**边缘路径：**

H5a 数据透明对感知收益有正向影响
H5b 数据透明对隐私关注有负向影响

H6a 系统交互对感知收益有正向影响
H6b 系统交互对隐私关注有正向影响
（无节制的信息传播增加了担忧）

H7a 系统个性化对感知收益有正向影响
H7b 系统个性化对隐私关注有正向影响
（个性化服务可能导致滥用）

H8 隐私疲劳对披露意图有正向影响
H9 感知收益对披露意图有正向影响
H10 隐私关注对披露意图有负向影响
H11 与隐私关注相比，感知到的收益对披露的影响会更大

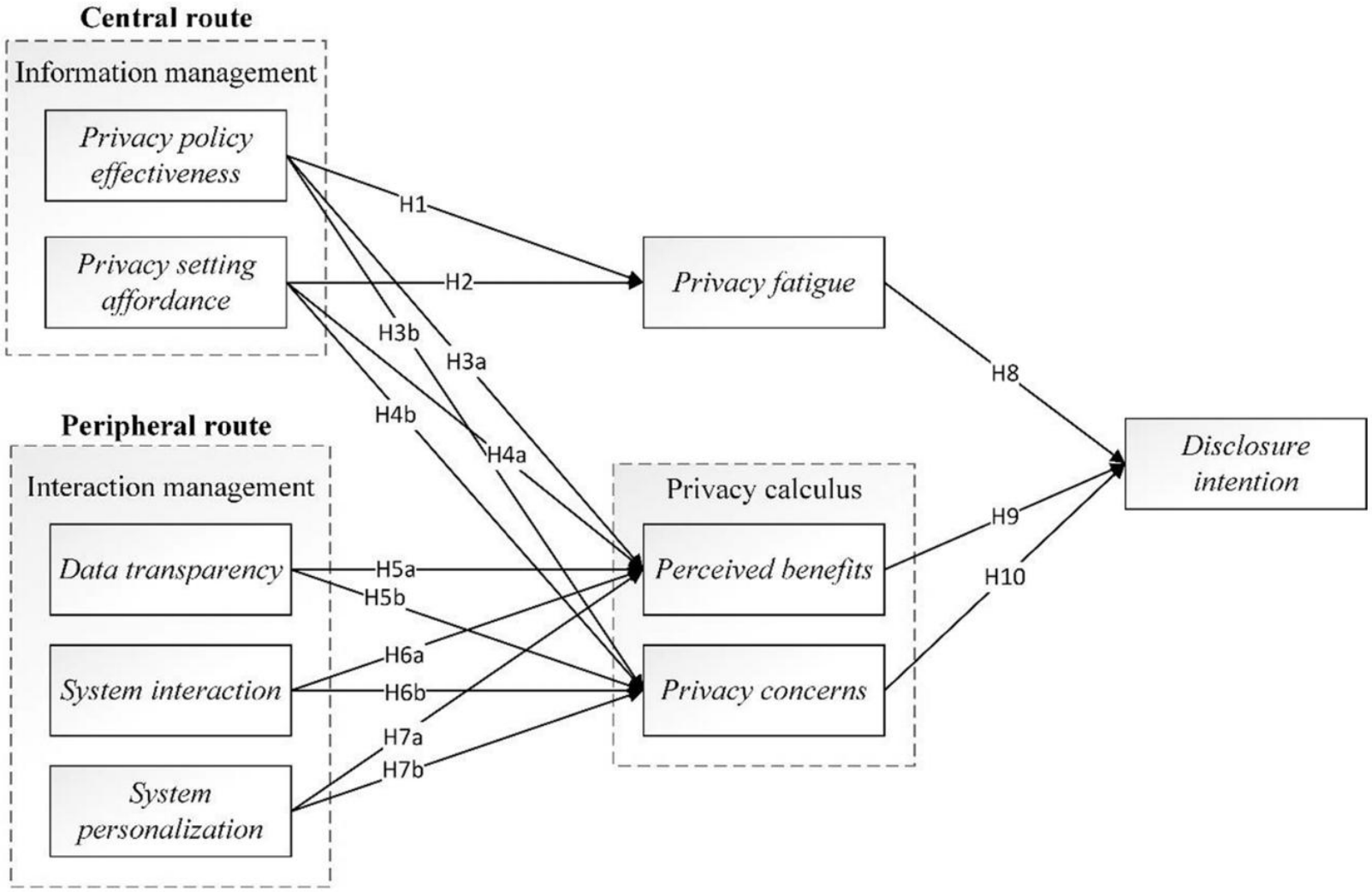


**Fig. 1.** Research model.

# 方法(1)

## 准实验设计：

1. 情景组合设计：八个情境的组合描述了基于正交实验设计的各个变量的不同属性
2. 情境材料设计：根据各种mHealth应用的实际隐私环境设计了文本材料和应用服务界面

*A-1. Situation combination design*

| | DT | SI | SP | PPE | PSA |
|---|---|---|---|---|---|
| 1 | H | H | L | L | H |
| 2 | L | H | H | L | H |
| 3 | L | L | L | H | H |
| 4 | H | H | L | H | L |
| 5 | L | L | L | L | L |
| 6 | L | H | H | H | L |
| 7 | H | L | H | H | H |
| 8 | H | L | H | L | L |

Note: H: high; L: low. DI = disclosure intention, SI = system interaction, SP = system personalization, PPE = privacy policy effectiveness, PSA = privacy setting affordance.

# 方法(2)

| 变量 | 等级 | 描述 |
|---|---|---|
| **DI** | H | 当你想查看A应用收集的身体数据，发现**首页上有一个专门的监测数据页面**，显示你的实时身体数据，包括步数、体重、血压、睡眠和体温。每张数据卡的右侧都标注了**数据来源**。血压卡的子页面显示详细的血压值，页面下方附有采集血压值的**目的和相关说明**。 |
| | L | 当你想查看A应用采集的身体数据，发现**没有设置统一的监测数据显示页面**。你花了5分钟在零散的功能页面中查看，每个页面除了数据值外，**没有任何明确的信息**。 |
| **SI** | H | 你有一些健康问题想求助。A应用**包括系统交互功能，如信息发布、话题、点赞、评论、私信等**。当你看到有人发布与体脂率相关的话题时，你可以选择私信提出相关问题并得到回复。 |
| | L | 你有一些健康问题想求助，发现A应用**没有开通社区、即时通讯等相关功能**。 |
| **SP** | H | A应用提供了首页信息推荐、训练计划推荐、健康提示等。系统可以根据您的健康记录数据和历史浏览信息生成您的偏好，并自动匹配出您可能感兴趣或对您有用的相关内容，**页面的标签中有 "个性化定制"和 "推荐 "**。 |
| | L | A应用中的健康内容和服务（包括信息、训练内容、健康提示等）**对所有用户都是一致的** |
| **PPE** | H | 首次使用A应用时，会在**醒目位置**提供非常**完整、详细**的数据隐私政策指南。A应用首次使用您的相关数据时，会弹出相关政策，并给出相应的保护提示。在政府每年公布的隐私政策合规性评估中，**A应用排名第一**。如果有用户对A应用的数据隐私政策提出疑问或质疑，A应用会**有专职服务人员详细解答**。 |
| | L | 首次使用A应用时，会在登录按钮旁边显示 "点击登录，同意A应用的所有隐私协议 "的**小字**。有媒体指出，A应用隐私协议中**存在明显的 "霸王条款"**。很多网友对A应用的隐私政策有疑问，**也没有听到公开回应**。 |
| **PSA** | H | 当你想修改A应用的隐私设置，发现**隐私入口设计在个人设置页面的醒目位置，层次清晰，说明明确**。在权限设置中，用户可以控制应用使用和查看位置、摄像头、相册等系统权限功能；在隐私权限设置中，用户可以控制应用是否允许通过通讯录、微博找到我以及附近的人是否有中等隐私权限功能。 |
| | L | 你想改变A应用的隐私设置，但**花了5分钟才在应用中找到隐私设置的入口**，所以你不得不放弃。 |

*Note: H: high; L: low. DI = disclosure intention, SI = system interaction, SP = system personalization, PPE = privacy policy effectiveness, PSA = privacy setting affordance.*

