

A photograph of three young adults, two men and one woman, standing on a balcony with a glass railing. They are smiling and looking towards the camera. The background shows a modern building with large windows and some greenery. The image is partially obscured by a white diagonal band that serves as a background for the title text.

Survey Study of Hong Kong High School Students' Attitude

Professor Edward Chan

Department of Applied Social Sciences

The Hong Kong Polytechnic University



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

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Doxing

Search for and publish private or identifying information about a particular individual on the Internet, typically with malicious intent (Oxford Dictionaries, 2015).

Does it work?



A representative sample of Hong Kong secondary school students (n = 2,120)

	N	%
Male	1,123	52.97
Female	997	47.03
Total	2,120	100

	N	%
Secondary 2	549	25.90
Secondary 3	560	26.40
Secondary 4	501	23.60
Secondary 5	510	24.10
Total	2,120	100.00



Experience of conducting doxing on the Internet

	Male	Female	Total
Ever conducted doxing (searching personal information) on the Internet	9.8%	14.5%	12.1%**
Targets of doxing:			
<i>People whom you like</i>	41.2%	62.0%	53.2%***
<i>People whom you dislike</i>	57.0%	45.9%	50.7%
<i>No specific targets</i>	27.6%	35.6%	32.2%
<i>Others</i>	9.0%	8.4%	8.6%
Never conducted doxing on the Internet	90.2%	85.5%	87.9%
Total	100.0%	100.0%	100.0%

p<.01, *p<.001

Whether the students ever conducted doxing on the Internet

Personal information found when the students conducted doxing on the Internet (1)

No.	Type	Male	Female	Total
1	Name	92.7%	95.6%	94.4%
2	Personal photos or videos	62.9%	76.8%	70.9%*
3	Birthday	65.2%	72.7%	69.5%
4	School name	53.5%	61.1%	57.9%
5	Relationship status	39.6%	61.4%	52.1%**
6	Mobile phone number	48.4%	37.3%	42.0%
7	Locations	20.5%	28.0%	24.8%
8	Sexual orientation	19.2%	26.1%	23.2%
9	Home address	40.1%	9.3%	22.4%***
10	Personal email address	25.3%	19.1%	21.7%
11	Intimate photos or videos	18.9%	23.4%	21.5%
12	Academic performance	22.0%	19.5%	20.5%
13	Odd habits	17.9%	17.9%	17.9%
14	Embarrassing photos or videos	16.9%	17.6%	17.3%
15	Political opinions	18.4%	10.1%	13.6%

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

Personal information found when the students conducted doxing on the Internet (2)

No.	Type	Male	Female	Total
16	Private internet or text conversation	12.2%	14.5%	13.5%
17	Sexual life	16.8%	7.5%	11.5%*
18	Parents' names	16.9%	7.0%	11.2%*
19	Racial or ethnic origin	6.6%	13.4%	10.5%
20	Religious beliefs	11.1%	9.5%	10.2%
21	Student card	8.7%	8.7%	8.7%
22	Obscene or indecent photos or videos	11.0%	7.1%	8.7%
23	Home telephone number	11.3%	6.0%	8.3%*
24	ID card number	9.4%	3.1%	5.8%*
25	Usernames and passwords of online accounts	7.6%	4.2%	5.7%
26	Bank account numbers	6.3%	0.0%	2.7%*
27	Passport number	4.7%	1.0%	2.6%*
28	Medical records	3.4%	0.6%	1.8%
29	Other	0.8%	0.7%	0.8%

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

Platforms the students conducted doxing

No.	Platform	Male	Female	Total
1	Social networking site	66.8%	86.7%	78.2%***
2	Instant Messenger	48.4%	51.5%	50.2%
3	Search engine	43.0%	23.8%	31.9%**
4	Video-sharing website	24.3%	13.3%	18.0%*
5	Forum	29.4%	9.5%	18.0%***
6	Chat-room	9.9%	11.4%	10.7%
7	Web-page	9.6%	11.3%	10.6%
8	Email	11.4%	2.4%	6.2%*
9	Blog	7.2%	3.2%	4.9%
10	Other	0.8%	0.4%	0.6%

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

Rationales for conducting doxing

No.	Rationale	Male	Female	Total
1	I liked that person	41.2%	62.6%	53.5%**
2	I hated that person	57.0%	45.9%	50.7%
3	I liked knowing other people's personal information	36.8%	45.6%	41.9%
4	I think it is fun	21.2%	21.2%	21.2%
5	No reason	17.6%	8.1%	12.2%
6	Other people also do so	11.0%	10.9%	10.9%
7	I wanted to use other people's personal information to punish them	9.8%	8.1%	8.8%
8	I wanted to share other people's personal information	10.4%	7.1%	8.5%
9	I wanted to prove to my friends that I have excellent computer skill	4.3%	2.3%	3.2%
10	I was forced to do so	4.1%	1.7%	2.7%
11	I wanted to use other people's personal information to pretend to be them	1.8%	1.6%	1.7%
12	Other	4.7%	1.9%	3.1%

Whether the students posted the information from doxing

	Male	Female	Total
Posted the information from doxing	2.0%	3.2%	2.6%
Platform for posting the information from doxing:			
Instant Messenger	67.4%	75.9%	72.6%
Social networking site	41.1%	33.7%	36.6%
Chat-room	14.4%	21.0%	18.4%
Forum	18.2%	7.6%	11.7%
Video-sharing website	9.6%	3.0%	5.6%
Email	4.8%	4.0%	4.3%
Search engine	4.8%	0.0%	1.9%
Never posted the information from doxing	7.2%	10.5%	8.7%
Refused to answer	0.7%	1.0%	0.9%
Never conducted doxing on the Internet	90.2%	85.5%	87.9%
Total	100%	100%	100%

Whether the students ever joined the **uncover teams** online groups or seen other people's personal information posted in these forums

	Male	Female	Total
Whether ever joined the uncover teams online groups or forums			
Ever joined	1.8%	1.2%	1.5%
Never	98.2%	98.8%	98.5%
Total	100.0%	100.0%	100.0%
Whether ever seen other people's personal information posted in the uncover teams online groups or forums			
Ever seen	29.6%	28.0%	28.8%
The situation:			
I unintentionally saw other people's personal information when I read posts in their groups or forums	73.2%	76.1%	74.6%
Other people shared those posts containing other people's personal information with me	40.3%	38.4%	39.4%
I intentionally looked for other people's personal information in their groups or forums	7.0%	6.2%	6.6%
Never	70.4%	72.0%	71.2%
Total	100.0%	100.0%	100.0%

Students' Experience of conducting doxing on the Internet



- 12.1% of students had conducted doxing on the Internet. More female students conducted doxing than male students and a significant interaction was found.
- The targets of doxing include people students like (53.2%) and dislike (50.7%), there can be also no specific targets (32.2%). More female students than male students conducted doxing because they liked that person.
- More than half of students searched for name, personal photos or videos, birthday, school name, and relationship status.
- More than half of students searched for the information via social networking site (78.2%) and instant messenger (50.2%).
- About 2.6% of the students indicated that they had posted the information from doxing. More female students posted the information than male students.
- About 1.5% of students indicated that they had ever joined the uncover teams online groups or forums.



Experience of disclosing your
personal information **by others**

Whether the personal information ever been disclosed on the Internet without students' consent

	Male	Female	Total
The personal information ever been disclosed on the Internet without students' consent	48.8%	61.2%	54.7%***

***p<.001

The personal information ever been disclosed on the Internet without students' consent (1)

No.	Type	Male	Female	Total
1	Personal photos or videos	27.7%	35.5%	31.4%***
2	Name	24.4%	36.0%	29.9%***
3	Birthday	18.8%	30.0%	24.2%***
4	Mobile phone number	12.4%	18.1%	15.1%***
5	School name	10.5%	19.5%	14.8%***
6	Academic performance	7.1%	12.1%	9.5%***
7	Locations	7.7%	11.0%	9.3%*
8	Private internet or text conversation	5.2%	13.4%	9.1%***
9	Embarrassing photos or videos	6.5%	11.4%	8.8%**
10	Personal email address	6.8%	9.2%	8.0%
11	Relationship status	4.2%	9.1%	6.6%***
12	Odd habits	3.6%	7.2%	5.4%
13	Parents' names	4.6%	4.2%	4.4%
14	Intimate photos or videos	3.3%	5.3%	4.3%
15	Student card	4.2%	4.1%	4.2%