# 量表

李克特5点

## Appendix B. Measurement items

| Construct/source | Items |
|---|---|
| Data transparency (Karwatzki et al., 2017) | 1. I can quickly learn about the data collected by A health<br>2. I can quickly learn about the sources of data collected by A health<br>3. I can quickly understand the purposes of collecting data for A health |
| System interaction (Johnson et al., 2006) | 1. I can interact with other users' health information through A health<br>2. I can strengthen my contact with other users through A health<br>3. A health can let other users know my health |
| System personalization (Mothersbaugh et al., 2012) | 1. In general, I think A health can flexibly serve me according to my wishes<br>2. A health can adjust the service and content according to my specific needs<br>3. I can create a training plan and health information suitable for my own needs and preferences with A health. |
| Privacy policy effectiveness (Li et al., 2016) | 1. I think it's effective to show the privacy policy of A health<br>2. I think privacy policy of A health is compliant<br>3. I think the protection promised in A health is effective |
| Privacy setting affordance (Grange, 2013; Grgecic et al., 2015) | 1. I can easily find the privacy switch I need to set in A health<br>2. The process of viewing the privacy management system and using it in A health consumes less energy and time for me<br>3. The privacy system function of A health let me know how to control my privacy information<br>4. Every privacy function and information annotation of A health are well understood |
| Privacy concern (Smith and Burke, 1996; Xu et al., 2012) | 1. Using A health, I'm afraid my privacy will be violated<br>2. Using A health, I'm worried that my personal information will be over collected<br>3. Using A health, I'm worried that my personal information will be accessed without authorization<br>4. Using A health, I'm worried that my daily operations will be tracked and monitored |
| Perceived benefits (Xu et al., 2011) | 1. A healths services and functions help me save time searching for useful health information<br>2. A healths services and functions provide me with instant and convenient health information<br>3. A healths services and functions can effectively help me achieve my fitness goals<br>4. In general, the services and functions of A health are beneficial to me |
| Privacy fatigue (Choi et al., 2018) | 1. Dealing with privacy in A health is exhausting<br>2. I'm not in a good mood when I'm dealing with the privacy issues in A health<br>3. I'm not so interested in the privacy issues of the A health<br>4. I have doubts about the significance of privacy in the A health |
| Disclosure intention (Li et al., 2016; Bansal et al., 2010) | 1. In order to use the services of A health, I would like to disclose relevant data<br>2. In order to use the service of A health, I will probably disclose relevant information<br>3. In order to use the services of A health, I tend to provide relevant data |

# 方法（2）

- **样本**：微信、微博和QQ收集
  - 预调查：收集80份问卷（每个场景10份），有效68份，并修改
  - 正式调查：收集到393份，有效251
  - 样本的人口特征与市场调查中mHealth用户特征一致（受过高等教育的年轻人）

- 分析：PLS-SEM

SmartPLS v3.0

样本数据不符合正态分布

模型较复杂

**Table 1**

Demographics.

| Variable | Items | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 101 | 40.20% |
| | Female | 150 | 59.80% |
| Age | Under 18 | 2 | 0.80% |
| | 18–25 | 143 | 57.00% |
| | 26–30 | 38 | 15.10% |
| | 31–40 | 38 | 15.10% |
| | 41 and above | 30 | 12.00% |
| Education | High school | 10 | 4.00% |
| | College | 24 | 9.60% |
| | bachelor | 122 | 48.60% |
| | Master | 83 | 33.10% |
| | Ph.D. and above | 12 | 4.80% |
| Experience with mHealth applications | 1–6 months | 82 | 32.70% |
| | 6–12 months | 26 | 10.40% |
| | 1–2 years | 37 | 14.70% |
| | 2–3 years | 29 | 11.60% |
| | Over 3 years | 27 | 10.80% |
| | Never | 50 | 19.90% |
| Used applications(*Top 5*) | Keep | 162 | 62.80% |
| | Xiaomi sport | 68 | 26.40% |
| | Apple health | 53 | 20.50% |
| | Huawei health | 50 | 19.40% |
| | Yuedong sport | 45 | 17.40% |

# 结果：测量模型

**共同方法偏差：**Harman的单因素检验，发现特征值大于1的因子有8个，解释了82.40%的方差，说明共同方法方差并不明显

**Table 2**
Results of confirmatory factor analysis.

| Construct | Items | Cronbach's Alpha | CR | AVE |
|---|---|---|---|---|
| DI | 3 | 0.705 | 0.843 | 0.628 |
| PPE | 3 | 0.953 | 0.970 | 0.915 |
| DT | 3 | 0.921 | 0.950 | 0.864 |
| PB | 4 | 0.924 | 0.946 | 0.815 |
| PC | 4 | 0.953 | 0.966 | 0.876 |
| PF | 3 | 0.863 | 0.901 | 0.752 |
| PSA | 3 | 0.967 | 0.979 | 0.939 |
| SI | 3 | 0.954 | 0.970 | 0.915 |
| SP | 3 | 0.948 | 0.967 | 0.906 |

**Notes:** DI = disclosure intention, PPE = privacy policy effectiveness, DT = data transparency, PB = perceived benefits, PC = privacy concerns, PF = privacy fatigue, PSA = privacy setting affordance, SI = system interaction, SP = system personalization, CR = Composite Reliability, AVE = Average Variance Extraction.

**测量模型：**

- 克朗巴哈系数α>0.7，CR>0.7表示内部一致性好
- AVE>0.5，表示良好的收敛效度
- 各构面的AVE的平方根高于构面之间的相关系数，表示通过区别效度
- 未报告因子载荷（预调查后删除了因子载荷低的）

# 结果： 关系散点图

RQ1: mHealth中隐私悖论是否存在

参考已有研究，图中的象限代表隐私实用主义者pragmatists （左上）、隐私冷漠者apathy （左下）、隐私悖论者（右上）和隐私守护者guardians （右下）