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

The personal information ever been disclosed on the Internet without students' consent (2)

No.	Type	Male	Female	Total
16	Home telephone number	3.9%	4.0%	3.9%
17	Home address	4.3%	2.5%	3.5%
18	Sexual orientation	2.4%	3.4%	2.9%
19	Usernames and passwords of online accounts	2.2%	2.7%	2.5%
20	Religious beliefs	2.6%	1.7%	2.2%
21	Passport number	2.5%	1.3%	1.9%
22	Racial or ethnic origin	1.6%	1.3%	1.4%
23	Political opinions	1.6%	0.8%	1.2%
24	Obscene or indecent photos or videos	0.7%	1.4%	1.0%
25	Sexual life	1.1%	0.9%	1.0%
26	ID card number	1.0%	0.9%	1.0%**
27	Medical records	1.1%	0.4%	0.7%
28	Bank account numbers	0.6%	0.6%	0.6%

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

Who disclosed the personal information of the students on the Internet

	Male	Female	Total
Classmates	46.5%	54.3%	50.7%*
Other students in the same grade	28.8%	31.6%	30.3%
Other students in your school	26.5%	29.9%	28.3%
People you personally know	21.7%	30.0%	26.2%**
Friends outside your school	20.6%	30.2%	25.7%***
Parents/family members	20.8%	28.0%	24.6%**
Relatives	8.4%	9.6%	9.0%
Internet friends	3.8%	6.2%	5.1%
Strangers	3.5%	4.6%	4.1%
Teacher/Tutor	2.7%	3.2%	2.9%
I don't know	32.5%	17.8%	24.7%***

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

The platforms the personal information of the students being disclosed on the Internet

	Male	Female	Total
Instant Messenger	53.7%	67.8%	61.3%***
Social networking site	44.7%	63.7%	54.9%***
Chatroom	9.7%	8.8%	9.2%
Email	6.2%	3.6%	4.9%
Video-sharing website	2.9%	1.7%	2.2%
Webpage	1.5%	1.5%	1.5%
Forum	0.7%	0.2%	0.4%
Blog	0.5%	0.3%	0.4%
I don't know	28.7%	15.0%	21.4%***

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

	Male	Female	Total
I did nothing	65.8%	66.9%	66.4%
I posted that person's personal information on the Internet	46.3%	49.9%	48.2%
I privately sent emails or messages to that person asking him to remove my personal information	34.7%	34.6%	34.7%
I asked administrators of search engines, social networking sites, forums, webpages or internet service providers, to remove my personal informat	34.8%	32.9%	33.8%
I talked face-to-face with that person and requested that he or she to remove my personal information	25.4%	26.4%	25.9%
I searched to find out who posted my personal information	24.2%	22.1%	23.1%
I condemned that person on the Internet	21.5%	15.6%	18.4%*

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

What did you do when
 you discovered that
 your personal
 information has been
 disclosed on the
 Internet

How did you feel after learning that your personal information was disclosed

	Depression	Anxiety	Stress
Normal	76.9%	73.4%	84.5%
Mild	4.2%	5.4%	3.5%
Moderate	6.4%	4.1%	2.2%
Severe	3.1%	2.3%	4.8%
Extremely Severe	9.4%	14.8%	5.1%
Total	100.0%	100.0%	100.0%

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

Students' experience of disclosing personal information by others



- 54.7% of students reported that their personal information had been disclosed on the Internet without consent. More female students reported their information had been disclosed by others than male students.
- 15%~31% of students reported that their personal information such as photos or videos, name, birthday, mobile phone number, or school name were disclosed.
- Classmates (50.7%), other students in the same grade (30.3%), and other students in the school (28.3%) were most likely to be the person who disclosed students' information.
- Students' personal information was generally disclosed via instant messenger (61.3%) and social networking site (54.9%).
- When students discovered that their personal information had been disclosed on the Internet, 66.4% of them did nothing.
- Students feel severe to extremely severe level of depressed (12.5%), anxious (17.1%), or stressful (9.9%) after learning that your personal information was disclosed.



The role as a bystander

	Male	Female	Total
Closely follow the incident	57.7%	68.4%	62.8%***
Find out the truth	44.4%	52.7%	48.4%***
Report the post/account of the bully	41.0%	56.4%	48.3%***
Call the police	37.5%	30.8%	34.3%**
Seek help from the Office of the Privacy Commissioner for Personal Data	29.7%	29.4%	29.5%
Seek help from teachers/social workers	22.8%	33.0%	27.6%***
Take anti-bullying action on the Internet	15.7%	19.1%	17.3%*
Forward the message to others	6.2%	10.0%	8.0%**
Ignore	6.9%	2.9%	5.0%***
Join to bully the victim	1.5%	1.1%	1.3%
Other	0.9%	0.9%	0.9%
I don't know	12.8%	9.5%	11.2%*

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

The students' reaction if they see their
parents/family members being cyberbullied

The students' reaction if they see their classmates/friends being cyberbullied

Classmates / Friends

	Male	Female	Total
Closely follow the incident	54.2%	68.4%	61.0%***
Find out the truth	43.5%	54.2%	48.6%***
Report the post/account of the bully	34.4%	53.0%	43.3%***
Seek help from teachers/social workers	35.4%	46.7%	40.8%***
Call the police	22.9%	16.5%	19.8%***
Take anti-bullying action on the Internet	15.7%	23.0%	19.2%***
Seek help from the Office of the Privacy Commissioner for Personal Data	17.2%	18.7%	17.9%
Forward the message to others	9.1%	11.8%	10.4%*
Ignore	7.3%	3.1%	5.3%***
Join to bully the victim	2.1%	0.8%	1.5%*
Other	1.7%	0.8%	1.3%*
I don't know	11.8%	8.2%	10.1%**

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

Classmates whom they hate

	Male	Female	Total
Closely follow the incident	37.7%	42.5%	40.0%*
Ignore	33.0%	33.1%	33.1%
Find out the truth	24.6%	28.0%	26.2%
Seek help from teachers/social workers	16.2%	18.7%	17.4%
Report the post/account of the bully	10.8%	16.9%	13.7%***
Forward the message to others	7.4%	9.2%	8.3%
Call the police	9.3%	5.5%	7.5%**
Seek help from the Office of the Privacy Commissioner for Personal Data	6.7%	5.6%	6.2%
Join to bully the victim	6.5%	2.8%	4.7%***
Take anti-bullying action on the Internet	2.4%	3.6%	3.0%
Other	0.4%	0.4%	0.4%
I don't know	15.6%	17.8%	16.7%

The students' reaction if they see their teachers/tutors being cyberbullied

Teachers / tutors			
	Male	Female	Total
Closely follow the incident	46.5%	53.2%	49.7%**
Find out the truth	33.8%	38.4%	36.0%
Report the post/account of the bully	22.6%	30.7%	26.5%***
Seek help from teachers/social workers	17.7%	21.3%	19.4%*
Call the police	19.0%	11.8%	15.6%***
Seek help from the Office of the Privacy Commissioner for Personal Data	15.3%	13.1%	14.2%
Ignore	14.0%	12.8%	13.4%
Forward the message to others	6.6%	9.4%	8.0%*
Take anti-bullying action on the Internet	7.3%	7.3%	7.3%
Join to bully the victim	1.9%	0.7%	1.4%*
Other	0.6%	0.8%	0.7%
I don't know	19.4%	20.1%	19.7%