可以观察到：
图中的散点集中在右上方区域，这意味着相当一部分受访者表现出高度的隐私关注，并倾向于向mHealth披露他们的信息。

因此，在这种情况下，隐私悖论的存在被证实了

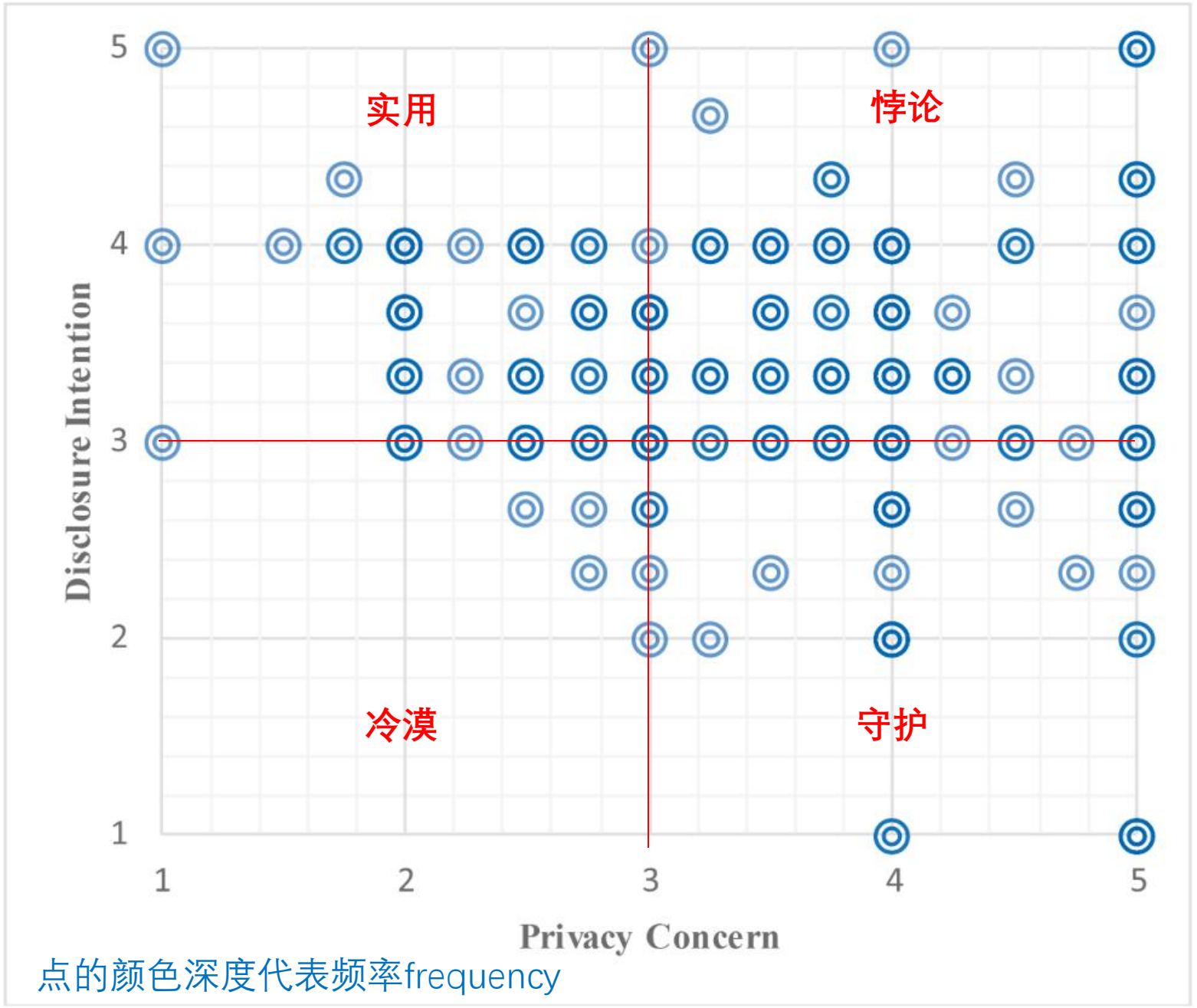


**Fig. 2.** Scatter diagram of privacy concern/disclosure intention.

# 结果：结构模型（1）

**中心路径：**

H1 隐私政策有效性对隐私疲劳有负向影响**S**

H2 隐私设置可及性对隐私疲劳有负向影响**S**

H3a 隐私政策有效性对感知收益有正向影响**S**

H3b 隐私政策有效性对隐私关注有负向影响**S**

H4a 隐私设置可及性对感知收益有正向影响**S**

H4b 隐私设置可及性对隐私关注有负向影响**S**

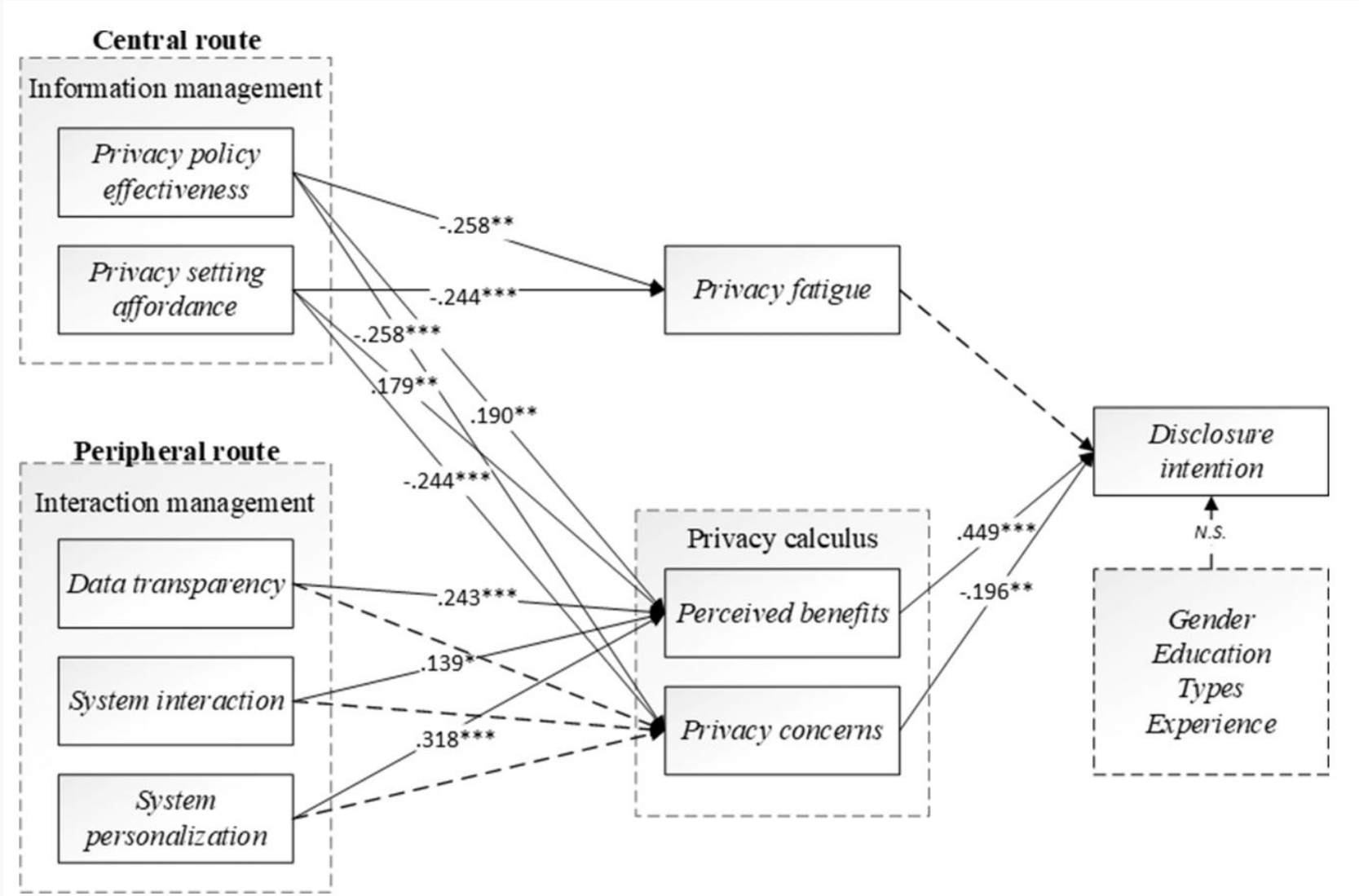


**Fig. 3.** Results of structural model (*$p < 0.05$,**$p < 0.01$,***$p < 0.001$, *N.S.*, Not significant).

模型具有良好的拟合效果（R2在0.16到0.50之间，Q2在0.13到0.39之间）

# 结果：结构模型（2）

**边缘路径：**

H5a 数据透明对感知收益有正向影响S
H5b 数据透明对隐私关注有负向影响N

H6a 系统交互对感知收益有正向影响S
H6b 系统交互对隐私关注有正向影响N

H7a 个性化对感知收益有正向影响S
H7b 个性化对隐私关注有正向影响N

H8 隐私疲劳对披露意图有正向影响N
H9 感知收益对披露意图有正向影响S
H10 隐私关注对披露意图有负向影响S
H11 与隐私关注相比，感知收益对披露意图的影响会更大S（比较|路径系数|）