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

Teachers / tutors whom they hate			
	Male	Female	Total
Closely follow the incident	37.0%	39.7%	38.3%
Ignore	29.8%	30.4%	30.1%
Find out the truth	23.5%	26.7%	25.0%
Report the post/account of the bully	10.5%	16.0%	13.1%**
Seek help from teachers/social workers	11.1%	11.8%	11.4%
Call the police	10.8%	6.4%	8.7%**
Seek help from the Office of the Privacy Commissioner for Personal Data	7.9%	7.2%	7.5%
Forward the message to others	7.1%	7.9%	7.5%
Join to bully the victim	5.6%	1.4%	3.6%**
Take anti-bullying action on the Internet	2.9%	3.8%	3.3%
Other	0.5%	0.5%	0.5%
I don't know	21.3%	23.5%	22.3%

The students' reaction if they see the celebrities being cyberbullied

Celebrities whom they like			
	Male	Female	Total
Closely follow the incident	48.9%	68.1%	58.1%***
Find out the truth	35.8%	48.7%	41.9%***
Report the post/account of the bully	24.3%	44.1%	33.8%***
Take anti-bullying action on the Internet	14.2%	23.2%	18.5%***
Ignore	20.6%	9.8%	15.4%***
Forward the message to others	9.7%	19.5%	14.4%***
Call the police	12.1%	8.2%	10.3%**
Seek help from the Office of the Privacy Commissioner for Personal Data	9.4%	8.6%	9.0%
Seek help from teachers/social workers	8.3%	7.9%	8.1%
Join to bully the victim	1.4%	1.4%	1.4%
Other	0.2%	0.4%	0.3%
I don't know	19.3%	13.4%	16.5%***

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

Celebrities whom they hate			
	Male	Female	Total
Ignore	42.0%	41.5%	41.8%
Closely follow the incident	31.1%	38.1%	34.4%**
Find out the truth	19.4%	22.6%	21.0%
Report the post/account of the bully	7.9%	11.0%	9.4%*
Forward the message to others	5.7%	8.3%	7.0%*
Call the police	6.6%	2.6%	4.7%***
Seek help from teachers/social workers	4.4%	3.1%	3.8%
Join to bully the victim	4.2%	2.8%	3.5%
Seek help from the Office of the Privacy Commissioner for Personal Data	4.1%	2.4%	3.3%*
Take anti-bullying action on the Internet	2.1%	2.6%	2.3%
Other	0.4%	0.1%	0.2%
I don't know	20.5%	22.0%	21.2%

Students' attitude toward their role as a bystander



- If students see their parents/family members, classmates/friends, teachers/tutors, or the celebrities being cyberbullied, most students will **closely follow the incident and try to find out the truth.**
- If the victims are people the students **care about**, they will choose to **report the post/account of the bully**; if the victims are people they **hate**, the students may just **ignore** with high possibilities.



Conceptualization of privacy and
knowledge of privacy protection

No.	Type	Neither personal information nor sensitive personal information	Personal information	Sensitive personal information
1	Usernames and passwords of online accounts	3.8%	8.0%	88.2%
2	Bank account numbers	3.3%	8.9%	87.8%
3	Passport number	1.9%	12.2%	85.9%
4	ID card number	1.6%	12.8%	85.5%
5	Private internet or text conversation	6.8%	13.7%	79.5%
6	Intimate photos or videos	8.8%	13.0%	78.2%
7	Embarrassing photos or videos	13.1%	10.6%	76.2%
8	Obscene or indecent photos or videos	18.9%	5.3%	75.7%
9	Home address	2.8%	23.7%	73.5%
10	Sexual life	15.0%	15.4%	69.6%
11	Medical records	8.3%	25.7%	66.0%
12	Odd habits	19.8%	26.8%	53.4%
13	Parents' names	8.7%	39.6%	51.7%
14	Personal photos or videos	8.3%	40.6%	51.1%

Concepts of personal information and sensitive personal information (1)