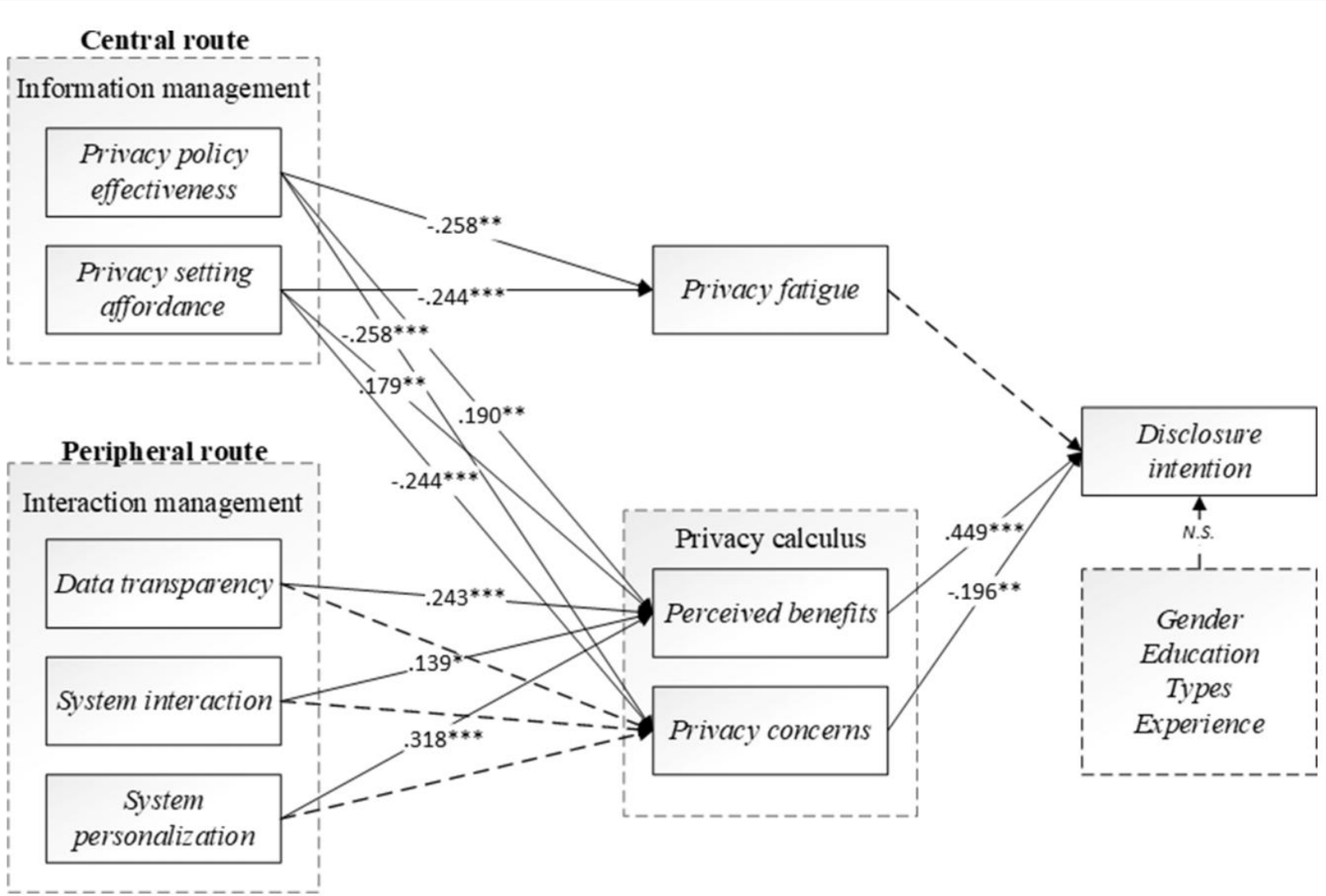


**Fig. 3.** Results of structural model (*$p < 0.05$,**$p < 0.01$,***$p < 0.001$, *N.S.*, Not significant).

# 结果：中介

- 考虑到样本数据不符合正态分布，且数据量较小，采用bootstrapping（n=1000）进行检验

**Table 4**
Results of the mediating effect.

| IV | MV | DV | Direct effect | Indirect effect | Sig. | Types of mediation |
|---|---|---|---|---|---|---|
| DT | PC | DI | −0.077 | −0.018 | N.S. | No |
| SI | | | 0.123 | 0.000 | N.S. | No |
| SP | | | −0.087 | 0.000 | N.S. | No |
| PPE | | | 0.149+ | 0.036+ | * | Partial |
| PSA | | | 0.122+ | 0.034+ | * | Partial |
| DT | PB | | −0.077 | 0.095** | ** | Full |
| SI | | | 0.123 | 0.058+ | * | Full |
| SP | | | −0.084 | 0.123** | ** | Full |
| PPE | | | 0.149+ | 0.076* | * | Partial |
| PSA | | | 0.122+ | 0.072* | * | Partial |
| PPE | PF | | 0.149+ | −0.012 | N.S. | No |
| PSA | | | 0.122+ | −0.030 | N.S. | No |

IV: independent variables; MV: mediating variables; DV: dependent variable; Sig.: significance; $^{+}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

DT = data transparency, SI = system interaction, SP = system personalization, PPE = privacy policy effectiveness, PSA = privacy setting affordance, PC=concern, PB=benefit, PF=fatigue

# 讨论

**主要发现：**

1. 与隐私关注相比，感知收益对披露意向有更大的影响
2. 交互管理功能对感知收益有明显的正向影响，对隐私关注没有明显影响（IS理解较弱、交互设计在其他场景已经广泛使用、披露不会造成严重后果等）
3. 隐私疲劳并没有促进用户的披露意向，可能是由于用户对mHealth投资的沉没成本较低。（在微信、QQ等场景中，用户已经投入了大量的时间、金钱和精力，甚至与其他用户有很深的社交联系，导致沉没成本非常高。在这类应用中，隐私疲劳作为一种应对机制，会促进披露行为。然而， mHealth是不同的，近40%的mHealth用户产生了低沉没成本（表1），这些用户一旦出现负面情绪，就可能选择停止使用该应用）

建议：mHealth的设计者应该优化其交互功能以提高用户的感知收益

**局限：**

样本局限（20-30岁的学生；中国样本，可能存在文化特征的影响）

本文研究mHealth内部功能特征，未来外部因素和个人因素

思考：医疗健康领域，疲劳->披露不显著？

**[3] JAMES T L, CALDERON E D V, BELANGER F, et al. The mediating role of group dynamics in shaping received social support from active and passive use in online health communities[J]. INFORMATION & MANAGEMENT, 2022,59(3).**

期刊：INFORMATION & MANAGEMENT (Q1/IF:10.328)

Received 6 April 2021, Revised 22 January 2022, Accepted 25 January 2022, Available online 29 January 2022, Version of Record 3 February 2022.

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# 背景

1. 很多研究表明OHC交换社会支持有助于改善患者健康、提升健康知识和改善行为

->**下一步应该确定促进OHC社会支持的特征**（OHC的特征）**目前还没搞清**

2. IS很少强调哪些因素会↑或↓

- ↑提供支持的因素：拥有可分享的健康知识、同情心或互惠性；社会资本
- ↑寻求支持的因素：社会认同、健康严重程度、渠道丰富性；社会资本；社会关系

->本文聚焦**接收到的社会支持的因素**

亮点：借鉴了心理治疗研究中的团体动力学研究（在面对面团体治疗中有益），检验了**凝聚力、利他主义和普遍性**这三种团体动力特征在OHC（为人们营造社会支持）中的作用

RQ1. OHC主动使用（即分享信息）和被动使用（即消费信息）是否都会导致用户接收到的社会支持的相似感知？

RQ2. 3个团体动力特征在主动/被动使用与接收到的社会支持之间是如何中介的？
研究对象：至少有一种慢性病的人（最有可能广泛使用OHC的人群）

# 团体动力学

定义：

发生在团体（群体）内部及团体之间的行为（信息消费和分享）、过程和变化

| | |
|---|---|
| OHC cohesiveness [12, p. 9, 26, p. 237] | User perception that the OHC has “emotional closeness among members; members’ caring and empathy toward each other; and members’ positive regard for what others feel, think, and do.” |

凝聚力Cohesiveness：归属感、情感依恋

成员之间的情感亲近；社区的归属感；对其他成员的关心和同情；成员对他人的感受、想法和行为的积极关注

| | |
|---|---|
| OHC altruism [26, p. 237] | User perception that the OHC “fulfills the need of group members to feel that they have something to offer other people and that they are needed by others.” |

利他主义Altruism：被需要、目标感

感到自己对他人有帮助并被他人所需要

| | |
|---|---|
| OHC universality [26, p. 237] | User perception that the OHC “gives group members a feeling that they are not alone in their experiences and life issues.” |

普遍性universality：安慰、减少孤独

当一个人因疾病或遭遇感到痛苦时，发现并非我一人，不会感到孤独或唯一(self-support小组same boat)

本文提出：如果用户的行为导致了对OHC团体动态的积极感知，他们就会从OHC感到获得了更多的社会支持

# 模型和假设（1）

H1a. OHC信息消费与接收到的社会支持正相关
H1b. OHC信息分享与接收到的社会支持正相关

**被动使用：**信息消费/潜水（关注他人，如：浏览、阅读）

**主动使用：**信息分享（主动创造，如：点赞、评论、发帖）

**接收到的社会支持：**工具性支持、信息支持、情感支持、社会交互（共同的兴趣和活动，以获得乐趣和消遣）

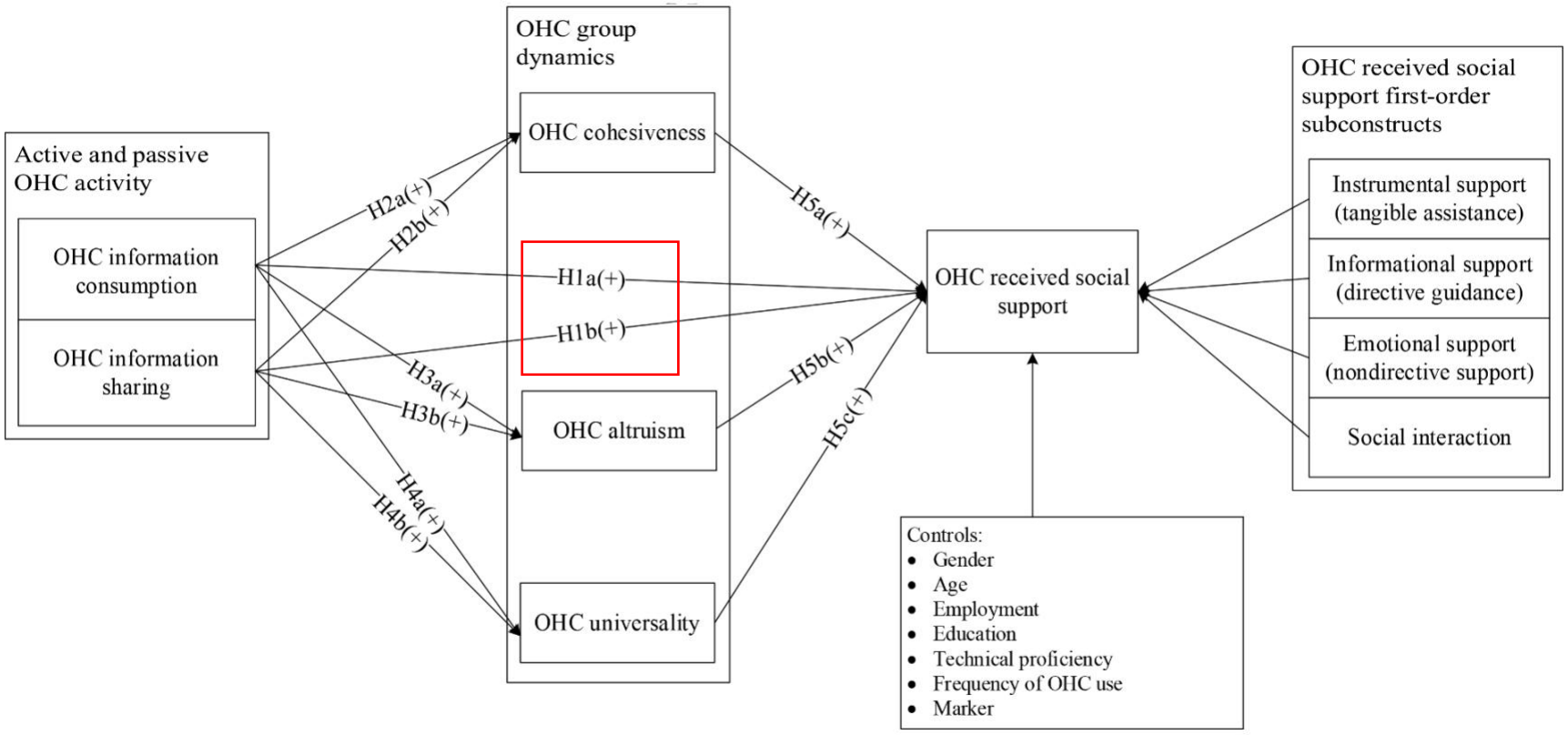



**Fig. 1.** Online health community social support model.

| | |
|---|---|
| OHC received social support (social interaction) [3, p. 140] | User perception that they have received "joking and kidding, talking about interests, and engaging in diversionary activities" from their online health community. |

# 模型和假设（2）

H2a-b. 信息消费和信息共享与凝聚力正相关
H3a-b. 信息消费和信息共享与利他主义正相关
H4a-b. 信息消费和信息共享与普遍性正相关

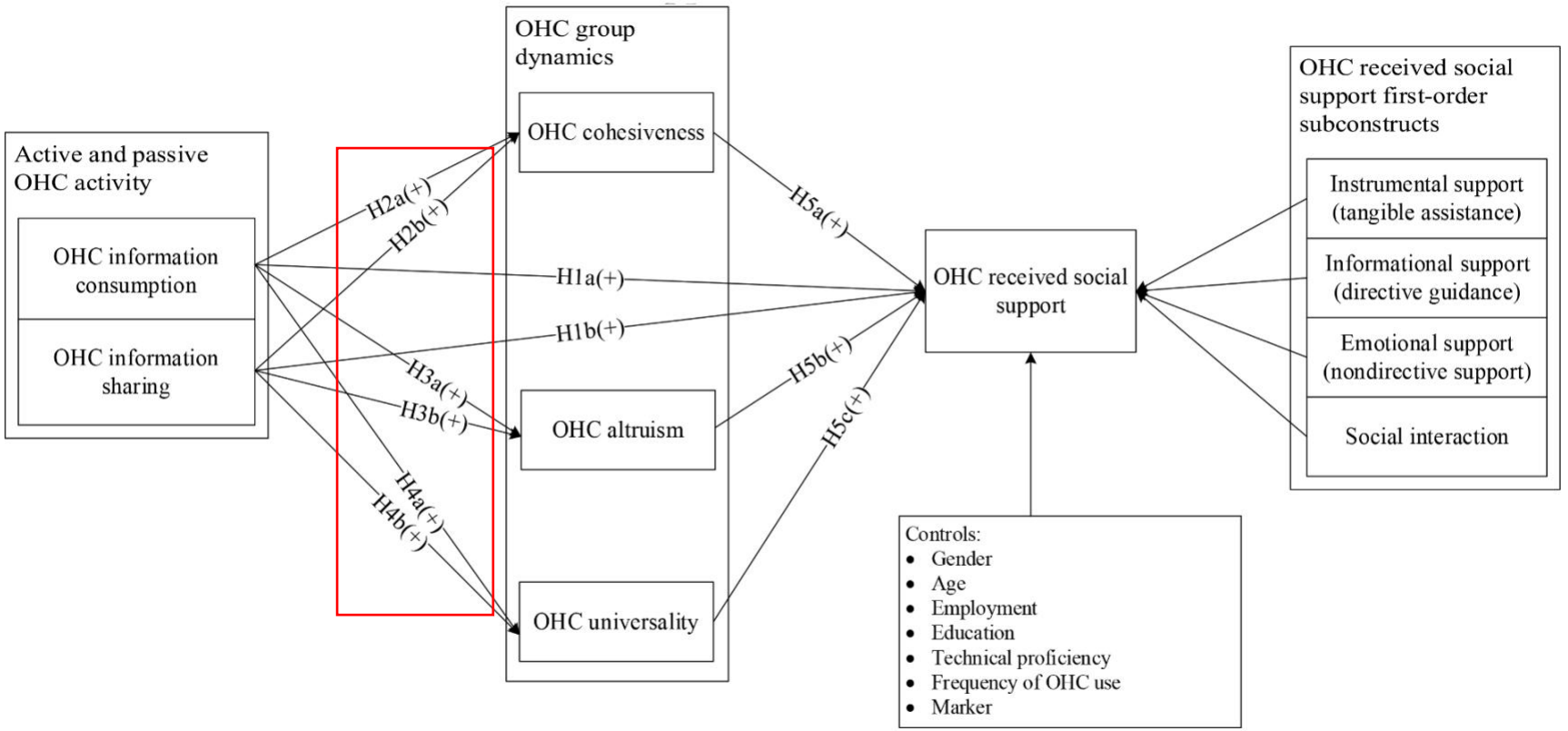



**Fig. 1.** Online health community social support model.

**消费/分享->凝聚力**

- 阅读他人所面临的疾病斗争，感到与团体成员更亲近，不需要对话
- 活跃的成员更有归属感

**消费->利他**

- 刚确诊疾病的患者普遍很受挫，这时候，浏览别人的帖子会感受到**被他人需要或重视**，对这些患者来说是有益的，给他们创造**目标感**；一项OHC研究发现，参与（分享、消费）与给予他人的帮助呈正相关