No.	Type	Neither personal information nor sensitive personal information	Personal information	Sensitive personal information
15	Locations	17.8%	32.4%	49.8%
16	Home telephone number	9.9%	45.5%	44.6%
17	Relationship status	16.2%	39.3%	44.5%
18	Sexual orientation	17.8%	38.1%	44.2%
19	Mobile phone number	4.4%	57.5%	38.1%
20	Student card	9.1%	63.1%	27.8%
21	Personal email address	5.9%	67.6%	26.5%
22	Academic performance	20.1%	54.4%	25.5%
23	Political opinions	32.8%	44.7%	22.5%
24	Racial or ethnic origin	20.6%	62.7%	16.7%
25	Birthday	8.3%	78.7%	13.0%
26	Religious beliefs	29.0%	58.3%	12.7%
27	School name	18.9%	70.1%	11.0%
28	Name	9.5%	80.9%	9.6%

Concepts of personal information and sensitive personal information (2)

	Male	Female	Total
Can name the Ordinance in Hong Kong	4.4%	2.5%	3.5%*
Could not name the Ordinance in Hong Kong	95.6%	97.5%	96.5%
• I do not know the name but I know there is an Ordinance	74.1%	77.2%	75.6%
• I do not know there is an Ordinance	21.5%	20.3%	20.9%
Total	100.0%	100.0%	100.0%

The knowledge of the name of the Ordinance in Hong Kong that aims to protect the privacy of individuals in relation to personal data

	How to manage my privacy settings	How to minimize the risk of disclosure of my personal information	How other people gather and use my personal information which I have disclosed on the Internet	What is legal and illegal to do on the Internet
From the Internet	49.1%	44.1%	42.0%	44.4%
In class	27.7%	29.8%	22.2%	39.0%
From my parents	23.7%	25.9%	17.4%	26.8%
I don't know how I have learnt	22.5%	21.6%	22.3%	18.5%
From my friends	21.4%	16.5%	14.4%	15.9%
From reading	17.8%	15.9%	12.8%	20.4%
From seminars outside the school	17.1%	20.1%	15.4%	26.2%
I have never learned about it	5.4%	5.6%	11.3%	6.6%

The sources the students have learnt from

Students' understanding of privacy and knowledge of privacy protection



- More than **3/4** of the students agreed the following information is sensitive personal information: usernames and passwords of online accounts, bank account numbers, passport number, ID card number, private internet or text conversation, intimate photos or videos, embarrassing photos or videos, obscene or indecent photos or videos.
- And also more than **3/4** of the students thought **name, birthday, school name** and were personal information, instead of sensitive information.
- Only **3.5%** of students can the name of the Ordinance in Hong Kong that aims to protect the privacy of individuals in relation to personal data.
- Nearly **half** of the students learn the knowledge about managing and protecting their privacy **from the internet**.

Discussion

- **Definition of doxing → Legal response**
- **What is personal data?**
- Personal Data (Privacy) Ordinance (Cap.486)
- **personal data** (個人資料) means any data—
 - (a) relating directly or indirectly to a living individual;
 - (b) from which it is practicable for the identity of the individual to be directly or indirectly ascertained; and
 - (c) in a form in which access to or processing of the data is practicable;
- **Hard data**
- **Social data:** engaging in social activities, networking
- Hard data: students know the importance of protecting; but hard data is not the major target of doxing
- Social data: Less cautious to defend doxing or protect personal information; but ready target of doxing



Intention of doxing:

- Mixed with curiosity & hostility
- Curiosity (no intention of causing harm) vs hostility (intent to cause harm)
- Blurred boundary between curious doxing and hostile doxing

Acts:

- Searching, posting, reposting (collective activity, social endorsement)
- Doxing: perpetrator, victim, victim → perpetrator, bystander

Legal responses:

- One-size-fits-all?
 - Personal Data (Privacy) Ordinance (Cap.486)
 - Access to computer with criminal or dishonest intent (Crime Ordinance (S.161, Cap.200))
- Or need more specific law targeting specific crime?



- **Public education**

- Responses to doxing (as victim):
 - Limited choices
 - Helplessness
- What to educate?
- Medium of education?



- Crime with advanced technology
- Do we have advanced mindset, with advance measures to fight crime?

Thank you.