**消费->普遍性**

- 通过阅读别人的帖子，他们感到不那么孤独，心态更加平和

# 模型和假设（3）

H5a-c. 凝聚力、利他主义和普遍性与接收到的社会支持正相关

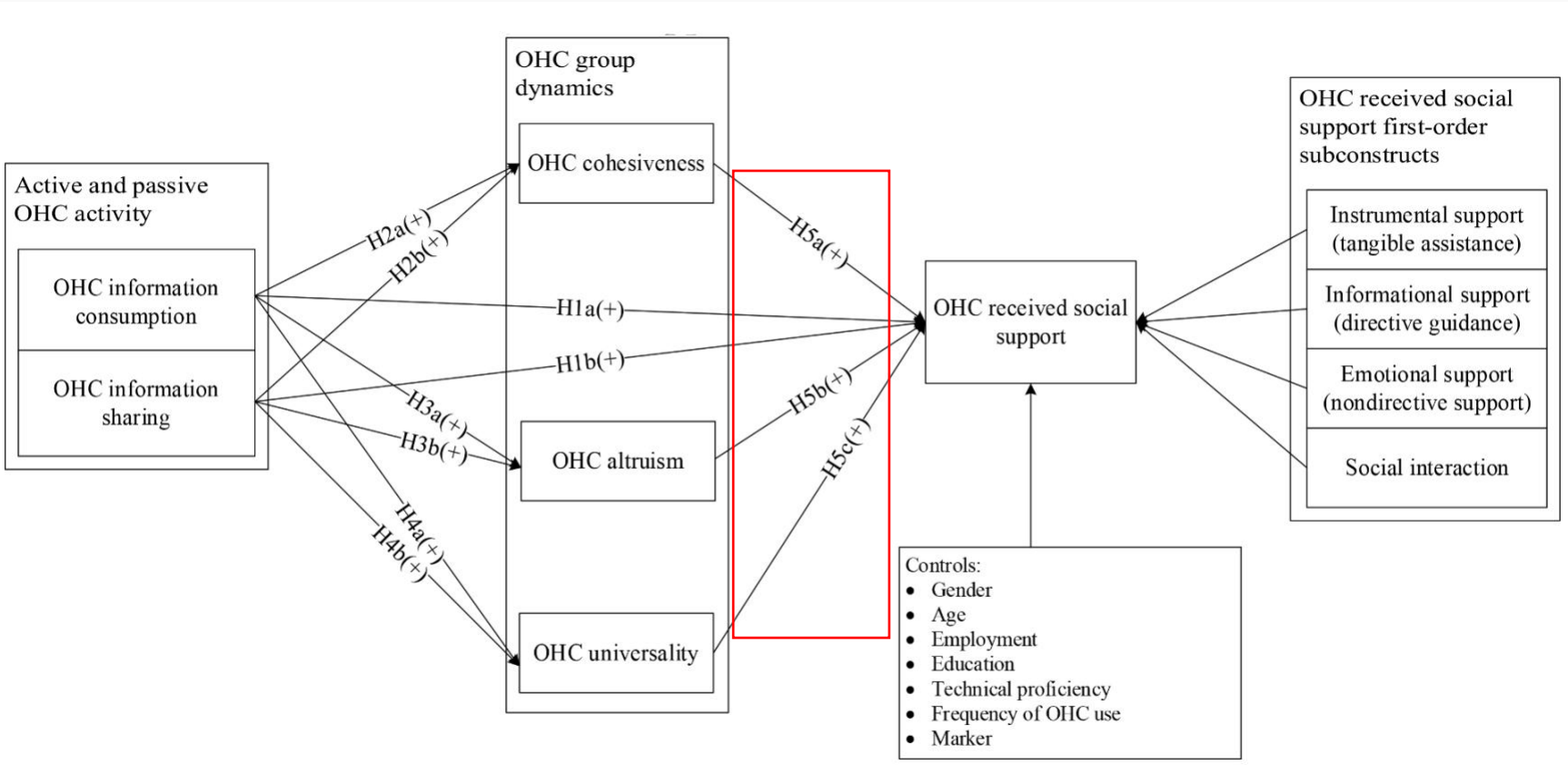



**Fig. 1.** Online health community social support model.

- OHC被认为越有凝聚力，它们提供的社会支持水平就越高
- 给予和接受帮助都能带来更好的心理健康
- 普遍性对癌症患者/残疾人/艾滋病人是有益的，意识到其他人有类似的问题，寻求到安慰

# 量表

| | | |
|---|---|---|
| **Cohesiveness** | COH1 | I feel a sense of belongingness to my online health community. |
| | COH2 | I feel that my online health community accepts me. |
| | ~~COH3~~ | ~~I feel like keeping in touch with the other members of my online health~~ community. |
| | COH4 | I feel that after revealing embarrassing things about myself, I am still accepted by my online health community. |
| | COH5 | My online health community makes me feel that I am not alone. |
| | COH6 | I feel that I belong to a group of people (my online health community) who understand and accept me. |
| | COH7 | My online health community has helped me learn that I am not the only one with my type of problem (i.e., "We're all in the same boat"). |
| | ~~COH8~~ | ~~My online health community helps me see that I am just as well off~~ as other people. |
| | COH9 | My online health community has helped me learn that others have some of the same "bad" thoughts and feelings as I. |
| | COH10 | My online health community has helped me learn that others have similar experiences to mine. |
| | COH11 | My online health community has helped me learn that I am not very different from other people. |
| | ~~COH12~~ | ~~My online health community gives me a "Welcome to the human race~~" feeling. |
| **Altruism** | ALT1 | I feel that helping others in my online health community has given me more self-respect. |
| | ALT2 | My online health community has helped me feel like putting others' needs before my own needs. |
| | ALT3 | I sometimes forget about myself and think of helping others in my online health community. |
| | ALT4 | I give part of myself to others in my online health community. |
| | ALT5 | I feel that I am helping others in my online health community and have an important impact in their lives. |

Likert7

| | | |
|---|---|---|
| **Universality** | UNI1 | My online health community has helped me recognize that life is at times unfair and unjust. |
| | UNI2 | My online health community has helped me recognize that ultimately there is no escape from some of life's pain. |
| | ~~UNI3~~ | ~~My online health community has helped me recognize that no matter how close~~ I get to other people, I must still face life alone. |
| | UNI4 | My online health community has helped me learn that by facing the basic issues of my life and death, I am more able to live my life more honestly and be less caught up in trivialities. |
| | UNI5 | My online health community has helped me learn that I must take ultimate responsibility for the way I live my life no matter how much guidance and support I get from others. |

**Prompt:** On your online health community, how often do you? [7-point Likert-type scales from 1 = "Never" to 7 = "Every time"]

| | | |
|---|---|---|
| **Social information consumption** | SICF1 | Look through the comments. |
| | SICF2 | Read information other people have posted. |
| | SICF3 | Click through the content the members have shared (such as photos, videos). |
| | SICF4 | Browse the content others have shared. |
| **Social information sharing** | SISF1 | React to posts of other members (e.g., by commenting, "liking," etc.). |
| | SISF2 | Post something (e.g., opinion, information, photos, links, etc.). |
| | SISF3 | Keep the other members updated about yourself. |

| | |
|---|---|
| Marker1 | All in all, I am satisfied with my job. |
| Marker2 | In general, I don't like my job. (R) |
| Marker3 | In general, I like working here. |

Likert5

| | |
|---|---|
| At1 | Please answer "Slightly True for Me" to this question. |
| At2 | The United States of America is on the continent of Asia. |
| At3 | If 2+3 = 5, then select "Agree" for this question. |

- 两位专家对题项的可读性进行评估，修改措辞
- 随机化题项

# 问卷收集

| | | |
|---|---|---|
| **Instrumental support** | IS1 | Give you some information on how to do something. |
| | IS2 | Help you understand why you didn't do something well. |
| | IS3 | Suggest some action that you should take. |
| | IS4 | Give you feedback on how you were doing without saying it is good or bad. |
| | IS5 | Give you some information to help you understand a situation you are in. |
| | IS6 | Check back with you to see if you followed the advice you were given. |
| | IS7 | Teach you how to do something. |
| | IS8 | Tell you what to expect in a situation that is about to happen. |
| Likert6/频率 | IS9 | Tell you what she/he did in a situation that was similar to yours. |
| | IS10 | Tell you how he/she felt in a situation that was similar to yours. |
| | IS11 | Assist you in setting a goal for yourself. |
| | IS12 | Say things that make your situation clearer and easier to understand. |
| **Emotional support** | ES1 | Tell you that she/he feels very close to you. |
| | ES2 | Let you know that he/she will always be around if you need assistance. |
| | ES3 | Tell you that you are OK just the way you are. |
| | ES4 | Express interest and concern in your well-being. |
| | ES5 | Comfort you. |
| | ES6 | Help you through a stressful situation. |
| **Social interaction** | SI1 | Do some activity with you to help you get your mind off of things. |
| | SI2 | Talk with you about some interests of yours. |
| | SI3 | Joke and kid around to try to cheer you up. |
| | SI4 | Let you know that you are doing something well. |
| **Tangible support** | TS1 | Give you money. |
| | TS2 | Loan you money. |
| | TS3 | Help you get financial assistance. |
| | TS4 | Loan or give you something (a physical object other than money) that you needed. |

样本：Amazon Mechanical Turk众包平台

预调查：N=150

标准：

- 至少有一种慢性病
- 至少使用一种OHC
- 至少年满18岁（机构审查委员会的要求）

正式调查：有效N=505

1. 有1409人尝试参加调查
2. 135人没有通过第一个过滤问题，即询问他们是否有慢性病且使用OHC
3. 年龄排除6人
4. 要求说明有哪些慢性病和使用哪些OHC
5. 注意力陷阱（3个），排除92人

# 样本

PLS偏最小二乘
SmartPLS v3.3.3

**Table 2**
Technical exposure of sample ($n$= 505).

| Technical proficiency | | Frequency of OHC use | | Examples of online health communities used | |
|---|---|---|---|---|---|
| Novice | 17 | Several times a day | 45 | epilepsy.com | http://www.epilepsy.com/connect |
| Intermediate | 163 | Once a day | 66 | Reddit | https://www.reddit.com/r/CrohnsDisease/ |
| Advanced | 246 | Several times a week | 173 | Daily Strength | https://www.dailystrength.org |
| Expert | 79 | Once a week | 87 | This Is MS | thisisms.com/forum |
| | | Several times a month | 82 | Living With Fibromyalgia | http://www.livingwithfibro.org/ |
| | | Once a month | 33 | Crohn's and colitis community | ccfacommunity.org |
| | | Less than once a month | 19 | Our neuropathy friends | https://www.facebook.com/pages/Our-Neuropathy-Friends/1470166936552772 |

Ps：↑也报告了最终样本的技术熟练程度（新手/中级…)和使用OHC的频率

**Table 1**
Chronic disease profile of sample ($n$= 505).

| Chronic disease | | "Other" conditions | |
|---|---|---|---|
| Alzheimer's disease and related dementia | 2 | Acid reflux | Gout |
| Arthritis (osteoarthritis and rheumatoid) | 28 | ADD | Hidradenitis suppuativa |
| Asthma | 74 | Addison's disease | Hyperemesis gravidarum |
| Atrial fibrillation | 2 | Advanced pulmonary fibrosis | Idiopathic intercranial hypertension |
| Autism spectrum disorders | 7 | Alopecia | Limb-girdle muscular dystrophy |
| Cancer | 14 | Ankylosing spondylitis | Lofgren's syndrome and sarcoidosis |
| Celiac disease | 22 | Anxiety | Lyme disease |
| Chronic fatigue syndrome | 18 | Arnold–Chiari malformation | Meniere's disease |
| Chronic obstructive pulmonary disease (COPD) | 2 | Ataxia | Medium chain Acyl-CoA Dehydrogenase deficiency |
| Diabetes | 66 | Autoimmune disorder | Narcolepsy, Addison's, & Parkinsonism |
| End-stage renal disease (ESRD) | 4 | Bipolar disorder | OCD |
| Epilepsy | 14 | Bronchiectasis | PCOS |
| Fibromyalgia syndrome | 31 | Chronic knee joint pain | Peripheral neuropathy |
| Heart failure | 11 | Chronic migraines | Pituitary tumor |
| Hepatitis (chromic viral B & C) | 5 | Chronic pain | Polycystic ovarian syndrome |
| HIV/AIDS | 11 | Chronic uterine fibroids | Polymyositis |
| Hyperlipidemia (high cholesterol) | 3 | Complex regional pain syndrome | Psoriasis |
| Hypertension (high blood pressure) | 38 | Costochondritis | PTSD |
| Hyperthyroidism, PKU (Phenylketonuria) | 22 | Crohn's disease | Rheumatoid disease |
| Inflammatory bowel diseases | 11 | Depression | Scoliosis |
| Multiple sclerosis | 13 | Diseases of the spine | Severe allergies |
| Osteoporosis | 0 | Dysautonomia | SI joint dysfunction |
| Parkinson's disease | 0 | Dystonia/ dysphonia | Sjogren's syndrome |
| Stroke | 1 | Eczema | Systemic mastocytosis |
| Systemic lupus erythematous | 4 | Ehlers–Danlos syndrome | Tourette syndrome |
| Other | 102 | Endometriosis | Trigeminal neuralgia |
| | | Ulcerative colitis | Vitiligo |

**Table 3**
Sample demographic information ($n$= 505).

| Age distribution | | Gender | | Employment | | Education | |
|---|---|---|---|---|---|---|---|
| 18–21 yrs. | 17 | Male | 170 | Employed full time | 341 | Grade school (K–8 grade) | 1 |
| 22–24 yrs. | 49 | Female | 335 | Employed part time | 95 | High school or equivalent (e.g., GED) | 34 |
| 25–27 yrs. | 84 | | | Not employed | 69 | Some college credit, no degree | 118 |
| 28–30 yrs. | 54 | | | | | Trade/ technical/ vocational training | 14 |
| 31–35 yrs. | 107 | | | | | Associate degree | 62 |
| 36–40 yrs. | 66 | | | | | Bachelor's degree | 196 |
| 41–50 yrs. | 66 | | | | | Master's degree | 63 |
| 51–60 yrs. | 43 | | | | | Professional degree | 8 |
| 61 + yrs. | 19 | | | | | Doctorate degree | 9 |

# 测量模型

## 1. 收敛和区别效度

- Outer loading（删除UNI3）
- cross-loading（删除COH3, COH8, COH12 ）
- 各构面的AVE的平方根>构面之间的相关系数
- HTMT异质-单质比率（两构面间的HTMT不能大于0.85 ）

**Table B.4. Heterotrait-Monotrait Ratio (HTMT)**

| Construct | IS | ES | SI | TS | COH | ALT | UNI | SICF | SISF |
|---|---|---|---|---|---|---|---|---|---|
| IS | | | | | | | | | |
| ES | 0.899 | | | | | | | | |
| SI | 0.888 | **0.997** | | | | | | | |
| TS | 0.435 | 0.459 | 0.579 | | | | | | |
| COH | 0.620 | 0.602 | 0.481 | 0.356 | | | | | |
| ALT | 0.611 | 0.699 | 0.652 | 0.262 | 0.777 | | | | |
| UNI | 0.558 | 0.543 | 0.471 | 0.203 | 0.781 | 0.771 | | | |
| SICF | 0.489 | 0.396 | 0.347 | 0.204 | 0.535 | 0.387 | 0.434 | | |
| SISF | 0.568 | 0.626 | 0.673 | 0.558 | 0.290 | 0.517 | 0.339 | 0.543 | |
| Marker | 0.284 | 0.271 | 0.265 | 0.171 | 0.290 | 0.302 | 0.191 | 0.192 | 0.229 |

## 2. 共同方法偏差：表明共同方法的偏差不太可能是一个问题

- Harman的单因素检验，最大的因素只占方差的31.42%
- PLS的标记变量技术（工作满意度Marker1-3）

## 3. 方差膨胀因子VIF，表明不存在多重共线性

- 题项中最高VIF=3.623（VIFs >5.0表明中等程度，而VIFs>10.0表明严重的多重共线性问题 ）

## 4. 信度

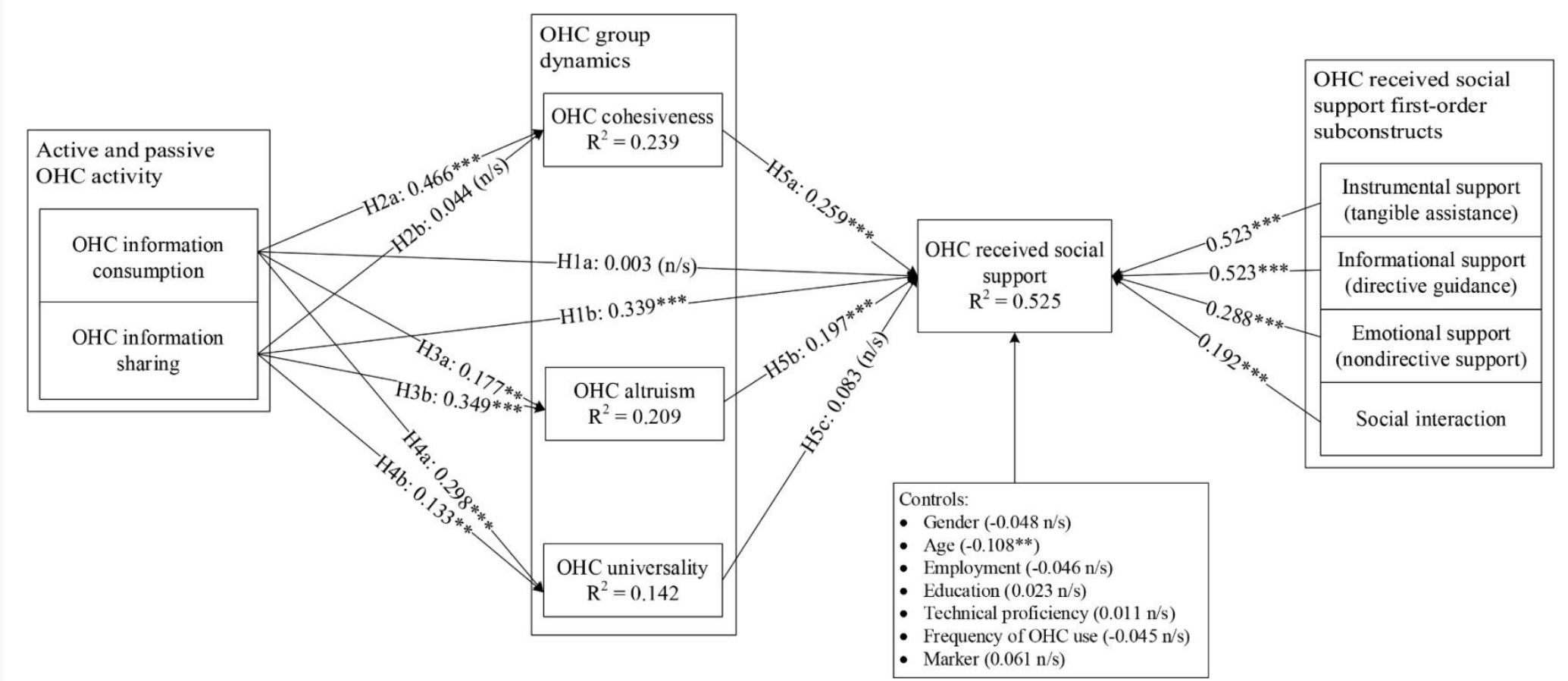
- Cronbach‘s alpha、组合信度CR和AVE

**Table B.3. Measurement Model Statistics and AVEs**

| Construct | C.A. | C.R. | AVE | IS | ES | SI | TS | COH | ALT | UNI | SICF | SISF | Marker |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IS | 0.917 | 0.930 | 0.525 | **0.725** | | | | | | | | | |
| ES | 0.863 | 0.898 | 0.594 | 0.804 | **0.771** | | | | | | | | |
| SI | 0.788 | 0.863 | 0.614 | 0.772 | 0.828 | **0.784** | | | | | | | |
| TS | 0.820 | 0.844 | 0.524 | 0.433 | 0.478 | 0.555 | **0.724** | | | | | | |
| COH | 0.919 | 0.933 | 0.610 | 0.572 | 0.548 | 0.420 | -0.044 | **0.781** | | | | | |
| ALT | 0.848 | 0.891 | 0.622 | 0.545 | 0.599 | 0.542 | 0.267 | 0.698 | **0.789** | | | | |
| UNI | 0.742 | 0.835 | 0.560 | 0.479 | 0.453 | 0.384 | 0.122 | 0.659 | 0.630 | **0.748** | | | |
| SICF | 0.873 | 0.913 | 0.725 | 0.439 | 0.347 | 0.298 | 0.026 | 0.487 | 0.337 | 0.359 | **0.851** | | |
| SISF | 0.788 | 0.876 | 0.701 | 0.490 | 0.515 | 0.527 | 0.491 | 0.259 | 0.430 | 0.269 | 0.459 | **0.837** | |
| Marker | 0.873 | 0.921 | 0.797 | 0.260 | 0.241 | 0.230 | 0.125 | 0.264 | 0.267 | 0.165 | 0.173 | 0.207 | **0.893** |

Note: Bolded, underlined values represent the square root of the AVEs

# 结构模型（1）




*** = $p < 0.001$; ** = $p < 0.010$, * = $p < 0.050$, n/s = not significant

**Fig. 2.** Online health community social support model.

H1a. OHC信息消费与接收到的社会支持正相关N
H1b. OHC信息分享与接收到的社会支持正相关S

H2a. 信息消费与凝聚力正相关S
H2b. 信息共享与凝聚力正相关N
H3a. 信息消费与利他主义正相关S
H3b. 信息共享与利他主义正相关S

H4a. 信息消费与普遍性正相关S
H4b. 信息共享与普遍性正相关S
H5a. 凝聚力与接收到的社会支持正相关S
H5b. 利他主义与接收到的社会支持正相关S
H5c. 普遍性与接收到的社会支持正相关N

# 中介

- H1a. 信息消费与获得的社会支持正相关(Not Support)->提出，OHC群体动态的完全中介
- H1b. 信息分享与获得的社会支持正相关(Support)-> 提出，OHC群体动态的部分中介

Bootstrapping，N=5000
如果a*b的CI包含0，不存在中介效应。
如果a*b的CI不包含0，那么间接效果成立。

- 如果c′的CI包含0，完全中介；
- 如果c′的CI不包含0，部分中介的

**Table 5**
Bootstrapped confidence interval tests for full and partial mediation model.

| Proposed relationship | Proposed full mediator | Mediation test (ab) (indirect effects) | | | Full/partial mediation test (c′) | | | Type of mediation relationship |
|---|---|---|---|---|---|---|---|---|
| | | 5% lower bound | 95% upper bound | Include zero? | 2.5% lower bound | 97.5% upper bound | Include zero? | |
| IC →VC → SS | VC | 0.070 | 0.174 | No | −0.088 | 0.096 | Yes | Full |
| IC →VA → SS | VA | 0.011 | 0.068 | No | −0.088 | 0.096 | Yes | Full |
| IC →VU → SS | VU | −0.003 | 0.054 | Yes | −0.088 | 0.096 | Yes | None |
| IS →VC → SS | VC | −0.012 | 0.036 | Yes | 0.261 | 0.417 | No | None |
| IS →VA → SS | VA | −0.009 | 0.027 | Yes | 0.261 | 0.417 | No | None |
| IS →VU → SS | VU | −0.001 | 0.029 | Yes | 0.261 | 0.417 | No | None |

IC = OHC information consumption; IS = OHC information sharing; VC = OHC cohesiveness; VA = OHC altruism; VU = OHC universality; SS = OHC social support.

OHC信息消费和OHC获得的社会支持之间的路径是由OHC凝聚力和OHC利他主义完全中介的。

# 讨论

1. **信息共享可以直接促进利他主义**（用户可能是在回答别人的问题）
2. **信息共享可以直接促进普遍性**（为用户提供了表达自己的机会，并感到被倾听或理解）
3. **但信息共享和凝聚力之间没有关联**（仅仅发帖可能不会直接导致归属感）
4. **凝聚力和利他主义有助于接收到的社会支持，但普遍性却没有**
   - 普遍性（安慰）仅仅是一种好处，并不导致4种社会支持
   - 而感觉自己是社区的一部分，并对该群体有贡献（即凝聚力和利他主义），可以加强和促进OHC收到的社会支持
5. **OHC的信息消费和分享均正向影响获得的社会支持**

   **5.1 消费->凝聚力/利他主义->OHC获得的社会支持（完全中介）**
   - 浏览可能会帮助用户感觉与其他成员更亲近，并帮助发展对团队的归属感（凝聚力）
   - 浏览别人发布的苦难和建议，可能会帮助用户获得一种目标感，感觉他们可以为社区做出贡献（利他）

   **5.2 分享->社会支持（不受群体动态的中介）**
   - 分享信息的用户可能在寻找与他们当前情况相关的特定问题的答案，得到回答可能会觉得自己得到了社会支持，而不需要考虑OHC群体的整体动态

**局限：**样本局限，未来考虑纵向研究；本文探讨团体动力学3个因素，未来考虑**哪些因素可能对特定类型的慢性病（如被污名化）的OHC最有影响力；**未集中在某一特定慢性病或某一特定类型的OHC，未来可探讨不同慢性病的OHC之间的差异

# 谢谢